

Alexus E. Cazares-Nuesser

she, her, hers | Honolulu, HI, USA
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EDUCATION

University of Hawai'i at Mānoa *August 2020 - present*
Ph.D. in Biological Oceanography
Advisor: Dr. Erica Goetze
Overall GPA: 3.74
Anticipated Graduation: December 2025

The University of Arizona *August 2015 - May 2019*
B.S. in Ecology and Evolutionary Biology (Honors)
B.S. in Molecular and Cellular Biology
Minor in Marine Science and Biochemistry
Overall GPA: 3.65 | Cum Laude

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, University of Hawai'i at Mānoa *January 2021 -present*
Zooplankton ecology in the eastern Clarion-Clipperton Zone, an area at risk of deep-sea mining.
National Science Foundation Graduate Research Fellowship (September 2022-present)
Advisor: Dr. Erica Goetze

Graduate Teaching Assistant, University of Hawai'i at Mānoa *August 2020-Jan 2021*
Developed OCN 102L, an introductory lab course for non-science majors, integrating Hawaiian examples and creating an 8-exercise lab manual with quizzes, report questions, and instructor materials for both online and in-person formats.
Faculty Instructor: Dr. Michael Cooney

Wildlife Biologist Assistant, The University of Arizona *August 2017 -June 2020*
Urban Ecology and Conservation of Reptiles at Stone Canyon in Oro Valley, Arizona. (May 2019-June 2020) Lizard Urban Ecology in Tucson, Arizona (August 2017-May 2019).
NASA Space Grant Intern (August 2018-May 2019)
Advisor: Dr. Matthew Goode

Herpetology Curatorial Intern, The UA Museum of Natural History *August 2017-May 2019*
Maintained herpetology collection, including database management, specimen preservation, photo voucher archiving, and researcher support.

Undergraduate Research Assistant, The University of Arizona *August 2016-July 2018*
Effects of Soil Microbiomes on Yellow Starthistle (*Centaurea solstitialis*) Growth.
Advisor: Dr. Katrina Dlugosch

PUBLICATIONS

Cazares-Nuesser, A.E., G. Stedman, J.C. Drazen, and E. Goetze. (in prep) Temporal variability in midwater zooplankton diversity, community composition, and biomass in the Eastern Tropical Pacific Ocean.

Dowd, M.H., V.E. Assad, **A.E. Cazares-Nuesser**, J.C. Drazen, E. Goetze, A.E. White, B.N. Popp. (in prep) Deep-Sea Mining Discharge: Implications for Midwater Food Web Dynamics.

Matthews, S.A., K. Kaminsky, **A.E. Cazares-Nuesser**, J. Questel, L. Blanco-Bercial, J. Hirai, and M.D. Ohman. (in prep) Distributions of mesopelagic zooplankton across the North Pacific Basin: testing the effects of physical dispersal vs. environmental selection.

Drazen, J.C., V.E. Assad, T.M. Frank, J.N. Perelman, S.Z. Rickle, **A.E. Cazares-Nuesser***, J. van der Grient, E. Goetze. (in review) Bathypelagic and abyssopelagic micronekton communities in the eastern Clarion Clipperton Zone. *Elementa – Special Issue*

Cazares, A., R. Cazares, R.W. Hansen (2020) *Diadophis punctatus regalis* (Regal Ringneck Snake) and *Salvadora grahamiae grahamiae* (Mountain Patch-nosed Snake) diet and predation. *Herpetological Review* 51(3):616

Cazares, A., J. Bosak, D. Huerta, R. Tuijl-Goode, and M. Goode (2020). *Hypsiglena chlorophaea* (Desert Nightsnake) diet. *Herpetological Review* 51(3):619-620.

Hansen, R.W., R. Cazares, and **A. Cazares** (2015) *Lampropeltis zonata* (California Mountain Kingsnake) predation. *Herpetological Review* 46(4):645-646.

* Name change from A. Cazares to A. E. Cazares-Nuesser in 2024.

PRESENTATIONS

Cazares, A.E., Jeffrey C. Drazen, and E. Goetze. “Seasonal changes in zooplankton DVM and active export in an oxygen minimum zone” *presented at* 15th International Conference on Copepoda. June 2024. Hiroshima, Japan. *Poster*.

Cazares, A.E., G. Stedman, Jeffrey C. Drazen, and E. Goetze. “Zooplankton ecological baselines in the Eastern Tropical Pacific amidst deep-sea mining risks” *presented at* ICES/PICES 7th International Zooplankton Production Symposium. March 2024. Hobart, Tasmania. *Oral*.

Matthews, S.A., K. Kaminsky, **A.E. Cazares**, J. Questel, L. Blanco-Bercial, J. Hirai, and M.D. Ohman. “Distributional ranges of mesopelagic zooplankton across the North Pacific Basin: Testing the effects of physical dispersal vs. environmental homogeneity” *presented at* ICES/PICES 7th International Zooplankton Production Symposium. March 2024. Hobart, Tasmania. *Oral*.

Dowd, M., **Cazares, A. E.**, Goetze, E., Drazen, J., and Popp, B. N. “Trophic Ecology Within and Below the Oxygen Minimum Zone Characterized by Compound-Specific Isotope Analysis of Amino Acids of

Particles and Zooplankton” *presented at* Ocean Sciences Meeting 2024. February 2024. New Orleans, LA. *Oral*.

Matthews, S., Kaminsky, K., **Cazares, A. E.**, Questel, J. M., Blanco-Bercial, L., Hirai, J., & Ohman, M. D. “Distributional Ranges of Mesopelagic Zooplankton Across the North Pacific Basin: Testing the Effects of Physical Dispersal vs. Environmental Homogeneity” *presented at* Ocean Sciences Meeting 2024. February 2024. New Orleans, LA. *Oral*.

Cazares, A.E., G. Stedman, Jeffrey C. Drazen, and E. Goetze. “Ecological Baselines for Midwater Mining Impacts: Zooplankton Ecology in the Eastern Clarion-Clipperton Zone” *presented at* Ocean Sciences Meeting. March 2022. Honolulu, HI. Virtual. *Poster*.

Cazares, A.E., D.G. Huerta and M.J. Goode. “Stone Canyon Snake and Gila Monster Research” *presented at* Future for Nature Academy at Leiden University Institute of Biology. October 2019. Leiden, Netherlands. *Invited Talk*.

Cazares, A.E., D.G. Huerta, J. Bosak, and M.J. Goode. “Effects of Urbanization on Gila Monsters in Arizona” *presented at* the Joint Meeting of Ichthyologists and Herpetologists. July 2019. Snowbird, UT. *Oral*.

Cazares, A.E. and M.J. Goode. “Effects of Urbanization on Gila Monsters” *presented at* The Arizona NASA Space Grant Symposium. April 2019. Tempe, AZ. *Oral*.

Cazares, A.E., D.G. Huerta, and M.J. Goode. “Effects of Urbanization on Gila Monster. Populations in Oro Valley, Arizona” *presented at* the 52nd Joint Annual Meeting of the Arizona and New Mexico Chapters of The Wildlife Society and American Fisheries Society. February 2019. Albuquerque, NM. *Oral*.

Cazares, A.E., L. Samora, C. Brenton, S. Ginar, A. Schiavoni, C. Smith, and M.J. Goode. “Urban Ecology of Desert Spiny Lizards on The University of Arizona Campus” *presented at* Biology of Lizards. May 2018. Rodeo, NM. *Poster*.

Cazares, A.E., L. Samora, C. Brenton, S. Ginar, A. Schiavoni, C. Smith, and M.J. Goode. “Urban Ecology of Desert Spiny Lizards on The University of Arizona Campus” *presented at* the 51st Joint Annual Meeting of the Arizona and New Mexico Chapters of The Wildlife Society and American Fisheries Society. February 2018. Flagstaff, AZ. *Poster*.

MENTORING EXPERIENCE

- **Undergraduate Research Mentorship**
University of Hawaii at Mānoa

Olivia Turner, Marine Biology Student
ZooScan zooplankton validation and image sorting using EcoTaxa.

November 2024-present

Michael Yamada, GES Graduate

August 2022-May 2024

ZooScanning the CCZ: A Baseline Study of Zooplankton Assemblages in the Clarion-Clipperton Zone. UROP Recipient 2022-2023; completed GES thesis in 2024.

Jolie Tosten, PhD Student at Rutgers University *March 2022-May 2023*
Midwater zooplankton biomass and community composition in the CCZ. UROP Recipient 2022-2023.

- **Graduate Application Mentorship Program** *September 2023-present*
Department of Oceanography, University of Hawaii at Mānoa
Co-developed a program to empower prospective graduate students by providing resources and guidance for navigating the application process, mentoring two students to date.
- **GES Peer Mentor Buddy Program** *August 2024-December 2024*
Department of Oceanography, University of Hawaii at Mānoa
Mentored undergraduate students on research project identification, faculty connections, thesis development, and academic success strategies.
- **Tutor, Herpetology (ECOL 483)** *January 2019 - May 2020*
Department of Ecology and Evolutionary Biology, The University of Arizona
Provided tailored academic support to students, including assisting a visually impaired student with identification techniques for southwestern reptiles and amphibians.
- **Peer Mentor** *August 2018-May 2019*
Departments of Ecology and Evolutionary Biology & Molecular and Cellular Biology, The University of Arizona
Trained as a near-peer mentor to guide two freshmen on research opportunities, goal setting, and campus involvement.

LEADERSHIP

Department of Oceanography, University of Hawaii at Mānoa

Awards Committee Representative for Nā Kama Kai *Jan.-Aug 2023; Sept. 2024-present*
Events Coordinator for Nā Kama Kai *August 2023-September 2024*
Diversity Representative for Nā Kama Kai *September 2020-January 2023*

The University of Arizona

College of Science Ambassador *August 2018-May 2019*
Ecology and Evolutionary Biology Ambassador *August 2016-May 2019*
Undergraduate Certificate in Honors Civic Leadership *August 2016-May 2018*

AWARDS

- **Graduate Student Organization Travel Award** *May 2024*
University of Hawai'i at Mānoa
Amount: \$1,000

- **Ka Malama Kai Grant** *March 2024*
University of Hawai'i at Mānoa, Department of Oceanography
Amount: \$1,800
- **ICES/PICES Travel Grant** *November 2023*
Amount: \$1,225
- **NSF Graduate Research Fellowship** *March 2022*
Amount: \$159,000
- **Second Place at School of Natural Resources and the Environment Film Festival** *March 2019*
The University of Arizona
Amount: \$100
- **UA/NASA Space Grant** *August 2018-May 2019*
The National Space Grant College and Fellowship Program
Amount: \$8,000

OUTREACH EXPERIENCE

- UHM NSF GRFP Application Review Workshop for STEM *October 2024*
- Letters to a Pre-Scientist, STEM Professional Letter Writer *September 2024-April 2025*
- UHM GES Thesis Experience, Mentor *September 2024-December 2025*
- UHM OCN201 Graduate Student Experience Panel, Panelist *April 2024*
- Letters to a Pre-Scientist, STEM Professional Letter Writer *September 2023-April 2024*
- UHM SOEST Preparing a 2024 NSF GRFP Application Workshop *September 2023*
- UHM Center for Teaching Excellence Experienced TA Panel, Panelist *August 2023*
- University of Arizona College of Science Discovery, Alumni *July 2023*
- Deep Sea Discovery Workshop for Teachers and Educators *June 2023*
- UHM Oceanography Graduate School Application Workshop Series *October 2022*
- Sam Hughes Elementary School Lizard Mark-Recapture Project *September 2019*
- The Desert of Rattlesnakes, Film Documentary, Living Zoology Film Studio, Speaker *May 2019*
- Flandrau Planetarium and Science Center Earth Day Volunteer *April 2019*
- Science City Volunteer at Tucson Festival of Books *March 2019*
- Children's Museum Tucson Family SciFest *February 2019*
- Space Camp at Biosphere 2 (Pilot Program), UA Student Participant *February 2019*
- Family STEM Fair at Diamond Children's Medical Center *November 2018*
- Flandrau Science Center Marine Discovery Workshops, Student Educator *August-December 2018*
- UA Marine Awareness and Conservation Society, Member *August 2018-May 2019*
- Arizona Insect Festival Volunteer *October 2016, 2017*

TECHNICAL SKILLS AND TRAINING

- Programming languages: R, Python

- Research Cruises: Maersk Launcher (February 28-April 22, 2021; September 21-November 2, 2021); Field Experience: 1m² and 10m² MOCNESS, CTD, and Plankton Pumps
- Molecular Lab Work: DNA Extractions from plant and zooplankton tissue, DNA Metabarcoding, PCR, Gel electrophoresis
- Bioinformatics: QIIME2/DADA2, Job scheduling with SLURM and scripting in Bash and Python for data analysis.
- Digital Imaging Systems: ZooScan, EcoTaxa
- Seafaring Certifications: Standards of Training, Certification and Watchkeeping for Seafarers
- Science Communication Training:
 - Young Voices of Science (YVoS) Science Communication & Outreach Program, Hubbard Brook Research Foundation (September 2024-January 2025)
 - UHM SOEST DEI Outreach Program (September-December 2024)
 - Global Foundation for Ocean Exploration Science Communication: Telling Your Story Micro credential (May 2024)
- Creative Tools: Graphic Design (Canva), Video Editing (Final Cut Pro, iMovie)
- Languages: Spanish (Intermediate: speaking, listening, writing)