

ERIK C. FRANKLIN

Curriculum Vitae

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Hawaii Institute of Marine Biology
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EDUCATION

- 2012 Ph.D., Zoology Department, University of Hawaii at Manoa. Advisor: Dr. Paul L. Jokiel. Dissertation: *Spatially-explicit predictive modeling of coral species distributions in the Hawaiian Islands*.
- 2004 M.S., Division of Marine Biology and Fisheries, Rosenstiel School of Marine and Atmospheric Science, University of Miami. Advisor: Dr. Jerald S. Ault. Thesis: *Habitat-based assessment protocol for the Florida marine aquaria fishery with application to gray angelfish*.
- 1996 B.S., Ecology, Behavior, and Evolution, minor: Environmental Studies, University of California, San Diego
- 1995 University of California-Education Abroad Program (UC-EAP), Sustainable Agroforestry and Tropical Ecology, Jardin Botanico Wilson, Costa Rica
- 1994 UC-EAP, Ecology, The Flinders University, Australia

PROFESSIONAL EXPERIENCE

- 2023-pres. Director, Climate-Resilient Food Innovation Network, UH System
- 2020-pres. Associate Research Professor, Hawaii Institute of Marine Biology, UHM
- 2018-pres. Graduate Faculty, Graduate Ocean Policy Certificate Program, UHM
- 2016-pres. Graduate Faculty, Zoology Graduate Program, UHM
- 2015-pres. Graduate Faculty, Department of Geography and Environment, UHM
- 2014-pres. Fellow, Cooperative Institute of Marine and Atmospheric Research, UHM
- 2013-pres. Graduate Faculty, Marine Biology Graduate Program, UHM
- 2012-2020 Assistant Research Professor, Hawaii Institute of Marine Biology, UHM
- 2005-2012 GIS/Data Analyst, Hawaii Institute of Marine Biology, University of Hawaii at Manoa (UHM)
- 2004-2005 Damage Assessment and Restoration Biologist, NOAA Florida Keys National Marine Sanctuary
- 2001-2004 Graduate Research Assistant, Rosenstiel School of Marine and Atmospheric Science, University of Miami
- 1998-2001 Damage Assessment and Restoration Biologist, NOAA Florida Keys National Marine Sanctuary
- 1997-1998 Science Information Specialist Intern, The Nature Conservancy (Florida)

RESEARCH

PEER-REVIEWED PUBLICATIONS (* = Franklin lab student, + = other student)

Total citations: 3684, h-index: 29; since 2018: 2779, h-index: 26 (Google Scholar)

76. Franklin EC, Platt MT*, Andrade P (accepted) Increased occurrence of the rare golden color morph of Pacific chub *Kyphosus sandwicensis* in a no-take marine reserve. *Journal of Fish Biology*. doi: [10.1111/jfb.15644](https://doi.org/10.1111/jfb.15644)

75. Winans WR⁺, Chen Q, Qiang Y, Franklin EC (2023) Large-area automatic detection of shoreline stranded marine debris using deep learning. *International Journal of Applied Earth Observation and Geoinformation* 124: 103515. doi: [10.1016/j.jag.2023.103515](https://doi.org/10.1016/j.jag.2023.103515)
74. Purwanto, Franklin EC, Mardiani SR, White AT (2023) Multiple-goal bioeconomic programming to address conflicting management objectives in Indonesian small pelagic fisheries. *Marine Policy* 150: 105519. doi: [10.1016/j.marpol.2023.105519](https://doi.org/10.1016/j.marpol.2023.105519)
73. Carlson KM, Mora C, Xu J⁺, Setter RO⁺, Harangody M⁺, Franklin EC, Kantar MB, Lucas M, Menzo ZM⁺, Spirandelli D, Schanzenbach D, Warr CC, Wong AE⁺, Businger S (2022) Global rainbow distribution under current and future climates. *Global Environmental Change* 77: 10206. doi: [10.1016/j.gloenvcha.2022.102604](https://doi.org/10.1016/j.gloenvcha.2022.102604)
72. Setter RO⁺, Franklin EC, Mora C (2022) Co-occurring anthropogenic stressors reduce the timeframe of environmental viability for the world's coral reefs. *PLoS Biology* 20: e3001821. doi: [10.1371/journal.pbio.3001821](https://doi.org/10.1371/journal.pbio.3001821)
71. Barkley YM*, Sakai T, Oleson EM, Franklin EC (2022) Examining distribution patterns of foraging and non-foraging sperm whales in Hawaiian waters using visual and passive acoustic data. *Frontiers in Remote Sensing* 3:940186 doi: [10.3389/frsen.2022.940186](https://doi.org/10.3389/frsen.2022.940186)
70. Akiona AK*, Popp BN, Toonen RJ, Siple MC, Kotubetey K, Kawelo H, Franklin EC (2022) Predatory fish diets shift toward an invasive mullet in a traditional Hawaiian aquaculture system. *Aquaculture, Fish and Fisheries* doi: [10.1002/aff2.68](https://doi.org/10.1002/aff2.68)
69. Mora C, McKenzie T, Gaw IM⁺, Dean JM⁺, von Hammerstein H⁺, Knudson TA⁺, Setter RO⁺, Smith CZ⁺, Webster KM⁺, Patz JA, Franklin EC (2022) Over half of known human pathogenic diseases can be aggravated by climate change. *Nature Climate Change* 12: 869-875 doi: [10.1038/s41558-022-01426-1](https://doi.org/10.1038/s41558-022-01426-1)
68. Nichols RS*, DeMartini EE, Franklin EC (2022) No butts about it: using urogenital disparity in a deep water snapper, *Etelis carbunculus* (Lutjanidae), for field based sexual identification. *Journal of Fish Biology* doi: [10.1111/jfb.15166](https://doi.org/10.1111/jfb.15166)
67. Andrade P, Morishige K⁺, Mau A, Kapon L⁺, Franklin EC (2022) Re-imagining contemporary conservation to support 'Āina Momona: Productive and thriving communities of people, place, and natural resources. *Parks Stewardship Forum* 38: 186–198 doi: [10.5070/P538257511](https://doi.org/10.5070/P538257511)
66. Purwanto, Franklin EC, Mardiani SR, White AT (2022) Stock assessment and overexploitation risk of small pelagic fish in Fisheries Management Area 715 of Indonesia. *Asian Fisheries Science* 35: 76-89 doi: [10.33997/j.afs.2022.35.1.007](https://doi.org/10.33997/j.afs.2022.35.1.007)
65. Jaya I, Satria F, Wudianto, Nugroho D, Sadiyah L, Buchary EA, White AT, Franklin EC, Courtney CA, Green G, Green S (2022) Are the working principles of fisheries management at work in Indonesia? *Marine Policy* 140: 105047 doi: [10.1016/j.marpol.2022.105047](https://doi.org/10.1016/j.marpol.2022.105047)
64. Longenecker K, Franklin EC, Hill-Lewenilovo R⁺, Lalavanua W, Langston R, Mangubhai, Piovano S (2022) Many immature individuals and largest size classes lacked females from three coral reef fishes (Actinopterygii) in Fiji market surveys: Implications for fishery management. *Acta Ichthyologica et Piscatoria* 52: 53-65 doi: [10.3897/aiep.52.80586](https://doi.org/10.3897/aiep.52.80586)
63. Johannsen T⁺, Franklin EC, Hunter CL (2022) A short-term winner? Dramatic

- increases in the population of mushroom coral *Lobactis scutaria* (Anthozoa: Fungiidae) in Kaneohe Bay, Hawaii from 2000 to 2018. *Pacific Science* 76: 79-93 doi: [10.2984/76.1.7](https://doi.org/10.2984/76.1.7)
62. Counsell CWW⁺, Coleman RR⁺, Lal SS⁺, Bowen BW, Franklin EC, Neuheimer AB, Powell BS, Toonen RJ, Donahue MJ, Hixon MA, McManus MA (2022) Interdisciplinary analysis of larval dispersal for a coral reef fish: opening the black box. *Marine Ecology Progress Series* 684: 117-132 doi: [10.3354/meps13971](https://doi.org/10.3354/meps13971)
 61. Limmon GV, Longenecker KL, Langston R, Franklin EC (2022) Capacity development in reproductive life history studies of tropical fishes in Ambon, Maluku, Indonesia for data limited fisheries. *Marine Policy* 136: 104948 doi: [10.1016/j.marpol.2021/104948](https://doi.org/10.1016/j.marpol.2021/104948)
 60. Hixon MA, Bowen BW, Coleman RR⁺, Counsell CW⁺, Donahue MJ, Franklin EC, Kittinger JN, McManus MA, Toonen RJ (2022) Fish flow: following fisheries from spawning to supper. *Frontiers in Ecology and the Environment* 20: 247-254 doi: [10.1002/fee.2449](https://doi.org/10.1002/fee.2449)
 59. Mau A⁺, Franklin EC, Huss GR, Nagashima K, Nicodemus P, Valdez A, Bingham J-P (2021) Near-daily reconstruction of tropical intertidal SST from limpet shells to infer their growth rates. *Nature Communications Earth & Environment* 2, 171 doi.org: [10.1038/s43247-021-00251-2](https://doi.org/10.1038/s43247-021-00251-2)
 58. Carlson B, Awai M, Saunders WB, Franklin EC (2021) *Nautilus belauensis* population demographics and trap yields in Palau were similar between surveys in 1982 and 2015. *Marine Ecology Progress Series* 670: 239-245 doi.org: [10.3354/meps13773](https://doi.org/10.3354/meps13773)
 57. Gill A⁺, Franklin EC, Donaldson TJ (2021) Fore reef location influences spawning success and egg predation in lek-like mating territories of the bird wrasse *Gomphosus varius*. *Journal of Fish Biology* doi: [10.1007/s10641-021-01084-w](https://doi.org/10.1007/s10641-021-01084-w)
 56. Altman-Kurosaki NT*, Smith CM, Franklin EC (2021) Oahu's marine protected areas have limited success in protecting coral reef herbivore functional assemblages. *Coral Reefs* doi.org/[10.1007/s00338-021-02054-5](https://doi.org/10.1007/s00338-021-02054-5)
 55. Scherrer SR⁺, Kobayashi DR, Weng KC, Okamoto HY, Oishi FG, Franklin EC (2021) Estimation of growth parameters integrating tag-recapture, length-frequency, and direct aging data using likelihood and Bayesian methods for the tropical deepwater snapper *Pristipomoides filamentous* in Hawaii. *Fisheries Research* 233: 105753 doi.org: [10.1016/j.fishres.2020.105753](https://doi.org/10.1016/j.fishres.2020.105753)
 54. Longenecker K, Langston R, Gill A⁺, Kelokelo M⁺, Donaldson TJ, Franklin EC (2020) Rapid reproductive analysis and weight-length relation of the humpnose big-eye bream *Monotaxis grandoculis* (Actinopterygii: Perciformes: Lethrinidae) from Micronesia with implications for fisheries. *Acta Ichthyologica et Piscatoria* 50 (4): 493–500. doi: [10.3750/AIEP/02965](https://doi.org/10.3750/AIEP/02965).
 53. Winter KB, Rii YM, Reppun FAWL, Hintzen KD, Alegado R, Bowen BW, Bremer LL, Coffman M, Deenik JL, Donahue MJ, Falinski FA, Frank K, Franklin EC, Kurashima N, Lincoln NK, Madin E, McManus MA, Nelson CE, Okano R, Olegario A, Pascua P, Oleson KLL, Price MR, Rivera MAJ, Rodgers KS, Ticktin T, Sabine C, Smith CM, Hewett A, Kaluhiwa R, Cypher M, Thomas B, Leong J,

- Kekuewa K, Tanimoto J, Kukea-Shultz K, Kawelo H, Kotubetey K, Neilson B, Lee T, Toonen RJ (2020) Collaborative research to inform adaptive co-management: A framework for the He'eia National Estuarine Research Reserve. *Ecology and Society* 25(4):15. [doi.org: 10.5751/ES-11895-27750415](https://doi.org/10.5751/ES-11895-27750415)
52. Winter KB, Lincoln NK, Berkes F, Kawelo H, Kotubetey K, Kukea-Shultz K, Alegado R, Kurashima N, Frank K, Pascua P, Rii Y, Reppun F, Knapp I, McClatchey W, Ticktin T, Smith C, Franklin EC, Oleson K, Price M, McManus M, Donahue M, Rodgers K, Bowen B, Nelson C, Beilson B, Thomas B, Leong J-A, Madin E, Rivera MA, Falinski K, Bremer L, Deenik J, Gon III S, Okano R, Olegario A, Toonen R (2020) Eco-mimicry in indigenous resource management: optimizing ecosystem services to achieve resource abundance in Hawai'i. *Ecology and Society* 25: 26. [doi: 10.5751/ES-11539-250226](https://doi.org/10.5751/ES-11539-250226)
51. Oyafuso ZS*, Leung PS, Franklin EC (2020) Evaluating biological and socioeconomic tradeoffs of marine reserve planning via a flexible integer linear programming approach. *Biological Conservation* 241: 108319 doi.org/10.1016/j.biocon.2019.108319
50. Franklin EC, Gray AE, Mundy BC (2019) Three new records of coastal fishes in the Hawaiian Islands. *Journal of the Ocean Science Foundation*, 33: 99–106 doi.org/10.5281/zenodo.3572888
49. Barkley YM*, Oleson EM, Oswald JN, Franklin EC (2019) Whistle classification of sympatric false killer whale populations in Hawaiian waters yields low accuracy rates. *Frontiers in Marine Science* 6: 645 doi.org/10.3389/fmars.2019.00645
48. Mora C, Rollins R+, Taladay K+, Kantar M, Chock M+, Shimada M+, Franklin EC (2019) Mora *et al.* reply. *Nature Climate Change* 9: 658-659 doi.org/10.1038/s41558-019-0538-1
47. Darling ES, McClanahan TR, Maina J, Gurney G, Graham NAI, Januchowski-Hartley F, Cinner JE, Mora C, Hicks CC, Maire E, Puotinen M, Skirving WJ, Adjeroud M, Ahmadi G, Arthur R, Bauman AG, Beger M, Berumen ML, Bigot L, Bouwmeester, Brenier, Bridge T, Brown E, Campbell SJ, Cannon S, Cauvin B, Chen AC, Claudet J, Denis V, Donner S, Estradivari, Fadli N, Feary DA, Fenner D, Fox H, Franklin EC, Friedlander A, Gilmour J, Goiran C, Guest J, Hobbs, J-PA, Hoey AS, Houk P, Johnson S, Jupiter S, Kayal M, Kuo C-Y, Lamb J, Lee MAC, Low J, Muthiga N, Muttaqin, Nand Y, Nash KL, Nedlic O, Pandolfi JM, Pardede S, Patankar V, Penin L, Ribas-Deulofeu L, Richards Z, Roberts TE, Rodgers KS, Safuari CDM, Sala E, Shedrawi G, Sin TM, Smallhorn-West P, Smith JE, Sommer B, Steinberg PD, Sutthacheep M, Tan CHJ, Williams GJ, Wilson S, Yeemin T, Bruno JF, Fortin MJ, Krkosek M, Mouillot D (2019) Social-environmental drivers inform strategic management of coral reefs in the Anthropocene. *Nature Ecology and Evolution* 3: 1341–1350 doi.org/10.1038/s41559-019-0953-8
46. Randall JE, Gray A, Franklin EC, Mundy BC, McCosker JE (2019) Five new records of fishes for the Hawaiian Islands. *Journal of Ocean Science Foundation* 33: 28-43. <http://dx.doi.org/10.5281/zenodo.3255089>
45. Johnson GB+, Taylor BM, Robbins WD, Franklin EC, Toonen R, Bowen BW, Choat JH (2019) Diversity and structure of parrotfish assemblages across the northern Great Barrier Reef. *Diversity* 11(1):14 doi.org/10.3390/d11010014

44. Oyafuso ZS*, Leung PS, Franklin EC (2018) Evaluating bioeconomic tradeoffs of fishing reserves via spatial optimization. *Marine Policy* doi.org/10.1016/j.marpol.2018.11.016
43. Mora C, Spirandelli D, Franklin EC, Lynham J, Kantar MB, Miles W, Smith CZ⁺, Freel K, Moy J⁺, Louis LV⁺, Barba EW⁺, Bettinger K, Frazier AG, Colburn IX JF⁺, Hanasaki N, Hawkins E, Hirabayashi Y, Knorr W, Little CM, Emanuel K, Sheffield J, Patz JA, Hunter CL (2018) Broad threat to humanity from cumulative climate hazards intensified by greenhouse gas emissions. *Nature Climate Change* 8: 1062-1071. doi.org/10.1038/s41558-018-0315-6
42. Mora C, Rollins R⁺, Taladay K⁺, Kantar MB, Chock MK⁺, Shimada M⁺, Franklin EC (2018) Bitcoin emissions alone could push global warming above 2°C. *Nature Climate Change* 8: 931-933. doi.org/10.1038/s41558-018-0321-8
41. Geronimo, R⁺, Franklin EC, Brainard RE, Elvidge CD, Santos MD, Venegas R, Mora C (2018) Mapping fishing activities and suitable fishing grounds using nighttime satellite images and maximum entropy modelling. *Remote Sensing* 10: 1604 doi.org/10.3390/rs10101064
40. Forsman ZH, Maurin P, Parry M, Chung A⁺, Sartor C, Hixon MA, Hughes K, Rodgers K, Knapp I, Gulko DA, Franklin EC, Del Rio Torres L, Chan NT, Wolke CS, Gates RD, Toonen RJ (2018) The First Hawai'i Workshop For Coral Restoration & Nurseries. *Marine Policy* 96:133-135 doi.org/10.1016/j.marpol.2018.08.009
39. Counsell CWW⁺, Donahue MJ, Edwards K, Franklin EC, Hixon MA (2018) Variation in coral-associated cryptofaunal communities along spatial scales and environmental gradients. *Coral Reefs* 37:827-840. [doi: 10.1007/s00338-018-1709-7](https://doi.org/10.1007/s00338-018-1709-7)
38. Levy J⁺, Hunter C, Lukaczyk, Franklin EC (2018) Assessing the spatial distribution of coral bleaching using small unmanned aerial systems. *Coral Reefs* 37: 373-387 [doi.org: 10.1007/s00338-018-1662-5](https://doi.org/10.1007/s00338-018-1662-5)
37. Franklin EC (2017) Vagrancy in paradise: documentation of the chevron butterflyfish *Chaetodon trifascialis* in Kaneohe Bay, Oahu, Hawaiian Islands. *Marine Biodiversity Records* 10:22 doi: [10.1186/s41200-017-0124-z](https://doi.org/10.1186/s41200-017-0124-z)
36. Longenecker K, Langston R, Bolick H, Crane M, Donaldson TJ, Franklin EC, Kelokelo M, Kondio U, Potuku T (2017) Rapid reproductive analysis and length–weight relations for five species of coral-reef fishes from Papua New Guinea: *Nemipterus isacanthus*, *Parupeneus barberinus*, *Kyphosus cinerascens*, *Ctenochaetus striatus*, and *Balistapus undulatus*. *Acta Ichthyol. Piscatoria* 47:107-124. doi: [10.3750/AIEP/02146](https://doi.org/10.3750/AIEP/02146)
35. Oyafuso ZS*, Drazen JC, Moore CH, Franklin EC (2017) Habitat-based species distribution modelling of the Hawaiian deepwater snapper-grouper complex *Fisheries Research* 195: 19-27 [doi: 10.1016/j.fishres.2017.06.011](https://doi.org/10.1016/j.fishres.2017.06.011)
34. Winston MS*, Taylor B, Franklin EC (2017) Intraspecific variability in the life history of endemic coral reef fishes between photic and mesophotic populations. *Coral Reefs* 36: 663-674. [doi: 10.1007/s00338-017-1559-8](https://doi.org/10.1007/s00338-017-1559-8)
33. Kapur MR*, Franklin EC (2017) Predicting climate impacts on tropical fisheries: are contemporary spatial management strategies sufficient? *Canadian Journal of Fisheries and Aquatic Sciences* [doi: 10.1139/cjfas-2016-0200](https://doi.org/10.1139/cjfas-2016-0200)

32. Veazey LM[†], Franklin EC, Kelley C, Rooney J, Frazer NL, Toonen RJ (2016) The implementation of rare events logistic regression to predict the distribution of mesophotic hard corals across the main Hawaiian Islands. *PeerJ* 4:e2189 [doi: 10.7717/peerj.2189](https://doi.org/10.7717/peerj.2189)
31. Selkoe KA, Gaggiotti OE, Donovan MK⁺, Trembl EA, Wren JLK⁺, Hawai'i Reef Connectivity Consortium[†], Toonen RJ (2016) The DNA of coral reef biodiversity – predicting and protecting genetic diversity of reef assemblages. *Proceedings of the Royal Society B* 283: 20160354. [doi: 10.1098/rspb.2016.0354](https://doi.org/10.1098/rspb.2016.0354)
[†] Franklin EC is member of Hawai'i Reef Connectivity Consortium
30. Oyafuso ZS*, Toonen RJ, Franklin EC (2016) Temporal and spatial trends in prey diversity of wahoo (*Acanthocybium solandri*): A diet analysis from the central North Pacific using visual and DNA bar-coding techniques. *Journal of Fish Biology* 88:1501-1523. [doi:10.1111/jfb.12928](https://doi.org/10.1111/jfb.12928)
29. Madin JS, Andreasen M, Bridge T, Connolly SR, Darling E, Diaz M, Falster D, Franklin EC, Gates RD, Hoogenboom MO, Huang D, Keith SA, Kuo CY, Lovelock CE, Luiz O, Martinelli J, Mizere T, Pandolfi JM, Pochon X, Putnam HM, Roberts TE, Stat M, Baird AH (2016) The Coral Trait Database. *Nature Scientific Data* 3:160017. [doi:10.1038/sdata.2016.17](https://doi.org/10.1038/sdata.2016.17)
28. Edmunds PJ, Adjeroud M, Baskett ML, Baums IB, Budd AF, Carpenter RC, Fabina NS, Fan T-Y, Franklin EC, Gross K, Han X, Jacobson L, Klaus JS, McClanahan TR, O'Leary JK, van Oppen MJH, Pochon X, Putnam HM, Smith TB, Stat M, Sweatman H, van Woesik R, Gates RD (2014) Persistence and change in community composition of reef corals through present, past and future climates. *PLoS ONE* 9(10): e107525. [doi:10.1371/journal.pone.0107525](https://doi.org/10.1371/journal.pone.0107525)
27. Ault JS, Smith SG, Browder J, Nuttle W, Franklin EC, DiNardo GT, Bohnsack JA (2014) Indicators for assessing the ecological dynamics and sustainability of southern Florida's coral reef and coastal fisheries. *Ecological Indicators* 44:164-172. [doi: 10.1016/j.ecolind.2014.04.013](https://doi.org/10.1016/j.ecolind.2014.04.013)
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24. Bird CE, Franklin EC, Smith CM, Toonen RJ (2013) Between tide and wave marks: a unifying model of physical zonation on littoral shores. *PeerJ* 1:e154 [doi: 10.7717/peerj.154](https://doi.org/10.7717/peerj.154)
23. Farmer NA, Ault JS, Smith SG, Franklin EC (2013) Methods for assessment of short-term coral reef fish movements within an acoustic array. *Movement Ecology* 2013:1-7. [doi: 10.1186/2051-3933-1-7](https://doi.org/10.1186/2051-3933-1-7)
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21. Stat M, Pochon X, Franklin EC, Bruno JF, Casey KS, Selig ER, Gates RD (2013) The distribution of the thermally tolerant symbiont lineage (*Symbiodinium* clade D) in corals from Hawaii: correlations with host and the history of ocean thermal stress. *Ecology and Evolution* 3:1317-1329. doi: 10.1002/ece3.556
20. Fabina NS, Putnam HM, Franklin EC, Stat M, Gates RD (2012) Transmission mode predicts specificity and interaction patterns in coral-*Symbiodinium* networks. *PLoS ONE* 7(9): e44970. doi:10.1371/journal.pone.0044970
19. Heron SF, Maynard J, Willis B, Christensen T, Harvell D, Vargas-Angel B, Beeden R, Sziklay J, Aeby G, Franklin EC, and 8 others (2012) Developments in understanding relationships between environmental conditions and coral disease. Proc 12th Int'l Coral Reef Symposium, Cairns, Australia. 16B:4.
18. van Woesik R, Franklin EC, O'Leary J, McClanahan TR, Klaus JS, Budd AF (2012) Hosts of the Plio-Pleistocene past reflect modern-day coral vulnerability. *Proceedings of the Royal Society B* doi: 10.1098/rspb.2011.2621.
17. Franklin EC, Stat M, Pochon X, Putnam HM, Gates RD (2012) GeoSymbio: A hybrid, cloud-based web application of global geospatial bioinformatics and ecoinformatics for *Symbiodinium*-host symbioses *Molecular Ecology Resources* 12(2): 369-373. doi:10.1111/j.1755-0998.2011.03081.x.
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15. Longenecker K, Chan Y, Franklin EC (2011) Relationships between the length of select head bones and body size for some Hawaiian parrotfishes (subfamily Scarinae). *Bishop Museum Occasional Papers* 111:13-26.
14. Aeby GS, Williams GJ, Franklin EC, Kenyon J, Cox EF, Coles S, Work TM (2011) Patterns of coral disease across the Hawaiian Archipelago: relating disease to environment. *PLoS ONE* 6(5): e20370. doi:10.1371/journal.pone.0020370
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10. Franklin EC, Dow A, Brong C, Craig M. Length-weight and length-length relationships of three endemic butterflyfish species (Chaetodontidae) from coral reefs of the Northwestern Hawaiian Islands, USA. (2009) *Journal of Applied Ichthyology* 25(5):616-617.
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 5. Hudson JH, Franklin EC (2005) Structural Reef Restoration and Coral Transplantation to the R/V Columbus Iselin Grounding Site in the Florida Keys National Marine Sanctuary. Proc OCEANS 2005 Americas MTS/IEEE Conference, Washington, DC, September 19-23, 2005.
 4. Franklin EC, Ault JS, Smith SG, Luo J, Meester GA, Diaz GA, Chiappone M, Swanson DW, Miller SL, Bohnsack JA (2003) Benthic habitat mapping in the Tortugas region, Florida. *Marine Geodesy* 26(1-2):19-34.
 3. Ault JS, Smith SG, Meester GA, Luo J, Franklin EC, Bohnsack JA, Harper DE, McClellan DB, Miller SL, Chiappone M, Swanson DW (2002) Synoptic habitat and reef fish surveys support establishment of marine reserves in Dry Tortugas, Florida USA. *Reef Encounter* 31:22-23.
 2. Franklin EC, Ault JS, Smith SG (2002) Utilization of a GIS in a fisheries assessment and management system. In: J. Breman (ed) *Marine Geography: GIS for the Oceans and the Seas*. Redlands, CA: ESRI Press.
 1. Miller SL, Swanson DW, Chiappone M, Ault JS, Smith SG, Meester GA, Luo J, Franklin EC, Bohnsack JA, Harper DE, McClellan DB (2001) An extensive deep reef terrace on the Tortugas Bank, Florida Keys National Marine Sanctuary. *Coral Reefs* 20:299-300.

WORKING PAPERS

- Franklin EC, Oyafuso ZS, Asher J (In prep) Model-based delineation of essential fish habitat for a data limited tropical snapper. *ICES Journal of Marine Science*
- Longenecker K, Langston R, Mamesah J, Natan Y, Pattinasarany M, Radjab AW, Romdon A, Ruli F, Simanjuntak P⁺, Sinaga FL⁺, Limmon GV, Franklin EC (In revision) Reproductive life history of the blacktip grouper *Epinephelus fasciatus* (Forsskal 1775): histological methods are critical for estimating parameters of a hermaphroditic fish. *Journal of Fish Biology*

TECHNICAL REPORTS

36. Franklin EC (2023) Western Pacific Stock Assessment Review: Stock Assessment of American Samoa Bottomfish, 2023, Panel Summary Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 5 pp.
35. Franklin EC (2023) Western Pacific Stock Assessment Review: Stock Assessment of

- American Samoa Bottomfish, 2023, Individual Reviewer Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 30 pp.
34. Franklin EC, Longenecker K, Langston R (2021) Specialist Training in Histology-based Reproductive Analysis of Tropical Fishes at Pattimura University, Ambon, Indonesia. Report prepared by the University of Hawaii at Manoa (UHM) for Tetra Tech's Supplemental Technical Assistance to the USAID SEA Project and Walton Family Foundation. 26 pp.
 33. Franklin EC (2021) Stock Assessment Review Report for the Small Pelagic Fishery in FMA 715, Indonesia. Report prepared by the University of Hawaii at Manoa (UHM) for Tetra Tech's Supplemental Technical Assistance to the USAID SEA Project and Walton Family Foundation. 39 pp.
 32. Franklin EC, Indrajaya, Wudianto, Nugroho D, Satria F, Sadiyah L (2020) Stock Assessment Review Protocol for Indonesian Fisheries Report prepared by the University of Hawaii at Manoa (UHM) for Tetra Tech's Supplemental Technical Assistance to the USAID SEA Project and Walton Family Foundation. 11 pp.
 31. Franklin EC (2020) US-Indonesia Stock Assessment Review Peer-to-Peer Exchange Report. Report prepared by the University of Hawaii at Manoa (UHM) for Tetra Tech's Supplemental Technical Assistance to the USAID SEA Project and Walton Family Foundation. 56 pp.
 30. Franklin EC (2020) Western Pacific Stock Assessment Review: Stock Assessment of Uku (*Aprion virescens*) in Hawaii, 2020, Panel Summary Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 6 pp.
 29. Franklin EC (2020) Western Pacific Stock Assessment Review: Stock Assessment of Uku (*Aprion virescens*) in Hawaii, 2020, Individual Reviewer Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 22 pp.
 28. Franklin EC (2020) Western Pacific Stock Assessment Review: Stock Assessment Update for the Main Hawaiian Islands Deep 7 Bottomfish Complex in 2021, with Catch Projections through 2025, Panel Summary Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 6 pp.
 27. Franklin EC (2020) Western Pacific Stock Assessment Review: Stock Assessment Update for the Main Hawaiian Islands Deep 7 Bottomfish Complex in 2021, with Catch Projections through 2025, Individual Reviewer Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 22 pp.
 26. Longenecker K, Langston R, Franklin EC (2020) Standard operating procedure for histology-based rapid reproductive analysis of tropical fish. Technical Report for Walton Family Foundation.
 25. Longenecker K, Franklin EC, Hill-Lewenilovo R, Lalavanua W, Langston R, Mangubhai S, Naisilisili W, Piovano S, Tomanitoakula J (2019) Histology-based estimates of reproductive size and sexual pattern for four heavily exploited Fijian reef fishes. Report to National Geographic. 15 pp.

24. Franklin EC (2018) Western Pacific Stock Assessment Review: Benchmark Review of the Stock Assessment of the Coral Reef Fishes of Guam, 2017, Consensus Panel Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 8 pp.
23. Franklin EC (2018) Western Pacific Stock Assessment Review: Benchmark Review of the Stock Assessment of the Coral Reef Fishes of Guam, 2017, Individual Reviewer Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 27 pp.
22. Grabowski TB, Franklin EC (2017) What can volunteer angler tagging data tell us about the status of the Giant Trevally (*ulua aukea*) *Caranx ignobilis* fishery in Hawaii: revisiting data collected during Hawaii's Ulua and Papio Tagging Project 2000-2016. U.S. Department of Interior, Fish and Wildlife Service, Cooperator Science Series FWS/CSS-126-2017, Washington, D.C.
21. Franklin EC (2016) Western Pacific Stock Assessment Review: Benchmark Review of the 2016 Stock Assessment of the Main Hawaiian Islands Reef-Associated Fish, Consensus Review Panel Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 26 pp.
20. Franklin EC (2016) Western Pacific Stock Assessment Review: Benchmark Review of the Stock Assessment of the Coral Reef Fishes of Guam, 2017, Individual Reviewer Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 26 pp.
19. Franklin EC (2016) Future Coral Reef Community Projections of DOI-Managed Coastal Assets in the Hawaiian Islands. Award #G13AC000395.
18. Franklin EC, Chaloupka M, Kobayashi DR (2015) WPSAR Tier 3 Panel Review of Stock Assessment Updates of the Bottomfish Management Unit Species of American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam in 2015 Using Data through 2013, Panel Summary Report. Report to Western Pacific Regional Fishery Management Council, NOAA Fisheries PIFSC, NOAA Fisheries PIRO. 15 p.
17. Franklin EC, Dow AR (2014) Annotated bibliography of scientific literature for coral reef ecosystem management unit species. Report to Western Pacific Regional Fishery Management Council. Contract 14-SFFIII-05, 461 p.
16. Brainard RE, Asher J, Blyth-Skyrme V, Coccagna EF, Dennis K, Donovan MK, Gove JM, Kenyon J, Looney EE, Miller JE, Timmers MA, Vargas-Ángel B, Vroom PS, Vetter O, Zgliczynski B, Acoba T, DesRochers A, Dunlap MJ, Franklin EC, Fisher-Pool PI, Braun CL, Richards BL, Schopmeyer SA, Schroeder RE, Toperoff A, Weijerman M, Williams I, Withall RD (2012) Coral reef ecosystem monitoring report of the Mariana Archipelago: 2003–2007. NOAA Fisheries, Pacific Islands Fisheries Science Center, PIFSC Special Publication, SP-12-01, 1019 p.
15. Ault JS, Franklin EC (2011) Fisheries resource status and management alternatives for the southeast Florida Region. Report to Florida DEP. Miami Beach, FL. Pp 105.
14. Carvahlo K, Franklin EC (2010) "Stakeholder involvement case study: Hawaiian

- Islands Humpback Whales National Marine Sanctuary" in Lindholm J, Pavia R (eds). 2010. Examples of ecosystem-based management in national marine sanctuaries: moving from theory to practice. Marine Sanctuaries Conservation Series ONMS-10-02. USDOC, NOAA, ONMS, Silver Spring, MD. 33pp.
13. Friedlander A, Aeby G, Balwani S, Bowen B, Brainard R, Clark A, Kenyon J, Maragos J, Meyer C, Vroom P, Zamzow J, DeMartini E, Franklin EC, and 19 others (2008) The State of Coral Reef Ecosystems of the Northwestern Hawaiian Islands. pp. 263-306. In Waddell JE, Clarke AM (eds.) The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008. NOAA Technical Memorandum NOS NCCOS 73. NOAA/NCCOS Center for Coastal Monitoring and Assessment's Biogeography Team. Silver Spring, MD. 569 pp.
 12. Hudson JH, Schittone J, Anderson J, Franklin EC, Stratton A. (2008) M/V Alec Owen Maitland Coral Reef Restoration Monitoring Report, Monitoring Events 2004-2007. Florida Keys National Marine Sanctuary Monroe County, Florida. Marine Sanctuaries Conservation Series NMSP-08-01. U.S. Dept. of Commerce, NOAA, NMSP, Silver Spring, MD. 34 pp.
 11. Franklin EC, Hudson JH, Anderson J, Schittone, J (2006) M/V *Jacquelyn L* Coral Reef Restoration Monitoring Report, Monitoring Events 2004-2005. Florida Keys National Sanctuary Monroe County, Florida. Marine Sanctuaries Conservation Series NMSP-06-09. USDOC, NOAA, NMSP, Silver Spring, MD. 25 pp.
 10. Schittone, J, Franklin EC, Hudson JH, Anderson J (2006) M/V *Connected* Coral Reef Restoration Monitoring Report, Monitoring Events 2004-2005. Florida Keys National Sanctuary Monroe County, Florida. Marine Sanctuaries Conservation Series NMSP-06-10. USDOC, NOAA, NMSP, Silver Spring, MD. 25 pp.
 9. Franklin EC, Hudson JH, Anderson J (2005) M/V *Wave Walker* Coral Reef Restoration Monitoring Report, Monitoring Events 2004. Florida Keys National Sanctuary Monroe County, Florida. Marine Sanctuaries Conservation Series NMSP-06-08. USDOC, NOAA, NMSP, Silver Spring, MD. 15 pp.
 8. Franklin EC (2004) Habitat-based assessment of the Florida Marine Aquaria Fishery with application to Gray Angelfish. MS thesis, Rosenstiel School of Marine and Atmospheric Science, University of Miami, Coral Gables, Florida.
 7. Ault JS, Zurcher N, Franklin EC, Smith SG, Luo J (2004) A strategy for managing marine ecological resources in Dry Tortugas National Park. Contract NPS CESU Grant No. NPS CA H5000 00 B494. 74 pp. Available from: JS Ault, University of Miami. Sponsored by National Park Service.
 6. Ault JS, Franklin EC, Smith SG (2003) Florida gray angelfish fishery stock assessment. Miami: University of Miami. Contract FFWCC-617573. 89 pp. Available from : JS Ault, University of Miami. Sponsored by Florida Fish & Wildlife Conservation Commission.
 5. Ault JS, Smith SG, Diaz G, Franklin EC (2003) Florida hogfish fishery stock assessment. Miami: University of Miami. Contract FFWCC-617573. 85 pp. Available from: JS Ault, University of Miami. Sponsored by Florida Fish & Wildlife Conservation Commission.
 4. Ault JS, Smith SG, Franklin EC, Luo J, Bohnsack JA (2003) Sampling design

- analysis for coral reef fish stock assessment in Dry Tortugas National Park. Contract NPS H5000000494-0012. 93 pp. with appendices. Available from: JS Ault, University of Miami. Sponsored by National Park Service.
3. Ault JS, Smith SG, Luo J, Meester GA, Bohnsack JA, Miller SL, Harper D, Franklin EC, Swanson DW, Chiappone M, McClellan DB, Fischel P, Schmidt T (2001) Baseline Multispecies Coral Reef Fish Stock Assessments for the Dry Tortugas. Miami: University of Miami. Contract NPS No. CA5280-00-032 and FKNMS No. NA67RJ0149. 123 pp. Available from: JS Ault, University of Miami. Sponsored by National Park Service and Florida Keys National Marine Sanctuary.
 2. [NOAA] National Oceanic and Atmospheric Administration (2000) Tortugas Ecological Reserve: Final Supplemental Environmental Impact Statement/Final Supplemental Management Plan. 315 pp.
 1. Franklin EC (1998) Battling a coral disease in the Florida Keys National Marine Sanctuary. Oceanic Resources Foundation Newsletter. Winter 1998.

CURRENT GRANTS AND CONTRACTS (\$2,816,543)

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| 2023-2025 | US National Science Foundation TIP Engines, “Advancing Climate Resilient Food Innovations (HI, USAPI)”, \$999,926, PI |
| 2023-2025 | Western Pacific Regional Fishery Management Council, “Ecosystem-based Fisheries Management Indicators for Coral Reef Fisheries of the Mariana Islands \$218,464, PI |
| 2022-2024 | National Oceanic and Atmospheric Administration, Coral Reef Conservation Program, Building Capacity and Providing Essential Data for Effective and Sustainable Management of Coral Reef Fisheries in Indonesia. \$199,684, PI |
| 2022-2024 | National Oceanic and Atmospheric Administration, National Marine Fisheries Services, Saltonstall-Kennedy Program, “Collaborative Fishing Community Assessment for Sustainable Management of the Coral Reef Fishery in the Commonwealth of the Northern Mariana Islands”, \$269,329, PI |
| 2021-2024 | US Army Corps of Engineers, “Biodiversity Nu’upia Ponds, Marine Corps Base Hawaii (MCBH) Project II”, \$184,607, PI |
| 2021-2024 | US Army Corps of Engineers, “Biodiversity Nu’upia Ponds, Marine Corps Base Hawaii (MCBH) Project I”, \$273,251, PI |
| 2019-2024 | National Oceanic and Atmospheric Administration, National Marine Fisheries Services, “Open Source ADMB Project”, \$671,282, PI |

FUNDING HISTORY (\$3,963,611 for 2012-2021)

- | | |
|-----------|--|
| 2019-2021 | Walton Family Foundation (via Tetra Tech), “Technical Fisheries Science Lead – Supplemental Technical Assistance to USAID SEA Indonesia program”, \$534,085, PI |
| 2019-2021 | Hawai‘i Division of Aquatic Resources (Coral Reef Conservation Program), “Stomach Content Analysis of Targeted Herbivorous Fishes in Hawai‘i \$49,681, PI (w/ R. Toonen) |

- 2015-2021 National Oceanic and Atmospheric Administration, National Marine Fisheries Service, “Enhancing Fisheries Science Opportunities at the University of Hawai‘i.” \$950,000, PI.
- 2017-2018 Western Pacific Regional Fishery Management Council Pacific Island Fisheries Research Program, “Trophic Models Supporting Ecosystem-Based Fisheries Management and Climate Change Planning in American Samoa”. \$60,000 PI.
- 2015-2018 US Environmental Protection Agency, “Development of Protocols to Prioritize Watersheds and Coastal Waters for Protection and Restoration in the Hawaiian Islands” \$247,963. PI (w/ P. Jokiel, K. Rodgers)
- 2014-2018 US National Science Foundation ICER, “Earthcube RCN: Coral Reef Science and Cyberinfrastructure Network (CReSCyNT)” \$299,000.00. Co-PI (w/ R. Gates (PI), M. Donahue, G. Jacobs, J. Lemus)
- 2016-2017 National Oceanic and Atmospheric Administration, National Marine Fisheries Service, “Rapid Increases in Reproductive Information for Exploited Reef Fish and Enhanced Research Capacity through Training to Support Ecosystem-Based Fisheries Management in Guam. \$68,883 PI. (JIMAR)
- 2014-2017 Harold K.L. Castle Foundation, “FISH FLOW: Following Kaneohe Bay fish from spawning to supper.” \$153,825.00. Co-PI. (w/ M. Hixon (PI), B. Bowen, M. McManus, R. Toonen. M. Donahue)
- 2013-2016 United States Geological Survey Pacific Islands Climate Science Center “Future Coral Reef Community Projections of DOI-Managed Coastal Assets in the Hawaiian Islands” \$243,630, PI
- 2013-2016 US National Science Foundation “Improved Cyberinfrastructure to Support Coral Reef Research And Education At The Hawaii Institute Of Marine Biology” \$235,777, Co-PI (w/ J. Leong (PI), R. Gates, G. Jacobs)
- 2014-2015 National Oceanic and Atmospheric Administration, National Marine Fisheries Service, “Marine Invasive Species and Vector Pathways of the Pacific Marine National Monuments” \$89,998.00. PI.
- 2010- 2015 National Oceanic and Atmospheric Administration, National Marine Fisheries Service, “Marine Fisheries Scientist at HIMB.” \$1,150,000, Co-PI. (w/ J. Leong (PI)).
- 2014 Western Pacific Regional Fisheries Management Council, PHASE 1: Delineation of Essential Fish Habitat (EFH) for Coral Reef Ecosystem Management Unit Species in the Hawaiian Island Archipelago. \$50,000, PI
- 2013-2014 National Oceanic and Atmospheric Administration Coral Reef Conservation Program (2013-2014) Hawaiian Coral Reef and Coastal Ecosystem Services Trade-Off Tool” \$68,552, Co-PI (w/ PI K. Oleson)
- 2012-2013 UH Seagrant, (2012-2013) ”Using Next-Generation Genomics to Develop a Cost-Effective Sex Ratio Assay in ‘Hawai’i’s Living Seawall’- Lobe Coral (*Porites lobata*), \$10,000, Co-PI (w/ PI R. Toonen)
- 2010-2013 US National Science Foundation, Comparative Assessment of Marine Ecosystems (CAMEO) (2010-2013) “Multiscale models of Hawaii’s coral reef communities” \$364,540, Co-I (w/ PI M. Donahue, P. Jokiel)

- 2010-2012 US Environmental Protection Agency. (2010-2012) “Ecoinformatics for Coral Reefs” \$111,000, PI
- 2009-2013 Pauley Foundation, (2009-2012) “Edwin Pauley Summer Marine Biology Program” \$75,000, co-PI (w/ R. Gates (PI), J. Lemus)
- 2008-2009 Hawaii State Department of Land and Natural Resources, Climate Change and Disease LAS Program. (2008-2009) “GIS Database Development and Web-Based Visualization of Spatial Patterns of Coral Bleaching and Disease Throughout the Hawaiian Archipelago” \$24,018, PI (w/ G. Aeby)
- 2008-2009 US Department of Commerce, NOAA, PIFSC/CRED. (2008-2009) “Database Design of Macroinvertebrate Survey Data and Ecosystem Integration Analysis”. \$59,322, Co-PI (w/ J. Leong)
- 2007-2008 Hawaii State Department of Land and Natural Resources, Fisheries LAS Program. Comparative Life History of Hawaiian Reef Fishes: An Archipelago Wide Survey of Age and Growth in U’u *Myripristis berndti* and ‘Aweoweo *Priacanthus meeki* “ \$27,031, Co-PI (w/ M. Craig)
- 2007 University of Hawaii Maui High Performance Computing Center (2007) “Quantification and Comparison of Patch, Class, and Seascape Scale Metrics for the Shallow Coral Reefs of the Northwestern Hawaiian Islands” \$2,000, Co-PI (w/ P. Jokiel)
- 2006 US Department of Commerce, NOAA IDEA Center Pacific Regional Integrated Data Enterprise “Integration of Biological Data and Visualization Tools for the Northwestern Hawaiian Islands” \$75,000, Co-PI (w/ J. Leong (PI), M. Chow)
- 2005 NOAA, FKNMS. (2005) “Assess the GIS capabilities of the [SE NMS] Region” \$9,000, PI
- 2004-2005 NOAA, FKNMS. (2004-2005) “Special Studies & Analysis – [Coral Restoration] Vessel Monitoring [in the FKNMS]” \$98,000, PI

PRESENTATIONS

- 40. Sex and death in the ocean: A fish tale. 5th Pacific Island Universities Regional Network Conference, Rarotonga, Cook Islands, July 5, 2023.
- 39. Preliminary findings of Western Pacific Stock Assessment Review of Nadon et al. Stock Assessment of American Samoa Bottomfishes, 2023. 147th Western Pacific Regional Fishery Management Council Scientific and Statistical Meeting. Honolulu, HI, March 14, 2023.
- 38. Model-based Uku (*Aprion virescens*) Essential Fish Habitat in Main Hawaiian Islands. Western Pacific Regional Fishery Management Council 141 SSC Meeting, online September 13, 2021 (talk)
- 37. Ensuring high scientific standards: Peer review of stock assessments in the U.S. Western Pacific region. USAID SEA Indonesia Virtual Symposium Series 2000, online, November 3, 2020 (talk)
- 36. Are life history traits of mesopelagic fish stable? An examination of reproductive traits of a lanternfish in the Central Pacific Ocean. Ocean Sciences Meeting, San Diego, CA, February 21, 2020 (talk)
- 35. Pattern recognition and ocean ecosystem characterization for marine macro-

- organisms: Using Fish-i semi-automate fish species identification, size estimation, and counts from stereo-video footage using convolutional neural networks.
NOAA Emerging Technology Workshop, June 26, 2019 (talk)
34. Potential contributions to NOAA-HIMB partnership by Franklin Lab, NOAA Fisheries PIRO & PIFSC, April 17, 2019 (talk)
 33. Estimating demographic parameters of odontocetes associated with the main Hawaiian Islands and known to interact with fisheries. NOAA Cooperative Research Program Meeting, August 9, 2017, Honolulu, HI (talk)
 32. Integrated Landscape Indicators to Evaluate the Condition of “Ridge to Reef” Systems and Prioritize Hawaiian Watersheds. 2017 Hawaii Conservation Conference, July 17, 2017, Honolulu, HI (talk).
 31. Quantitative and Geospatial Methods for Coral Reef Ecology, Fisheries Assessment, and Climate Change, UH Department of Biology Lecture Series, Nov 13, 2015, Honolulu, HI (talk)
 30. Biogeography and Geomatics of Tropical Marine Ecosystems: Incorporating Geographic Approaches to Coral Reef Ecology, Fisheries Assessment, and Climate Change Science”, UH Department of Geography Lecture Series, Oct 1, 2015, Honolulu, HI (talk)
 29. Turning Data Poor into Ecosystem Rich: A Metacommunity Approach to Test Spatial Harvest Strategies for “Data Poor” Hawaiian Coral Reef Fisheries, Aug 18, 2015, Portland, OR (talk)
 28. Hawaii Coral Reef Community Dynamics Under Future Climate Scenarios, USGS PICSC Symposium, Feb 26-27, 2015, Honolulu, HI (talk)
 27. Admiring the Seascape: A Regional-scale Perspective of Hawaiian Coral Reef Community Dynamics Using Satellites, Statistics and Supercomputers, Hanauma Bay Nature Preserve. October 26, 2014 (talk)
 26. Species distribution models for archipelago-scale analysis of Hawaiian corals. Ecological Society of America Meeting, August 6-10, 2012 Portland, OR (talk).
 25. Species distribution models for macroecological studies of Hawaiian corals. 12th International Coral Reef Symposium, July 9-13, 2012 Cairns, Australia (talk).
 24. Spatially-explicit predictive modeling of corals in the Hawaiian. 37th Tester Symposium, March 14-16, 2012 UH Manoa, Honolulu, HI (talk).
 23. Ecological niches and geographic distributions of Hawaiian corals. USGS Pacific Coastal and Marine Science Center, Santa Cruz, California March 9, 2012. (invited talk)
 22. Rapid Development of a Hybrid Web Application for Synthesis Science of Symbiodinium with Google Apps. Environmental Information Management Conference 2011, Sept. 28-29, 2011, UCSB, California, (presentation)
 21. Coral species distribution models: a foundation for climate change studies and marine spatial planning. Sept. 19-20, 2011, EPA STAR Conference, Georgetown University, Washington, DC. (poster)
 20. Spatially-explicit predictive modeling of coral species distributions in the Hawaiian Islands. Euro ISRS 2010, December 12-17, 2010, Wageningen, The Netherlands (poster)
 19. A Knowledge Management System for the Kaneohe Bay Ecosystem. HCPO/HIGICC

- Annual Conference, September 23-25, 2009, Sheraton Waikiki, Honolulu, HI (presentation).
18. Geospatial technologies and data analysis. Northwestern Hawaiian Islands Joint Symposium & Semi-Annual Meeting, November 13-14, 2008, Windward Community College, Kaneohe, HI (presentation).
 17. MPA planning for the HIHWNMS with Marxan: A brief overview of the software with examples from the tropical Pacific Ocean. Class lecture for UH-Manoa, OEST 699, The role of marine protected areas in ecosystem-based management, September 24, 2008, Honolulu, HI (presentation).
 16. Life history of Hawaiian redfish and Northwestern Hawaiian Islands specimens. Fisheries Local Action Strategy Symposium, September 19, 2008, State of Hawaii Division of Aquatic Resources, Honolulu, HI (presentation).
 15. Northwestern Hawaiian Islands coral reef research partnership: Management and visualization of ecological data collected in the NWHI. Hawaii Conservation Conference, July 29-31, 2008, Honolulu, HI (presentation).
 14. Intro to GIS. Seminar at Hawaii Institute of Marine Biology. July 18, 2008, Kaneohe, HI (presentation).
 13. Northwestern Hawaiian Islands coral reef research partnership: Geospatial technologies and data analysis. NWHI Coral Reef Research Partnership Biannual Meeting, May 2, 2008, Hawaii Institute of Marine Biology, Kaneohe, HI (presentation).
 12. Pin cushions of the sea: Ecology of urchins in the Northwestern Hawaiian Islands. Hanauma Bay Educational Lecture Series, March 13, 2008, Honolulu, HI (presentation).
 11. Northwestern Hawaiian Islands coral reef research partnership: Ocean mapping, ecosystem threats, and information management. Pacific Region Integrated Data Enterprise Workshop, October 16-18, 2007, Honolulu, HI (presentation).
 10. Integration of biological data and visualization tools for the Northwestern Hawaiian Islands. Pacific Region Integrated Data Enterprise Workshop, October 16-18, 2007, Honolulu, HI (poster).
 9. Life history of coral reef fishes of the NWHI. Hawaii Reef Fish Life History Workshop, May 4, 2007, UH-Hilo, Hilo, HI (presentation).
 8. Geospatial technologies and data analysis. Northwestern Hawaiian Islands Joint Symposium & Semi-Annual Meeting, February 6-7, 2007, Honolulu, HI (presentation).
 7. Introduction to GIS. Seminar at Hawaii Institute of Marine Biology, November 8, 2006, Kaneohe, HI (presentation).
 6. Developing a monitoring program for restored coral reefs in the Florida Keys National Marine Sanctuary. 2nd National Conference on Coastal & Estuarine Habitat Restoration, September 12-15, 2004, Seattle, Washington (presentation).
 5. Marine protected areas in South Florida: Examples of design and evaluation involving GIS. Coastal GeoTools 2003, January 6-9, 2003, Charleston, South Carolina (presentation).
 4. Lessons learned from planning a marine protected area: Bring your GIS. 5th Annual Society for Conservation GIS Conference, July 5-7, 2002, Borrego Springs, CA (presentation).

3. Remote sensing, GIS, and design-based sampling surveys to characterize coral reefs of the Dry Tortugas, USA. Seventh International Conference on Remote Sensing for Marine and Coastal Environments 2002, May 22-24, 2002, Miami, Florida (poster).
2. The role of GIS in planning a marine ecological reserve in the Florida Keys National Marine Sanctuary, USA. Coastal GeoTools 2001, January 8-11, 2001, Charleston, South Carolina (poster).
1. Assessment of anthropogenic impacts to benthic habitats in the Florida Keys National Marine Sanctuary: Managing a vessel grounding database. Scientific Aspects of Coral Reef Assessment, Monitoring, and Restoration, April 14-16, Fort Lauderdale, FL (poster).

HONORS & AWARDS

US EPA STAR PhD Fellowship, Ecoinformatics (2010-2012)
 HI Geographic Information Coordinating Council Lierman Scholarship (2012)
 University of Miami Graduate School Award of Academic Merit (2004)
 University of Miami Graduate School Academic Council (2003)
 International Light Tackle Tournament Association Fellowship (2001)
 ESRI User Conference Student Assistantship (2001)
 University of California Education Abroad Program Scholarship (1995)
 Provost's Honors, Roosevelt College, University of California, San Diego (1995)
 Fifth College Leadership Award, University of California, San Diego (1993)

TEACHING

POST-DOCTORAL RESEARCHERS MENTORED (n = 2)

2017-2018 Mark W. Miller, PhD
 2016-2018 Iain R. Caldwell, PhD

GRADUATE STUDENTS MENTORED (n = 11)

2023-pres. Spencer Davis, Ph.D. candidate, UHM Marine Biology
 2019-2023 Keena Leon-Guerrero, M.S., UHM Marine Biology
 2017-2019 Noam Altman-Kurosaki, M.S., UHM Marine Biology
 2015-2019 Zack Oyafuso, Ph.D., UHM Marine Biology
 2015-2019 Ryan Nichols, M.S., UHM Marine Biology
 2016-2018 Anela Akiona, M.S., UHM Marine Biology
 2014-2020 Yvonne Barkley, Ph.D., UHM Marine Biology
 2014-2016 Maia Kapur, M.S., UHM Marine Biology
 2014-2016 Morgan Winston, M.S., UHM Marine Biology
 2013-2016 Katie Lubarsky, M.S., UHM Marine Biology (co-advised w/ M. Donahue)
 2013-2015 Zack Oyafuso, M.S., UHM Marine Biology

Fellowships for Mentored Graduate Students: 3 NSF GRFPs, 1 NMFS/SeaGrant Population Dynamics Fellowship, 1 Hauoli Mau Loa Fellowship, 1 WPRFMC US Pacific Territories Fishery Capacity-Building Scholarship

GRADUATE STUDENT COMMITTEES (n = 17)

2021-pres.	Hannah von Hammerstein, Ph.D. candidate, UHM Geography and Envir.
2019-pres.	Danielle Bartz, Ph.D. candidate, UHM Marine Biology
2019-pres.	Leon Tran, M.S. candidate, UHM Marine Biology
2019-pres.	Renee Setter, Ph.D. candidate, UHM Geography and Environment
2016-pres.	Erik Brush, Ph.D. candidate, UHM Zoology
2014-pres.	Rollan Geronimo, Ph.D. candidate, UHM Geography
2014-pres.	Farrah Powell, M.S. candidate, UHM Geography
2013-pres.	Christine Runyon, Ph.D. candidate, UHM Marine Biology
2020	Sean Dimoff, M.S., University of Victoria, Canada (external examiner)
2019-2020	Renee Setter, M.S., UHM Geography and Environment
2019-2021	Ross Winans, M.S., UHM Geography and Environment
2014-2019	Stephen Scherrer, Ph.D., UHM Marine Biology
2017-2019	Trevor Johannsen, M.S., UHM Marine Biology
2016-2018	Alisha Gill, M.S., University of Guam Biology
2013-2018	Chelsie Counsell, Ph.D., UHM Marine Biology
2014-2018	Lindsay Veazey Ph.D., UHM Zoology
2013-2016	Garrett Johnson, M.S., UHM Marine Biology

UNDERGRADUATE STUDENTS MENTORED (n = 11)

2023	Madeleine Platt, Dalhousie University (summer)
2018-2020	Richard Chen, UHM Marine Biology
2018-2019	Shelby Eisenberg, UH Windward CC
2018-2019	John Mitchell, UH Windward CC
2016-2017	Jonathan Napier, UHM Marine Biology
2014-2015	Alyza Dietzel, UHM Marine Biology
2014-2015	Taylor Whitman, UHM Marine Biology
2014-2015	Tate Wester, UHM Marine Biology
2014	Ryan Sirota, UHM Marine Biology
2014	Calder Atta, Boston University (summer)
2013	Hulali Kinilau, Chaminade University (summer)

COURSES

Co-Instructor for “Jungle Histology” laboratory course for histology-based reproductive analysis of Indo-Pacific reef fish species for students and fishery professionals

Jul-Aug 2021 Pattimura University, Ambon, Indonesia, 8 participants

Jan-Feb 2021 USAID SEA Indonesia STA project, 538 online participants

June 2018 University of South Pacific, Suva, Fiji, 12 participants

Nov 2017 Department of Marine and Wildlife Resources, Amer. Samoa, 15 participants

June 2017 University of Guam Marine Laboratory, Guam, 13 participants

University of Hawaii at Manoa:

Semester	Course	Title	Credits	#Students
FA23	MBIO699	Directed Research	6	1
SP23	MBIO700	Thesis Research	1	1
FA22	MBIO700	Thesis Research	1	1
FA21	MBIO700	Thesis Research	8	1

SP21	MBIO700	Thesis Research	5	1
FA20	MBIO800	Dissertation Research	1	1
FA20	MBIO699	Directed Research	5	1
SP20	MBIO800	Dissertation Research	1	1
FA19	MBIO699	Directed Research	4	1
FA19	MBIO800	Dissertation Research	2	2
SU19	MBIO800	Dissertation Research	4	1
SP19	MBIO699	Directed Research	1	1
SP19	MBIO700	Thesis Research	9	2
SP19	MBIO800	Dissertation Research	1	1
SP19	OCN499	Undergraduate Thesis	3	1
FA18	MBIO699	Directed Research	18	3
FA18	MBIO700	Thesis Research	3	2
SU18	MBIO699	Directed Research	2	1
SU18	MBIO700	Thesis Research	6	1
SP18	MBIO611	Introduction to Quantitative Methods in Fisheries Science	4	5
SP18	MBIO699	Directed Research	12	2
SP18	MBIO700	Thesis Research	1	1
FA17	MBIO699	Directed Research	21	4
FA17	MBIO700	Thesis Research	1	1
SU17	MBIO699	Directed Research	4	1
SP17	MBIO710	Topics in Marine Fisheries and Natural Resource Management (Mark-Recapture Methods)	1-3 (9 total)	4
FA16	MBIO699	Directed Research	5	3
SP16	MBIO699	Directed Research	3	1
SP16	MBIO700	Thesis Research	12	2
SP16	MBIO710	Topics in Marine Fisheries and Natural Resource Management (Data Visualization)	1-3 (7 total)	3
FA15	MBIO699	Directed Research	11	4
SP15	BIOL499	Biological Problems	6	2
SP15	MBIO700	Thesis Research	6	1
SP15	MBIO710	Topics in Marine Fisheries and Natural Resource Management (Fisheries Science)	1-3 (12 total)	6
SP15	OCN499	Undergraduate Thesis	1	1
FA14	MBIO611	Introduction to Quantitative Methods in Fisheries Science	4	10
FA14	MBIO699	Directed Research	9	2
SP14	ZOOL739	Topics in Ecology: Ecosystem Approaches to Fisheries	1-2 (total 6)	5
FA13	ZOOL739	Topics in Ecology: Ecosystem Approaches to Fisheries	1-3 (total 15)	12

note: Directed Research and Thesis Research credits are total for all students

INVITED COURSE LECTURER

2013-2023	ZOOL410, Corals and Coral Reefs (U)
2013	MBIO602, Marine Biology-Processes and Impacts (G)
2013	Marine Conservation Biology and Policy (G)
2010	Wildlife Ecology and Management (U)
2009	Role of MPAs in Ecosystem Based Management (G)
2008	Field Problems Marine Biology (U)
2006	Marine Biology Laboratory (U)

University of California, San Diego

1996	Teaching Assistant, Ecology Laboratory (U)
1995	Teaching Assistant, Organismic and Evolutionary Biology (U)

Note: U = undergraduate course, G = graduate course

SERVICE

TECHNICIANS SUPERVISED (n = 5)

2019-2022	Johnnoel Ancheta
2019-2020	Kenneth Longenecker, PhD
2015-2016	Anela Akiona
2014-2015	Frank Mancini
2013-2014	Allegra Dow

UNIVERSITY AND COMMUNITY SERVICE

Faculty, NOAA Quantitative Ecology and Socioeconomics Training program, faculty member based at the University of Hawaii at Manoa, one of multiple faculty positions funded nationally at various universities to train students in quantitative fishery science), performed research in quantitative marine ecology and fishery science, mentored graduate and undergraduate students, developed and offered courses in fishery science, collaborated with NOAA PIFSC, provided national-level service through WPRFMC SSC and national SSC meetings, 2013-pres.

Reviewer: manuscripts for Proceedings of Royal Society B, Scientific Reports, Diversity and Distributions, MDPI Diversity, Global Change Biology, Restoration Ecology, Coral Reefs, Environmental Biology of Fishes, Environmental Conservation, Ecosphere, Global Ecology and Biogeography, Molecular Ecology Resources, PLoS ONE, Progress in Oceanography, Biological Conservation, Estuarine, Coastal and Shelf Science, Polar Research, Fisheries, International J. of Digital Earth, Marine Geodesy, Caribbean Journal of Marine Science, Marine Technology, ESRI Press; funding proposals for NOAA MARFIN, NOAA Saltonstall Kennedy, Great Lakes Fishery Commission, NOAA National Undersea Research Center, NOAA Coral Reef Conservation Program

Chair, WPSAR Panel: American Samoa Bottomfish Stock Assessment Review, Feb 2023

Chair, WPSAR Panel: US Pacific Islands Territorial Bottomfish Stock Assessment Update Review, Dec 2020

Chair, WPSAR Panel: Hawaii Uku Stock Assessment Review, Feb 2020

Member, HIMB Boating Safety Committee, May 2020-present

Chair, WPSAR Panel: Guam Coral Reef Fish Stock Assessments Review, Feb 2018
Chair, WPSAR Panel: Hawaii Coral Reef Fish Stock Assessments Review, Aug 2016
Chair, UHM SOEST GES Undergraduate Marine Track Committee Dec 2015
Chair, WPSAR Panel: US Pacific Islands Territorial Bottomfish Stock Assessment
Update Review, Aug 2015
Member, Presentation to Site Selection Committee for Hawaii NERRS Heeia Estuary
candidate site, Aug 2013
Member, Ad Hoc Education Committee, Western Pacific Regional Fisheries
Management Council, July 2013-present
Member, Ad Hoc Reef Fish ACL Committee, Western Pacific Regional Fisheries
Management Council, spring 2013-present
Member, Scientific and Statistical Committee, Western Pacific Regional Fisheries
Management Council, Feb 2013-present
Group Leader, GIS Day, lead groups of elementary school children for geography
and GIS educational activities. Bishop Museum, Honolulu, HI, 2011-2012
Planning Committee, EPA STAR Graduate Fellows Conference 2011, Washington, DC
Invited Participant, NCEAS Workshop “Tropical coral reefs of the future”, 2010-2011
Steering Committee, International Ocean Observing System (IOOS) Biological Data
Project, Pacific Region to develop a community data schema and metadata
standard for reef survey data collection, 2009-2011
Steering Committee, Euro ISRS 2010, Wageningen, Netherlands, Dec 13-17, 2010
Invited Participant, NIMBioS Investigative Workshop “Modeling sustainability of coral
reef ecosystem services under multiple interacting stressors”, July 21-23, 2010
Committee Member, Search for HIMB IT Specialist, 2010
Lead Faculty, established Hawaii Institute of Marine Biology Community on the
Scholarspace at UH, Manoa Library Digital Repository website, 2009-2010
Faculty Reviewer, UH-Manoa ASUH Undergraduate Partial Tuition Award, 2009-2010
Lead Faculty (with Gates and Lemus), HIMB Edwin W. Pauley Summer Program in
Marine Biology, 2009
Curricular material development: Member of team that developed curriculum guide
under National Center for Ecological Analysis and Synthesis (NCEAS)
Distributed Graduate Course “Role of MPAs in Ecosystem-Based Management”
UH-Manoa course OEST699, 2009
Invited Participant, NCEAS Distributed Graduate Workshop “Role of MPAs in
Ecosystem-Based Management”, April 4-9, 2009
NSF Cyberinfrastructure Summer Institute for Geoscientists, August 11-15, 2008
NSF EPSCoR Cyberinfrastructure Workshop, November 6, 2007
Committee Member, Search for HIMB IT Specialist, December 2006
Member, American Fisheries Society, Ecological Society of America, International
Society for Reef Studies, Society for Conservation GIS