**Taylor Ely**

3598 Alani Drive Honolulu, HI 96822

(310) 245-0207 tely@hawaii.edu

**Education**

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| University of Hawaiʻi 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 Hawaiʻi 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 Hawaiʻi 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**

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* 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**

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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 3rd place Undergradate 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 *Waegelea antarctica*, with notes on egg masses of the related *Antarctophiline 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** August 2019 to December 2019

Ecology and Evolutionary Biology Lab (BIOL 265L) University of Hawaiʻi at Mānoa

**Teaching Assistant**  January 2020 to May 2020

Invertebrate Biology (BIOL 485L) University of Hawaiʻi at Mānoa