

Taylor Ely
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Education

University of Hawai‘i at Mānoa started August 2019
PhD Candidate in Zoology current GPA: 4.0

University of California, Los Angeles June 2018
Bachelors of Science Marine Biology GPA: 3.957
Minor in Environmental Systems and Society

Graduate Research Assistant

September 2024 to current

University of Hawai‘i at Mānoa

NSF grant # 2049672

Investigating marine biogeography and population structure in North Central Pacific

- Collected eDNA samples on a 3-week long research cruise
- Trained and supervised undergraduates and post-bacs for eDNA sample processing

NSF Graduate Research Fellow

August 2019 to September 2024

University of Hawai‘i at Mānoa

Testing environmental DNA as a population genetics tool in the Main Hawaiian Islands

- DNA extractions, quantification, amplification, purification, and library prep
- Bioinformatics and analysis in R and wrote functions for population genetics analysis

Lab Technician

February to June 2019

Bowdoin College Brunswick, Maine

Sequenced and ran preliminary analysis on parrotfish gut samples

- DNA extractions, quantification, amplification, purification, and library prep
- Bioinformatics on cluster and analysis in R Studio and wrote protocol for future students
- In charge of upkeep of the lab which included ordering supplies

Undergraduate Research Assistant

October 2015 to June 2018

UCLA, Department of Ecology and Evolutionary Biology, Los Angeles

Undergraduate in Dr. Paul Barber’s Lab

Assisted Ph.D. candidate, Zack Gold, with his research on marine eDNA

- Collected samples both above water and SCUBA diving
- DNA extractions, quantification, amplification, purification, and library prep

Senior Honors Thesis testing the degradation rate of eDNA in a protected cove using qPCR and sequencing data

- Designed experiment, collected samples, ran lab work, ran analysis, and wrote the paper

Invertebrate Zoology Intern

June to August 2017

Smithsonian Institute, National Museum of Natural History

Dr. Chris Meyer’s Lab, Washington D.C.

Sequenced samples from the ARMS project across Indonesia using Sanger sequencing

- Conducted amplification, cycle sequencing, and purification; also aligned sequences

Certifications

- Certified Open Water Scuba Diver and Underwater Naturalist since 2008
- Scientific Diving certified since 2016: 112 scientific dives
- CPR, AED, and First Aid certified

Honors & Awards

2023	E. A. Kay award in Zoology (\$2500)
2020	Edmondson Research Fund (\$2000)
2019	NSF Graduate Research Fellowship Program (\$32,000 stipend for 3 years)
2018	Graduated Summa Cum Laude and Departmental Highest Honors
2018	3 rd place Undergraduate Poster at UCLA's Biology Research Symposium
2014-2018	Dean's Honors List
2017	UCLA Undergraduate Research Scholarship Program award (\$5000)
2017	Whitcome Research Undergraduate Summer Fellowship (\$3000)
2016	Promise Award Scholarship (\$2000)
2015	Honor Society: Alpha Lambda Delta and Phi Eta Sigma
2014	California State PTA Scholarship (\$500)

Select Presentations

Ely T (2023) "Can eDNA be used as a population genetics tool for marine communities?" Albert L. Tester Memorial Symposium. Honolulu, HI.

Ely T (2018). "Monitoring Sea Star Wasting in Oregon's Marine Reserves". Oregon Sea Grant Final Symposium. Newport, OR.

Ely T (2018). "Investigating Temporal Variation of eDNA in a Marine Environment". UCLA's Annual Biology Research Symposium. Los Angeles, CA.

Ely T, Blanchette A, Zeko A (2017). "Territorial damselfish enhance nutrient supplies to algal turf in shallow coral reefs". Marine Biology Quarter Symposium. Los Angeles, CA.

Reports and Peer Review

Ely TD*, Mukai GNM*, Kobayashi DR, Marko PB, Moran AL, Wren JLK. *In Review*. Characterizing key sensitivities for modeling long-distance dispersal in the North Central Pacific Ocean.

* = co-first authors

Ely T, Patten N, Naisbett-Jones LC, Spencer ET, Willette DA, Marko PB. (2023). Molecular identification of critically endangered European eels (*Anguilla anguilla*) in U.S. retail outlets. *PEERJ*.

Moran AL, Toh M-WA, Lobert GT, **Ely T**, Marko PB. (2021). Egg masses and larval development of the Antarctic cephalaspidean slug *Waagelea antarctica*, with notes on egg masses of the related *Antarctophilina alata*. *Journal of Molluscan Studies*. 87(3).

Ely T, Barber PH, Man L, Gold Z. (2021). Short-lived detection of an introduced vertebrate eDNA signal in a nearshore rocky reef environment. *PLOS ONE* 16(6): e0245314.

Blanchette A*, Ely T*, Zeko A.*, Sura S, Turba R, Fong P. (2019). Damselfish *Stegastes nigricans* increase algal growth within their territories on shallow coral reefs likely via enhanced nutrient supplies. *Journal of Experimental Marine Biology and Ecology*.

* = co-first authors

Ely T, Gold Z, Barber P. (2018). Investigating Temporal Variation in a Marine Environment. UCLA Senior Honors Thesis.

Teaching

Teaching Assistant

Ecology and Evolutionary Biology Lab (BIOL 265L)

August 2019 to December 2019

University of Hawai‘i at Mānoa

Teaching Assistant

Invertebrate Biology (BIOL 485L)

January 2020 to May 2020

University of Hawai‘i at Mānoa