

Richard R. Coleman

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EDUCATION

- In progress* Ph.D candidate, Zoology; Specialization in Ecology, Evolution, and Conservation Biology
University of Hawai'i at Mānoa, Honolulu, HI
Graduate Advisor: Brian W. Bowen, Ph.D
- 2010 B.S., Biology, Concentration: Marine Biology and Limnology
San Francisco State University, San Francisco, CA
- 2006 A.S., Biology (with Honors)
Sacramento City College, Sacramento, CA

PEER-REVIEWED PUBLICATIONS

8. Selkoe KA, Trembl EA, Wren JLK, Gaggiotti OE, Donovan M, Andrews K, Bernal MA, Bird C, Bolick H, Baums I, Bowen BW, **Coleman RR**, *et al.* (2016) Community genetics of Hawaiian reefs reflect habitat, history, thermal stress and ecology. *Proceedings of the Royal Society of London B: Biological Sciences* 283: 20160354
7. **Coleman RR**, Eble JA, DiBattista JD, Rocha LA, Randall JE, Berumen ML, Bowen BW (2016) Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions between the Red Sea, Indian Ocean, and Pacific Ocean. *Molecular Phylogenetics and Evolution*. 100: 243-253.
6. Ahti AP, **Coleman RR**, DiBattista JD, Berumen ML, Rocha LA, Bowen BW. (2016) Phylogeography of the wrasses *Coris gaimard* and *C. cuvieri* in the Red Sea, Indian Ocean and Pacific Ocean. *Journal of Biogeography*. 43:1103-1115
5. Bridge, TCL, Luiz, OJ, **Coleman, RR**, Kane, C, Kosaki, R. (2016) Ecological and morphological traits predict depth-generalist fishes on coral reefs. *Proceedings of the Royal Society of London B: Biological Sciences* 283: 20152332
4. Fernandez-Silva I., Randall JE, **Coleman RR**, DiBattista JD, Rocha LA, Reimer JD, Meyer CG, Bowen BW. (2015). Yellow tails in a Red Sea: Phylogeography of the Indo-Pacific goatfish *Mulloidichthys flavolineatus* reveals isolation in peripheral biogeographical provinces and a cryptic evolutionary lineage in the Red Sea that persisted through glacial cycles. *Journal of Biogeography*. 42: 2402-2413
3. Gaither MR, Bernal MA, **Coleman RR**, Bowen BW, Jones SA, Simison B, Rocha LA (2015) Genomic evidence for ecological speciation in a coral reef fish. *Molecular Ecology*. 24: 1543-1557
2. **Coleman RR**, Gaither MR, Kimokeo B, Stanton FG, Bowen BW, Toonen RJ. (2014) Large-scale introduction of the Indo-Pacific damselfish *Abudefduf vaigiensis* into Hawai'i promotes genetic swamping of the endemic congener *A. abdominalis*. *Molecular Ecology* 23: 5552-5565
1. Selkoe KM, Gaggiotti OE, Andrews K, Bernal MA, Bird C, Bolick H, Baums I, **Coleman RR**, *et al.* (2014) Emergent patterns of population genetic structure for a coral reef community. *Molecular Ecology*. 23: 3064-3079

SUBMITTED AND IN PREP

Sheikh RM, **Coleman RR**, Gaither MR, Ali QM, Rigby MC, Shaharom-Harrison FM. A new species of *Spirocamallanus* (Nematoda: Camallanidae) from Siganid fishes (Perciformes: Siganidae) in Malaysia. *Submitted*

Coleman RR, Copus JM. Assemblages shift in coral reef fishes along a depth gradient in Pohnpei, Micronesia. *In prep*

Fernandez-Silva, I, Coleman, RR, Knapp I, Bowen, BW. Genetic connectivity studies in support of a traditional fishery in Hawaii: The goatfishes *Mulloidichthys flavolineatus* and *M. vanicolensis* reveals contrasting patterns. *In prep*

GRANTS AND AWARDS

2017	DeLill Nasser Award (Genetics Society of America)	\$1,000
2017	2017 Sarah Ann Martin Award in Biology (ARCS Scholar Foundation, Honolulu Chapter)	\$5,000
2016	The Colonel Willys E. Lord DVM & Sandina L. Lord Endowed Scholarship	\$3,000
2016	41 st Albert L. Tester Symposium, Best Paper – Honorable Mention	
2015	University of Hawai‘i , Graduate Student Organization Research and Travel Award	\$463
2015	Sackler Colloquia Travel Award	\$450
2015	UH Sea Grant (to PI B. Bowen, writing led by R. Coleman)	\$79,240
2015	Dr. Nancy Foster Scholarship, Office of National Marine Sanctuaries (NOAA)	\$196,000
2013	Watson T. Yoshimoto Scholarship	\$1,839
2013	University of Hawai‘i Graduate Student Organization Research Travel Award	\$1,423
2011	NSF Graduate Research Fellowship Program (GRFP), 2011-2016	\$121,500
2011	Smithsonian Institution Fellowship Program	\$8,100
2008	NSF Undergraduate Biology Math Collaboration (UBM) Fellowship, 2008-2010	\$44,000
2010	Undergraduate Diversity at 2010 Evolution conference provided by NESCent	\$815
2010	2010 Benthic Ecology Meeting, Best Undergraduate Presentation – Poster Presentation	
2008	NSF Research Experience for Undergraduates	\$4,500
2008	Bay Scholarship	\$500
2008	Instructionally Related Activities SFSU COSE Grant	\$260

PROFESSIONAL EXPERIENCE

2015-2019	Dr. Nancy Foster Scholar , Office of National Marine Sanctuaries (NOAA) Supervisor: Brian Bowen, Ph.D, Hawai‘i Institute of Marine Biology
2015	Graduate Research Assistant , Castle Foundation Supervisor: Mark Hixon, Ph.D, University of Hawai‘i at Mānoa - <i>Fine scale connectivity of Kāne‘ohe Bay recreational fisheries</i>
2013-2015	At-Large Representative , Graduate Student Organization University of Hawai‘i at Mānoa
2013-2014	Executive-at-Large, Oahu campuses , UH Student Caucus University of Hawai‘i System
2011-2016	NSF Graduate Research Fellow , NSF Graduate Research Fellowship Program Supervisor: Brian Bowen, Ph.D, Hawai‘i Institute of Marine Biology
2011-2012	General Assembly Member, Zoology Department , Graduate Student Organization University of Hawai‘i at Mānoa
2011	Smithsonian Fellow , Smithsonian Institution Supervisor: Lynne Parenti, Ph.D, National Museum of Natural History

- *DNA extraction and PCR amplification of spirit preserved specimens*
- 2010 **Research Technician**, Romberg Tiburon Center for Environmental Studies
San Francisco State University
Supervisor: C. Sarah Cohen, Ph.D
- *Genotyping of invasive ascidians: Botryllus spp., Botrylloides spp. Didemnum vixellum*
- 2008-2010 **NSF UBM Fellow**, Romberg Tiburon Center for Environmental Studies
San Francisco State University
Supervisor: C. Sarah Cohen, Ph.D
- 2008 **NSF Research Experience for Undergraduates**, Romberg Tiburon Center for Environmental Studies, San Francisco State University
Supervisor: C. Sarah Cohen, Ph.D
- *Population genetics and phylogenetics of the brooding seastar, Leptasterias spp.*

FIELD EXPEDITIONS

- 2017 *Kiritimati (Christmas Island), Kiribati*
Chief Scientist: Brian Bowen, Hawaii Institute of Marine Biology
Collection of specimens as part of a study investigating the origins of Hawaiian reef fishes.
7 days.
- 2015 *Papahānaumokuākea Marine National Monument*
Chief Scientist: Randall Kosaki, NOAA National Marine Sanctuaries
Collection of specimens and survey of seamounts at mesophotic depths (76-92 m; 250-300').
28 days at sea
Kimbe Bay, Papua New Guinea.
PI: Tom Bridge, James Cook University
Coral surveys along a depth gradient (5-45m); Specimen collections. 30 days
- 2014 *Pohnpei, Federated States of Micronesia.*
PIs: Brian W. Bowen, University of Hawaii; Richard Pyle, Bishop Museum
Coral surveys along a depth gradient (5-60m); Specimen collections. 22 days
- 2013 *Philippines Biodiversity Expedition*
PI: Brian W. Bowen, Hawaii Institute of Marine Biology
Collection of shallow and mesophotic reef fish as part of an ongoing genetic connectivity study.
Our team collected over 1000 specimens representing over 200 species. 19 days

Papahānaumokuākea Marine National Monument and Johnston Atoll
Chief Scientist: Randall Kosaki, NOAA National Marine Sanctuaries
Collection of shallow and mesophotic reef fish as part of an ongoing genetic connectivity study about the NOAA R/V Hi'ialakai; Islands visited: Nihoa, Laysan, French Frigate Shoals, and Johnston Atoll. Our team collected over 1000 specimens representing over 80 species. 26 days at sea

Red Sea Biodiversity Cruise, Saudi Arabia
PI: Michael L. Berumen, King Abdullah University of Science and Technology (KAUST)
Census of the marine biodiversity of the Red Sea; Locations visited: Thuwal, Al Lith, Farasan Island, South Farasan Banks. Collected specimens representing over 100 fish species. 12 days at sea
- 2012 *Pacific Region, Johnston Atoll, the Phoenix Islands, and America Samoa*
NOAA Coral Reef Ecosystem Division (CRED) Cruise.
Chief Scientist: Jill Zamzow (Leg I), Bernardo Angel-Vargas (Leg II-IV)

International expedition aboard the NOAA R/V Hi'ialakai conducting over 35 coral surveys. Locations visited: Johnston Atoll, Howland Island, Baker Island, Swains Island and American Samoa. 28 days at sea

TEACHING EXPERIENCE

- 2017 **Guest Lecture.** Biol 403 Field Problems in Marine Biology
University of Hawaii, Manoa, Honolulu, HI
- 2014 **Teaching Assistant.** Biol 265 Lab: Ecology and Evolution
University of Hawaii, Manoa, Honolulu, HI
- 2009 **Teaching Assistant.** Biol 585/586: Marine Ecology Lecture/Lab
San Francisco State University, San Francisco, CA
- 2009 **Guest Lecture.** Biol 362, Field Methods in Ecology; Material and Methods in Rocky Intertidal Monitoring. *Sacramento City College, Sacramento, CA*
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PRESENTATIONS *Received presentation award

- Coleman, RR,** Kraft, D, Toonen RJ, Bowen BW. From spawning to settlement: Parentage analysis of the Convict Tang, *Acanthurus triostegus*, around Oahu. *Evolution 2017*. Portland, OR. June 2017.
- Coleman, RR,** Eble, JA, DiBattista JA, Rocha LA, Randall JE, Berumen ML, Bowen BW. Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions. *13th International Coral Reef Symposium*. Honolulu, HI. June 2016.
- ***Coleman, RR,** Eble, JA, DiBattista JA, Rocha LA, Randall JE, Berumen ML, Bowen BW. Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions. *41st Albert L Tester Symposium*. Honolulu, HI. April 2016. Best Paper, Honorable Mention
- Coleman, RR,** Eble, JA, DiBattista JA, Rocha LA, Randall JE, Berumen ML, Bowen BW. Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions. *Western Society of Naturalist*. Sacramento, CA. November 2015
- Coleman, RR,** Gaither MG, Kimokeo B, Stanton FG, Bowen BW, Toonen RJ. Large-scale introduction of the Indo-Pacific damselfish *Abudefduf vaigiensis* into Hawai'i promotes genetic swamping of the endemic congener *A. abdominalis*. *3rd Asia-Pacific Coral Reef Symposium*. Kenting, Taipei. June 2014
- Coleman, RR,** Bowen. BW Investigating a low dispersal cardinalfish at the evolutionary boundary between Indian & Pacific Oceans. *Albert L. Tester Symposium 2014*. University of Hawaii, Honolulu, HI. April 2014
- Bowen, BW, Rocha LA, Copus J, **Coleman RR** et al.. Origins of Tropical Marine Biodiversity. *Philippines Bureau of Fisheries & Aquatic Resources*. Manila, Philippines. December 2013.
- Coleman, RR,** Gaither MG, Kimokeo B, Stanton FG, Bowen BW, Toonen RJ. Patterns of hybridization between an endemic (*Abudefduf abdominalis*) and a naturally introduced damselfish (*A. vaigiensis*) in the Hawaiian Archipelago. *Evolution, Ecology, and Conservation Biology Seminar*. University of Hawaii, Manoa, Honolulu, HI, November 2013.
- Coleman, RR,** Bowen BW. Phylogeography of the cardinalfish, *Pristiapogon kallopterus*. *Links between Hawai'i and Okinawa: Marine biology spanning the Pacific*. University of the Ryukyus. Okinawa, Japan. June 2013.
- Coleman, RR.,** Gaither MG, Kimokeo B, Dudoit CA, Stanton FG, Bowen BW, Toonen RJ. Hybridization between a Hawaiian endemic and a recent colonizer. *Evolution, Ecology, and Conservation Biology Seminar*, University of Hawaii, Manoa, Honolulu, HI, November 2012.
- Coleman, RR.,** Gaither MG, Kimokeo B, Dudoit CA, Stanton FG, Bowen BW, Toonen RJ. Using sequence data to evaluate hybridization between a Hawaiian endemic and introduced Indo-Pacific

Sergeant Major (*Abudefduf abdominalis* x *A. vaigiensis*). *1st Joint Congress on Evolutionary Biology*, Ottawa, Canada, July 2012. Poster

Coleman, RR., Parenti L. Extraction of DNA from spirit preserved museum specimens and its application toward future molecular studies. *Smithsonian Institution Minority Awards Program 2011*, August 2011, Washington, D.C.

***Coleman, RR.**, Cohen, CS (2010). Genetic and Morphological Variation in the Six Rayed Sea Star, *Leptasterias* spp., in Central California.

- *Evolution 2010*, Portland, OR, June 2010. Poster Presentation
- *2010 Benthic Ecology Meeting*, Wilmington, NC, March 2010. Poster Presentation, Student Poster Award – Undergraduate Poster*
- *12th Bay Area Conservation Biology Symposium*, San Francisco, CA, February 2010. Oral Presentation

Coleman, RR., Lai, AJ, Smith, AL, and Cohen, CS (2009). Are sea stars of the genus *Leptasterias* separated by habitat in the rocky intertidal of Northern California? An analysis using mitochondrial DNA and morphology.

- *34th West Coast Undergraduate Biological Science Conference* at Point Loma Nazarene University, San Diego, CA, April 2009. Poster Presentation
- *San Francisco State University Annual College of Science and Engineering Student Project Showcase*, San Francisco, CA, April 2009. Poster Presentation

INVITED TALKS

Coleman, RR. Evolutionary and contemporary patterns of connectivity and dispersal in coral reef fishes. *ARCS Foundation, Honolulu Chapter*. Honolulu, HI. April 2017.

Coleman, RR., Kraft, D, Toonen RJ, Bowen BW. From spawning to settlement: Parentage analysis of the Convict Tang, *Acanthurus triostegus*, around Oahu. *Future Leaders in Marine Science Student Research Symposium*. Honolulu, HI. February 2017.

Coleman, RR., Eble, JA, DiBattista JA, Rocha LA, Randall JE, Berumen ML, Bowen BW. Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions in the Red Sea, Indian Ocean, and Pacific Ocean. *Hawaii Pacific University, Marine Science Guest Speaker Seminar Series*. Kaneohe, HI. December 2015

Coleman, RR., Eble, JA, DiBattista JA, Rocha LA, Randall JE, Berumen ML, Bowen BW. Regal phylogeography: Range-wide survey of the marine angelfish *Pygoplites diacanthus* reveals evolutionary partitions. *California Academy of Sciences*. San Francisco, CA. November 2015

Coleman, RR., Gaither MG, Kimokeo B, Dudoit CA, Stanton FG, Bowen BW, Toonen RJ. Hybridization between a Hawaiian endemic and a recent colonizer. *9th Indo Pacific Reef Fish Conference*. Okinawa, Japan. June 2013.

MEDIA ENGAGEMENTS

2016 **Featured Scientist.** Special Issue: Graduate Education in the Ocean Sciences (2016). *Oceanography* 29(1): 88.

2016 **Guest Scientist.** Seafood Stories hosted by Fish Revolution. A 5-course dinner with sustainable seafood and discussions with scientists. <http://fishrevolution.org/>

2015 **Interview.** Alexander Deedy. “Hitching a Ride on the Great Pacific Garbage Patch” Hakai Magazine, <http://bit.ly/1NEpdsp>

2014 **Guest Blog Post.** Coleman, Richard. “Surveying the Mesophotic” Bishop Museum Current Research, <http://blog.bishopmuseum.org/research/2014/07/08/surveying-the-mesophotic/>

2010 **Interview.** “Studying the Stars of the Sea”, *BIONews*, Spring 2010, Issue 8, San Francisco, CA, http://biology.sfsu.edu/sites/default/files/Spring%202010%20Newsletter_0.pdf

OUTREACH AND PUBLIC SERVICE

- 2017 **Education.** La Holoholo *Loko Ea*, Haleiwa, HI
- 2016-2017 **Education.** La Holoholo *Paepae 'o He'eia*, Kaneohe, HI
- 2016 **Session Chair.** 13th *International Coral Reef Symposium*. Session Title: Coral reefs in extreme, compromised and marginal environments, and their role as refugia – Highly stressed, urbanized and exposed systems. Honolulu, HI
- 2016 **Volunteer.** 41st *Albert L. Tester Symposium*, University of Hawaii, Manoa. Honolulu, HI
- 2013-2015 **At-Large Representative.** University of Hawai'i, Graduate Student Organization.
- 2013-2015 **Course Evaluation Committee.** University of Hawai'i
- 2013-2015 **Campus Art Advisory Committee.** University of Hawai'i
- 2015 **Science Judge.** *Honolulu District Science and Engineering Fair*. Honolulu, HI
- 2013-2014 **Executive-at-Large, Oahu Campuses.** University of Hawai'i Student Caucus
- 2011, 2013 **Education.** Exhibit: "Science Island – The Hawai'i Institute of Marine Biology Community Education Program" *SOEST (School of Ocean and Earth Sciences) Open House*, Honolulu, HI
- 2013 **Education.** Centers for Ocean Sciences Education Excellence. *Hawaii Ocean Expo 2013*, Honolulu, HI
- 2011, 2013 **Education.** Tide pool walk. *Mililani-Mauka Elementary School*, Mililani, HI
- 2011-2012 **Graduate Student Representative.** *Department of Biology (formerly Zoology)*, University of Hawai'i, Mānoa, Honolulu, HI
- 2011 **Education.** Exhibit: "Science Island – The Hawai'i Institute of Marine Biology Community Education Program." *2011 SOEST (School of Ocean and Earth Sciences) Open House*, Honolulu, HI
- 2011, 2012 **Fund Raising.** Fund Drive, *Hawaii Public Radio*, Honolulu, HI
- 2011 **Poster Judge.** 36th *Albert L. Tester Symposium 2011*, University of Hawai'i, Mānoa, Honolulu, HI
- 2009 **Education.** Sand Crab Beach Monitoring, *Long-term Monitoring Program & Experiential Training for Students (LiMPETS)*, San Francisco, CA
- 2008, 2009 **Education.** Discovery Day, *Romberg Tiburon Center for Environmental Studies*, Tiburon, CA
- 2009 **Education.** Beach Seining. *Marin Headlands Sky Outdoor Education*, Sausalito, CA
- 2009 **Education.** 2009 Sneak Preview, *San Francisco State University*, San Francisco CA
- 2009 **Moderator.** National Ocean Science Bowl, *San Francisco State University*, San Francisco, CA

JOURNAL REVIEWER

- Annals of Aquaculture and Research (1), Bioinvasions Records (2), Coral Reefs (3), Journal of Biogeography (1), Journal of Experimental Marine Biology and Ecology (1), Marine & Freshwater Research (1), Molecular Ecology (2), Molecular Phylogenetics and Evolution (2), PLOS ONE (2), Reviews of Fish Biology and Fisheries (1), Royal Society Open Science (1), Zootaxa (1)

GRANT REVIEWER

- National Fish and Wildlife Foundation (2016)

RESEARCH SKILLS

- RAD Sequencing library preparation, ezRAD
- Polymerase chain reaction (PCR), gel electrophoresis, cycle sequencing
- DNA Extractions: methods include Phenol/Chloroform, Chelex, HotSHOT, extraction kits (Omega, Qiagen), spirit preserved tissue
- Applied Biosystems 3130 Genetic Analyzer, loading and maintenance

- Software programs:
DNA: Bioedit, Geneious, Sequencher
Genetic Analyses: Arlequin, BEAST, DnaSP, FSTAT, GenePop, Hybridlab, IMA2, jModeltest, MEGA, MrBayes, Network, NewHybrid, PAUP*, PhyML, STRUCTURE
Statistics: Minitab, SPSS, Primer, PERMANOVA+
Editing: Adobe Illustrator, Adobe Photoshop
- Organism Identification: Pacific Ocean reef fish (experience in Hawai‘i, Philippines, Micronesia) and Pacific Northwest intertidal invertebrate (experience in California).

DIVING RELATED CERTIFICATIONS

- University of Hawaii Scientific Diver, 2011
 - More than 300 logged dives; over 100 Closed-Circuit Rebreather dives
 - 300' (91 m) depth authorization; Deepest logged dive: 321' (98 m)
 - Endorsements: Enriched Air Nitrox, Dive Computer, Bluewater/Open Ocean Diving, Closed-Circuit Rebreather (APD Inspiration Vision), Staged Decompression Diving, Technical Nitrox, Trimix Diving
 - Additional Pertinent Training: Bloodborne Pathogens (DAN); Hazardous Marine Life First Aid (DAN)
- TDI Evolution Advanced Mixed Gas (#612094), 2014
- TDI Inspiration/Evolution Air Diluent Closed-Circuit Rebreather Diver (#487076), 2012
- NAUI Master Diver (#cole42780ricmsd), Enriched Air Nitrox (EANx), SCUBA Rescue Diver, 2011
- PADI Open Water Diver, 2004
- CPR, First Aid, AED, as of 02/2015 (DAN)
- Boat U.S Foundation's Boating Safety Course: Hawaii, 05/2015

REFERENCES

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