



2023

GRAY'S REEF NATIONAL MARINE SANCTUARY FOUNDATION MEMBERSHIP IMPACT REPORT



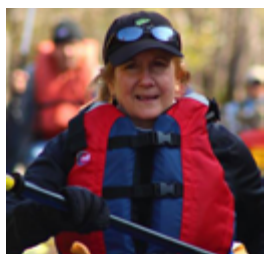
Gray's Reef
National Marine
Sanctuary Foundation

Gray's Reef National Marine Sanctuary (GRNMS) protects Georgia's and our southeastern ocean treasures. The natural live-bottom reef is teeming with marine life and is part of the endangered North Atlantic right whale's calving ground. Loggerhead turtles rest at the reef, where scientists have identified more than 200 fish species and over 900 species of invertebrates.

The National Marine Sanctuary Foundation aims to develop ocean stewards through education and public engagement, and to support research and conservation initiatives of our national marine sanctuaries and monuments. As a Chapter of the National Marine Sanctuary Foundation, we formed to promote protection for Gray's Reef, raise funds on the Sanctuary's behalf, and develop programs to raise awareness for ocean conservation in close collaboration with the Sanctuary team.

The goal of the Board of Trustees is to ensure that the Chapter is successful in establishing itself as a fully operational and permanent organization. We continue to work towards this goal to support Sanctuary priorities and to provide impactful conservation outcomes.

Board of Trustees



Cathy J. Sakas



Lane Johnson



Sue Ebanks



Dr. JT Prather



Cheryl Chip



Faye DiMassimo



Brittany Dodge



Dr. Forrest Estes



Suzie Williams

Our Mission

To support and strengthen Gray's Reef National Marine Sanctuary as a unique and vital landmark for the community and the nation through educational and charitable purposes.

Our Vision

Communities in Savannah, Georgia and the southeast U.S. are engaged stewards, making informed decisions that affect the reef and ocean resources locally, regionally, and globally for the current and future health of our ocean.

Our Work

The Foundation focuses on three priority areas: Education and Outreach, Science and Technology, and Conservation and Restoration. Our Chapter's primary area of focus is education and outreach in which we are developing programs intended to stimulate local conservation ethic and aptitude, as well as the blue economy in the southeastern United States.

Our innovative and experiential learning programs and outreach campaigns engage communities in discovery of Gray's Reef through exploration, personal insight through participation, and sanctuary conservation through partnerships, sponsorships and donations. Your membership helps to fund the Gray's Reef mission while impacting the community through these featured programs:



Gray's Reef Southeast MATE ROV Competition

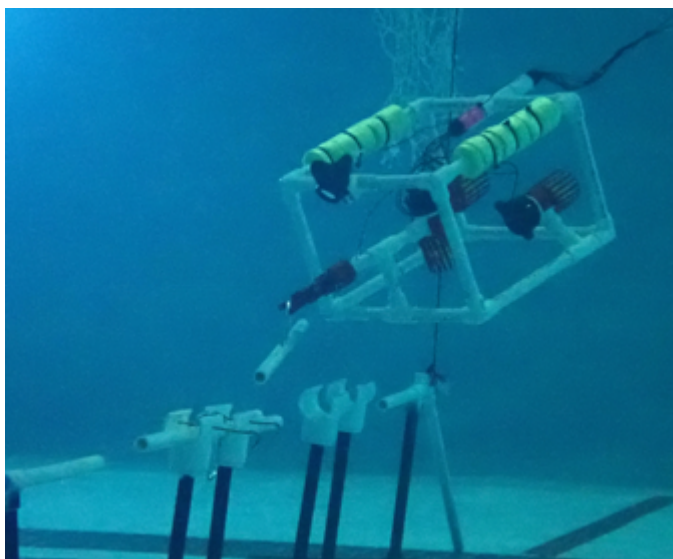
The Gray's Reef Southeast MATE ROV Competition is a marine technical trade education program introducing watershed and coastal ecology, oceanography, physics, fundamentals of mechatronics, electrical circuitry, systems engineering, data interpretation, computer coding, and the development of 21st-century work-force skills. In our cornerstone education program, we invite schools across the southeast to participate in STEM skills development, team building, and place-based learning activities utilizing underwater robots. This program also expands knowledge of local marine and environmental issues, research, and technology to Georgia students and teachers.

In May 2022, we supported twelve student teams in the Gray's Reef qualifier event, and two teams in the MATE ROV World Championships. These regional teams totaled 72 participants (students & coaches), approximately 150 spectators in attendance, and a livestream providing access to hundreds more to follow along and cheer on their teams. The regional competition was supported by 32 volunteers offering 315 hours in service to students along with support from our partners at NOAA Gray's Reef National Marine Sanctuary and Georgia Southern University.

Since 2004, Gray's Reef has educated youth and communities on how to build a sustainable future by providing STEM-focused environmental education programming to Georgia K-12 schools, and by hosting the regional Gray's Reef Southeast MATE ROV Competition for undergraduate research experiences.

Our MATE ROV program:

- Engages teachers and students in participatory exploration and transformative discoveries through project-based learning using underwater robotics kits.
- Cultivates concern among teachers and students for the ocean environment through exploration of the root causes of problems and possible solutions.
- Promotes understanding of the marine ecosystem, STEM concepts, and the research tools and technologies used for ocean exploration.
- Supports workforce readiness and pathways to STEM and marine technical careers.



Students are engaged in immersive ocean research during our annual Gray's Reef Southeast MATE ROV Competition. Teams of students from 3rd grade to college build innovative robots for the purpose of conducting a simulated research mission. This competition challenges teams to act as small businesses who create products, demonstrate the product's performance, and market their product along with their 'business'.

At the Gray's Reef regional qualifier, advanced-level teams may earn a spot in the MATE ROV World Championship event. Our regional program provides an introduction and pathway for Georgia students to marine technical training and career opportunities, supporting the blue economy and advancing student potential. These education opportunities highlight Sanctuaries for their place-based economic impact and for public engagement in ocean research.





Dozens of regional student teams participate in our annual competition, however [teacher professional development](#) is important for making student connections with relevant learning objectives and desired outcomes. Providing teachers with experiences and training in ocean science and technology advance their content mastery and confidence with classroom implementation.

The Gray's Reef Foundation Chapter offers subject matter expertise to provide teachers with hands-on skill development in electrical circuitry and submersible vehicles for underwater robotics applications. This year, the Chapter was awarded \$78,753 from the Honda USA Foundation to support teacher professional development and provide resources to classrooms for participation in our MATE ROV Competition.

The grant award provides students and teachers an opportunity to learn, build, and compete in the blue economy while exploring research and technologies used in our Sanctuaries and ocean planet. The 2023 competition season is now underway with workshops and material distribution through March and the Gray's Reef Southeast MATE ROV Competition taking place May 5-6, 2023.

HONDA
Honda USA Foundation

2022 Quotes:

"Love this program!!" teacher

"So thankful" parent

"Great experience" student

"Very exiting and very fun experience!" student

"We are thrilled to have opportunities like this available in our community." teacher

**"Excellent learning opportunity across
a broad spectrum of disciplines."
teacher**

"My daughter absolutely loves the ROV program." parent

**"This is the first place my son feels like he fits in. Best thing ever
for him." parent**

"I loved the experience it was really fun and I learned a lot" student

"It's amazing and fun!" student

**"The MATE ROV program is the best STEM program bar none.
I am very happy to have helped make it a reality for the
southeastern USA." volunteer**

Media

Event Feature: (Connect Savannah)

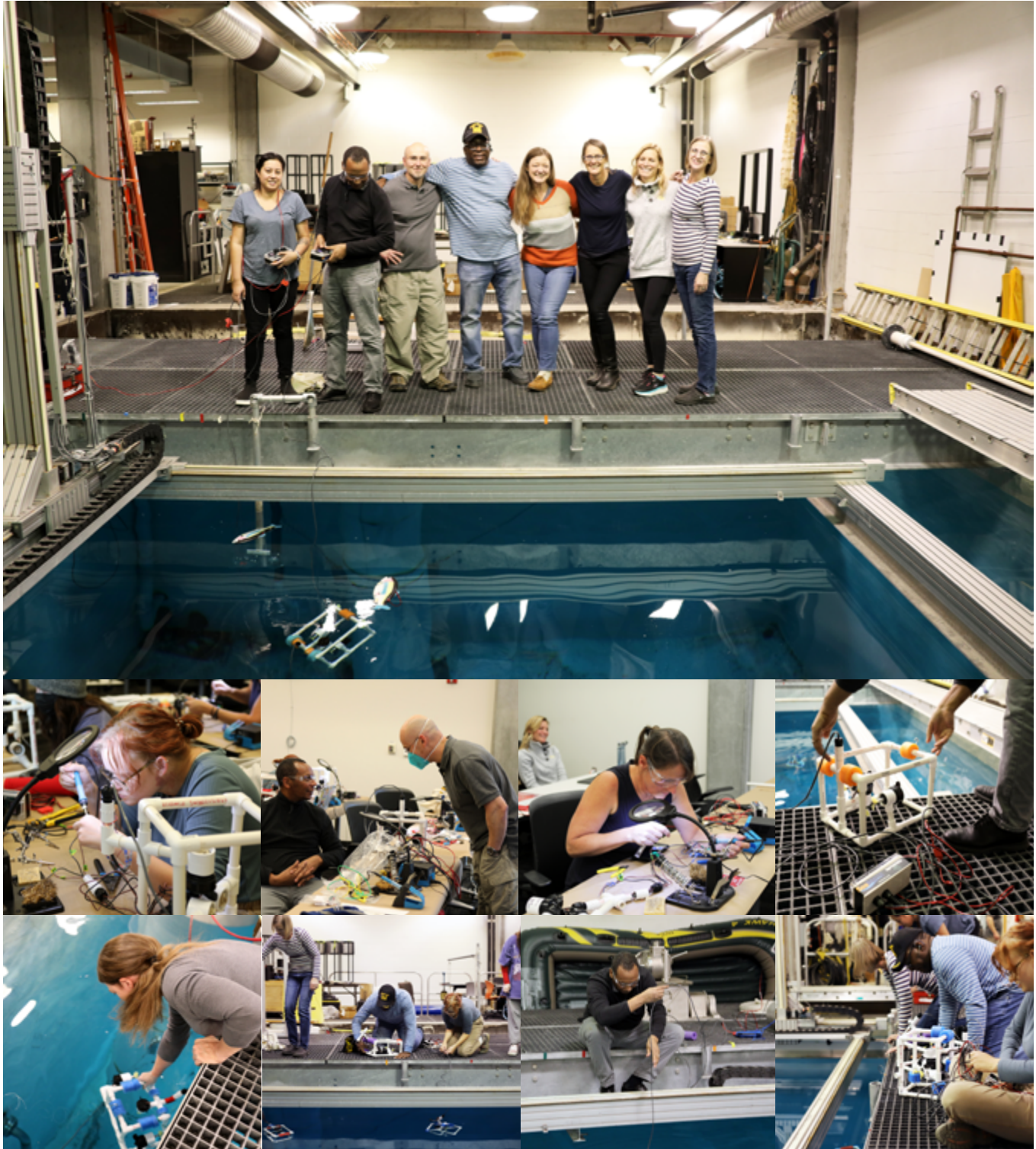
<https://www.connectsavannah.com/savannah/annual-grays-reef-mate-rov-competition-set-to-take-place-at-chatham-county-aquatic-center/Content?oid=18311886>



Media

Workshop Feature: (Georgia Institute of Technology)

<https://www.me.gatech.edu/news/acoustic-water-tank-laboratory-and-ceismc-host-underwater-robotics-training-expand-access-stem>



Media

Team Feature: WhaleTech Robotics (Journal of Ocean Technology)

https://issuu.com/journaloceantechnology/docs/e-jot_vol17n3_flipbook/98

2022 MATE World Championship

Marketing Display Winners

WHALETECH ROBOTICS

Building a better future with 2003
2004 Paulding St. Dallas, TX 75225, USA

WHOLE STORY

WhaleTech Robotics is a team of students from North Paulding High School, a public high school in Dallas, Texas. The team was founded in 2003 and has since become one of the most successful teams in the world. They have won numerous awards and championships, including the 2022 MATE World Championship. The team's success is due to their dedication, hard work, and teamwork. They have a strong focus on research and development, and they are always looking for ways to improve their robot. They also have a strong focus on community service and outreach. They have participated in many events and have helped to raise awareness of ocean technology. They are proud to represent their school and their country.

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In-Person

Explorer

TEAM NAME
WhaleTech Robotics
North Paulding High School
Dallas, TX
United States of America

TEAM MEMBERS
Andy Grogg
Drew Grogg
Dylan Josselyn
Jesse Lutz
Terry Brownawsky

INSTRUCTORS
Gail Gardner
Nikola Lutz

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WhaleTech Robotics team - North Paulding Robotics Club (Dallas, GA)
EXPLORER Class 2022

Thank you to our program **SPONSORS**

Mr. Angus Littlejohn

HONDA

Honda USA Foundation



GRAY'S REEF
NATIONAL MARINE
SANCTUARY



**National
Marine Sanctuary
Foundation**



CENTER for **STEM** EDUCATION

i²STEM^{ed}

Georgia Southern University College of Education

**Georgia
Tech**



**Acoustic
Water Tank**

The George W. Woodruff School
of Mechanical Engineering

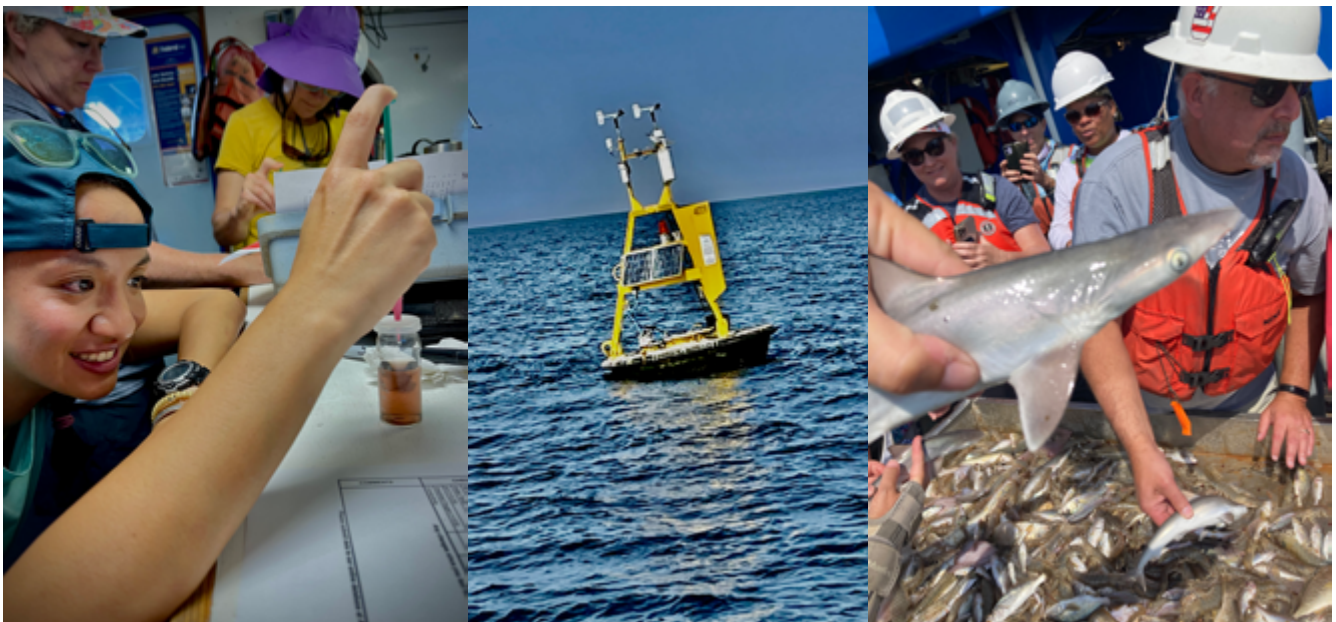


CEISMC

Georgia Tech Center for Education Integrating
Science, Mathematics, and Computing

Rivers to Reefs

The Chapter reprised the popular **Rivers to Reefs teacher workshop** last year in collaboration with the University of Georgia - Skidaway Institute of Oceanography. Dr. Marc Frischer, a SkIO researcher, invites Gray's Reef and our Rivers to Reefs teacher participants on board the UNOLS research vessel *Savannah* for a day-long, immersive field experience to explore coastal watersheds and water quality. Thirteen teacher participants took part in the sampling of local flora and fauna, processing of chemical water quality testing, comparative analysis with shipborne instrumentation, and remote sensing of offshore, seafloor habitats at Gray's Reef.



This workshop experience provides broader impact exposure for Dr. Frischer's National Science Foundation-funded study of marine plankton. This NSF grant covers the cost of workshop time on board the UNOLS vessels totaling \$13,000 daily. Additional in-kind support provided by Gray's Reef National Marine Sanctuary includes Research Coordinator Kimberly Roberson's time and expertise to support learning about Gray's Reef National Marine Sanctuary.

[Rivers to Reefs](#) is led by Chapter Board Founding Chair (current Vice Chair), Cathy Sakas, who created the program for Gray's Reef National Marine Sanctuary in 2004 and continues her support through the Chapter. Fully-funded workshops feature a week-long exploration of Georgia's Altamaha River watershed from the headwaters near Atlanta to the coast near Sapelo Island. Sponsorship opportunities are available to support this program to expand its' reach. ([media feature](#))

Gray's Reef Ocean Discovery Center

In 2014, a marketing and feasibility study was conducted by the Office of National Marine Sanctuaries to assess the need and support for a public visitors center for Gray's Reef National Marine Sanctuary. Almost a decade later, we helped to open the doors of the Gray's Reef Ocean Discovery Center at 340 Martin Luther King Jr. Blvd, Savannah Georgia.



The ribbon cutting dedication ceremony and open house on October 15, 2023 launched the new visitors center in historic downtown Savannah. This new public location for ocean exploration will be operated by staff of Gray's Reef National Marine Sanctuary with support from the National Marine Sanctuary Foundation and Gray's Reef Chapter. The [Ocean Discovery Center](#) will open to the public early 2023 and is expected to educate and engage more than 500,000 visitors annually.

This new site offers 3,625 square feet of exhibit and event space to feature the creatures, habitats, and research at Gray's Reef. [Sponsorship opportunities](#) are available for exhibit and program development.



Media

Ribbon-Cutting Feature: (Savannah Morning News)

<https://www.savannahnow.com/story/news/environment/2022/10/15/grays-reef-national-marine-sanctuary-celebrates-new-discovery-center/10495068002/>



Gray's Reef Ocean Discovery Center Exhibit Planning



RENDERING - VIEW FROM FRONT ENTRY

Exhibit concept designs



H - CHILDREN'S EXPLORATION STATION

Children's



SKETCH - SOUNDSCAPES



Exhibit development is underway and these initial concept designs reflect the primary focus areas, including: an ocean theater, VR media stations, children's reefscape, soundscape portals, art galleries, Science-on-a-Sphere Explorer, media kiosks, and a sustainable gift shop.

Partnerships are important for leveraging our offerings in this space, and others, through exhibit development. Thank you to our friends at the Coastal Heritage Society for supporting gift shop operations.

Gray's Reef Society Soiree



A Gray's Reef [membership campaign](#) was launched to drive awareness and engagement with the Sanctuary and funding for Chapter operations. Our new Gray's Reef Society members joined us in celebration of the launch of the Ocean Discovery Center at our Gray's Reef Society Soiree. In it's inaugural year, the membership campaign resulted in 13 Ocean Protector Society members and 8 Keystone Society members for a total of \$13,020 in proceeds to support our mission.

The Soiree brought in an additional \$4,170 of revenue for the Chapter with \$7,500 of in-kind donations, including the event space at SCAD's Pei Ling Chan Gallery and Garden for the Arts. This type of event is intended as a VIP and members-only function to grow our membership and to create a society of engaged community leaders to support Gray's Reef. A media release and news articles featuring our Save Spectacular Celebration, which included the ribbon cutting dedication and Soiree, circulated news about the Ocean Discovery Center to over 115,074,479 viewers during the month of October.

The Save Spectacular Celebration provided a local focus for the [50th anniversary of national marine sanctuaries](#). The National Marine Sanctuary System has grown into a nationwide network of 15 national marine sanctuaries and two marine national monuments that conserve more than 620,000 square miles of spectacular ocean and Great Lakes waters, an area nearly the size of Alaska.

Media

Soiree Feature: (Savannah Business Journal)

https://www.savannahbusinessjournal.com/news/nonprofits/oct-7---grays-reef-national-marine-sanctuary-foundation-to-celebrate-new-ocean-discovery/article_2dd0b148-4646-11ed-b644-537b72900b72.html



Thank you

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Angus Littlejohn
Bill and Freda Smith Family Fund
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Carlton Joyce
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Russell Kent
Savannah College of Art & Design
Scuba Service and Supply
Sheri Estes
Sue Ebanks
Suzanne Williams
Timothy R. Andrews
Willie Haynes
Yamaha Marine Group

Personal Perspective:

"The southeastern United States is spectacular for its natural, scenic beauty, wildlife, wilderness, and waterways. My family and I, descendants of Scotch-Irish immigrants and Cherokee indigenous communities, have lived in SC and Georgia for many generations. This land is my home and my legacy. Gray's Reef is our iconic ocean wilderness ecosystem found submerged just beyond our shoreline. It supports wildlife across the eastern seaboard with the benefits of its protection as a national marine sanctuary echoing through the depths of the Atlantic Ocean as only a healthy reef ecosystem can. It is important that we protect Gray's Reef, and our remaining wilderness areas, for the health of our wildlife and water, resiliency of our ocean planet, and shared legacy of our southern heritage."

Thank you for joining us in our mission of protection.



Jody Patterson

Chapter Director

Gray's Reef National Marine Sanctuary Foundation

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Sanctuary
Foundation

