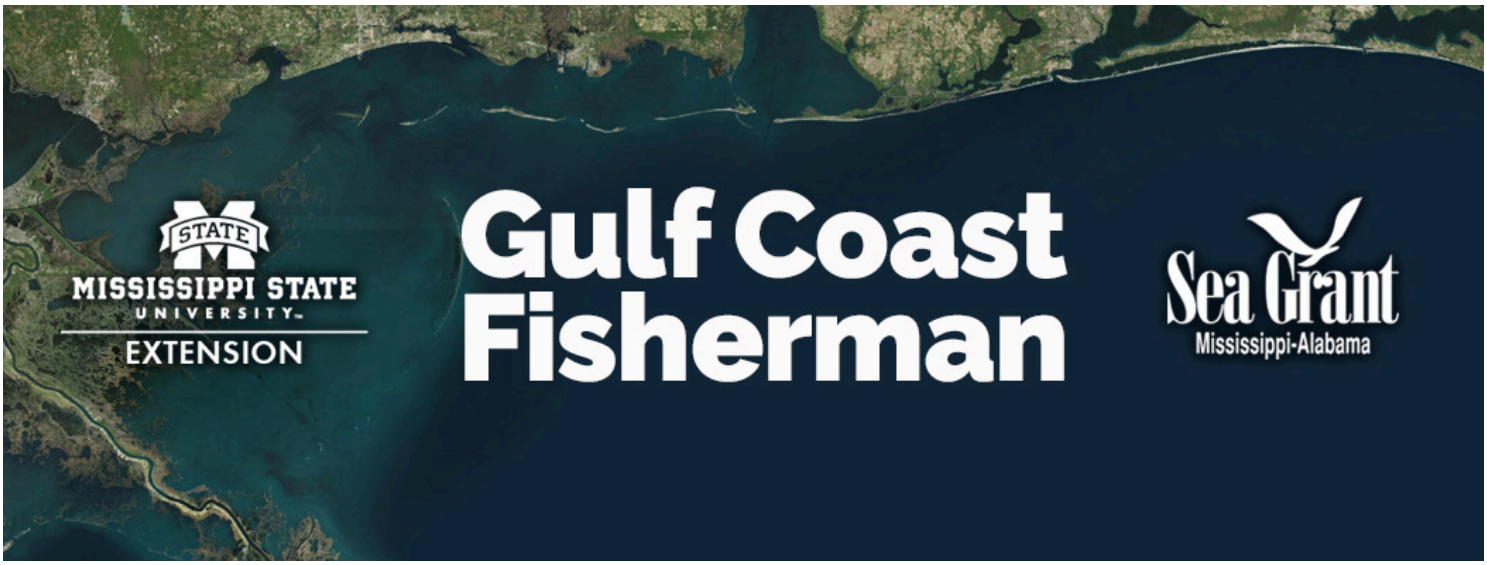

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Bridging Science and the Sea through Mississippi State University's Extension Service

The History of MSU's Extension Service

Beginning in an era when dissent was common among Americans, "Extension" began to solidify its foundation by bridging gaps between science and stakeholders. Signed in 1862 by President Abraham Lincoln, the Morrill Act set aside millions of acres of federal land to create colleges that would "benefit the agricultural and mechanical arts." Each state was granted 30,000 acres of land to be distributed by senators and representatives, and the land or its proceeds were to fund educational institutions. While some states declined this opportunity, many of today's prominent universities, including the University of Wisconsin, Rutgers University, and eventually Mississippi State University, were founded as land-grant institutions.

Eager to capitalize on this opportunity, Mississippi accepted the provisions of

the Morrill Act in 1866, but due to the ongoing Reconstruction from the Civil War, the acceptance was nullified. Once the war ended, Congress awarded three-fifths of the Mississippi land-grant funds to Alcorn State University, an African American college, and the remaining two-fifths to the University of Mississippi. However, the University of Mississippi struggled to attract agricultural students, and as a result, Mississippi A&M College (now Mississippi State University) was established in 1878. Two years later, in the fall of 1880, classes began in Starkville, Mississippi, with an enrollment of 354 students.

A bird's eye view of Mississippi State University, formerly Mississippi Agricultural and Mechanical College, in 1909. Source: Mississippi Encyclopedia

In the mid-1880s, farmers' institutes across Mississippi paved the way for what is now considered Extension work. This form of education enabled farmers to increase their profits through crop diversification and livestock improvements. By 1905, Mississippi had three "agricultural demonstrators" who adopted the "show, don't tell" philosophy – teaching by example rather than just instruction. Early results indicated enhanced living conditions among families and communities influenced by Extension. By 1909, a national Extension section was formed, and its members advocated for federal funding for agricultural Extension work. In 1913, this came to fruition with President Woodrow Wilson's signing of the Smith-Lever Act, which formally established the Cooperative Extension Service.

As time progressed, so did the influence of Extension. By 1916, most Mississippi counties had a designated county agent or home demonstration agent, and 17 bulletins had been disseminated to 10,000 Mississippians, including businessmen, community leaders, and farmers. Dairy farming flourished, the boll weevil (a cotton-feeding insect) infestation was eradicated, and the 4-H Club thrived. Having weathered the Great Depression and supported emergency food efforts during both of the World Wars, Mississippi State University's Extension Service remains robust today, delivering the latest research and educational resources to Mississippians across all 82 counties.

For more information about the history of Extension at Mississippi State University, please follow this link.

Mississippi's delegation at the first national 4-H camp in Washington, D.C., in 1927. Source: A History of Mississippi State University Extension Service

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Extension on the Mississippi Coast

Following the blueprint of the Morrill Act, Dr. Athelstan Spilhaus proposed the establishment of Sea Grant colleges in 1963 to advance oceanic work,

mirroring the development of agriculture and mechanic arts. This idea was realized three years later with the passage of the national Sea Grant College Program Act. By 1971, the first four Sea Grant colleges were designated. Today, 34 university-based programs exist across all coastal and Great Lakes states, as well as Puerto Rico and Guam.

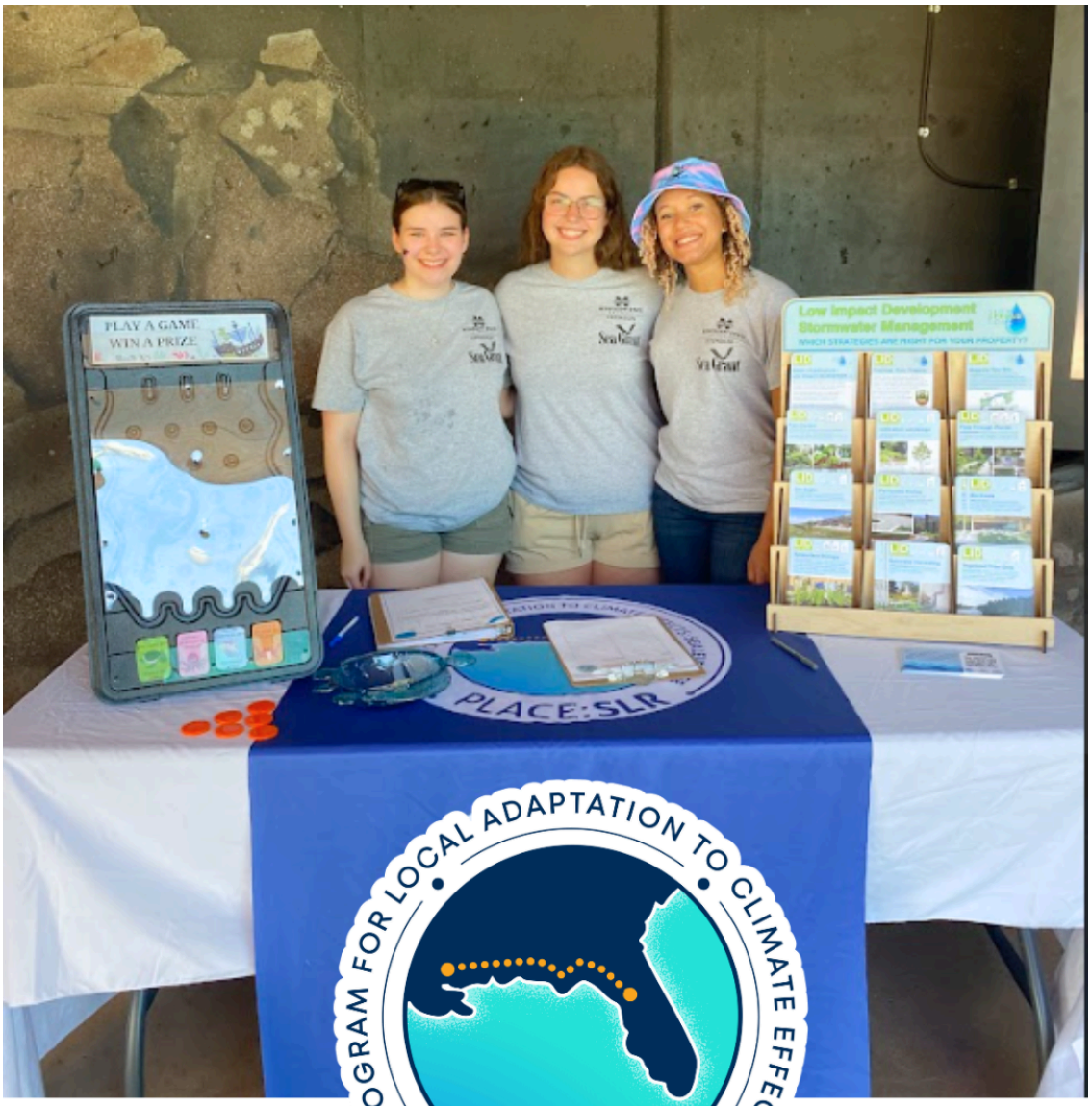
As a member of the Mississippi-Alabama Sea Grant Consortium, Mississippi State University proudly holds both land-grant and Sea Grant statuses. In 1988, the University established the Coastal Research and Extension Center (CREC) in Biloxi, Mississippi. The facility is home to dedicated experts who provide outreach and education regarding the coastal environment to coastal Mississippi residents. Specific topics include (but are not limited to) fisheries, seafood processing, aquaculture, wetland management, marine industry, recreation, economics, and law. One program at CREC that continues to make waves is the Coastal and Marine Extension Program (CMEP)!

Broadly, the CMEP mission is “to put science into practice by providing coastal stakeholders with the knowledge they need to make sound environmental, economic, and resilient decisions. The process of gathering information and getting it to people that can use it involves Extension, applied research, outreach, and education activities.” Currently, there are five subprograms within the CMEP – let’s take a closer look at each!

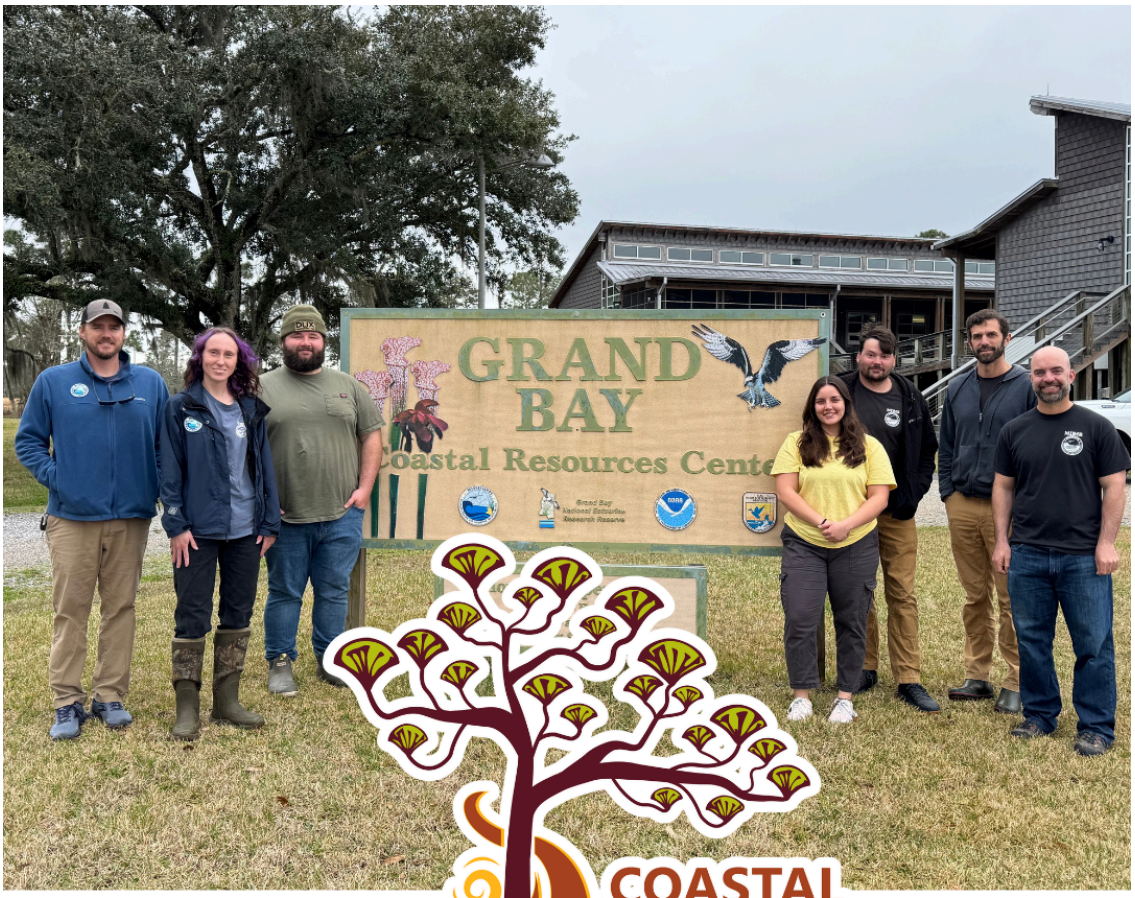
The Mississippi Sound Estuary Program (MSEP) is a non-regulatory program that collaborates with local organizations and community leaders to promote conservation and restoration of the Mississippi Sound and its contributing watershed. The MSEP team strives to maintain the Sound as a vibrant and thriving ecosystem for future generations. To learn more about the MSEP, check out its website here!

COASTAL CONSERVATION & RESTORATION

The Coastal Conservation & Restoration (CCR) Program's focus areas are broad and constantly evolve to adapt to the current needs of stakeholders. The CCR team's projects span from local to international scales, and the topics range from living shorelines to conservation grazing (the use of livestock for habitat management), marine debris, and Mississippi inland and coastal cleanups. To read more about the CCR Program, click here!

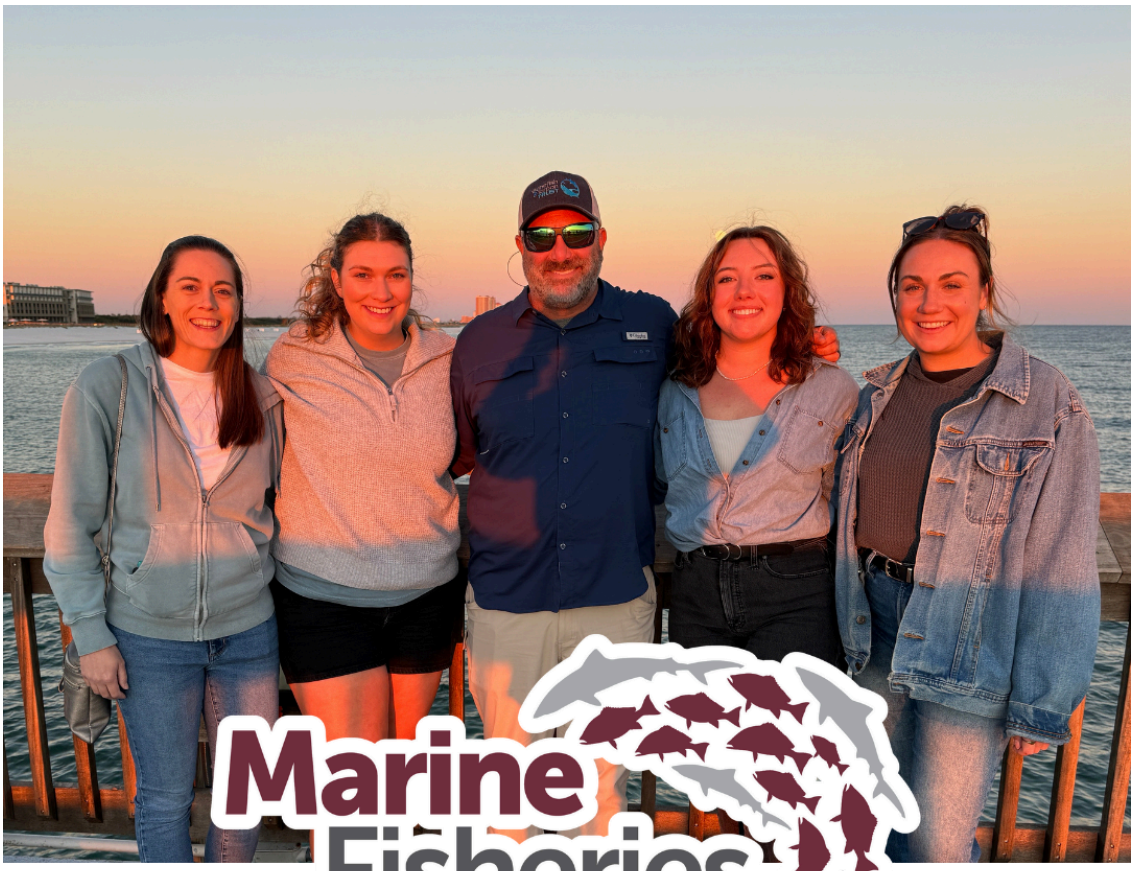


The Program for Local Adaptation to Climate Effects (PLACE) is a partnership between the Mississippi-Alabama Sea Grant Consortium, Florida Sea Grant, NOAA Sea Grant, and Mississippi State University that aims to support and enhance sea-level rise resilience in the northern Gulf. The PLACE team works directly with stakeholders to understand risk, communicate risk, and facilitate action related to coastal inundation under rising sea levels in a changing climate. To find out more about the PLACE, visit its website here!



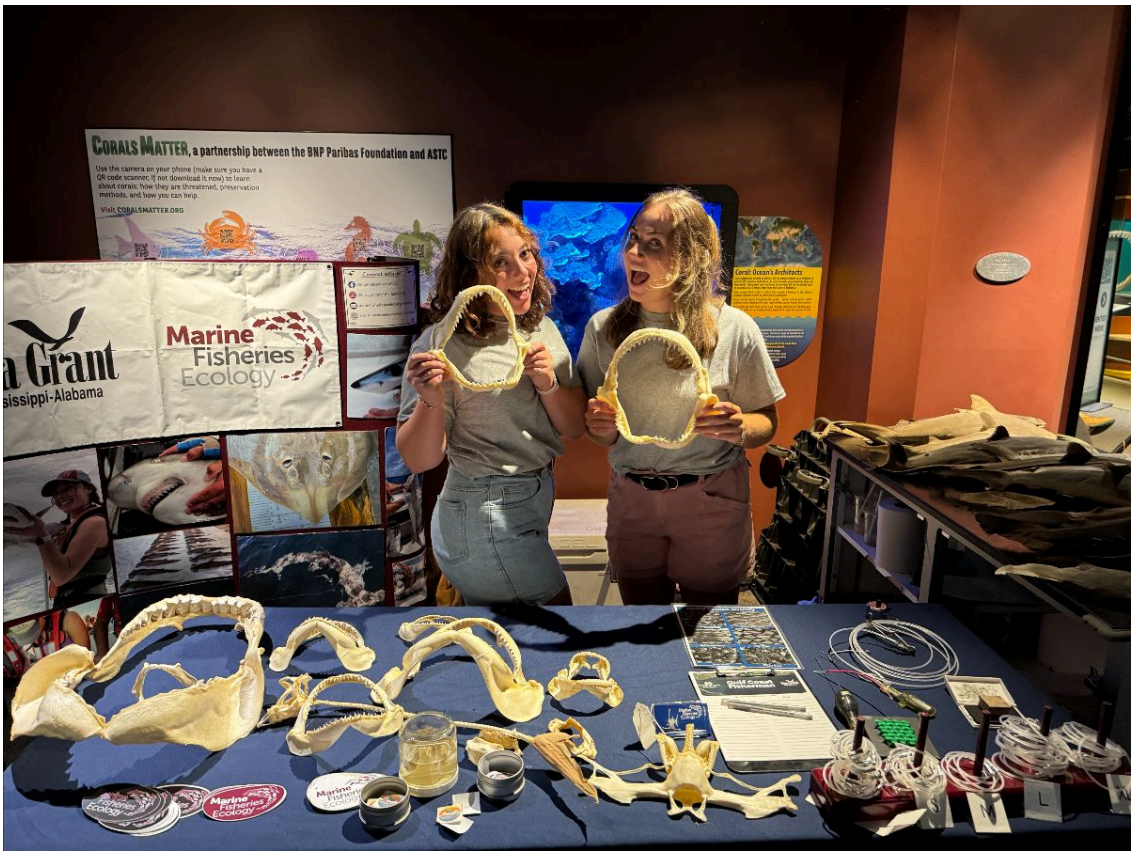
COASTAL
UPLAND
RESTORATION
& ECOLOGY

The Coastal Upland Restoration & Ecology (CURE) Program was designed to improve awareness, understanding, and conservation of historically common but now imperiled coastal grassland habitats. The CURE team works to understand the effects of common restoration and management practices for these habitats on the associated ecological communities, focusing on vegetation, birds, reptiles, and mammals. To explore CURE, head to its website here!



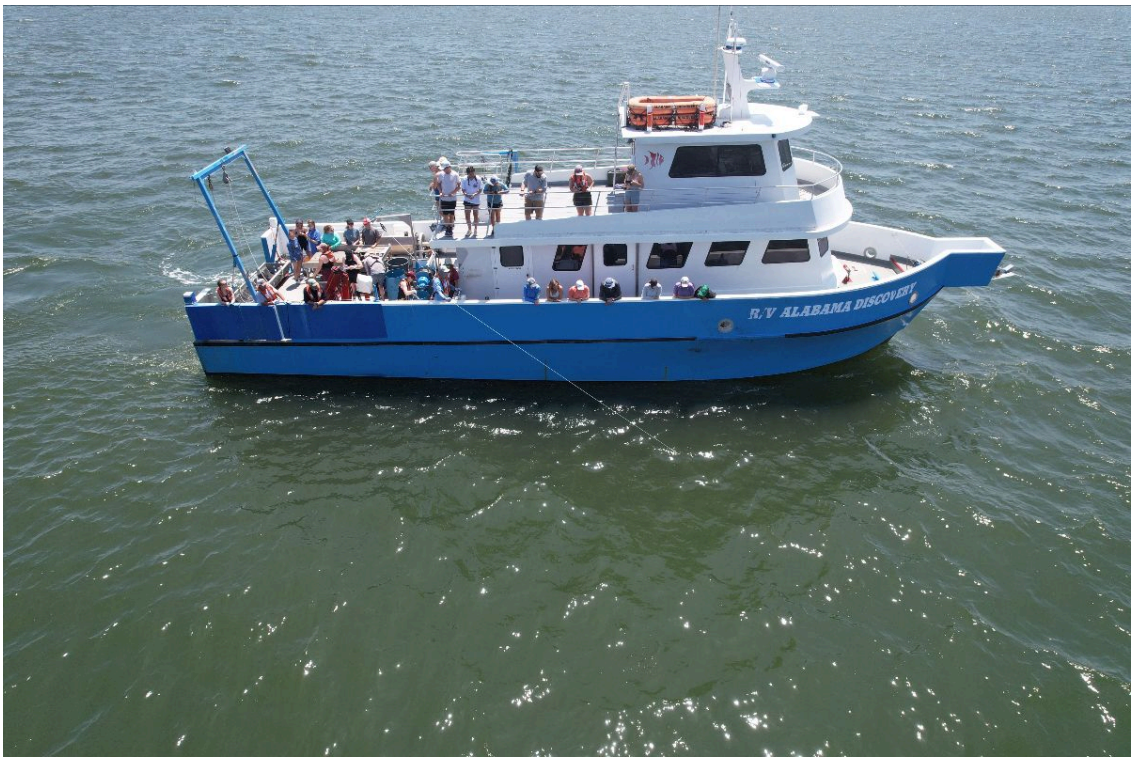
The Marine Fisheries Ecology (MFE) Program focuses on providing science-based solutions to common issues affecting both commercial and recreational fishermen in the northern Gulf. Our research objectives are to better understand the abundance and distribution, life history, movements and migrations, and feeding ecology of a wide range of species, including coastal sharks, reef fishes, and coastal pelagics. Let's take a deeper dive into our MFE Program!

The MFE Program was established in 2017 by our Principal Investigator, Dr. Marcus Drymon. Our team strives to draw connections between fisheries science and the community to ensure the fishery resources we all depend upon are sustained for future generations. We engage with people of all sectors and demographics by sharing research-based knowledge through various projects, publications, and outreach efforts.



Marine Fisheries Ecology (MFE) Program team members showcase shark jaws during an outreach event at the McWane Science Center in Birmingham, Alabama. Source: MFE Program

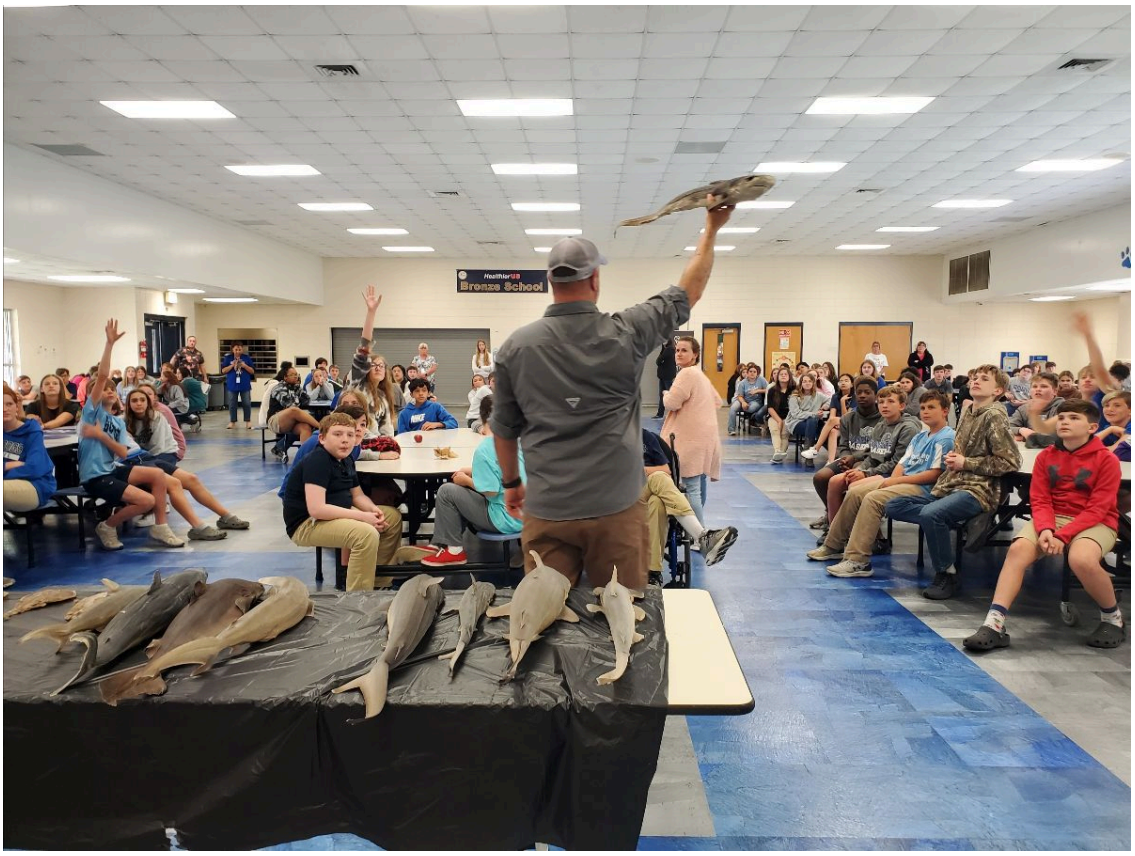
Building on our commitment to community engagement, we initiated our Fishermen Invested in Science, Healthy Ecosystems, and Sustainability (FISHES) course in 2021. The course provides fish enthusiasts with practical, science-based information about fisheries management, fisheries science, and sustainability. It consists of five classroom sessions and a field excursion on the R/V Alabama Discovery. To learn more or join the interest list, visit our website or contact us directly.



FISHES students participate in the field excursion aboard the R/V Alabama Discovery in Mobile Bay. Source: Coastal Conservation & Restoration Program

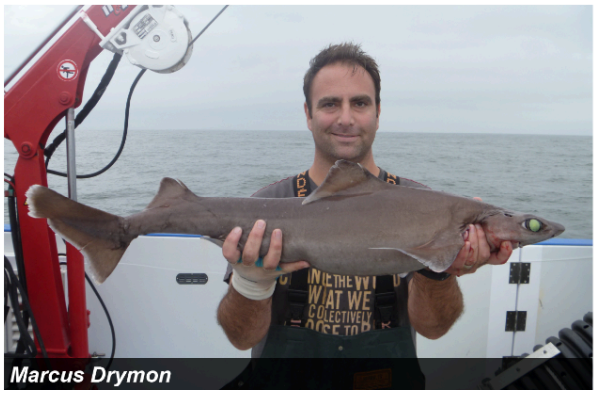
Additionally, we collaborate annually with Gulf State Park to host a multi-day shark-focused event complete with interactive presentations, dissections, and hands-on activities. This year's "Shark Fest" will take place from June 26th to 28th at the Gulf State Park Pier in Gulf Shores, Alabama.

Beyond large-scale events, our team offers engaging classroom visits where we bring real specimens and interactive resources for unique hands-on learning experiences! We also participate in local environmental festivals and fairs, such as Celebrate the Gulf, which will be held this year on Saturday, April 5th from 10 AM to 3 PM in Pass Christian, Mississippi. If you would like us to visit your classroom or event, please complete our Google form to submit your request!



Dr. Marcus Drymon, displays real shark specimens to a group of local middle school students. Source: MFE Program

We are fortunate for those who laid the foundation of Extension work, and we aspire to build upon their legacy in fisheries science and management, ensuring our research has a lasting impact on both the community and marine resources.



I'm Marcus Drymon, an Associate Extension Professor at Mississippi State University and a Marine Fisheries Specialist at Mississippi-Alabama Sea Grant. Amanda Jargowsky, Abby Vaughn, Alena Anderson, Danielle McAree, Lindsay Mullins, and I are the Marine Fisheries Ecology Lab. We'd love to hear from you! Please reach out to us at marinefisheriesecology@gmail.com

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