ANNUAL REPORT 2024

2024 AT A GLANCE

Our core mission remains steadfast in its focus on transformative oceanic and coastal research and education. Each milestone highlighted in this year's annual report demonstrably affirms our commitment to this mission.

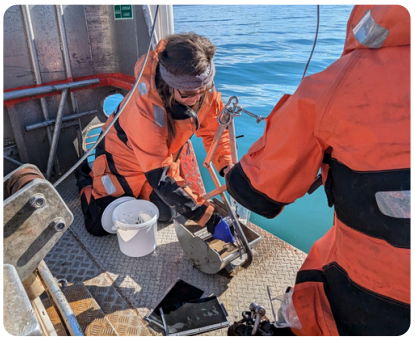
In 2024, we completed several of the significant milestones outlined in our Strategic Plan. As a result, our diverse research and education portfolio continues its impressive expansion. These successes now provide promising opportunities for Consortium Scientists and students to study the resilience of Alabama's remarkable marine resources. These achievements were made possible through the dedicated support of our staff and faculty, Sea Lab Foundation Board Members, legislators, and the contributions of our donors.

To meet the burgeoning interest from students in our member institutions and K-12 schools across Alabama's 67 counties, we began planning for a new dormitory, research vessel, and outdoor classroom adjacent to the scientific diving pool that was completed in 2023. These new additions will significantly increase student housing capacity, expand our research collaborations, and enhance workforce development opportunities in our coastal communities.

This year, the Alabama Aquarium achieved record attendance, welcoming nearly 120,000 visitors who explored galleries showcasing our rich and diverse watershed's natural resources. We will further improve this experience in Spring 2025 by adding a dynamic, immersive, and creative play space for visitors aged three to eleven.

Two Ashford Middle School 7th graders hold a puffer fish during a BayMobile visit.

Alea Ryan (Athens State), Candace Newman (Auburn) and Josh Kuykendall (UAB) work together to reel in a catch during the Marine Biology vessel trip.



Post doc Katie Howe collects samples on an expedition in Svalbard, known as the world's most northern settlement.

DHP high school intern Jackson Cruikshank (Alma Bryant) helps prep for a summer educator workshop.

Aquarium Docent Kathryn Twilley explains a horseshoe crab to visitors.

A young boy takes a closer look at submerged aquatic vegetation during Discovery Day.

DORM IMPROVEMENTS

ENHANCED CAMPUS LIVING

Overnight visitors to the DISL campus will notice improved living conditions in the dormitories. With the support of the Alabama Legislature, the Challenger and Beagle dormitories, built in the 1960s, underwent an 18-month renovation.

The renovations included installing a new energy-efficient HVAC system and impact-resistant windows. These upgrades will reduce humidity and moisture common along the Gulf coast. DISL's maintenance team assisted in replacing the dormitories' wiring, sheetrock, and flooring. A fresh coat of paint and updated closet space topped off the renovations.

NEW DORMITORY PLANS

The Sea Lab began the design phase of a new dormitory which will serve resident graduate students, interns, visiting scientists, and regional science meetings. At a projected cost of $15 million, this new dormitory will replace Albatross Hall, which was damaged beyond repair by Hurricane Sally in 2020. The new dormitory will provide housing for 96 students and lessen pressures on our K-12 program's housing needs during the academic year.

The new dormitory is supported by the Alabama Legislature's supplemental funding from the FY2022 and FY2023 ETF budgets.

OUTDOOR CLASSROOM

EXPANDING EDUCATIONAL SPACE

Designs were completed to build an open-air classroom adjacent to the recently completed scientific diving pool. This addition will house diving equipment and marine technology tools used in our “hands-on” ocean technology and SCUBA classes.

Construction of the scientific pool was completed in 2023. The proximity of the new outdoor classroom will provide unique learning experiences and spark student enthusiasm for ocean sciences. Students will be able to build, test, and adjust their designs without losing time between stages.

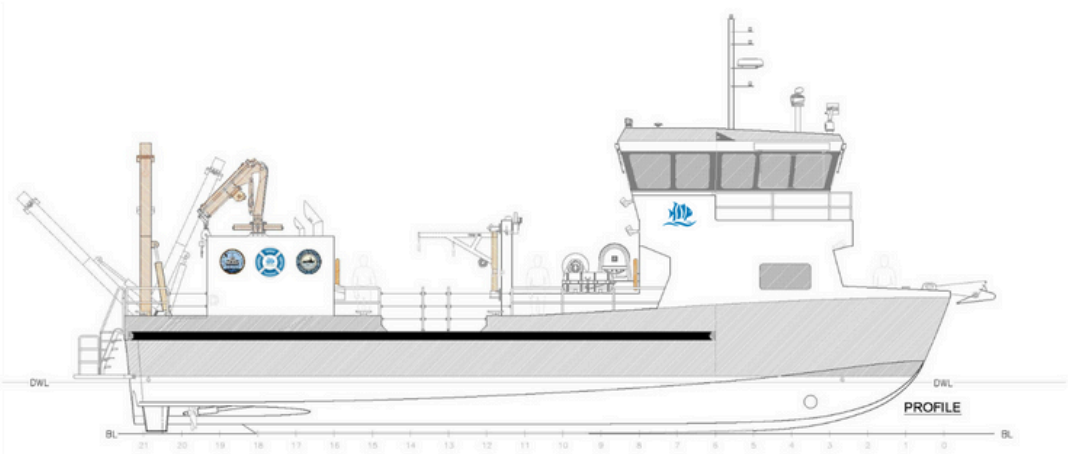
The Pool and Classroom Capital Campaign was supported by gifts from the following supporters: Alabama Power Foundation, the Mobile County Commission, John Adams Steely Foundation, J.L. Bedsole Foundation, the Ben May Charitable Trust, Crampton Trust, The Daniel Foundation, C. D. Helen & Jeff Glaze Foundation, The Hearin-Chandler Foundation, the Dr. Monte L Moorer Foundation, the DISL Foundation Board of Directors and many individual donors.

AROUND CAMPUS...

- May’s Cafe serving line and coolers were updated thanks to a supplemental appropriation from the State of Alabama.
- Four solar canopy tables were installed around campus. The solar canopy tables are an excellent way for students to connect between classes and recharge their electronic devices.
- Boy Scouts attending the Mobile Area Council’s Thanksgiving Camp at DISL built picnic tables for open campus spaces as part of a community service project.

NEW RESEARCH VESSEL

REACHING NEW HORIZONS



The Louisiana-based shipyard Aluma received the green light to begin construction on DISL's new aluminum-hulled research vessel. The U.S. Coast Guard completed the design review and issued a "Notice to Proceed" at the year's end. It's estimated that construction will take 12 to 14 months.

Once completed, the new cutting-edge vessel will allow Marine Environmental Sciences Consortium (MESC) researchers and students to conduct offshore research overnight. We will also be better able to partner with agency researchers. The ability to remain on the water longer will save valuable time and research funds by eliminating the daily need to return to the dock.

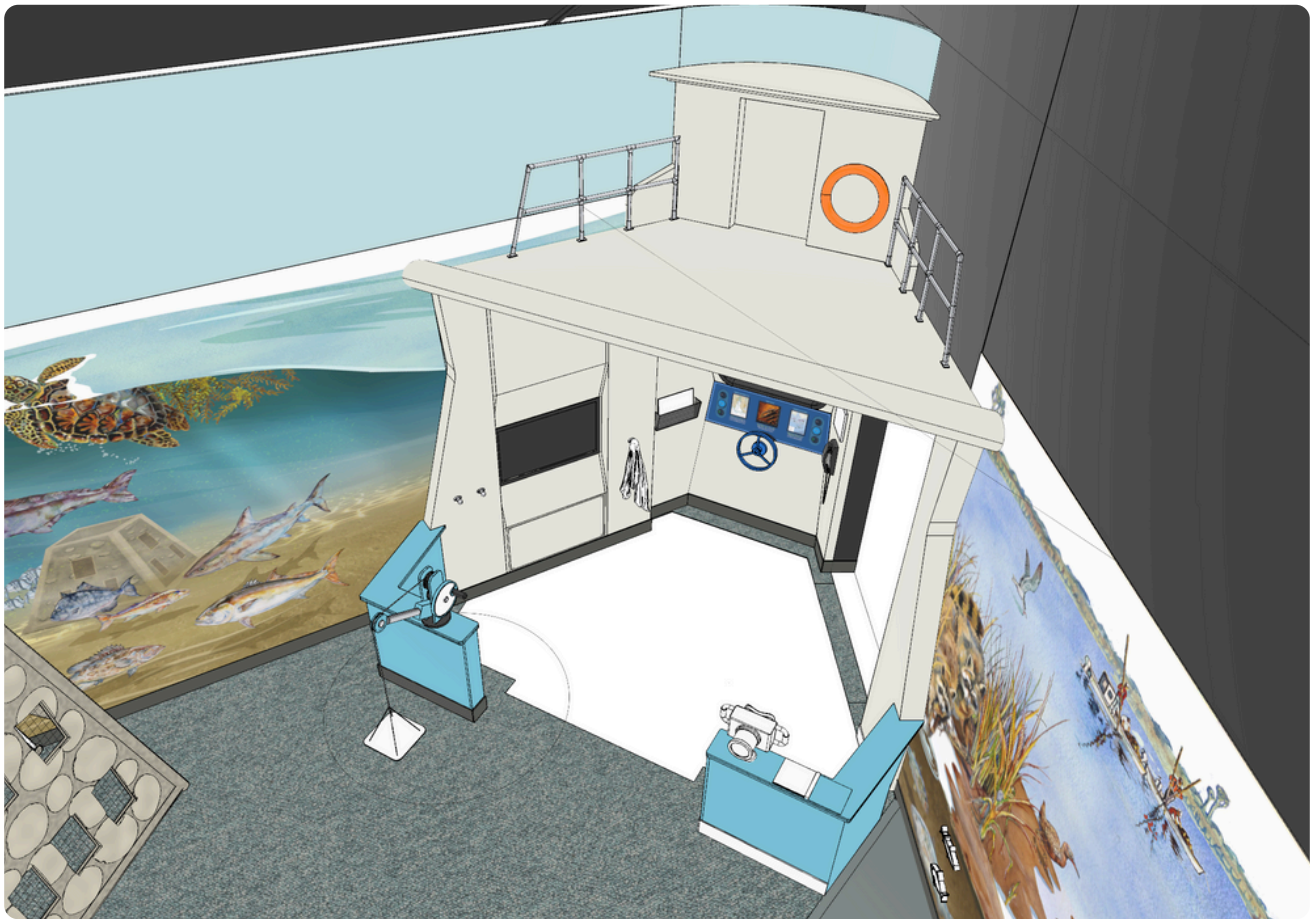
Funds for the vessel were made available through support from the Gulf of Mexico Energy Securities Act (GOMESA).

Currently, the Sea Lab operates two large research vessels: the R/V Alabama Discovery and the R/V E.O. Wilson. In addition to the Wilson and the Alabama Discovery, there are several small (14 to 30 feet) outboard boats and skiffs.

In 2024, the R/V Alabama Discovery supported 294 trips for education and research. The R/V E.O. Wilson supported 41 trips.

NEW HANDS-ON EXHIBIT

CONNECTING THE DOTS



A rendering of the vessel that will be included in the hands-on play environment in the Alabama Aquarium. The vessel includes tools used by researchers when on a research expendition.

The DISL completed the design for a dynamic hands-on play environment in the Alabama Aquarium earlier this year. The Little Billy Goat Hole experiential learning area features an interactive boat, along with ocean, and lab-themed areas for younger students. It's the second phase of renovations for the Alabama Aquarium.

The redesign includes opportunities to remotely operate vehicles (ROVs), role-play as scientists, and explore underwater habitats. These hands-on exhibits will help children learn about the Gulf of America ecosystem and the vital work of the DISL at an age-appropriate level, fostering empathy for the natural world and a lifelong appreciation for Alabama's coastal environment.

Completion of Little Billy Goat Hole is slated for Spring 2025.

ALABAMA CENTER OF EXCELLENCE

The first round of projects funded by the Alabama Center of Excellence are moving towards completion, while the second round of projects are getting underway. Established in 2019 by the United States Department of Treasury, the Alabama Center of Excellence (ALCoE) is housed at the Dauphin Island Sea Lab. The competitive grant program uses RESTORE Act funds provieded to academic institutions in Alabama to perform cutting-edge, forward-looking, scientific research in the north-central Gulf of America.

Data generated by the Center of Excellence-funded research will help provide science-driven solutions and recommendations for current and future conditions in coastal Alabama. Funds will also be used to create new and enhanced outreach platforms to inform policymakers and concerned citizens on the role and importance of our coastal resources in the lives of Alabama citizens.

There are currently 18 projects funded by ALCoE across two funding competitions.

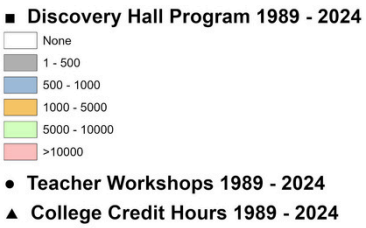
Two projects received national media attention in 2024. Principal Investigator Dr. Brian Dzwonkowski is studying the occurrence of offshore hypoxia and was interviewed for an AL.com article in July.

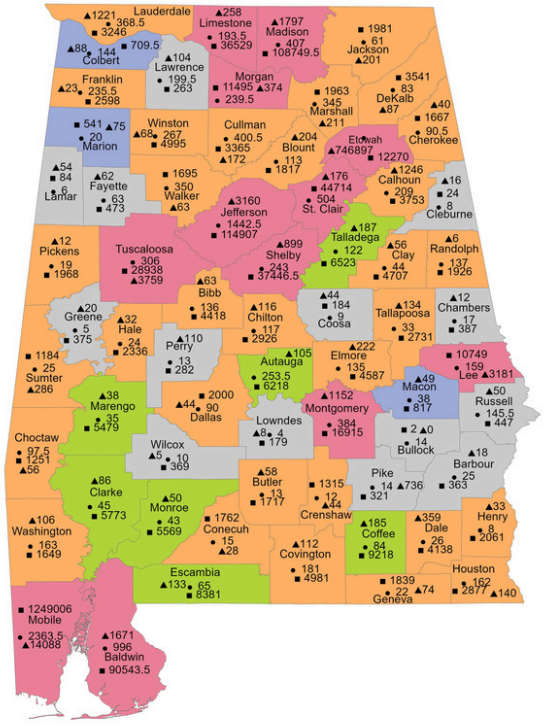
Other notable mentions include project presentation at Gulf of America Conference in Tampa and Bays and Bayous in Biloxi and participation in the Smithsonian's MarineGEO seagrass habitat working group, National Oceanic and Atmospheric Administration (NOAA) Science RESTORE meetings and Center of Excellence Research Grant Program.

STATEWIDE IMPACT

The map illustrates the Sea Lab's commitment to serving college students, K-12 students, and teachers from around our state.

While the Sea Lab has been providing consistent programs since created by the Alabama Legislature in 1971, the map outlines enrollment for our programs from 1989 to present.





UNIVERSITY PROGRAMS

University Programs tripled undergraduate enrollment during the spring term in 2024. The spring course offerings started in 2023 to give MESC students another opportunity to meet their degree requirements with DISL classes. Sixteen students representing the University of South Alabama, University of North Alabama, and Jacksonville State University were a part of the 2024 spring term.

The traditional summer sessions had a 20 percent increase in undergraduate and graduate hours enrollment. The summer sessions saw thirteen of the 21 MESC schools represented. Twenty-eight courses were offered between the two-week May Term and the five-week First and Second Sessions. The University of Alabama at Birmingham's Introduction to Neurobiology course returned with a record 24 students enrolled in the special August session.

In the first summer session, students pose for a picture after orientation. The first session started on May 20 and included eleven courses.

Research conducted at the Dauphin Island Sea Lab focuses on our ocean, coastal zones, and watersheds. This research provides the best available science for coastal policy and stakeholders. DISL's University Programs also selected nine students for its National Science Foundation's Research Experiences for Undergraduates program. The students work with DISL faculty mentors to carry out independent research projects on a variety of exciting topics in marine science. The University of South Alabama and DISL faculty member Dr. Ruth Carmichael led the program, assisted by Ph.D. student Sophia Corde. Several of the students presented their research at science conferences in the fall.

The 2024 DISL NSF-REU Program Cohort included Ph.D. mentor Sophia Corde (DISL/University of South Alabama), Marissa Hall (University of South Alabama), Andrew Clark (Hendrix College), KayLee Ridge (University of Evansville), Colin Tang (University of Delaware), Nolan Cooper (University of Alabama in Huntsville), Whitney Spencer (Alabama A&M University), Chase Schubert (Whitman College), Jon Mai (Gonzaga University), and Faculty Mentor Dr. Ruth Carmichael (DISL/University of South Alabama).

SCIENTIFIC DIVING

The scientific diving program at the Dauphin Island Sea Lab continues to provide invaluable training for students and researchers. Scientific diving is a tool used by researchers, federal and state agencies, museums/aquariums, and some consulting companies to perform workplace diving operations with the objective of collecting data for scientific or educational purposes.

DIVERS - 24
TOTAL DIVES- 433
TIME UNDERWATER (MINUTES) -18,870
TRAINING WEEK: 6 CANDIDATES
SCIENTIFIC DIVER FALL COURSE: 6 CANDIDATES
DISCOVER SCUBA: 43 PARTICIPANTS
SNORKEL ORIENTATION/TRAINING: 81 PARTICIPANTS

SCIENCE CONFERENCES

Consistent with our mission statement, DISL faculty and students presented their research at fifteen worldwide science conferences. These included the Benthic Ecology Meeting, Graduate Student Symposium, Bays and Bayous Symposium, Gulf Estuarine Research Society, Society of Marine Mammalogy Conference, World Fisheries Congress, Ocean Sciences Meeting, Association for the Sciences of Limnology and Oceanography, Reef Futures, Alabama Chapter of American Fisheries Society, American Fisheries Society, International Wildlife Disease Association, and Oyster South Symposium.

DISL/University of South Alabama Dr. Jeffrey Krause and his lab members attended the Ocean Sciences Meeting in New Orleans, Louisiana.

DISL/University of South Alabama Dr. Charlie Martin and his lab in attendance at the Gulf Estuarine Society Meeting in Fairhope, Alabama.

KNAUSS MARINE POLICY FELLOWSHIP

Ph.D. Student Allie Smith was selected as a 2025 NOAA Knauss Marine Policy Fellowship finalist. The finalists are selected through a competitive process that involves review panels composed of national experts in marine science, policy, and education. Smith is a member of Dr. Jeffrey Krause's lab at DISL/University of South Alabama.

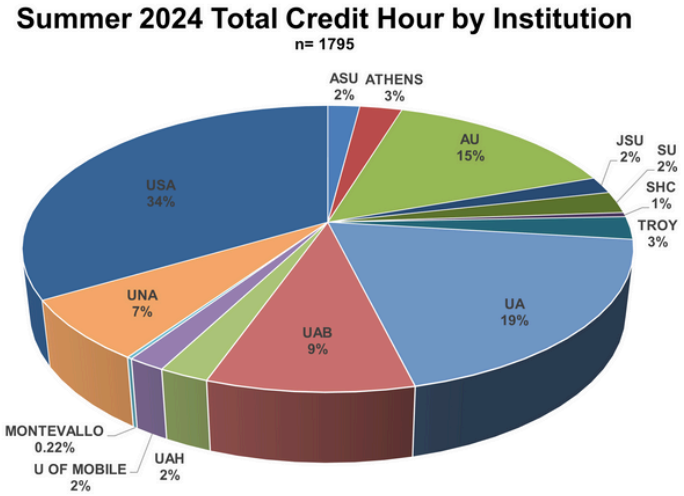
SCHOLARSHIP

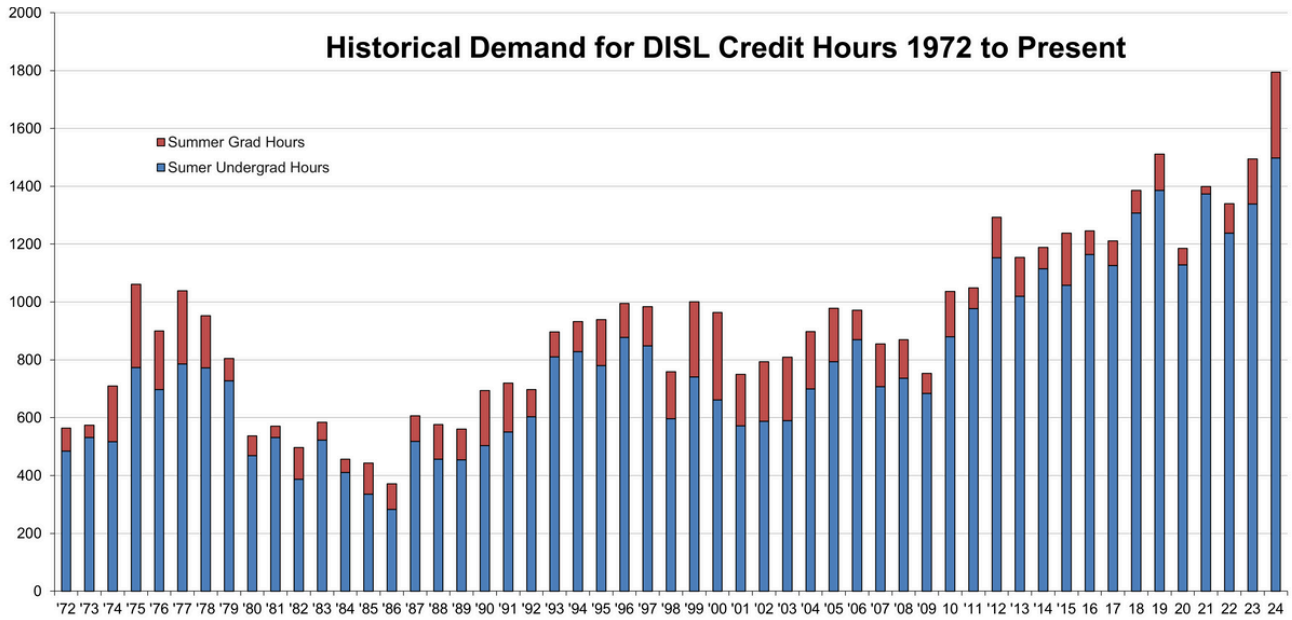
Fourteen students seeking a career in marine science felt a little less pressure last summer because of the support from scholarships funded by the Dauphin Island Sea Lab Foundation. The scholarships cover room and board needs during the DISL summer sessions.

Alexis Cleveland (Alabama State University) and Alex Barnes (Jacksonville State University) take a break from their dolphin watch during the Marine Mammals summer course for a photo.

The recipients included:

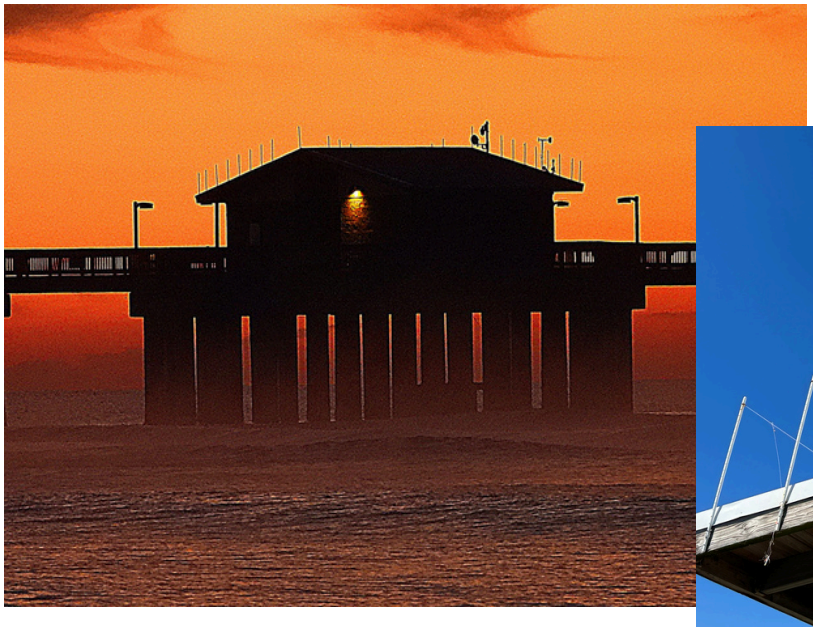
Alex Barnes, Jacksonville State University
Morgan Bellflower, University of Alabama
Jordan Ward, University of Mobile
Madison Dorsey, Samford University
Chloe Bean, University of South Alabama
Ava Gordon, University of South Alabama
Macie Henson, Jacksonville State University
Cristel Ruiz, University of Alabama
Ravyn Miller, University of North Alabama
Taylor Korte, University of South Alabama
Troyva Sweeting, University of North Alabama
Karlie Brodzinski, Jacksonville State University
Adam Boyd, University of Alabama Birmingham
Brayden Freeman, University of Alabama

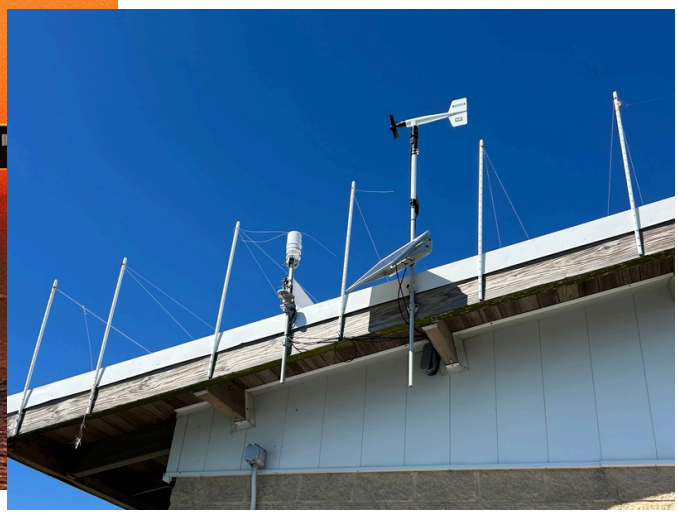




ARCOS

The Alabama Real-Time Coastal Observing System (ARCOS) launched a new weather station at the Gulf State Park Pier in Gulf Shores, Alabama, in 2024. These stations collect real-time meteorological and hydrographic data around Mobile Bay and coastal Alabama. The data they provide is invaluable for understanding these complex ecosystems and is made publicly available year-round at disl.edu/arcos.





The Gulf State Park Pier Station went online in December 2024.

We continue to provide and maintain ARCOS thanks to the financial support of the Alabama Center of Excellence, the Alabama Department of Conservation Natural Resources, the Gulf of Mexico Coastal Ocean Observing System, and other agency partners.

Users can now access the near real-time data, updated every thirty minutes, through *www.disl.edu/arcos*. Historical data reports for each station are also available. The Dauphin Island and Meaher Park stations historical data collections begin with 2003.

This is an overview map of where the ARCOS stations are located. The Weeks Bay (NERRS)station is maintained by the Alabama Department of Conservation and Natural Resources (ADCNR).

WEBSITE TRAFFIC

MAIN PAGE - 44,908
DAUPHIN ISLAND - 6,028
MIDDLE BAY LIGHTHOUSE - 4,307
BATTLESHIP PARK - 3,609
PERDIDO PASS - 3,061
KATRINA CUT - 3,056
CEDAR POINT- 2,954
BON SECOUR - 2,683
MEAHER PARK - 2,660
WEST END - 447
GULF STATE PARK PIER - 138

RESEARCH

Dr. Ron Baker's lab developed an interactive website demonstrating how living shorelines work. Project Greenshores in Pensacola Bay, Florida, is used as the website model. Erosion and disappearing habitats along our coastlines can impact nearshore and offshore habitats. Living shorelines can help reduce these impacts by stabilizing the coastal edge and enhancing fisheries' biodiversity.

This photo shows the layout of the Project Greenshores living shoreline. The breakwaters are visible along the marsh edge. These structures help to reduce wave action.

Living shorelines are dynamic and include a variety of structures made from natural materials. Marsh grass helps to hold the sediment in place and create habitat, oyster reefs also create habitat, and breakwaters help to decrease the wave action along these areas to protect the habitats created. The website outlines each item, with videos used to survey and monitor the area. It also includes a reference guide to the fish species that can be spotted in the area. The website was built with a grant from the Pensacola and Perdido Bays Estuary Program.

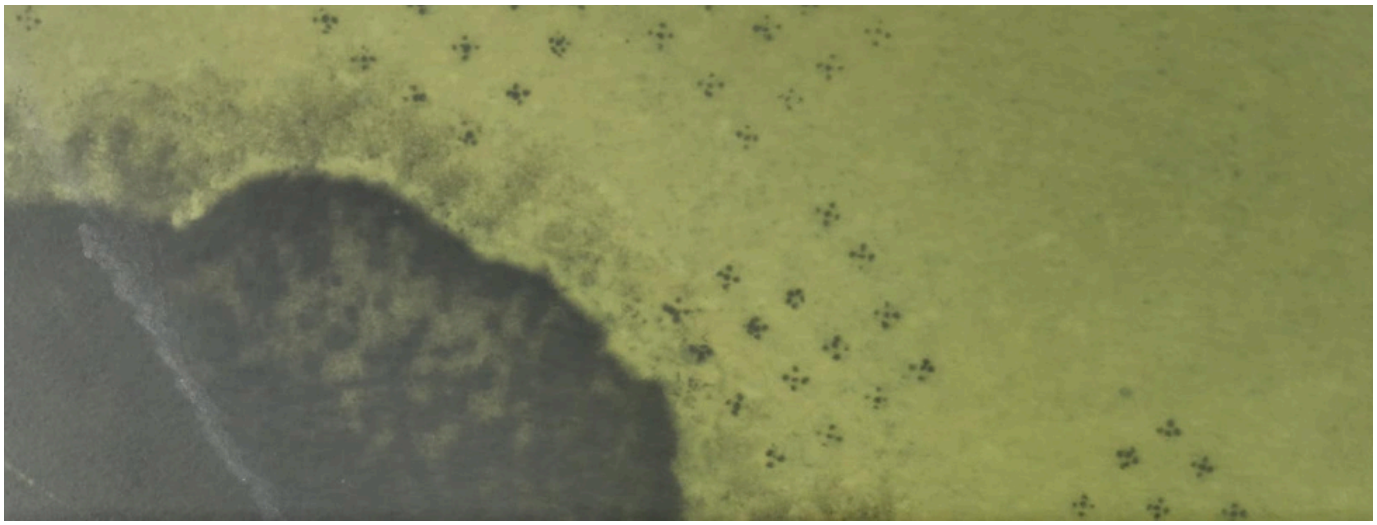
The DISL Marine Mammal Research Program oversees the Manatee Sighting Network (MSN) and the Alabama Marine Mammal Stranding Network (ALMMSN). These programs encourage people to report stranded, live or dead, marine mammals, and sightings of manatees. Data gathered from these sightings support the Marine Mammal Research Program's efforts to guide the management and conservation of marine mammals and their habitat. The ALMMSN provides volunteer training to encourage the participation of the public in responding to strandings.

In December, the Manatee Sighting Network team led the efforts to rescue a cold-stressed manatee from the Theodore Industrial Canal off Mobile Bay. The manatee was rescued and brought to SeaWorld Orlando for rehabilitation.

Personnel from the DISL, FWC, USFWS, and the Alabama Department of Conservation and Natural Resources, Marine Resources Division teamed up to capture a male manatee on December 19. (Courtesy DISL/MSN)

Cold stress is the leading cause of death for manatees in Alabama and nearby waters along the northern Gulf of Mexico, and rescue success is limited.

The Manatee Sighting Network received nearly 400 manatee sighting reports in 2024, with more than half of the reports from Alabama waterways. The Alabama Marine Mammal Stranding Network responded to 27 marine mammal strandings in 2024.

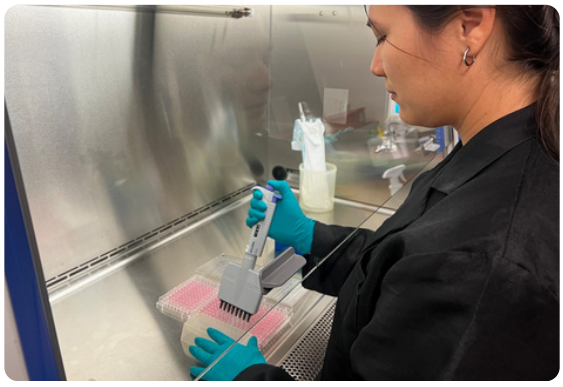


In support of TNC's Lower Perdido Restoration Projects, DISL and partners transplanted almost 2 acres of shoalgrass near Bird and Walker Islands in Perdido Bay. (Courtesy Alex Rodriguez/DISL)

The Dauphin Island Sea Lab partnered with The Nature Conservancy and CSA Ocean Sciences to install the Walker and Robinson Islands restoration project in Baldwin County's Perdido Bay. The team worked for nearly two weeks between July and August to re-establish seagrasses on the northern side of Robinson Island. The transplanting was done using the "sod method" similar to how sod is laid in a yard and improves the chances of survival.

This sod method also provides "a buffet" for the local sea creatures, such as pinfish and sting rays, as the patches are quickly filled with small marine bugs that serve as snacks for the sea creatures. Dottie Byron, program manager with DISL, said it's the first time a project of this magnitude was attempted. Teams from all of the involved agencies are monitoring the transplanted seagrass.

To the south, Dr. Alison Robertson, DISL/University of South Alabama, collaborated with other researchers to determine why fish in the Florida Keys were disoriented or impaired and seen spinning before dying. Dr. Robertson's used her expertise in ecotoxicology to understand how environmental change affected fish and other marine organisms. Smalltooth sawfish, a critically endangered species, appeared most affected by the environmental changes.



Elizabeth Murphy a marine biotechnologist, University of South Alabama's Stokes School of Marine Science and the Dauphin Island Sea Lab, tests the neurological effects of fish toxins. (Courtesy of Alison Robertson)

Robertson and the research team believe the fish suffered from a consortium of natural toxins produced by a class of algae called dinoflagellates. The dinoflagellates normally affecting the fish are found on the seafloor. In this study, however, researchers were detecting them in the water column. The toxins were also found in impacted fish gill tissue, meaning the fish were breathing in the poisons. Robertson and the team continue to research how the toxins moved from the seafloor to the water column.

RESEARCH GRANTS

Listed below are the granting agencies supporting the research at the Dauphin Island Sea Lab, along with the primary investigator and the grant amount.

BP - Dr. Sean Powers - $267,916
USFW - Dr. Ruth Carmichael - $94,636
EPA- Dr. Ruth Carmichael - $217,418
EPA - Dr. John Lehrter -$120,000
FDA- Dr. Ruth Carmichael - $1,500,000
FWC- Dr. Alison Robertson - $37,620
ADCNR - Dr. John Valentine - $8,368,353
Alabama Center of Excellence - Dr. Ruth Carmichael - $692,412
Alabama Center of Excellence - Dr. Kelly Dorgan - $399,953
Alabama Center of Excellence - Dr. Jeff Krause - $421,757
Alabama Center of Excellence - Dr. Lee Smee - $116,542
ADCNR - Dr. Ken Heck - $781,560.12
ADCNR/GOMESA - Dr. John Valentine $3,250,000
ADCNR/GOMESA - Dr. Ruth Carmichael - $182,461
NASA - Dr. Brian Dzwonkowski - $33,634
NASA - Dr. Tina Miller-Way - $122,220
NOAA - Dr. Ron Baker - $377,704.33
NOAA - Dr. Benjamin Belgrad - $108,148
NOAA - Dr. Ruth Carmichael - $32,467
NOAA - Dr. Brian Dzwonkowski - $999,725
NOAA/The Nature Conservancy - Dr. Ken Heck - $438,147.80
NOAA - Dr. Tina Miller-Way - $693,566
NOAA - Dr. Sean Powers - $728,786
NOAA - Dr. Lee Smee - $829,885
NOAA - Dr. John Valentine - $1,803,757
NSF - Dr. Ruth Carmichael - $326,755
NSF - Dr. Kelly Dorgan - $863,786
NSF - Dr. Brandi Kiel-Reese - $142,501
NSF - Dr. Jeff Krause - $1,753,211
NSF - Dr. Tina Miller-Way - $22,053
NSF - Dr. Alison Robertson - $1,380,587
NSF - Dr. Lee Smee - $2,774,062
Office of Naval Research - Dr. Kelly Dorgan - $259,994
U.S. Department of Treasury - Dr. Ronnie Baker - $3,879,800.53
U.S. Department of Commerce - Dr. Sean Powers - $100,457
USDC - Dr. John Lehrter - $832,498
USDT - Dr. Brian Dzwonkowski - $241,904
USGS - Dr. Charlie Martin - $211,132.15

Total: $31,583,225.90

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DISCOVERY HALL PROGRAMS

Discovery Hall Programs (DHP) hosts classes, field trips, and summer programs for K-12 students and educators. The hands-on learning programs promote conservation to increase public awareness and understanding of our ocean.

Alabama schools continue to dominate academic year classes. The K-12 classes are offered from September through May and are designed to meet the Alabama Course of Study Standards in Science for each age group. These classes are a great way for educators to enhance textbook lessons.

Not all schools can send students for an overnight or day trip to the Dauphin Island Sea Lab. That's why the BayMobile was developed as a traveling classroom to reach even more students throughout the state of Alabama.

Seventh graders from The Altamont School from Birmingham were one of 154 school groups that visited the Dauphin Island Sea Lab to take classes during an overnight field trip


Educators work through a field exercise during the Change and Resilience in Gulf of Mexico Environments Workshop offered in June 2024.

Continuing educational opportunities are vital for formal and informal educators. DHP offers professional development workshops virtually and in-person throughout the year to help educators develop lesson plans based on the most recent data and information related to marine science topics. The workshops also provide materials for the educators to use in the classroom and field exercises. The virtual Plankton 3D workshop delivered 3D plankton models with identification cards.

ACADEMIC YEAR FIELD TRIPS
154 SCHOOL GROUPS
73% ALABAMA
791 CLASSES TAUGHT

BAYMOBILE
31 SCHOOLS
10,438 STUDENTS

PROFESSIONAL WORKSHOPS
166 EDUCATORS
79% ALABAMA
12 STATES

ACCESS VIRTUAL FIELD TRIP
2,287 ALABAMA STUDENTS
13 SESSIONS
26 ALABAMA COUNTIES

Participant in the Northern Gulf Coastal Regional MATE ROV Competition helps teammates navigate in the windy conditions at the outdoor pool.

A highlight of the year for DHP was hosting the 11th annual Northern Gulf Coast Regional MATE competition in the new scientific pool on DISL's campus in April. It's one of two student underwater robotics competitions hosted by DHP each year. Sixteen teams from four states competed with their custom-built remotely operated vehicles (ROVs). The outdoor conditions challenged all the teams, testing their skills and adaptability. One challenge was the wind, which made the ROVs' visibility and movability difficult. In years past, the pool missions for the competition were held at Bishop State Community College's indoor pool.

The multi-day competition is a part of the Marine Advanced Technology Education (MATE) network of 40 regional competitions held across the U.S. and worldwide. From the Northern Gulf Coast Regional, GEARS from Eastwood Presbyterian Church School in Montgomery, Alabama, earned the opportunity to represent the Region in the MATE World Championship this year.

DHP also co-hosted the Alabama Regional SeaPerch competition with UMS-Wright Preparatory School in Mobile. This was the fourth year of the competition, which was held at UMS-Wright. Seven schools competed in the single-day competition. Northeast Lauderdale High School NJROTC from Meridian, Mississippi, won the regional champion title. While Rehobeth High School NJROTC of Dothan, Alabama, earned the regional slot to attend the International SeaPerch ROV Competition.

STEM programs were a hot topic for DHP educators on the road in 2024. DHP Chair Dr. Tina Miller-Way and ROV Program Coordinator Rachel McDonald attended several meetings to discuss the ROV program. These events included the Southeast Robotics Conference in Auburn, the iStem Summit in Vestavia Hills, STEM Day in Montgomery, and Go Explore Math and Science Event (GEMS) at the University of South Alabama.

Dr. Tina Miller-Way and Rachel McDonald attended the Southeast Robotics Conference in Auburn.

Several DHP educators also attended conferences to discuss the programs developed for visiting students and to network new ideas. Kyle Halstead shared Plankton Food Webs at the Alabama Science Teachers Association conference. Greg Graeber discussed Alabama Sharks at the 2024 National Science Teaching Association Conference. JoAnn Moody attended the Southeastern Environmental Education Alliance Leadership Clinic. There was also a DHP presence at the National Marine Education Association Annual Meeting in Boston, Massachusetts.

Fall Family Camp participants get ready for a kayak trip.

Programs that began during COVID continued to be successful. Family camp and Science Friday are both a great way for adults and children to participate together in DHP educator-led activities. Science Friday includes three class options in one day once a month. Family Camp is an overnight adventure offered in Spring and Fall.

Summer programs were at capacity, which enhanced the experience for four interns. The interns, two college and three high school, worked with DHP's education faculty during single-day and multi-day camps, educator workshops, and outreach events. These internships are an excellent opportunity to gain hands-on experience in environmental education and learn about the Gulf of Mexico's ecosystems.

The 2024 Discovery Hall Programs interns were Jackson Cruikshank (Alma Bryant High School), Iven Keomanyvong (Alma Bryant High School), Gavin Mason (Mary G. Montgomery High School), Grace Carey (University of Nebraska), and Olivia Proctor (Southest Missouri State University).

SUMMER
411 CAMPERS
20 STATES
19 PROGRAMS

FAMILY CAMP
FALL & SPRING
33 PARTICIPANTS
4 STATES

SCIENCE FRIDAY
6 SESSIONS
261 PARTICIPANTS
AGE RANGE 4-ADULT

The National Marine Educators Association recognized Dr. Tina Miller-Way's dedication to enhancing marine science lessons with the 2024 Individual National Marine Education Award. Dr. Miller-Way helped grow the STEM programs at the Dauphin Island Sea Lab, including using remotely operated vehicles to teach about deep sea exploration and ocean engineering.

ALABAMA AQUARIUM

The Alabama Aquarium at the Dauphin Island Sea Lab ended 2024 with record admissions. Close to 120,000 visitors toured the aquarium with nearly half that visiting in the summer months -June, July, and August.

The excursions program, which expanded beyond the summer months in 2021, added a new experience with the guided lab tour for visitors. The tour offers a behind-the-scenes look at the physical research spaces and insight into current research at DISL. The added program was a great way to connect the community to how and why current research is being conducted. Nearly 200 people toured the labs as a part of the new excursion.

The touch table in the Alabama Aquarium is a favorite spot for visitors. They have the chance to interact with horseshoe crabs and hermit crabs.

More than 100 people volunteered their time at the Alabama Aquarium, making it the most successful year for the docent/volunteer program. The program was created to enhance the visitor experience inside the Aquarium and to assist at outreach events year-round. This was the first year there were volunteers secured for every daily shift. The volunteers are also on-hand for awareness events like World Ocean Day, National Estuaries Week, and Discovery Day.

The volunteer program also includes volunteer gardeners who help to beautify campus year-round. This year, there were 15 gardeners.

A fun addition for the holidays included an underwater pumpkin carving exercise in the Mobile Bay tank with the scientific diving program. More than two dozen people watched as DISL graduate student Korrie Brown and Research Vet Catharina Vendl carved the DISL fish into the pumpkin. While fun to watch, the event was a lesson in diving communication for Brown.

2024 VISITORS

117,414

EXCURSIONS

187 GUIDED LAB TOUR
311 VESSEL
125 SALT MARSH
121 BEACH, DUNE, FOREST

DOCENT/VOLUNTEERS

19 COLLEGE STUDENTS
7 HIGH SCHOOL STUDENTS
77 ADULTS
8 SNOWBIRDS
15 GARDENERS

MOBILE BAY NATIONAL ESTUARY PROGRAM

While the Mobile Bay National Estuary Program Management Conference, made up of over 300 community leaders in government, industry, academia, non-profits, and citizens, embarks on creating a 10-year road map for comprehensive conservation and environmental management, the program office continued to make great strides in 2024 to promote the wise stewardship of Alabama's estuaries and coast.

The Mobile Bay National Estuary Program (MNEP) measures accomplishments across four pillars which are measuring conditions, ecosystem restoration, local capacity building, and education and involvement.

MEASURING CONDITIONS

Pathogens are a significant source of water impairment worldwide. To reduce costly laboratory testing, MBNEP worked with Xan O Consulting LLC to create a Pilot Canine Pathogen Detection Program.

Professor X sniffs out a water sample during training in the field.

The program will be a screening tool to help identify human-source bacteria. The Food and Drug Administration (FDA), Alabama Department of Enviromental Management (ADEM), Mobile County, the City of Mobile, and DISL are partnering to develop the program.

Veteran Paul Orcutt with Xan O Consulting LLC is tapping into his 35 years of experience training dogs for the military, defense contractors, and government organizations to train Professor X for the project. The FDA created the dog training aid that is used. The ADEM coastal laboratory will also contribute space to make the training aid and do sample analysis.

ECOSYSTEM RESTORATION

Seven projects focused on ecosystem restoration in the Mobile Bay area. The projects ranged from restoring the natural flow and function of water, reducing sediment runoff, channel restoration, stabilization, and continuing eradication of the invasive apple snail.

Deer River Containment for Beneficial Use

The Deer River Marsh Restoration project included the hydrologic restoration of 3,350 linear feet of Middle Fork of Deer River. The team enhanced 15 acres of marsh through thin layer placement and built containment for more than 220,000 cubic yards of material from U.S. Army Corps of Engineers to create 19 acres of new marsh.

In lower Fowl River, the team began placing timber breakwater structures and riprap along five spits. These efforts aim to combat boat wakes and restore 28 acres of marsh using 50,000 cubic yards of material from the U.S. Army Corps of Engineers. In April, a public summary meeting on the project was held. More than 50 people attended the meeting. The project is funded by the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund in partnership with the state of Alabama.

Fowl River Spits-Bellingrath dry placement of material.

LOCAL CAPACITY BUILDING

Two events were held during the year to enhance the skills of professionals and elected officials in managing the resources of Alabama's estuaries and coasts. A Stream Restoration Workshop gathered 54 contractors, engineers, and local resource managers to discuss the latest in stream restoration technologies. The workshop included site visits to completed and active projects.

Mobile Bay NEP hosted a Lunch and Learn seminar on carbon capture and sequestrian economic opportunities. More than 100 business leaders attended.

EDUCATION AND INVOLVEMENT

Community events and presentations build stewardship for the resources of Alabama's estuaries and coasts. Mobile Bay NEP reached more than 7,000 community residents through participation in clean-ups, back-to-school events, and the Alabama Deep Sea Fishing Rodeo.

The Vets Recover organization focuses on veterans who need little help outside the Veterans Affairs, mainly those experiencing homelessness and drug addiction. They sponsor a portion of the Magnolia Cemetery by cutting grass and doing trash cleanups. The MBNEP staff assisted with a cleanup and talked with some local veterans about the NEP's mission and how they can get involved.

Mobile Bay NEP assisted with the Vets Recover cleanup of the Magnolia Cemetery.

Presentations at civic clubs, symposiums, and association meetings connected the Mobile Bay NEP team with more than 1,200 citizens throughout the year.

The MBNEP sponsored and staff helped to organize the biennial Bays and Bayous Symposium held in Biloxi, Mississippi, in November. The symposium gathered students, researchers, and management agencies from across the Gulf Coast.

DAUPHIN ISLAND SEA LAB FOUNDATION

The Dauphin Island Sea Lab Foundation (DISLF) donations funded 14 projects for Sea Lab Programs in the 23-24 fiscal year.

Discovery Hall Programs K5-12

- BayMobile - All In Credit Union
- High School Scholarships - funded by the DISLF Jenny Cook Memorial Fund
- ROV competition -Partial funding from Thompson Engineering, Curtis and Edith Munson Foundation, and DISLF
- Sea Stars - Funded by Rotary Club of Mobile, Glaze Foundation and Donors Computers - Munson Foundation, Crampton Trust, Bedsole Foundation, Caring Foundation, Hearin Chandler

University Programs Undergraduate, Masters, and PhD candidates

- New Microscopes - Regions Bank
- University Programs DISLF Scholarships – Cocktails with the Critters and Individual Donors, Employee Giving
- Bays and Bayous Symposium - deGruy Scholarship
- George Cline Scholarship, Jacksonville State University
- Marine Mammal Stranding Network - Anonymous Donor, Fleet Feet
- UP Computers – Donors, RC&D Grant
- New Van for UP – Bedsole and Crampton Grants • New Hydrophones – Powers Lab – Alabama Power Foundation

Campus-Wide

- Sun Sail Shades for Campus – Alabama Dermatological Foundation
- Fitness Equipment - DISL Employee Campaign

The DISLF exceeded all fundraising goals set for 2024. Each gift is vital to the strength of the Sea Lab, and the impact is unprecedented. There are several ways to support the Foundation and the Sea Lab programs throughout the year.

Donations are collected year-round through sealabfoundation.org and through annual fundraising events. These events continue to enhance Sea Lab projects as seen above.

Cocktails with the Critters was held in May at the Blue Gill Restaurant on the Causeway. Guests learned about current projects during the evening and got up close with some of the BayMobile's preserved specimens. The virtual silent auction was held the week leading up to the evening. The event was supported by 60 corporate sponsors and 17 individual sponsors. The virtual auction included 130 items. Net income from the evening topped $92,608, a 2.5 percent increase from 2023.

In October, the Foundation added a new recognition award to the 11th annual Marine Environmental Awards Luncheon. Chris Blankenship, Commissioner of the Alabama Department of Conservation and Natural Resources, was the first recipient of the Sessions-Brown Conservation Leadership Award. The award was created in 2023 in recognition of Alabama Senator David Sessions' and Representative Chip Brown's advocacy for the conservation of the land and waters in the Mobile-Tensaw Delta and Alabama watershed.

DISL Executive Director Dr. John Valentine, ADCNR Commissioner Chris Blakenship, Sen. David Sessions, and DISL Foundation Executive Director Helene Hassell.

The Foundation also recognized Dr. Mimi Fearn and the Dauphin Island Bird Sanctuaries for their outstanding contributions to marine environmental sustainability in the Alabama Gulf Coast Region.

The keynote speaker for the luncheon was Dr. Larry Madin, Deputy Director Emeritus of Woods Hole Oceanographic Institute. Madin was among the first biologists to use SCUBA diving and submersibles to study oceanic animals *in situ*.

Fairhope High School, the Alabama School of Math and Science, and the University of South Alabama Graduate students attended the luncheon thanks to sponsor support.

Alabama School of Math and Science

Fairhope High School

Graduate students enjoyed a lunch visit with MEAL keynote speaker Dr. Larry Madin during his visit to the Dauphin Island Sea Lab ahead of the Marine Environmental Awards Luncheon.