

Abby J. Vaughn

Extension Associate

Mississippi State University
Coastal Research and Extension Center
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Education

Master of Science in Wildlife, Fisheries and Aquaculture

Mississippi State University, Starkville, MS

August 2020 – December 2022

Advisor: Dr. Peter J. Allen

Thesis Title: Understanding the relationship among cool temperatures, growth, metabolism, and energy use of *Ictalurus* spp.

GPA: 4.0

Bachelor of Science in Biology

Minor in Chemistry

Concentration in Aquatic Biology

Eastern Kentucky University, Richmond, KY

August 2016 – December 2019

Advisor: Dr. Sherry L. Harrel

GPA: 3.8, Magna Cum Laude

Employment

Extension Associate

Mississippi State University

Marine Fisheries Ecology Program, Biloxi, MS

January 2023 – Present

- Supervised by Dr. J. Marcus Drymon
- Coordinate and manage the *Deepwater Horizon* Bluefin Tuna Restoration Project in collaboration with the NOAA Restoration Center
- Conduct outreach, education, and Extension events to communicate science to the public and to fisheries stakeholders
- Conduct traditional and applied fisheries research
- Aid in offshore bottom longline survey throughout the northern Gulf of Mexico
- Author blogs, newsletters, Extension publications, social media content, and peer-reviewed journal articles
- Assist with annual intern supervision and management

Algebra & Geometry Intervention Teacher

Anderson County Board of Education

Anderson County High School, Lawrenceburg, KY

August 2022 – December 2022

- Supervised by principals Chris Glass, Josh White, Dustin Fore, and Kayla Smith
- Co-taught Biochemistry courses of 30+ students and aided in classroom management
- Intervened in Algebra and Geometry while collecting data records for individual students' progress
- Planned interactive and engaging lessons for Algebra and Geometry concepts
- Tutored students in AP and dual-credit Chemistry curricula

Technician

Kentucky Department of Fish and Wildlife Resources

Center for Mollusk Conservation, Frankfort, KY

May 2019 – July 2019, December 2019 – August 2020

- Supervised by Dr. Monte A. McGregor
- Aided in the restoration and propagation of 70+ endangered and threatened freshwater mussels
- Performed mussel diet preparation, mussel and glochidium cleaning, water quality testing, and aquaculture system maintenance
- Participated in annual mussel surveys and habitat assessments of Kentucky rivers and streams
- Assisted with glochidia infestations of freshwater host fishes, daily fish feedings, and water changes
- Conducted husbandry for hellbenders (*Cryptobranchus alleganiensis*)

Biological Intern

Thomas More University

Thomas More University Biology Field Station, California, KY

May 2018 – August 2018

- Supervised by Dr. Christopher N. Lorentz
- Analyzed the biota and habitat near various power plants along the Ohio River
- Collected fish vouchers from the Ohio River via hoop nets, gill nets, and electroshocking
- Obtained water quality parameters throughout sections of the Ohio River
- Led outreach and education events for K-12 children focused on biological sampling protocols, aquatic ecosystems, and boating safety

Biological Student Employee

Eastern Kentucky University

Department of Biological Sciences, Richmond, KY

January 2017 – May 2017

- Supervised by Dr. Sherry L. Harrel
- Collected samples via backpack electrofishing for the Buck Darter Research Project
- Restructured and maintained preserved freshwater fish specimens within the research museum

Project Management Experience

2023 – Present NOAA Fisheries Office of Habitat Conservation's Restoration Center.
Restoring for bluefin tuna via fishing depth optimization. PI: Drymon JM.
Total funding: \$2,074,200.

Research Experience

Graduate Research Assistant

Mississippi State University, Starkville, MS

August 2020 – December 2022

- Investigated the relationships among cool temperatures, growth, metabolism, and energy use of cultured catfishes
- Assisted with other research projects that involved the following study species: Atlantic tarpon, invasive cichlids, peacock bass, saltwater catfishes, and Atlantic sturgeon
- Maintained recirculating aquaculture systems (RAS)
- Conducted daily fish husbandry
- Supervised and mentored two undergraduate assistants

Peer-Reviewed Publications

1. **Vaughn AJ**, Street GM, Boudreau MR, Allen PJ. **In Review**. The relationship among acceleration, metabolism, and tail beat frequency of channel catfish (*Ictalurus punctatus*) during critical swimming speed tests. Aquaculture.

Extension Products

1. **Vaughn AJ**, Jargowsky AE, Drymon JM. **2023**. Gulf Coast Fishermen Newsletter, Issue 31, [Let's Talk Tuna](#). Mississippi-Alabama Sea Grant Consortium publication MASGP-23-001-03.

2. Osowski AR, **Vaughn AJ**, Jargowsky AE, Drymon JM. **2023**. Gulf Coast Fisherman Newsletter, Issue 30, [Saltwater Fishing Apps](#). Mississippi-Alabama Sea Grant Consortium publication MASGP-23-001-02.
3. **Vaughn AJ**. **2023**. [MSU Marine Fisheries program offers FISHERS course](#). Mississippi State University Extension Outdoors article.

Conference Presentations

1. **Vaughn AJ**, Piko AA, Reinhardt JF, Foster DG, Orbesen ES, Hendon JR, Dance MA, Wells RJD, Rooker JR, Jargowsky AE, Drymon JM. **2023**. Restoring bluefin tuna using fish depth optimization in the Gulf of Mexico's pelagic longline industry. 75th Annual Meeting of the Gulf and Caribbean Fisheries Institute. Nassau, Bahama. *Accepted*.
2. Daulong AJ, **Vaughn AJ**, Wang S, Dahlgren C, Dinh TTN, Yamamoto FY, Allen PJ. **2023**. Effects of low temperature on physiological performance and tissue energy storage in catfish. Aquaculture America. New Orleans, LA.
3. **Vaughn AJ**, Allen PJ. **2022**. The effects of low temperature on growth and metabolic processes of juvenile channel *Ictalurus punctatus*, blue *Ictalurus furcatus*, and hybrid catfish *I. furcatus* x *I. punctatus*. Aquaculture 2022: World Aquaculture Society Triennial Meeting with the American Fisheries Society Fish Culture Section and the National Shellfisheries Association. San Diego, CA.
4. **Vaughn AJ**, Allen PJ. **2022**. The effects of low temperature on growth and metabolic processes of juvenile *Ictalurus* spp. Mississippi State University's Graduate Research Symposium. Starkville, MS.
5. Daulong AJ, **Vaughn AJ**, Dinh TTN, Yamamoto FY, Allen PJ. **2022**. Effects of low temperature on liver and muscle energy storage and condition in catfish. Mississippi State University's Undergraduate Research Symposium. Starkville, MS.
6. **Vaughn AJ**, Allen PJ. **2021**. Understanding the relationship between cool temperatures and metabolic rate of channel (*Ictalurus punctatus*), blue catfish (*I. furcatus*) and hybrid catfish (*I. furcatus* x *I. punctatus*) in different culture and environmental conditions. 47th Annual Meeting of the American Fisheries Society, Mississippi Chapter. Virtual.
7. Carrus E, **Vaughn AJ**, Lorentz CN. **2019**. Detecting microplastics in aquatic ecosystems using zebra mussels (*Dreissena polymorpha*). Eastern Kentucky University Biological Sciences Honors Day Ceremony. Richmond, KY.

8. Carrus E, **Vaughn AJ**, Lorentz CN. **2019**. Detecting microplastics in aquatic ecosystems using zebra mussels (*Dreissena polymorpha*). The 34th Annual Scientific Symposium of Ohio River Basin Consortium for Research & Education (ORBCRE) and Ohio River Basin Alliance (ORBA) Summit. Crestview Hills, KY.

Outreach Experience

Marine Discovery Day at the Mississippi Museum of Natural Sciences

2023

75th Mississippi Deep Sea Fishing Rodeo

2023

Sharks and Rays Booth at My Two Boots

2023

Shark Dissection Class at the Old School Learning Depot

2023

Sharks and Rays Booth at Sand Jam

2023

Shark Week at Gulf State Park Pier

2023

Shark and Ray Diversity at St. Martin Gifted Center

2023

Shark and Ray Diversity at The Blake at Biloxi

2023

Shark and Ray Diversity at Vancleave, MS Elementary and Middle Schools

2023

Fish Diversity at Lawrenceburg, KY Elementary School

2022

Mississippi State University's American Fisheries Society Veteran Family Fishing Event

2022

Continuing Education

Statistical Analysis, R Programming Language Intensive Workshop

Mississippi State University

Department of Wildlife, Fisheries and Aquaculture

Starkville, MS

August 9th – 13th, 2021

Instructor: Dr. Melanie Boudreau

Elasmobranch Advanced Field Skills Course

Field School

Miami, FL

August 2nd – 8th, 2019

Elasmobranch Field Skills Course

Field School

Miami, FL

January 3rd – 9th, 2019

Certifications

Professional Association of Diving Instructors Open Water Dive Certification

2018

Academic Awards

Aquaculture 2022, Physiological Insights Towards Improving Fish Culture

2022

- Second place Student Presentation Competition

Mississippi State University Graduate School Travel Award

2022

Mississippi State University Graduate Research Symposium

2022

- Third place Oral Presentation, Forest Resources and Veterinary Medicine Master's Students

Eastern Kentucky University's Department of Biological Sciences Dan R. Varney Memorial Scholarship

Spring 2019

- Based on academic achievement, leadership and service, and potential for professional achievement

The 34th Annual Scientific Symposium of Ohio River Basin Consortium for Research & Education (ORBCRE) and Ohio River Basin Alliance (ORBA) Summit
Fall 2018

- Best Student Poster Presentation Recipient

Eastern Kentucky University Retention Scholarship
Fall 2018

- Minimum 2.0 GPA and a grade of "C" or better in all coursework, including developmental courses

Eastern Kentucky University Nancie Stone Endowed Scholarship
Spring 2018, Spring 2017

- Female, resident of KY, OH, WV, employed off-campus with minimum of 10 hrs., and minimum 3.0 GPA

Arthur and Frieda Bingham Prize
Spring 2017

- Eastern Kentucky University Department of Biological Sciences
- Awarded to a rising sophomore or junior who, as a major in Biology (not enrolled in the Pre-Med emphasis), has demonstrated outstanding academic performance

Professional Societies

American Fisheries Society
February 2023 – Present

Mississippi Chapter of the American Fisheries Society
February 2023 – Present

Mississippi State University's Student Sub-Unit of the American Fisheries Society
Secretary
August 2021 – August 2022

Computer Skills

- **R Programming Language**
- **SAS**
- **ArcGIS**
- **Microsoft Office** (Word, Excel, PowerPoint)
- **Adobe** (Lightroom, Illustrator, Photoshop, Premiere Pro, Creative Cloud)
- **Canva/Prezi**

Social Media & Communications

Marine Fisheries Ecology [Facebook page](#) and [Instagram page](#)

Mississippi State University

Marine Fisheries Ecology Program, Biloxi, MS

January 2023 – Present

- Manage and create content for social media pages

Fishermen Invested in Science, Healthy Ecosystems, and Sustainability [Facebook page](#)

Mississippi State University

Marine Fisheries Ecology Program, Biloxi, MS

January 2023 – Present

- Manage and create content for social media page

References

Dr. J. Marcus Drymon (Current Supervisor)

Associate Extension Professor, Mississippi State University

Marine Fisheries Specialist, Mississippi-Alabama Sea Grant Consortium

Mississippi State University Coastal Research and Extension Center

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Dr. Peter J. Allen (MS Advisor)

Associate Professor, Mississippi State University

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Dr. J. Wesley Neal

Extension/Research Professor, Mississippi State University

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