

Emilie J. Richards

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EDUCATION

- 2016-current **PhD. Biology**, University of California Berkeley
Advisor: Christopher H Martin
- 2013-2016 **M.S. Zoology**, University of Hawai'i at Manoa
Advisor: Robert C Thomson
- 2009-2013 **B.S. Marine Biology**, University of Hawai'i at Manoa
Advisor: David B Carlon

PUBLICATIONS

- 2021 **Richards E**, McGirr J, Wang J, St. John M, Poelstra J, *Solano M, *O'Connell D, Turner B, Martin C. A vertebrate adaptive radiation is assembled from an ancient and disjunct spatiotemporal landscape. *PNAS*.
<https://www.pnas.org/content/118/20/e2011811118>
- 2020 *Korzik ML, *Austin HM, *Cooper B, *Jasperse C, *Tan G, **Richards E**, Spencer ET, Steinwand BW, Fodrie FJ, Bruno JF. Marketplace shrimp mislabelling in North Carolina. *PLoS one*. <https://doi.org/10.1371/journal.pone.0229512>.
- ET Spencer, **Richards E**, Steinwand BW, *Clemons J, *Dahringer J, *Desai P, *Fisher M, *Fussell S, *Gorman O, Jones D, *Le A, *Long K, *McMahan C, *Moscarito C, *Pelay C, *Price P, *Smith A, *VanSant A, Bruno J. A high proportion of red snapper sold in North Carolina is mislabeled. *PeerJ*.
<https://peerj.com/articles/9218/#supp-1>.

*Undergraduate authors

- 2019 Martin C and **Richards E**. The paradox behind the pattern of rapid adaptive radiation: how can the speciation process sustain itself through an early burst? *Annual Reviews in Ecology and Evolution*. <https://doi.org/10.1146/annurev-ecolsys-110617-062443>.
- Martin C, McGirr J, **Richards E**, St. John M. How to investigate the origins of novelty: insights gained from genetic, behavioral, and fitness perspectives. *Integrative Organismal Biology*. <https://doi.org/10.1093/iob/obz018>.
- Richards E**, Servedio M, Martin C. Searching for sympatric speciation in the genomic era. *BioEssays*. <https://doi.org/10.1002/bies.201900047>.
- 2018 **Richards E**, Poelstra J, Martin C. Don't throw out the sympatric species with the crater lake water: fine-scale investigation of local introgression provides equivocal support for causal role of secondary gene flow in one of the clearest examples of sympatric speciation. *Evolution Letters*. <https://doi.org/10.1002/evl3.78>.
- Poelstra J, **Richards E**, Martin C. Speciation in sympatry with ongoing secondary gene flow and a potential olfactory trigger in a radiation of Cameroon cichlids. *Molecular Ecology*. <https://doi.org/10.1111/mec.14784>.
- Richards E**, Brown J, Barley A, Chong R, Thomson R. In press. Unexpected variation across mitochondrial gene trees and evidence for systematic error: How much gene tree variation is biological? *Systematic Biology*. <https://doi.org/10.1093/sysbio/syy013>.
- 2017 **Richards E**, Martin C. Adaptive introgression from distant Caribbean islands contributed to the diversification of a microendemic adaptive radiation of trophic specialist pupfishes. *PLOS Genetics*. <https://doi.org/10.1371/journal.pgen.1006919>.
- Martin C, Hohna S, Crawford J, Turner B, **Richards E**, Simons L. The complex effects of demographic history on the estimation of substitution rate: concatenated gene analysis results in no more than twofold estimation. *Proc R Soc Lond B*. <https://doi.org/10.1098/rspb.2017.0537>.
- Richards E**, Comeault A, Poelstra J. Digest: Sticklebacks do not just go with the flow: Genetic differentiation of stream populations due to more than just geographic distance. *Evolution*. <https://doi.org/10.1111/evo.13138>.

GRANTS

2021	UCB MVZ Junea W. Kelly Fellowship	
	UCB Integrative Biology Summer Research. Funds	\$1,450
	MVZ David and Marvalee Wake Fund	\$1,500
2020	UCB SURF-SMART Graduate Student Mentor Fellowship	\$5,000
	MVZ David and Marvalee Wake Fund	\$2,000
2019	Evolution 2018 SSB Graduate Student Travel Grant	\$500
2016	UHM Graduate Student Organization Travel Grant	\$600
2015	Hampton and Meredith Carson Fellowship Award	\$3,000
2013	Undergraduate Research Opportunity Program Award	\$4,200

Teaching and Mentorship

Teaching Assistant

2016-2017	<i>Course-based undergraduate research experience (CURE) class: Seafood forensics.</i> Undergraduate class. University of North Carolina at Chapel Hill. ‘Emilie was a great TA and worked hard with us to ensure we learned as much as possible.’ Anonymous student review Fall 2017 ‘Emilie was a great TA, very kind and helpful and really cared about what we were doing.’ Anonymous student review Fall 2017
2016	<i>Introduction to Biology Lab</i> Undergraduate class. University of North Carolina at Chapel Hill. ‘My TA was amazing. She was very helpful and eager in anything and everything she did. She honestly cared and would give you up most attention and in depth explanations or help when needed. She was also very understanding and willing to work with you if you

had situations arise that conflicted with scheduling.’ -Anonymous student review Fall 2016

- 2014- 2015 *Concepts of Genetics Lab*
Undergraduate class. University of Hawai’i at Manoa.
- 2014- 2015 *Cell and Molecular Biology Lab*
Undergraduate class. University of Hawai’i at Manoa.
- 2013 *Introduction to Biology Lab*
Undergraduate class. University of Hawai’i at Manoa.

Mentorship and Outreach

- 2020-2021 *Expanding Your Horizons Workshop UC Berkeley*

2021: Mirror, mirror, on the wall. Who is the most aggressive fish of them all?’ <https://youtu.be/4KdDTYXw8H8>
2020: You are what you eat!
- 2020 *SURF-SMART undergraduate research fellowship mentor*
UC Berkeley
<https://surf.berkeley.edu/fellows/takao-kakegawa/>
- 2018 *North Carolina Museum of Natural Sciences Darwin Day*
Public Booth: ‘Algae, Snails, and Scales, Oh My!’
- 2016 *SciRen Science Lesson Plan Development*
Picturing Diversity Activity: 9-12th grade

AWARDS

- 2016 **Best Paper Award**, best presentation of graduate research, University of Hawai’i at Manoa.
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PRESENTATIONS

- 2020 Invited talk. UCB Introgression and Speciation Discussion Group. Berkeley, CA
- 2019 Contributed talk. Bay Area Population Genetic Meeting. Berkeley, CA
- Contributed talk. Evolution Meetings, Providence, RI.
- Contributed talk. Biology Department Lunch Seminar Series. Chapel Hill, NC.
- Contributed talk. Gordon Research Symposium Speciation Seminar. Venture, CA.
- Contributed talk. Joint Evolution & ESEB Meetings. Montpellier, France
- 2018 Invited talk. University of Virginia. Biology Dept Seminar. Charlottesville, VA.
- 2017 Invited talk. Duke University PopBio Seminar Series. Durham, NC.
- Contributed talk. Evolution Meetings, Portland OR.
- Contributed talk. Biology Department Lunch Seminar Series. Chapel Hill, NC
- 2016 Contributed talk. Graduate Research Symposium. ***Best Paper Award**. Honolulu, HI.
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SERVICE

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| Referee for Journals | Molecular Ecology, Scientific Reports, Evolution, American Naturalist, Peer J |
| Committees/Working Groups | Museum of Vertebrate Zoology (MVZ) Welcoming Space Working Group |
| | MVZ DEI Recognition Working Group |
| | MVZ Promoting Interactions Working Group |
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AFFILIATIONS AND MEMBERSHIP

- 2016-current Society for Study of Evolution.
- 2016-current Society for Systematic Biologists.

- 2014-2016 Evolution, Ecology, and Conservation Biology Group. University of Hawai'i.
- 2014-2016 Graduate Women in Science. Hawai'i Chapter.
- 2013-2016 Phi Beta Kappa Honors Society. Hawai'i Chapter.