

# ZACHARY GARMOE

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## EXPERIENCE:

- **Graduate Teaching Assistant: Ecology Dept, Montana State University | Aug 2023 – Present**
  - Biology 160: Principles of Living Systems. Cellular biology and introductory genetics.
  - Teach 60 students per semester over three laboratory sections.
  - Use tabletop experiments including microscopy, electrophoresis, and Polymerase chain reaction tests.
  
- **Environmental Science Coordinator: Delaware Center for the Inland Bays | March 2020 – Jul 2023**
  - Project Manager: Inland Bays Continuous Water Quality Monitoring Program
    - Oversee a network of six continuous hydrological monitoring locations.
    - Data gathered through the program resulted in the relisting of portions of the Indian River on the EPA imperiled waters list.
    - Grew network from two to six locations during time as Project Manager
  - Project Manager: Shorezone Fish and Blue Crab Survey
    - Manage approximately 200 seine surveys annually from April to October.
    - Oversee the training of more than 50 community volunteer scientists.
  - Project Manager: Inland Bays Reforestation and Monitoring Program:
    - Planted more than 50 acres of mixed-hardwood forest since 2020.
    - Designed protocols & quality assurance plan to monitor all CIB reforestation sites.
  - Project Manager: Inland Bays Macroalgae Survey and Juvenile American Eel Passage Monitoring
    - Completed a comparative analysis of macroalgae survey methods in summer 2021.
  - Assist with the annual monitoring of oyster reefs, Horseshoe Crabs, and Diamondback Terrapins.
  - Assist with the management of summer interns.
  
- **Program Manager: Karen Noonan Center, Chesapeake Bay Foundation | July 2019 – March 2020**
  - Oversaw a remote, residential island education facility, located on the Chesapeake Bay.
  - Performed dredge, trawl, and seine surveys with over 500 students annually.
  - Educated students on the intersections between local waterman culture & Chesapeake ecology
  - Collected GIS data to measure shoreline erosion pressures on the marshes surrounding the center.
  
- **Island Educator: Chesapeake Bay Foundation | Sept 2018 – July 2019**
  - Lead multi-day field educational experiences for students at a remote facility on the Chesapeake Bay.
  
- **Chesapeake Conservation Corps: Maryland Coastal Bays Program| Aug 2017 – Aug 2018**
  - Performed seine, fyke, and electrofishing surveys for restoration and monitoring programs
  - Managed a community science water monitoring program comprised of more than 100 volunteers.
  - Lead & assisted with field & classroom-based education programs, interacting with over 2000 students
  
- **Laboratory Manager & Teaching Assistant: UMBC | Sep 2012– May 2017**
  - Assisted in the implementation of weekly laboratory sessions for *Science 100: The Study of Water*.
  - Taught students entry-level data collection processes for biological & chemical water quality indicators.
  - Facilitated student use of tools to design and implement independent research projects.

- **Water Quality Intern: Blue Water Baltimore | Jan 2017 – May 2017**
    - Collected water-quality field samples from water bodies in Baltimore City for testing & lab analysis.
  - **Camp Director: Philmont Scout Ranch | Summers 2014-2017**
    - Supervised a remote backpacking outpost in the southern Rocky Mountains.
    - Oversaw a staff of 6 educators, interacting with an average of 15,000 participants annually.
  - **Program Counselor: Philmont Scout Ranch | Summers 2012-2013**
    - Delivered interpretive environmental and historical education more than 15,000 annual participants.
    - Helped ensure the safety of participants while completing.
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## EDUCATION:

- **MFA: Science & Natural History Filmmaking: Montana State University | August 2023-Present**
  - **BA: Environmental Studies: University of Maryland, Baltimore County | Sept 2011-May 2017**
    - Dean's List: Spring 2015
    - Minor in Visual Arts with a concentration in Cinematic Arts
    - Assistant Photo Editor: The Retriever Weekly | 2015-2016
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## SKILLS:

- Experienced public speaker, communicator, and science educator.
  - Proficient in Adobe Premiere Pro, Photoshop, and Lightroom.
  - Documentary filmmaking, cinematography, and post-production (5+ years of experience).
  - Documentary, studio, portrait, and nature photography (10+ years of experience).
  - Strong seamanship, Maryland State Boating License. First Aid Trained, certified WFR.
  - Proficient with continuous in-situ chemical water monitoring systems (YSI EXO, Sea-Bird sondes).
  - Fish sampling methods using seine, trawl, electrofishing, rod and reel.
  - Proficient in R and R Studio, Microsoft Access, Adobe Creative Suite, Microsoft Office.
  - Experienced in subsurface aquatic surveys (submerged aquatic vegetation, braun-blanquet surveys).
  - Experienced in micro-pipetting, electrophoresis, and PCR analyses.
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## REPORTS AND PUBLICATIONS:

- Garmoe, Z. Noe-Fellows, M. (2023) *Inland Bays Reforestation Monitoring Program: Quality Assurance Project Plan*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 30pp
- Garmoe, Z. (2022) *Seaweed Monitoring in the Inland Bays, a Methodology Analysis*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 15pp
- Garmoe, Z., McGowan, A. (2022). *Inland Bays Continuous Water Quality Monitoring Program: Quality Assurance Project Plan*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 39pp
- McGowan A., Garmoe, Z., (2022) *Summary Report of Continuous Water Quality Monitoring in the Indian River, 2021*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 5pp.
- Pérez-Pérez, N., and Z. Garmoe. (2022). *Inland Bays Volunteer Terrapin Survey: Annual Report 2020-21*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 10pp.
- Garmoe, Z., A.T. McGowan, and D. H. Bartow. (2021). *Inland Bays Horseshoe Crab Spawning Survey Five-Year Trend Report: 2015-2019*. Delaware Center for the Inland Bays. Rehoboth Beach, DE. 32pp.

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## PRESENTATIONS:

- Garmoe, Z., McGowan, A., Andres, S. (2023) Continuous Water Quality Monitoring in the Inland Bays. [Oral Presentation]. Delaware Estuary Science & Education Summit. Atlantic City, NJ.
- Garmoe, Z., McGowan, A. (2022). Nearshore Fish in the Inland Bays, a Ten-Year Analysis. [Oral Presentation]. Inland Bays Citizens Advisory Committee, Rehoboth Beach, DE.
- McGowan, A., Garmoe, Z., Walch, M. (2022). *Continuous Water Quality Monitoring in the Inland Bays*. [Oral Presentation]. Inland Bays Scientific & Technical Advisory Committee, Spring Meeting.
- Garmoe, Z., Perez-Perez, N. (2021) *Volunteer-Driven Diamondback Terrapins Projects in the Delaware Inland Bays* [Virtual Presentation]. Delaware Estuary Science and Environmental Summit.
- Garmoe, Z. (2018). *The Ocean Pines Canal Challenge: A Citizen Science Water Quality Event on the St. Martin River*. [Oral Presentation]. Maryland Coastal Bays Scientific & Technical Advisory Committee, Spring Meeting, Cambridge, MD.
- Garmoe, Z., Jesien, R. (2017). *Oyster Castles as Erosion Mitigation for Colonial Bird Habitat in Maryland's Coastal Bays*. [Poster]. Chesapeake Watershed Forum, Shepherdstown, WV.

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## CREATIVE AWARDS & PUBLICATIONS:

- Contest Judge | Lou Parsons III Memorial Photo Contest | Fall 2023
- Lead Photographer | [Voices of the Coastal Bays](#) | Spring 2022
- [Grand Prize Winner](#) | Lou Parsons III Memorial Photo Contest | Summer 2021
- Award of Excellence | Philmont Photo Contest | Summer 2017
- Best in Show | Bartleby Creative Arts Journal | Spring 2016
- [Glimpses of an insurrection](#) | Dear Dave Magazine, Issue 21 | Summer 2015
- [Award of Excellence](#) | College Photographer of the Year | Spring 2015

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## VOLUNTEERING & PROFESSIONAL AFFILIATIONS:

- Member | Atlantic Estuarine Research Society | November '21 – Present
  - Member | American Fisheries Society | March '21 – Present
  - Volunteer | Maryland Coastal Bays Program | September '18 – August '23
  - Election Judge | Worcester County Maryland | February '22 – August '23
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