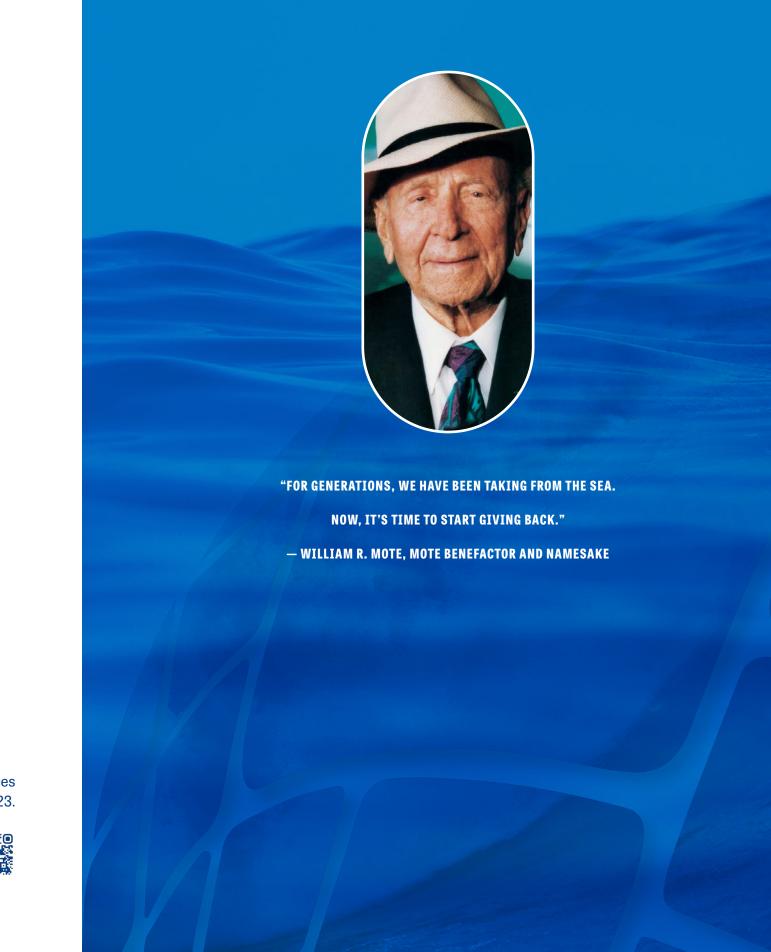


ANNUAL REPORT





Mote's 2023 Annual Report presents accomplishments and finances for the 2023 fiscal year, Oct. 1, 2022 - Sept. 30, 2023.

For the digital version of this report, scan this QR code or visit: mote.org/2023AR







A t Mote Marine Laboratory & Aquarium, our impacts are global. Mote's innovative marine science has touched every ocean on Earth to empower conservation, solve grand challenges and safeguard humanity's quality of life. Our science education programs connect people of all ages, backgrounds and locations with our mission. All the while, Mote has never forgotten where it came from—the communities that generously nurtured us along and the leaders who pushed our organization to the forefront.

As Chair of the Board of Trustees, I reflect often on what former Chairs accomplished and what those who are no longer with us might think about the organization as it is today. This year, my thoughts have given special attention to one former Chair, our namesake, Bill Mote, who led the organization as Chair and President from 1967 until 1986 and continued as President until July 2000.

Mr. Mote was a visionary. He envisioned a future where Mote would extend its scientific reach across all seven continents, and his passion for our science was perhaps only matched by his passion to share our discoveries with the world as a public service.

Forty-three years ago, in October 1980, Mr. Mote oversaw the opening of Mote's Marine Science Center. At its public dedication event, he proclaimed that the Center "belongs to the people of Sarasota." During its first year of operations, our first open-to-the-public outreach facility would welcome more than 15,000

visitors to enjoy an informal marine science education experience that equipped them with the knowledge needed to better protect and conserve our natural environments.

While Mote's Marine Science Center has evolved, including an early '90s name change to Mote Aquarium, its central purpose has remained the same—translating and transferring Mote's marine science discoveries and findings as a public service to increase ocean literacy and positively impact human society.

As I look forward to the coming year, I am most excited that we will complete construction of our new Mote Science Education Aquarium (Mote SEA). This 110,000-square-foot facility will continue in the grand tradition of the Marine Science Center—offering the world a window of discovery into the globally significant and impactful research conducted by Mote scientists. I hope Mr. Mote would be proud of what we have accomplished, the strides we have taken to fulfill his vision, and that when we dedicate Mote SEA, we will dedicate a facility that not only belongs to the people of Sarasota, but to all people.

Sandi Stuart

Sandra Stuart Chair, Mote Marine Laboratory Board of Trustees During the last 68 years, Mote Marine Laboratory & Aquarium has grown into a global powerhouse of diverse marine research and science education. What began as a meager one-room laboratory has thrived on the synergy of Mote's three foundational pillars:

- **Passion** for science and marine conservation that began with our Founding Director, Dr.
 Genie Clark, and continues to flow through the veins of our entire Mote family of 300 staff, 1,300 volunteers,10,000 members, and the world's greatest Board of Trustees.
- Partnership that began with that of a local shark fisherman and now extends around the world to local communities, commercial, recreational and subsistence fisherfolk, private enterprise and entrepreneurs, and other nonprofits and academic institutions.
- **Philanthropy** that began with Anne and Bill Vanderbilt who provided that initial one-room laboratory in Placida for Genie, followed by the powerfully productive philanthropic embrace of Mr. William R. Mote from 1967 to 2000.

Since then, philanthropic support for Mote has grown more significantly through thousands of private foundations and individuals like you. As a direct result of your support, especially over the last decade, Mote has achieved dramatic growth and impact with our national and internationally respected innovative research, experiential science education and public outreach. From our base of

operations right here on Florida's Gulf Coast, we now conduct research and engage in partnerships in all the world's oceans. Mote scientists are leaders in collaborative discussions between our US Harmful Algal Bloom Control Technologies Incubator and Japan, Chile and Korea; in Global FinPrint, the world's largest reef shark survey in 58 nations, which has resulted in new international trade regulations for these species; and in the collaboration of Mote's International Coral Gene Bank with global Coral Biobank Alliance partners in the Philippines, Australia, Monaco, Indonesia, and French Polynesia. Mote is conducting research around the world-from Belize, on Earthwatch's Shark and Ray Conservation expedition, to Ilha do Fogo (Fire Island) off the coast of Mozambique on the first science-based assessment of these remote coral reefs and turtle nesting habitats.

Many of our research partnerships around the world are encompassed within Mote's International Marine Science Diplomacy Initiative. The Mote-Israel Cooperative Marine Research program serves as a regional focal point for not only conducting important research, but for also helping to bring people from different nations and cultures together. Mote has established coral reef research partnerships in this region with the University of Jordan and King Abdulaziz University in Saudi Arabia, as well as a joint aquaculture effort with Israel, Egypt, Morocco and Tunisia. In 2023, we received an invitation to serve as an advisor and

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Above: Red Sea Ecosphere Conference Keynote Speaker Dr. Michael P. Crosby, President & CEO of Mote, with His Royal Highness Prince El-Hassan bin Talal in Agaba, Jordan, during November 2022

Science Education Aquarium. While I was leading the Red Sea Marine Peace Park partnership initiative between Israel and Jordan 21 years ago, I was invited to Taiwan to lead an international workshop on the potential use of the Red Sea Marine Peace Park model for international marine science partnerships in that region. I am pleased to report that those collaborations have now enabled Mote and the Taiwan National Museum of Marine Biology and Aquarium to partner on innovations for coral reef research and restoration, along with joint science education programs and exhibits in our respective aquariums.

Speaking of international marine research and science education partnerships, I want to thank all of you who have supported our *Oceans for All* campaign to create Mote's new Science Education Aquarium (Mote SEA). We know that Mote SEA will not just be a landmark for our region—it will positively transform our region's economy and science education for our schools. It will also advance our International Marine Science Diplomacy Initiative, as each year hundreds of thousands of visitors from around the world will experience the wonder of Mote education and public outreach.

Mote is pushing forward the frontiers of marine science and technology. We are expanding our research, science education, and policy programs to positively impact the restoration, conservation and sustainable use of marine biodiversity, healthy habitats, and natural resources in Florida and around the world. Philanthropy is the fuel for Mote innovation that makes this all a reality. Please join us in achieving Mote's vision of Oceans for All that will strengthen our impacts and partnerships across oceans and cultures.

Dr. Michael P. Crosby. President & CEO

MOTE MAKING WAVES AROUND THE WORLD

his past year has seen significant growth in Mote's International Marine Science Diplomacy Initiative. We are partnering with scientists in a growing number of nations to exchange ideas and methods for the good of our oceans and society.

"We continue expanding our marine research, science education and public outreach programs to positively impact the restoration, conservation and sustainable use of marine biodiversity, healthy habitats and natural resources in Florida and around the world," said Dr. Michael P. Crosby, President & CEO of Mote.

The ocean provides over half the planet's oxygen, food and jobs for billions, new medicines, recreation and more. However, our ocean faces severe challenges-

overfishing, the loss of essential coral reefs, harmful algal blooms and more—that threaten marine life and humanity's quality of life worldwide.

The countries coping with these challenges have national boundaries, but ocean ecosystems do not. To heal the oceans, marine scientists worldwide must work together.

Uniting the best and brightest scientists is our specialty at Mote—allowing us to uncover solutions for urgent ocean issues. Here is a snapshot of the research Mote advanced with international partners this year.

> **CONTINUE READING FOR** JUST A FEW EXAMPLES OF MOTE'S INTERNATIONAL REACH >

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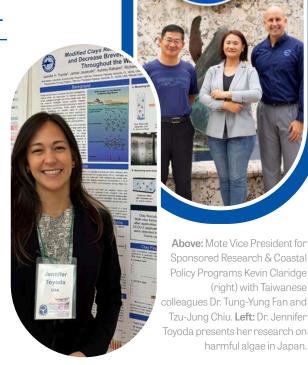
IN THE SPOTLIGHT: INTERNATIONAL IMPACT

HIGHLIGHTS FROM MOTE'S INTERNATIONAL MARINE SCIENCE DIPLOMACY INITIATIVE

Mote scientists are leading the world's largest reef shark and ray survey, Global FinPrint, partnering with local scientists, fishermen and others at 19 new sites worldwide. These sites represent the second round of FinPrint research. The first round began at Florida International University and transformed into successful conservation efforts led by Mote. The first FinPrint survey deployed 22,000 baited, remote, underwater video stations on about 400 reefs in 58 nations and territories. Findings led to most reef shark species being listed as being threatened with extinction by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, as well as new international trade regulations under the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES).

Mote has a long history of marine science partnerships in the Middle East, where diverse nations border a common natural treasure: beautiful coral reefs of the Red Sea and Gulf of Aqaba.

In the early 1950s, Mote Founding Director Dr. Eugenie Clark conducted groundbreaking fish research in the Red Sea. She later became a champion of conservation for the Red Sea and Gulf of Aqaba. Mote President & CEO Dr. Michael P. Crosby's focus on the region—including his leadership of U.S., Israeli and Jordanian partners in the Red Sea Marine Peace Park Cooperative Research, Monitoring and Management Program—has laid groundwork for longstanding partnerships including the Mote-Israel Cooperative Marine Research Program (MIC). Today, Mote and Israeli scientists continue collaborating to study the resilience of Red Sea corals facing ocean acidification, disease and other challenges.



Mote scientists have also partnered with Jordanian scientists to study Red Sea coral reefs. Earlier this year, Mote was invited to serve as an advisor and partner for establishing a new marine science and technology hub and aquarium in Aqaba, Jordan, modeled on Mote. Dr. Crosby has since met with His Majesty King Abdullah II to discuss Mote's involvement with capacity building, educational exchange programs, applied marine science and technology development.

Mote is collaborating with many other countries on different projects. Mote scientists are working with Japan, Chile and Korea to test technology to mitigate the impacts of harmful algal blooms. In Mozambique, Mote scientists are assessing remote coral reefs and turtle nesting

Right: Mote Staff Scientist Dr. Sara Williams and Mote Senior Biologist Ian Combs with the on-site boat and dive-support team at Fire Island, Mozambique.



habitats. In Belize, we're leading Earthwatch's Shark and Ray Conservation expedition. Most recently, Dr. Tung-Yung Fan visited our Florida campuses to discuss his coral restoration work conducted at the National Museum of Marine Biology & Aquarium in Taiwan. Mote and the Museum are implementing new partnerships in coral

Mote scientists have also begun building harmful algabloom research collaborations with Japanese, Korean and Chilean scientists—for example, by presenting promising technology for red tide mitigation during the 20th International Conference on Harmful Algae in Hiroshima, Japan. There, Mote and partners from

Top: A map showing some of the countries where Mote scientists work.

Above: Mote President & CEO Dr. Michael P. Crosby (third from left) and Mote Associate Vice President for the Aquarium Evan Barniskis (second from left) meet with Chief Commissioner of Aqaba Special Economic Zone Authority Nayef H. Al-fayez (center) and colleagues in Aqaba, Jordan.

Woods Hole Oceanographic Institution highlighted their discoveries that modified clay can remove red tide cells and decrease the concentration of their toxins. Mote's research focuses on the Gulf of Mexico's red tide algae while adding to the growing scientific literature on mitigation options for harmful algae around the world.

Museum are implementing new partnerships in coral research, restoration and marine science education.

Mote scientists have also begun building harmful algal bloom research collaborations with Japanese, Korean and Chilean scientists—for example, by presenting

"WHEN MARINE SCIENTISTS FROM DIFFERENT NATIONS WORK TOGETHER, WE BUILD TRUST BY SHARING KNOWLEDGE AND INVOLVING MANY SEGMENTS OF SOCIETY IN OUR COMMON MISSION TO SAFEGUARD THE OCEAN. EVEN WHEN INTERNATIONAL RELATIONSHIPS ARE TENSE OR LIMITED, MARINE SCIENCE CAN OPEN DOORS TO COLLABORATION AND COMMUNICATION FOR THE GOOD OF OUR SHARED WATERS." — DR. MICHAEL P. CROSBY

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FERTILE GROUND FOR INNOVATION

Above: Turtle grass (*Thalassia testudinum*) in Steinhatchee, Florida. **Credit**: Whitney Scheffel

his year, Mote Marine Laboratory announced a novel research initiative focused on restoring seagrasses—essential but threatened plants that feed manatees, shelter seafood fishes and protect and stabilize coastlines.

The Seagrass Restoration Technology Development Initiative is the latest of several massive, multipartner, research enterprises entrusted by state and federal leaders to Mote—recognizing our ability to unite the best and brightest minds to solve the ocean's toughest challenges.

"In the last five years alone, Mote has been selected by the State of Florida to lead game-changing R&D partnerships for restoring seagrass and mitigating red tide, and we've been selected by the National Oceanic Atmospheric Administration to expand our harmful algae mitigation scope nationwide," said Mote President & CEO Dr. Michael P. Crosby. "We are deeply grateful that our societal leaders have invested millions of dollars and immense trust in our mission to restore marine ecosystems, strengthen the blue economy and improve communities' quality of life."

Through these and other major initiatives, Mote and partners develop science-based solutions and intellectual property and transfer them to agencies and industries best suited to scale them up.

THE ROOTS OF SEAGRASS RECOVERY

Seagrass meadows worldwide have shrunk about 29% since the late 1800s. Severe recent declines in Florida's Indian River Lagoon have left manatees starving.

To recover these vital marine plants, Mote was selected to administer the Seagrass Restoration Technology Development Initiative (403.93344 Florida Statutes) in partnership with the Florida Department of Environmental Protection's (DEP's) Aquatic Preserve Program and the University of Florida (UF).

Mote and Initiative partners are working to develop, test and implement innovative, effective, cost-efficient and environmentally sustainable technologies and approaches for restoring coastal seagrass ecosystems. As fiscal year 2023 ended, Mote was planning a new seagrass research nursery and preparing a request for proposals to recruit our best and brightest peers in seagrass genetics, resilience, sustainable production and other restoration essentials.

Going forward, Mote, UF and DEP will create a 10-year statewide strategic plan for Florida seagrass restoration. Mote also aims to develop, with private foundation support, a market for "blue carbon" offsets—using seagrasses' natural ability to capture carbon dioxide and mitigate climate change.

RED TIDE MITIGATION: FROM COAST TO COAST

Red tides kill fish and other wildlife, cause respiratory issues in people and drain millions of dollars from Gulf of Mexico economies. Other devastating harmful algal blooms (HABs) affect people worldwide.

The good news? This year, Mote's R&D initiative to mitigate red tide in the Gulf has sparked a national-level sister program.

- Gulf of Mexico: The Florida Red Tide Mitigation &
 Technology Development Initiative—led by Mote
 in partnership with the Florida Fish and Wildlife
 Conservation Commission (FWC)—has screened more
 than 300 potential compounds for effectiveness since
 2019 and has 35 projects completed or ongoing, all
 focused on mitigating the Gulf of Mexico's severe red
 tides, blooms of Karenia brevis algae.
- National: The U.S. HAB Control Technologies
 Incubator (US HAB-CTI) was announced in October
 2022 as a partnership between Mote, University of
 Maryland's Institute of Marine and Environmental

Technology and the National Oceanic and Atmospheric Administration (NOAA), which provided a \$7.5-million grant. So far, US HAB-CTI leaders have awarded \$1 million in competitive funding to partners testing HAB mitigation technologies for salt- and freshwater systems nationwide.

Mote's HAB and seagrass initiatives use a rigorous, tiered R&D process to advance new technologies from the lab to real-world application. This process also includes assisting partners with field implementation regulatory processes and managing intellectual property to provide revenue for the next wave of scientific solutions.

"Mote is using the best practices found in academia and research to develop intellectual property and generate sustaining revenue through tech transfer," said Mote Chief Innovation Officer Dr. Alex Beavers. "Tech transfer is widespread in some fields but is a new and emerging area for marine science. Mote is quickly becoming a global leader."



IMPACTS: 2023 HIGHLIGHTS INNOVATIVE RESEARCH

+300 RED TIDE MITIGATION OPTIONS

tested to date by the Mote-FWC* Florida Red Tide Mitigation & Technology Development Initiative as of fall 2023. About a **dozen promising mitigation options** will move into controlled, permitted field testing to decrease red tide impacts.

1ST PEER-REVIEWED STUDY

published as a result of Mote-FWC* Red Tide Initiative by Mote. University of Central Florida and Woods Hole Oceanographic Institution, Results: One type of clay product ("Modified Clay II") might be able to treat red tide without impacting adult blue crabs. Clay binds to and sinks red tide (Karenia brevis) algae.

+100 PARTNERS joined Mote in a new national program: the U.S. Harmful Algal Blooms **Control Technologies Incubator (US HAB-CTI)**

focusing on nationwide saltwater and freshwater algae.



for red tide algae by Mote-FWC* Cooperative Red Tide Research Program this year—a key part of a statewide monitoring network.

NUTRIENT SENSOR

deployed by Mote in New Pass, Sarasota, Florida, is monitoring nitrate in real time to help us better understand water

quality challenges.

CONFERENCE

on ocean acidification invited a Mote scientist

to participate and exchange knowledge with peers from the U.S.. Cuba and Mexico on this threat to our shared marine resources.



83 COASTAL SITES IN 5 STATES

MONITORED by Mote's Beach Conditions Reporting

a tide anous ellecting System (visitbeaches.org) as of late 2023, including

30-DAY MISSION

completed by Mote's underwater glider Dora this year—our longest

ever-to monitor offshore conditions relevant to red tide research. 3 autonomous aliders are now collecting ocean data for Mote.

MOTE IS...

SPEARHEADING RED TIDE MITIGATION

HURRICANE IAN spurred a new study by Mote

and University of Maryland on impacts of intense stormwater flow into the Gulf of Mexico. Study topics: How might storms intensified by climate change worsen ocean acidification, lower dissolved oxygen & boost algae blooms? FUNDED BY NATIONAL SCIENCE FOUNDATION

MOTE IS...

FINDING SOLUTIONS THROUGH CHEMISTRY

REPORT TO U.S. CONGRESS drew upon

Mote's expertise to inform federal leaders of oceanacidification threats in U.S. southeast waters.

8 SCIENTIFIC TEAMS FROM AROUND THE WORLD

did research in Mote's Climate & **Acidification Ocean Simulator (CAOS)** this year. In late summer/fall the system protected corals evacuated

from Mote's underwater nurseries against extreme heat.

SECRET PASSAGES FROM AQUIFER TO SEA?

Mote scientists continued seeking "submarine seeps" where underground freshwater from the Upper Floridan Aquifer moves into Gulf of Mexico saltwater environments, and they launched a new round of research on deep Gulf habitats called blue holes, investigating whether they supply nutrientrich freshwater offshore and provide a "food" source for red tide blooms.

10,000 LBS.

OF RED DRUM

& 1,000 pounds of plants reared in

Mote's Ron & Marla Wolf Aguaponics

technology. Mote farms 4 aquatic plant

conservation & cultivation technologies.

species and many fishes, shellfish &

crustaceans to advance sustainable

Center this year to demonstrate

of sustainable seafood farming

& promote commercialization

NEW EFFORT TO SAVE SEAGRASS: Mote launched the

Seagrass Restoration Technology Development Initiative this year. Worldwide, seagrass meadows have shrunk ~29% since the late 1800s. Severe recent declines in

Florida's Indian River Lagoon have left manatees starving. Science-based

restoration is needed, supporters: DEP*, NOAA* AND THE RON AND MARLA WOLF FOUNDATION **2** NEW SEAGRASS STUDIES

> published by Mote and University of Florida scientists this year improved our understanding of how to support healthy seagrass meadows.

+6,500 feet (2,000 meters): Deepest sites in the Gulf of Mexico where Mote scientists collected sediments to

search for medically useful microscopic life

296 STRAINS of microscopic life

131 MICROBIAL

ISOLATES from the

ocean were screened by Mote for their ability to

fight pathogens (sources

bacteria). 18.3% of these

isolates can fight one or

of disease, including

antibiotic-resistant

isolated from deep-sea sediments and marine species and added to the Mote Microbial Library Mote scientists mine these microbial isolates for new potential sources of medicine

MOTE IS... **PUSHING FRONTIERS**

3 RAY VENOMS SCREENED

from spotted eagle rays, Atlantic stingrays and cownose rays for bioactivity against 3 human cell lines by Mote and University of South Florida. Studying venom can lead to discovering novel drugs.

more pathogens **PROTEINS FROM SHARKS**

DOCUMENTED as of late 2023 by Mote scientists and partners who have recorded video from 575 commercial reef fish fishing trips in the Gulf of Mexico since 2016 to support sustainable fisheries.

FISHERY CATCHES

200,000

MOTE IS... **CREATING A MORE** SUSTAINABLE FUTURE

CANCER-FIGHTING

are one big step closer to being purified and available for medical research to improve human cancer therapies. Mote scientists used 3 antibodies to help separate these proteins from a natural mix of compounds produced by shark immune cells. The **newly** separated protein is estimated to have 400 times greater cancer-fighting activity than the original mixture if compared milligram for milligram

750 SAMPLES

collected from 24 data-deficient fish species by Mote and commercial fishery collaborators in Florida and Texas this year to aid fisheries management

~20.000 RED DRUM RELEASED in Southwest Florida by Mote to optimize responsible fisheries enhancement practices and replenish sportfish populations affected by events such as red tide

+170.000 DETECTIONS OF MOTE'S TAGGED. HATCHERY-REARED FISH

made in the environment this year-including a snook we released almost 6 years ago. Recent Mote-released snook had the highest survival rate we've measured to date.



SUSTAINABLE FARMING

training program launched by Mote and University of Florida IFAS* Sarasota County.

5 OF 6 SURVEYED SPAWNING SITES HAD FEWER GOLIATH GROUPER in 2022 vs.

2013, signs of possible declines revealed in Mote's peer-reviewed **study** published this year in the journal Fishes. Partnership with Florida

*DEP: Florida Department of Environmental Protection • FWC: Florida Fish and Wildlife Conservation Commission

*NOAA: National Oceanic and Atmospheric Administration • IFAS: Institute of Food and Agricultural Sciences



A CORAL COMEBACK

oral reefs in the Florida Keys experienced record-breaking heat waves this summer—with temperatures exceeding 100 degrees Fahrenheit, higher-than-normal salinity and low oxygen water from Florida Bay.

In response, Mote Marine Laboratory immediately began an unprecedented evacuation of thousands of stressed and dying corals from our four offshore coral nurseries, with the help of over 70 staff members, six Mote research vessels, and immense support from the Florida Keys community.

In a matter of days, Mote carefully transported thousands of corals from our offshore nurseries in Sand Key, Looe Key, Islamorada and Key Largo to our three land-based coral nurseries in Summerland Key, Key Largo and Islamorada, along with our 200-acre

Above: Mote Staff Biologist Megan Kennedy helps evacuate corals from Mote's underwater nurseries to protect them from the extreme heat of summer 2023.

Sarasota-based Mote Aquaculture Research Park (MAP).

After nearly three months of supportive care to help the corals recover, Mote's expert coral reef restoration scientists began the multi-step process of reintroducing thousands of healthy corals back into our underwater nurseries.

Throughout the return effort, Mote is following strict protocols outlined by the National Oceanic and Atmospheric Administration (NOAA) and the Florida Fish and Wildlife Conservation Commission (FWC). These protocols include a veterinarian health certification of all evacuated corals before they can be returned to offshore nurseries. Corals are closely examined to prevent any potential diseases or pests that could spread on the reef.

Once cleared and reintroduced to the offshore nurseries, the corals undergo a strict, 30-day observation period. Then they are reassessed by Mote staff and cleared for restoration purposes such as microfragmentation—cutting corals into small pieces that grow up to 50 times faster—and eventual outplanting to restore Florida's Coral Reef. Our normal cycle of coral restoration operations are projected to resume early in 2024.

Mote's immediate goal is to continue to gather and analyze data from this stress event, apply what was learned to future data-driven restoration techniques, and use our proven microfragmentation techniques on the coral genotypes that did well during this event.

These resilient individuals and other diverse native corals will rebuild our offshore nurseries, power successful restoration and pass their beneficial traits on to the next generation of diverse, resilient corals on Florida's Coral Reef.

CRABS ARE CORAL CHAMPIONS

As part of our holistic, science-based approach to coral reef restoration, Mote researchers look forward to releasing hatchery-reared Caribbean king crabs produced from Mote's new Florida Coral Reef Restoration Crab Hatchery Research Center to sites in the Keys.

These crabs play crucial roles in maintaining the delicate equilibrium of coral reef ecosystems by grazing on algae. As algae populations surge due to ecological imbalances, they can smother and weaken coral structures, leaving them vulnerable to disease and bleaching events. Caribbean king crabs have emerged as champions in the fight to mitigate algae overgrowth and rescue threatened coral reefs.

The crabs' positive impacts were previously masked by their low abundance. Increasing their numbers will decrease overabundant algal cover, which will facilitate coral growth, settlement, survival and recruitment. These positive impact will dramatically improve coral reef restoration outcomes and reinforce coral reef resilience against the mounting challenges of human effects and environmental stressors.

About two months after the ribbon cutting for Mote's Florida Coral Reef Restoration Crab Hatchery Research Center, the facility has produced 467 broodstock crabs with 182 hatched clutches that have produced about 110,888 juveniles.

Once the juvenile crabs reach about 1-inch (30 millimeter) carapace width, about three to five months after hatching, the Mote team will release them onto various reef sites. Over three months, beginning in the first quarter of 2024, approximately 300 crabs will be released at three separate reefs sites off Key West (100

crabs per reef site).



2,344 SEA TURTLE HATCHLINGS received rehabilitative care at Mote this summer.

860 CALLS ANSWERED by Mote's 24-hour

hotline for stranded marine animal response (888-345-2335) this year. (340 calls about manatees, 284 about sea turtles, 74 about dolphins and whales, 162 others).



MOTE IS... **COMING TO THE RESCUE**

3 DOLPHIN CALVES RESCUED

from life-threatening entanglements by Mote and partners. Each rescued bottlenose dolphin benefits the conservation of

its population, Partners: CLEARWATER MARINE ACUARIUM, EWC*, SDRP*

4.284 SEA TURTLE NESTS

documented by Mote scientists and volunteers on

beaches from Longboat Key through Venice, Florida, this summer, including 4,091 loggerhead and 193 green sea turtle nests—our highest number of green nests ever recorded and highest overall number of nests ever recorded on Venice, LONGBOAT KEY MONITORED IN PARTNERSHIP WITH KEY TURTLE WATCH

528 UNIQUE SEA **TURTLES TAGGED**

for identification and 908 turtle encounters documented by Mote scientists on turtle nesting beaches on Siesta Key, Casey Key, and Venice. Mote researchers collected

and released 6,511 hatchlings in 2023.

DISTINCT MANATEES

were photo-documented by Mote scientists on Florida's east coast this year to understand how they responded to changes in a warm water refuge. SUPPORTED BY FLORIDA POWER & LIGHT

MANATEES recorded

during Mote's Sept. 25, 2023, survey in Sarasota County, the 3rd highest count in Mote's 38-year aerial survey history.

This year, Mote conducted 72 hours of aerial (airplane) surveys to support manatee management and conservation.



.ened or endangers., eturn to the ocean matters. turtle species are threatened or endangered, so

+6 RAY SPECIES being studied by

Mote scientists to aid conservation. For example. Mote monitors trends of longnose stingrays & endangered Atlantic chupares

with fishers in Belize.

63% DECLINE OF 5 **MAIN REEF-SHARK**

SPECIES documented this year

by Global FinPrint, a worldwide initiative turning shark science into conservation at Mote. Overfishing is the main threat, reported project partners in the prestigious peer-reviewed journal Science.

MOTE IS...

+50 SHARK SPECIES

stand to benefit from international trade regulations strengthened by CITES* in late 2022—a decision informed by Mote and partners in the Global FinPrint initiative.

17 ENDANGERED RAYS

(Atlantic pygmy devil rays)

sampled & tagged off Florida's Panhandle & 4 tagged on Florida's east coast—firsts for the species that will aid conservation & management.

+100° FAHRENHEIT:

LENDING A FIN TO

SHARKS AND RAYS

2023's hot summer water temperatures led Mote to evacuate thousands of stressed corals from its underwater nurseries. Mote scientists have started returning recovered corals to the water and learning from this extreme event to restore resilient reefs.

****** +215,000 **CORALS RESTORED**

to date (2008-2023) by Mote scientists on Florida's Coral Reef, including 45,714 this year.

+21,000 CORAL **OFFSPRING**

from 5 species joined Mote's collection through coral breeding events this year in the Florida Keys.

OUT OF HOT WATER

HELPING CORALS

100 CORALS were given new treatments for the deadly black band disease or served as controls in a study in the Lower Florida Keys. 88% of treated corals had no active disease one week later.

MOTE IS...

PROJECT BY MOTE & OCEAN ALCHEMISTS, LLC.

CARIBBEAN KING CRABS:

juveniles produced as of late 2023 by Mote's new Florida Coral Reef **Restoration Crab Hatchery Research** Center dedicated to producing native crabs to help control algae on restored reefs.

750 NEW CORALS added to Mote's International

Coral Gene Bank, including 6 new species. The Gene Bank preserves corals to protect populations at risk of extinction.

3 TYPES OF MANATEES

(Florida, Antillean & African) were better understood this year through Mote's peer-reviewed research on manatee vocalizations. Recording sounds is the most efficient way to detect certain manatee species and can help us determine age (calf vs. adult).



NEW SEA TURTLE PROTECTION ZONE

announced this year by Mote:

A voluntary zone where boaters are encouraged to slow down to avoid striking sea turtles in Sarasota Bay, Florida, waters.

how long Mote scientists

have documented some individual manatees that we photo-documented again this year. In

southwest Florida, Mote's

team identified 429

individual manatees.



MOTE IS... AN ALLY TO TURTLES, **MANATEES & MORE**

40 MANATEES, 54 TURTLES

rescued from red tide areas were sampled for blood plasma for a new study. Mote and Florida Gulf Coast University scientists will analyze the animals' protein profiles for signals of red tide toxicity. This research may improve treatment & diagnosis of animals whose symptoms continue after red tide dissipates.

*CITES: Convention on International Trade of Endangered Species of Fauna and Flora

· NOAA: National Oceanic and Atmospheric Administration

~\$7 MILLION

awarded to Mote by NOAA

for a four-year, transformative coral

restoration initiative at 10 key sites

on Florida's Coral Reef



MOTE SEA: MAKING SCIENCE ACCESSIBLE FOR ALL

This year, more than 63,236 children and adults engaged with Mote Marine Laboratory's informal science education programs, outreach programs and educational booths—a new record.

Demand for Mote programs is growing—and not just because they're fun ways to get children into the water and interns into our real working labs. Mote is helping students advance from education to career opportunities in marine STEM (science, technology, engineering and math)—including students facing financial or cultural barriers in these fields.

Many local students will start their journey into marine STEM at Mote Science Education Aquarium (Mote SEA), the rebirth of our public Mote Aquarium projected to complete construction this coming **Above:** A young visitor discovers a microscopic world using an interactive digital scope in an education exhibit at Mote Aquarium.

Right: A young child discovers what lives in local waters during one of Mote Marine Laboratory's informal science education programs.

winter at Nathan Benderson Park near Interstate 75 and University Parkway in southwest Florida.

Mote SEA will have the capacity to provide no-cost education programs to 70,000 local public school students. This year, Mote welcomed Dr. Kristen Ranges to champion these efforts. She's starting with a needs assessment to ensure K-12 students in local counties will be able to access Mote's engaging, inclusive and comprehensive science curricula.

"First, we're looking at logistics and operations—for example, working with the school systems to secure bus transportation and decide which groups of students and how many will visit Mote SEA's teaching labs at a given time."

STUDENTS WILL DIVE INTO MARINE STEM IN THREE TEACHING LABS ON THE FIRST FLOOR OF MOTE SEA:

The **OCEAN TECHNOLOGY LAB** will feature a 3D printer, laser cutter, LED touch displays and other tools that will help students build and test their own autonomous underwater vehicles and tackle other marine engineering activities.

The MARINE ECOLOGY LAB will feature animal habitats, live animal ambassadors and large murals that will help students explore themes such as connected ecosystems and water quality.

The BIOMEDICAL/IMMUNOLOGY

LAB will allow students to use tools such as digital microscopes and explore topics like finding new medicinal compounds from the ocean and using DNA to investigate conservation-related questions, such as the paternity of sea turtle hatchlings.

"The Mote research themes for each teaching lab are advanced, but we'll be working with students as young as kindergartners—so these labs are meant to be super flexible and our curricula will be adjusted to the students' needs." Dr. Ranges said. "Even within a single grade level, students will come from different schools with different resources for STEM education. We need to meet them where they are."

Dr. Ranges is working to link state education standards with Mote research concepts, and in the coming months, she'll work directly with local teachers to solidify and test the curricula for Mote SEA.

"We are extremely excited about the cutting-edge learning and research opportunities Mote SEA will be able to provide our students," said Dr. Sarah Burkett, Science Program Specialist for Sarasota County Schools. "The interactive laboratory experiences both inside and outside the classroom will be immersive, supporting student learning in a new, unique way."

Mote SEA won't just deepen students' education—it will also help bridge gaps between education and careers through four STEM Workforce Training Labs on the

second and third floors: the Aquaculture Lab. Conservation Lab. Coral Lab and

Veterinary Clinic & Diagnostic Center.

In these labs, interns and program participants including high schoolers, undergraduates and graduates will gain technical skills, increased science literacy and career-building networking opportunities by working alongside Mote scientist mentors on their ongoing projects.

With time, Dr. Ranges and her Mote teammates look forward to building deeper connections among the Teaching Labs, Workforce Training Labs and Mote's existing school programs. For example, Mote is currently rolling out a partnership with Bayshore High School to introduce and improve access to STEM

careers for students in minority populations that are historically underrepresented in marine science.

Mote Associate Vice President for Education Aly Busse said: "At Mote SEA, and throughout our communities, our goal is to give students multiple entry points into marine STEM and build their knowledge along with their sense of belonging, science identity, self efficacy and confidence around STEM."



28 BRIEFINGS for local, state & national

government leaders were provided this year by Mote President & CEO Dr. Michael P. Crosby and fellow Mote scientists, a key way that we translate & transfer our knowledge to inform societal decisions vital to the ocean's future.

105.000 FOLLOWERS

on Facebook, 54,500 on Tiktok, 52,000 on Instagram, 19,000 on X (twitter), and 13,379 on LinkedIn connected with Mote's mission this year.









100 PEOPLE FROM **15** STATES

attended the Women of the Water Conference at Mote. This event allowed industry, research, academia, and government professionals to share experiences and address challenges facing U.S. aquaculture through research, community and collaboration, held by the florida department of

4,600 NEW 💉 **DONORS & MEMBERS**

joined Mote's ever-growing family this year, helping to champion our marine science, conservation and education mission.

1,377 MOTE VOLUNTEERS

33 dedicated volunteers helped educate visitors at Mote's new Education Outreach Center at Anna Maria City Pier and +50 volunteers assisted in

368 SUPPORTERS

—including donors, corporate sponsorships and public contributors -are powering the completion of Mote Science Education Aquarium (Mote SEA), which is anticipated to open in winter 2024.

4/4 STARS AND 100% ★★★★

—the highest possible scores—awarded to Mote this year by **Charity Navigator**. This means that Mote is a highly effective nonprofit organization and our supporters can give with confidence.

14,419 MOTE MENTIONS in news media stories this

year-twice as many as last year-allowed Mote to share our mission of marine science, conservation and education with more people worldwide.

MOTE IS... **STAYING IN TOUCH**

54 MILLION:

combined reach of Mote's Facebook, Instagram, X (Twitter) and LinkedIn.

Together Mote's profiles on these social platforms also had **5.1 million** impressions and an engagement rate of 5.51%.



2,000 MOTE **SUPPORTERS**

engaged with our fundraising events this year, empowering Mote to achieve more for our oceans locally and globally.

CONTRIBUTED 159,796 HOURS of service across every facet of Mote this year, including some exciting new roles:

Mote's coral restoration efforts through our new citizen science program in Key Largo, Florida.

MOTE IS... **CELEBRATING OUR SUPPORTERS**

LARGEST EXHIBIT AT MOTE SEA:

The Gulf of Mexico exhibit began coming to life in summer 2023 as huge acrylic windows weighing 27,900 pounds and 22,200 pounds were installed—one of several big moments in the construction of our new hub for marine STEM education, Mote Science Education Aguarium (Mote SEA),

73 HIGH SCHOOLERS participated in the teen

volunteer program, which provides students with an opportunity to volunteer during the school year. Engaging Mote visitors throughout Mote Aguarium, each interpretive station features hands-on learning activities and focuses on Mote research. Teen volunteers also assist acebook, edIn. se in programs conducted by the Mote Education

Department, including camps, special events, and outreach.

NEW CITIZEN-SCIENCE PARTNERSHIP

between Mote and ScubaPro is inviting citizen scientists from all over the world to help restore corals with Mote scientists.

63,236 PARTICIPANTS from 45 states and

around the world including Canada, Japan and Kenya engaged

with Mote's structured, informal science education programs,

outreach programs and educational booths this year.

182 UNDERGRAD INTERNS

outed 87,360 hours to Mote's mission this year. 41 of those participated in advanced research experiences supported by NSF* and philanthropic funding and focused on reaching underrepresented minority students.

NEW ROLE: Diversity & Inclusion Advisor

to Mote's President & CEOtaken on by Mote Aquarium Biologist III Amanda Felix to **help support** the participation of underrepresented minorities in STEM

internships and other science education and career development opportunities.

31 MENTORS TRAINED

to better support underrepresented minority students in marine STEM through a Mote-led workshop at Louisiana State University—the first transfer of knowledge and tools developed through the Mote-led MarSci-LACE partnership to an external academic institution.*MARINE EXCELLENCE: A PARTNERSHIP LED BY MOTE THAT

NEW K-12 NEEDS ASSESSMENT

launched by Mote to ensure local public schools can access the 3 teaching labs and 4 workforce training labs being developed for the new Mote Science Education Aguarium (Mote SEA).

MOTE IS...

MAKING SCIENCE ACCESSIBLE FOR EVERYONE

9 OFFSITE EXHIBITS maintained by Mote in Florida this year: 7 in Sarasota-Manatee area, 2 in the Florida Keys.

MOTE IS... **EXHIBITING EXCELLENCE**

353 SPECIES OF **MARINE LIFE**

called Mote Aquarium home this year, serving as ambassadors in our mission to educate people of all ages about the ocean.



engaged 54 participants with Mote in

Summerland Key and Key Largo

2 NEW EXHIBITS

wowed Mote Aquarium visitors this year: The limited-time exhibit Voyage to the Deep based on "20,000 Leagues under the Sea" and the long-term display Trailblazers in STEM featuring diverse scientists who shaped their fields. Voyage to the DEEP WAS SUPPORTED IN-PART

*NSF: National Science Foundation 2023 Annual Report 21 20 Mote Marine Laboratory

SUPPORTING OUR BEST AND BRIGHTEST

Mote is dedicated to nurturing the best and the brightest minds in marine science and technology fields—a key priority in our *Beyond 2020 Vision & Strategic Plan*. Mote offers the following awards and fellowships—made possible by philanthropic support—to deserving members of its research staff. Below each award is a list of this year's recipients.

MOTE POSTDOCTORAL RESEARCH FELLOWSHIPS ▼

These three-year fellowships provide 100% salary support, research start-up, supplies, equipment and mentorship to postdoctoral scientists conducting outstanding work early in their careers.

NEW IN 2023:



DR. JAMILA ROTH
Seagrass Ecosystem Research & Restoration



DR. KATIE FLOWERS
Ray Biology & Conservation



DR. KIRSTIE FRANCISMarine Microbiology

FELLOWSHIP RECIPIENTS WHO CONTINUED IN 2023:



DR. JENNIFER TOYODA
Ecotoxicology



DR. BETH BRADYManatee Research

MOTE EMINENT SCHOLAR AWARDS ▼

These three-year awards provide 50% salary coverage to Mote senior scientists with great potential to significantly advance or develop a research initiative consistent with Mote's *Beyond 2020 Vision* that will help ensure the long-term prosperity of Mote's research enterprise.

EMINENT SCHOLAR AWARDEES CONTINUING IN 2023:



DR. ERINN MULLER, Associate Vice President for Research, Manager of the Coral Health & Disease Research Program



DR. CYNTHIA HEIL, Director of the Red Tide Institute at Mote, Manager of the HAB Mitigation & Ecology Program

MOTE SCHOLARLY & SERVICE AWARDS ▼

These two-year awards provide 25% salary support for scholarly and service activities that further Mote's mission, consistent with Mote's *Beyond 2020 Vision*.

NEW IN 2023:



DR. SUMIT CHAKRABORTY Staff Scientist in the Phytoplankton Ecology Program



DR. HANNA KOCH Staff Scientist in the Coral Reef Restoration Program



DR. JAKE LASALA Manager of the Sea Turtle Conservation & Research Program



DR. RYAN SCHLOESSER Manager of the Fisheries Ecology & Enhancement Program



DR. JASON SPADARO Manager of the Coral Reef Restoration Research Program

SCHOLARLY AND SERVICE AWARDEES CONTINUING IN 2023:



DR. NATE BRENNAN Staff Scientist in the Fisheries Ecology & Enhancement Program



DR. EMILY HALL Manager of the Ocean Acidification Research Program and the Chemical & Physical Ecology Program



DR. JIM LOCASCIO Manager of the Fisheries Habitat Ecology & Acoustics Program



DR. VINCE LOVKO Manager of the Phytoplankton Ecology Program



DR. NICOLE RHODY Staff Scientist in the Marine & Freshwater Aquaculture Research Program



DR. TRACY SHERWOOD Staff Scientist in the Environmental Laboratory for Forensics



DR. CATHY WALSH Manager of the the Marine Immunology Program & Manatee Research Program



DR. DANA WETZEL Manager of the Environmental Laboratory for Forensics

HONORING MOTE'S NEXT GENERATION

With more than 300 staff members, including 45 Ph.D. scientists, Mote Marine Laboratory is full of sea stars. Here are just a few of our next-generation scientists who put their best fins forward this year, working diligently to find innovative solutions to ocean issues.



DR. KATIE FLOWERS

As a Mote Postdoctoral Research Fellow in Ray Biology and Conservation, Dr. Flowers investigates how sharks, environmental factors and human pressures influence stingray abundance and behavior in Caribbean coral reef ecosystems.

Today, she is monitoring coastal ray abundance in Belize with the local fishing community. More specifically, she's searching coastal waters for smalltooth sawfish and wingfin stingrays, two critically endangered species that are potentially extirpated from the Mesoamerican region. Dr. Flowers and her team pay local shark fisherfolk to conduct ray research, reducing the number of days they fish for sharks. "We're searching for stingrays to save sharks," said Dr. Flowers.

In the future, she aims to expand standardized ray abundance monitoring throughout the Greater Caribbean, especially in ray fishing nations, and build local capacity for ray research and species management with Mote.



DR. SARA WILLIAMS

As a Staff Scientist in Mote's Coral Health & Disease Research Program, Dr. Williams uses innovative modeling and statistical analyses to study coral health and resilience. By combining and analyzing data from past coral experiments, Dr. Williams helps Mote predict what reefs will look like under future ocean conditions and helps inform coral restoration practices for more resilient reefs.

This year, Dr. Williams and Mote colleagues have focused on testing non-antibiotic, antiviral coral cure ointments in the U.S. Virgin Islands (USVI). The treatments are currently about 60% effective at stopping stony coral tissue loss disease progression and 100% effective for black band disease.

Dr. Williams will return to the USVI in summer 2024 to survey elkhorn coral populations around Buck Island. She will map disease prevalence, test new treatments, and perform coral fertility assessments.



DR. JENNIFER TOYODA

As a Mote Postdoctoral Research Fellow, Dr. Toyoda studies ecotoxicology. More specifically, she studies how natural toxins and human-made chemicals affect marine ecosystems.

Recently, Dr. Toyoda has been collaborating with the Florida Fish and Wildlife Conservation Commission to study red tide toxin (brevetoxin) accumulation in shellfish. She's investigating the molecular mechanisms of how toxins are biotransformed and how shellfish detoxify. Her work will help natural resource managers and shellfish farmers predict and understand the risk of neurotoxic shellfish poisoning.

In the future, Dr. Toyoda plans to continue studying how inhaled toxins from sea spray affects human and wildlife health, as well as the ecological factors that contribute to red tide bloom progression.



DR. KIRSTIE TANDBERG FRANCIS

As a Mote Postdoctoral Research Fellow in Molecular Microbiology, Dr. Francis studies natural products produced by marine microorganisms with potential for drug discovery.

This year, Dr. Francis and a team of NOAA and USGS scientists ventured over 2,000 meters deep into the Gulf of Mexico using a deep-sea multi-corer to sample sediment. Relatively understudied, deep-sea habitats could hold potential for new discoveries. "Exploring new and unique places allows us to find new organisms, which may produce new chemistry," Dr. Francis said.

Dr. Francis has isolated microorganisms from the deep sediments she sampled and extracted substances that lead to the death of cancer cells and other pathogens. In 2024, she plans to isolate the compounds responsible for the biological activity and study their potential medical applications, adding to Mote's history of marine biomedical success.

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TOPPING OFF, COUNTING DOWN

Above: An aerial view of the progress made on Mote SEA as of Sept. 15, 2023.

2023 WAS A MOMENTOUS YEAR FOR THE CONSTRUCTION OF THE NEW MOTE SCIENCE EDUCATION AQUARIUM (MOTE SEA) AT A SOUTHWEST FLORIDA NEXUS SITE, NATHAN BENDERSON PARK.

In November, the Sarasota County Commission reaffirmed their financial support for Mote SEA with the Nov. 14 unanimous approval of a reimbursement resolution intended to outline their official intent to commit \$20 million, which has been a critical element of support throughout the entire project. The vote marked the final step of the County's commitment, which began with a Jan. 15, 2020, unanimous vote to provide a letter of commitment for the funds.

In December, Mote staff, supporters and members of the media celebrated with a topping off ceremony—a milestone event where the final structural beam is set into place atop a structure, thus completing its frame. Mote SEA already stands as an unmistakable and unmissable landmark within University Town Center.

Those passing by can now begin to see the building's iconic shape, as the framework for the exterior aesthetic—aluminum panels creating a sweeping and dynamic look—is hoisted into place and connected to the structure.

Mote SEA's interior will be just as iconic:

On July 25 and 26, the 400,000-gallon Gulf of Mexico shark conservation habitat—the largest exhibit in Mote SEA—began coming to life as a crane lifted two massive windows made of acrylic (clear, strong, aquarium-grade material) into place.

Mote staff celebrated the installation with a July 25 gathering of our generous individual and corporate

supporters, who have joined Mote's government supporters to commit more than \$100 million combined toward the \$130 million goal for creation of Mote SEA.

The windows, weighing 27,900 and 22,000 pounds, will give future visitors an immersive view of sharks, rays, sea turtles, tarpon, snook, red drum, snapper, parrotfish, coral reef formations and many other denizens of the Gulf that Mote is proud to call our blue backyard. One of the windows will also open up into a large multi-purpose room that will host a vast array of educational and community programs.

Heading into 2024, the construction team will begin to install the remaining large-scale acrylic panels for the balance of the main habitats throughout Mote SEA. In addition, a complex network of plumbing and life support systems, necessary to breathe life into the 1 million gallons of habitat throughout the facility, will begin to take shape.

It is anticipated that the certificate of occupancy (C.O.)—a formal approval from Sarasota County certifying that Mote SEA meets all required construction requirements and is safe for occupation—will be applied for in late summer 2024. Once the C.O. is issued, our aquarium biologists can undertake Mote's transport and acclimation process for the wide array of animals that will ultimately call Mote SEA home.

Perhaps most exciting is the anticipated opening of the facility, which remains on schedule for winter 2024, when Mote will realize its vision for offering a window of discovery into the globally-significant marine science research conducted by Mote scientists across every ocean in the world.

Right: Mote staff sign a beam to commemorate the topping off of Mote SEA in November. From top to bottom: Mote Trustee and Board Vice Chairman Hobart (Skip) Swan; Associate Vice President for the Aquarium Evan Barniskis; Mote President & CEO Dr. Michael P. Crosby with Mote Trustee Lt. Col. Frances Rice. Mote Director of Events & Guest Experience Veronica Perrelli, Aquarium AVP Barniskis and Membership Manager Kohl at the Mote SEA construction site.

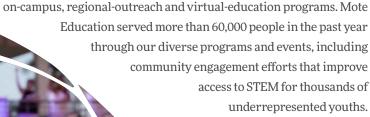




MOTE MARINE LABORATOR

TOAST TO TEACHERS

Mote Marine Laboratory & Aquarium was pleased to recognize over 220 local science and elementary teachers from Sarasota, Manatee and DeSoto counties at its inaugural Toast to Teachers appreciation event, which took place on Oct. 6, 2023 with support from the Mote President's Advisory Council. Teachers gathered in Mote's beautiful courtyard and enjoyed complimentary cuisine, cocktails, dancing, raffle items, and entertainment, all generously donated by local businesses and community members. Donations were also raised to benefit Mote's Education Department with a total of \$60,000 raised for the Toast to Teachers Education fund, which provides local counties with access to Mote's Education programs. Mote Education provides STEM (science, technology, engineering and math) education through a wide variety of



Left (from top to bottom): Rita Giannopulos shares a toast with her guest; Mote Director of Education Elaina Wheaton and Education Specialist II Lauren Karpovage with their display of educational resources at the event; Guests raise their glasses to toast local teachers; Mote Chief Development Officer Andria Piekarz with Event Co-Chair Michelle Swartz.

OCEANIC EVENING: A GLOBAL GALA

On Oct. 28, 2023, more than 500 supporters joined us to celebrate the global mission of Mote Marine Laboratory & Aquarium during our annual Oceanic Evening gala at The Ritz-Carlton, Sarasota. The event adopted an "Around The World" theme celebrating the outstanding research our scientists are working on in numerous countries such as Belgium, Egypt, Haiti, Israel, Japan, Mexico and many more.



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OCEANIC EVENING PHOTOS BY: LORI SAX

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FULL STRATEGIC PLAN, SCAN THIS QR CODE OR GO ONLINE TO: MOTE.ORG/BEYOND2020

WE ARE MOTE

7 ANNUAL GOALS MET OR SURPASSED BEYOND 2020 VISION & STRATEGIC PLAN

306 MOTE STAFF 45 DOCTORAL-LEVEL STAFF 67 AQUARIUM STAFF

INCLUDING: 129 RESEARCH STAFF 28 EDUCATION STAFF

+\$24,139,966 DONATED TO MOTE

VIA 5,602 DONATIONS FROM 3,350 GENEROUS DONORS

+10,000 MEMBERS

223 CORPORATE DONORS

26 RESEARCH PROGRAMS LEADING MARINE SCIENCE AROUND THE WORLD

Benthic Ecology



Coral Health & Disease Research

Coral Reef Restoration Research



Environmental Health / Beach Conditions Reporting System



Fisheries Ecology & Enhancement

9 CENTERS OF EXCELLENCE

Fisheries Habitat Ecology & Acoustics

Alfred Goldstein Institute for Climate Change Studies

· Center for Fisheries Electronic Monitoring at Mote

International Coral Gene Bank · Louis Stokes Alliance

for Minority Participation: Marine Science Laboratory

Alliance Center of Excellence • Marine Policy Institute

· Center for Shark Research · Florida Red Tide

Mitigation & Technology Development Initiative .



Florida Keys Marine Field Operations







Marine & Freshwater Aquaculture



Marine Immunology



Ocean Acidification Research



Ocean Technology



Sarasota Dolphin Research

(Sea Turtle Conservation & Research

(+) Sea Turtle Rehabilitation Hospital

Seagrass Ecosystems Research &

Sharks & Rays Conservation Research

Stranding Investigations

64 SCIENCE EDUCATION PROGRAMS (43 IN PERSON & 21 VIRTUAL). INCLUDING:

College internships & National Science Foundation-supported Research Undergraduates · Community engagement & outreach programs · Endless Oceans adult learning program • Family programs & events · Florida Keys programs for school groups and the public · Florida Master Naturalist Program · Homeschool programs · Junior Educators in Training • Kayaking programs • Professional development programs • Project Nature Bridge • School programs: field trips, classroom kits and outreach • Scout programs • SEA Trek and other virtual learning programs · Special needs programs ·

Animal Encounters • Breakfast with the Sharks • Camp programs •

Shark Pups & Grownups · Youth Ocean Conservation Summit

Mote's Beyond 2020 Vision & Strategic Plan, endorsed by our Board of Trustees, charts a course for the success of Mote's mission. Below are the annual strategic goals met or exceeded by our hardworking Mote family this year.

INCREASE THE LEVEL OF FUNDING FROM ALL SOURCES FOR ANNUAL RESEARCH OPERATIONS TO APPROXIMATELY \$27 MILLION IN 2030.

FY ACTUAL: \$25,409,197

FISCAL YEAR GOAL: \$19,200,000

EXPAND THE TOTAL NUMBER OF MOTE PH.D.-LEVEL RESEARCHERS TO 45 IN 2030.

FY ACTUAL: 45

RECRUIT AT LEAST TWO NEW FULL TIME, SENIOR LEVEL RESEARCH **STAFF BY 2030.**

FY ACTUAL: 1

RECRUIT AND ANNUALLY MAINTAIN FOUR CONTINUOUSLY ROTATING THREE-YEAR POSTDOCTORAL RESEARCH FELLOWSHIP POSITIONS WITH FULL SALARY/FRINGE/START-UP COSTS BY 2025. INCREASE THE TOTAL NUMBER OF INSTITUTIONAL (I.E., UNIVERSITY, AGENCY, NGO, CORPORATION) RESEARCH AND/OR **COMMERCIAL PARTNERSHIP AGREEMENTS TO 30 BY 2030**

FY ACTUAL: 25

INCREASE THE NUMBER OF PARTICIPANTS SERVED BY MOTE'S STRUCTURED EDUCATION PROGRAMS (I.E., DIGITAL LEARNING, FIELD TRIPS, CAMPUS PROGRAMS) TO APPROXIMATELY 60,000 IN 2030.

FY ACTUAL: 47,477

PEER-REVIEWED **PUBLICATIONS, BOOKS**

END, with nine applications pending this year thanks to & CHAPTERS* Mote's innovative

ଞ୍ଚିଛି FY ACTUAL: 5

INCREASE ANNUAL PHILANTHROPIC INVESTMENTS SUPPORTING **RESEARCH PROGRAMS TO AT LEAST \$12 MILLION IN 2030.**

FY ACTUAL: \$9,725,090

71% **RESEARCH**

\$25,409,197

23%

EDUCATION & AQUARIUM \$8.080.043

FACILITIES & ADMINISTRATION

\$2.269,997



*From October 1, 2022 through December 31, 2023

\$35,759,237* **OPERATING BUDGET** DOES NOT INCLUDE BENEFICIAL INTEREST IN MOTE MARINE FOUNDATION

Control Technologies Incubator (US HAB-CTI)

• Red Tide Institute • U.S. Harmful Algal Bloom

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MOTE'S MISSION IS BOUNDLESS BECAUSE OF YOU

ur mission of global marine science and conservation is only possible with the support of our dedicated donors, members and volunteers near and far.

In every way, you mean the world to us.

This year, we welcomed more than 4,600 new donors and members to our ever-growing family, and nearly 2,000 of our supporters engaged with fundraising events, empowering Mote Marine Laboratory & Aquarium to achieve more for our oceans locally and globally.

We celebrated with you—often in our hard hats—as Mote Science Education Aquarium (Mote SEA) rose from the ground and its three stories rapidly took shape, setting the stage for our incredible new wave of accessible marine science education for communities in southwest Florida and beyond.

We also celebrated our philanthropic supporters at Mote's Guardians of the Sea reception, where more than 300 of you joined us for a truly special evening.

Mote members of all ages joined us for a giant-squidsized adventure in Voyage to the Deep, an immersive, limited-time exhibit adapted from Jules Verne's classic "20,000 Leagues Under the Sea." Nearly 600 members joined us for an exclusive exhibit preview brimming with adventure, science and fun.

Mote volunteers, who include our Board of Trustees and many donors and members, gave the vital gift of their time, expertise and goodwill to every facet of Mote's mission this year. During our annual Volunteer Awards Ceremony, we offered our deep appreciation and hearty thanks to Mote volunteers reaching milestones of one year to an incredible 40 years of service.

No matter where we travel to lead ocean-saving science, we never leave home without one vital thing: Our deep gratitude for the supporters who put our mission on the map.

2023 VOLUNTEER AWARD RECIPIENTS

BOARD OF TRUSTEES

40 YEARS

Don Featherman

30 YEARS

Andy Ireland

20 YEARS

Richard O. Donegan

10 YEARS

Jeanie Stevenson

7 YEARS

Rogan Donelly Elizabeth Moore

3 YEARS

Barbara Brizdle Rod Hershberger

1 YEAR

Susan Molinari Frances Rice

ALL OTHER VOLUNTEER AWARDEES

25 YEARS

20 YEARS

Chris Garber Michael Pizzi Terri Pizzi

Kerri Scolardi

Maureen Snyder

Bette Boysen

Jim Grimes

Dr. Edward Hamilton

Yvonne Hebda

Mary Day-Karl

Sharon Dickman Stephen Dickman

Peter Rosasco

Cyndi Seamon

Sue Stolberg

15 YEARS

Mary Brugger Bruce Camardo **David Fontaine** David Gill

Kim Heuberger

Jeffrey Hollway

Cathy Horn Mel Kestner

Terry Leland Richard Miller

Roger Mitchell

Ken Rear

Jeffrey Steinsnyder

Ann Walborn

10 YEARS

Lisa Faron Paul Hudson Donna Krusenoski Jennifer Lampl

Ciera Lemoniades Jill Marsh

Charlie Mericle Arthur Reilly Sarah Stern

Bill Tiffan

VOLUNTEER EMERITUS INDUCTEES

Sheldon Aptekar Angela Briguglio Debbie Cohen

Callie Desormier

Tom Fulks

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David Levine Gary Marcus

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Paul Swanton

Greg Watson Carol Weisberg



MOTE SEA DONORS

MOTE TRUSTEES & ADVISORS

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MAKO BENEFACTORS **NAUTILUS SOCIETY**

Education Aguarium (Mote SEA), from its inception to December 31, 2023.

\$1.000.000 OR MORE

Anonymous

Anonymous

Bishop Parker Foundation

Dr. Andrew and Dr. Judith Economos

Karol Foss

Anonymous

Anonymous

Manatee County Board of County Commissioners

Sarah, Ling & Michael Markovitz

Ryan and Maureen Martin

Sarasota County Board of County

Commissioners

State of Florida Department of Economic Opportunity

Anonymous

Anonymous Anonymous

Thank you to the following generous donors who have contributed to our Oceans for All campaign to create Mote Science

\$500.000 TO \$999.999

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Anonymous

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SEA EXPLORERS

\$250.000 TO \$499.999

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Barbara Brizdle

Kenneth and Carrie Cox

Frank E. Duckwall Foundation. Inc.

Ron and Terri Greenbaum

Henry and Marilyn Taub Foundation

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Elizabeth Moore

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