

Elizabeth A. Karan

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Education

- 9/2017 - present **PhD student in Ecology and Evolutionary Biology**
University of California Los Angeles, Los Angeles, CA USA
- 9/2012 - 5/2016 **A.B. in Organismic and Evolutionary Biology**
Harvard University, Cambridge, MA USA
Courses in comparative biomechanics, genetics and genomics, invertebrate zoology, herpetology, computer science, statistics, chemistry, animal behavior, vertebrate reproductive biology, systematics
- Senior thesis title: “The scales of cnidarian associated fishes and their functional implications”
- 6/2012 **High School Diploma**
Jonathan Dayton HS, Springfield, NJ USA

Research Experience

- 9/2017 - present **Alfaro Lab**, University of California, Los Angeles; Los Angeles, CA USA
PhD student
PhD Advisor/Principal investigator: Prof. Michael Alfaro
- 5/2015 - 5/2016 **Lauder Lab**, Harvard University, Cambridge, MA USA
Undergraduate senior thesis research project
Project: The relationship between scale morphology and ecology across species
Principal investigator: Prof. George V. Lauder
- 1/2015 - 5/2015 **Radcliffe Research Partnership**, Harvard University, Cambridge, MA USA
Research assistant
Project: Nacre as a paleothermometer
Principal investigator: Prof. Pupa Gilbert
- 10/2014 – 5/2016 **Harvard Museum of Comparative Zoology Ichthyology Department**
Volunteer
Worked under the supervision of the collection manager, Karsten E. Hartel
Duties: identifying and sorting larval specimens, measuring specimens, updating the online database
- Summer 2014 **Operation Wallacea**, Wakatobi N.P., Indonesia
Research assistant
Projects: Anemonefish cohabitation; sponge photosynthesis; mangrove fiddler crab ecology; reef diversity surveillance; impacts of burrowing sponges

Publication and Presentations

PUPA Gilbert, KD Bergmann, CE Myers, MA Marcus, RT DeVol, C-Y Sun, AZ Blonsky, J Zhao, **EA Karan**, E Tamre, N Tamura, AJ Giuffre, S Lemer, G Giribet, JM Eiler, AH Knoll. Nacre tablet thickness records formation temperature in modern and fossil shells. *Earth and Planetary Sciences Letters*. February 2017.

EA Karan, DK Wainwright, GV Lauder. The scales of cnidarian associated fishes and their functional implications. *Organismic and Evolutionary Biology Senior Thesis Writers' Poster Session*. Harvard Univ. April 2016.

EA Karan, DK Wainwright, DC Collar. "A comparative study of damselfish scale morphology. *Society of Integrative and Comparative Biology*. Portland, OR. January 2016.

Awards and Grants

2017	Irving and Jean Stone Fellowship
2016	Donald and Kathleen Pfister Prize
2015	Dean's Summer Research Award
2015	Museum of Comparative Zoology Grant for Undergraduate Research
2015	Harvard College Research Prize
2014	David Rockefeller International Experience Grant

Skills and Certifications

Computer languages	C, Python, R, HTML, JavaScript
Computer software	Adobe Suite, MrBayes, BEAST, Astral, POY, phyutility, SequenceMatrix, Geneious, MountainsMap, Mesquite, Igor, ImageJ
Imaging	SEM image processing in Photoshop, SEM analysis in wave metrics software, underwater video transects, underwater behavior videography, 3D topography reconstruction of fish scales using GelSight
Lab techniques	Dissection, sediment composition gradation, water salinity measurements, water pH measurements, PCR, fish husbandry
Field techniques	Species identification, species collection, underwater reef transects, fish stereo video surveys, invertebrate surveys, benthic surveys, reef rugosity measurements, recording behavioral observations
Certifications	Open Water Diver – PADI

Teaching

9/2018 - present	GE Cluster 70A: Evolution of the Cosmos and Life Teaching Assistant Leading discussion sections, first-year student advising
4/2018 - 6/2018	Ecology and Evolutionary Biology 116: Conservation Biology Teaching Assistant Lead discussion sections, created quiz material and learning activities
9/2014 - 5/2015	Harvard College Bureau of Study Counsel Tutor Course tutor for Organismic and Evolutionary Biology 10: Foundations of Biological Diversity

Leadership & Outreach

9/2018 - present	EEB Committee: Seminar and Eco Evo Pub Coordinator Scheduling and organizing biweekly student presentations
7/2015 - 5/2016	Harvard Boxing Club Captain Teaching technique, teammate support, gear management, 40+ member club
3/2015 - 5/2016	Harvard College Ocean Sciences Club Officer K-12 education and outreach, raising awareness of ocean-related issues on campus
11/2013 - 11/2015	Kirkland House Committee Publicity director 2013 - 2014; Secretary 2014 - 2015 Coordinated community life for a college residential community, planned bi-weekly events, supported student-initiated programming

Languages

English	Native speaker
German	Intermediate proficiency (speaking, reading, and writing)
Spanish	Basic (speaking, reading, and writing)
Indonesian	Basic (speaking)