

# MAGGIEDILLON

<https://mmdillon38.github.io/>

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## Education

### Master of Biology

*California State Polytechnic University, Pomona*

*2022 – Present*

*Thesis: Influence of Construction Material and Habitat Characteristics on Size-Specific Fish Assemblages on Bolsa Chica Artificial Reef*

### Bachelor of Arts

*St. John's College, Annapolis MD*

*2014 - 2018*

## Research Experience

Graduate Research Assistant / California Polytechnic University, Pomona / Claisse Lab

*Pomona, CA July 2022- present*

- Used remotely operated vehicles with stereo video to analyze fish assemblages on artificial reefs as part of BOEM & State of California grant funded research
- Developed standard operating procedures for the deployment of ROV and data analysis

Research Assistant / Occidental College / Stubler Lab

*Los Angeles, CA September 2024- present*

- Investigated the effects of OA and predator presence on Boring Sponges in flow thorough and closed systems as part of an NSF funded project
- Analyzed community assemblage data

Field Volunteer / Occidental College / Vantuna Research Group

*Los Angeles, CA July 2023- present*

- Collected data while SCUBA Diving in southern California
- Assisted in deployment of sonar data collection
- Deployed Stereo-ROV in nearshore environments

Field and Laboratory Technician / The Virginia Institute of Marine Sciences (VIMS) / Fabrizio Lab

*Gloucester Point, VA July 2021- July 2022*

- Conducted Standard Metabolic Rate research using respirometry chambers on Blue Catfish
- Collected data and fishes on seine and trawl surveys
- Dissected and processed fish otoliths for microchemistry
- Mentored and managed undergraduate students in the lab and field

Field and Laboratory Technician Anne Arundel Community College / Domanski Lab

*Arnold, MD January 2021 – July 2021*

- Performed in-lab aseptic microbiological culturing techniques, analytical chemistry and basic equipment maintenance
- Conducted water quality sampling from boat, shore, and by wading into streams
- Mentored and managed undergraduate students in the lab and field

Oyster Restoration Assistant / Chesapeake Bay Foundation

*Annapolis, MD April 2021 - July 2021*

- Assisted with oyster restoration activities including spat-on shell growing, oyster cage construction, oyster reef building, and community engagement efforts
- Conducted water quality sampling for oyster aquaculture
- Operated company boats and trucks

Fin Fish Intern / National Oceanic and Atmospheric Administration (NOAA) / Chambers Lab

*Highlands, NJ May 2018 – August 2018*

- Conducted high frequency experiments on the effects of ocean acidification and seasonal variation on early life stages of key marine fishes in future climate change models
- Analyzed survival, embryonic and larval development and size data of fish

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## Teaching & Relevant Experience

Dive Center Supervisor / *Associated Student Inc. PADI Educational Dive Facility*

*Pomona, CA July 2022-Current*

- Managed and supervised a team of undergrad and graduate students
- Coordinated with school and community members to promote conservation and SCUBA diving
- Taught training courses as PADI Dive Master and PADI Dive Instructor

Teaching Associate / *California Polytechnic University, Pomona*

*Pomona, CA August 2022- December 2022*

- Instructed BIO1220L an introductory lab studying Ecology, Evolution, and Biodiversity
- Lesson planned, graded, and administered exams

Marine Science Instructor / *Guided Discoveries*

*Catalina Island, CA January 2019 – June 2020*

- Implemented outdoor marine science education program according to Next Generation Science Standards
- Led hundreds of students on kayak trips, hikes, and snorkels in varying conditions year round
- Operated and drove chase boats for educational programs in the ocean

Marine Life Program Leader / *Rustic Pathways*

*Dominican Republic May 2019- August 2019*

- Worked with local marine NGOs to educate students on current marine science and environmental issues
- Led high school students in coral reef and mangrove field surveys in the Dominican Republic
- Partnered with local NGOs to promote citizen science and conservation

Education and Field Intern / *Khalid Bin Sultan Living Oceans Foundation*

*Annapolis, MD September 2016 – May 2018*

- Edited coral reef and mangrove field and classroom curriculum
- Wrote and published blogs on the Foundations website for a non-scientific audience
- Assisted in teaching high school students about mangrove education ecosystems, food webs, and classifications of animals in Jamaica

## Presentations

CSU ARI / *Sacramento CA / November 2024*

*Using Remotely Operated Vehicles to Assess How Artificial Reef Design Can Influence Fish Communities (Talk)*

GEOHAB / *Arendal Norway / May 2024*

*Influence of construction material and habitat metrics on size specific fish assemblages on southern California artificial reefs (Poster)*

Ocean Science Meeting / *New Orleans LA / February 2024*

*Size specific fish assemblages on southern California artificial reefs using remotely operated stereo video (Poster)*

Western Society of Naturalist Conference/ *Monterey CA / November 2023*

*Fish assemblages on southern California artificial reefs using remotely operated stereo video (Poster)*

Western Society of Naturalist Conference/ *Oxnard CA / November 2022*

*Won best graduate student poster for research on the effects of temperature on metabolic rates of Blue Catfish (Poster)*

American Fisheries Society Tidewater Conference / *Nags Head NC / March 2022*

*Effects of temperature on metabolic rates of Blue Catfish (Poster)*

National American Fisheries Society Conference / *Atlantic City NJ / August 2018*

*Effects of seasonal variation on Atlantic silverside early life history (Talk)*

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## Publications

Neill, J.L., **Dillon, M.M.**, Bilecki, C., Bollinger, S., Dansereau, S.C., Flores, A., Garcia, K.B.G., Hernandez-Thorn, R.A., Kim, M., Martinez, P.V., Pua, C.B., Ramirez, D.F., Sebastian, D., Scott, J.A., Wong, B., Yuen, A.A., Claisse, J.T., Valdés, Á., n.d. New contributions to the heterobranch sea slug biodiversity of Bocas del Toro, Panama.

Nepal, V., **Dillon, M.**, Fabrizio, M.C., Tuckey, T.D., 2024. Physiologically-informed predictions of climate warming effects on native and non-native populations of blue catfish. J. Therm. Biol. 124, 103951. <https://doi.org/10.1016/j.jtherbio.2024.103951>

## Professional Development

California State Polytechnic University, Pomona Biology Graduate Student President / 2023 - *Current*  
*Elected president of the Biology Graduate Student Association to serve students and act as a liaison between students and administration*

UC Davis NSF Sustainable Oceans Traineeship Davis CA / 2023- 2024  
*One of three CSU students selected to participate in a policy traineeship meeting with ocean policy makers and stakeholders and to present my research*

University of Washington NSF Evolving Seas RCN Training Program / 2023  
*Participated in weekly lab meeting with the Roberts Lab at University of Washington dedicated to professional development*

## Funding & Awards

CSU ARI-NextGen Fellow / 2024

- Awarded \$25,000 graduate fellowship for tuition and research

CSU Kenneth H. Coale Graduate Scholar Award / 2024

- Awarded \$4,000 scholarship for tuition and research

Cal Poly Pomona Presidential Fellow / 2024

- Awarded \$3,500 scholarship for tuition

Cal Poly Pomona LOGRAR Travel Grant / 2024

- Awarded \$3,000 for travel and conference expenses

Cal Poly Pomona ASI Professional Development Scholarship / 2023

- Awarded \$2,200 for PADI Instructor training Cal Poly Pomona

Cal Poly Pomona Wickler Memorial Scholarship / 2023

- Awarded \$1,500 merit-based scholarship for tuition

Cal Poly Cal Poly Pomona Peter Castro Biodiversity and Evolution Scholarship / 2023

- Awarded \$2,500 merit-based scholarship for tuition

Cal Poly Pomona Office of Undergraduate Research Travel Grant / 2022

- Awarded \$600 for travel and conference expenses

Cal Poly Pomona, Foundation Scholarship / 2022

- Awarded \$6,000 for tuition

Cal Poly Pomona ASI Professional Development Scholarship / 2022

- Awarded \$1,000 to complete PADI Divemaster training

## Skills & Certifications

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|-------------------------------------|--|
| • Intermediate R Programming Skills | • AAUS Scientific Diver                        |
| • Intermediate GIS Skills           | • DAN Diving First Aid for Professional Divers |
| • EventMeasure                      | • PADI Dive Instructor                         |
| • Stereo Video Analysis             | • PADI DiveMaster                              |
| • Closed System Aquarium Operation  | • CPR/FirstAid/AED/Oxygen Instructor           |
| • Open System Aquarium Operation    | • MOTC Scientific Boaters Certification        |