



MOTE MARINE LABORATORY | 2009 ANNUAL REPORT



MILESTONES

Dear Friends,

As we approach our 55th anniversary in 2010, we have the opportunity to reflect on Mote's history. As always, we are amazed at Mote's accomplishments. From a small one-room facility and one scientist, we have grown to four geographical locations with 31 buildings housing 178 employees and 1,400 volunteers in three major divisions – a great tribute to the people involved in this great organization. With seven research centers, 24 research programs, formal education programs and informal public outreach through Mote Aquarium, Mote remains committed not just to marine research, but to sharing our knowledge with the public, educating young minds and serving our community. Here are some highlights for 2009:

SCIENCE

- Mote researchers had 88 new extramurally funded research projects and 23 projects whose funding was continued, including studies that began in Sarasota, Charlotte Harbor, the Florida Keys and beyond.
- Our scientists produced nearly 100 peer-reviewed research papers, book chapters, technical reports and other publications, presented their work at numerous national and international conferences and forged new scientific partnerships at home and around the globe.
- We had the opportunity to join with colleagues from the U.S., Mexico and Cuba to discuss joint research and conservation plans for the Gulf of Mexico and Caribbean. This will result in the first long-term marine science plan agreed upon by scientists from all three nations in nearly 50 years.

EDUCATION

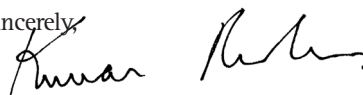
- Our educators reached nearly 30,000 students in 2009 via school programs, summer camps, fishing clinics, internships, and distance learning programs. Ten percent of the children we reached were living in under-served communities. Mote educators also expanded program offerings to provide even more opportunities for students to explore our marine world.
- We also hosted the Florida Marine Science Educators Association Annual Conference, a gathering of educators from around the state, to continue our efforts to educate teachers so they can share current science with their students.

AQUARIUM

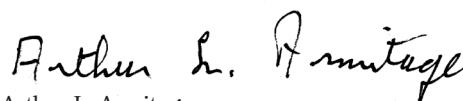
- Two new exhibits opened in Mote Aquarium highlighting Mote's research and conservation efforts. Sea Turtles: Ancient Survivors showcases Mote's sea turtle research and conservation programs and provides the public new information about marine research and its impact on sea turtle populations.
- And the Seahorse Conservation Laboratory provides expanded breeding facilities for our seahorse program and allows us to showcase this conservation effort with the public. We continue finding innovative ways to interact with our guests, such as special group tours and children's birthday parties, and we're excited to begin new interactive programs in 2010.

Institutionally, Mote signed a landmark agreement expanding our research partnership with the University of South Florida, which will allow for new science ventures, expanded learning opportunities and new economic development opportunities for the region and state. The most immediate project is collaboration between USF's Research Park and the Mote Aquaculture Research Park, which will allow the University to integrate new sustainable energy technologies there through the Florida Energy Systems Consortium. Increasing energy efficiency is an important goal at the Park, which is the nation's largest research facility dedicated to aquaculture and sustainably farming fish by reducing water use. Mote's Board of Trustees remains engaged in supporting the Lab through 17 committees, reflecting a comprehensive approach to the organization's governance. On behalf of the Mote staff, volunteers and the Board of Trustees, we would like to thank you for your support and encourage you to review this document for information about our 2009 accomplishments. Please visit us online at www.mote.org or in person at Mote Aquarium to learn about Mote's remarkable research, conservation and outreach efforts.

Sincerely,



Dr. Kumar Mahadevan, Ph.D.,
President & CEO



Arthur L. Armitage
Chairman of the Board of Trustees

SCIENCE CENTERS

AQUACULTURE RESEARCH & DEVELOPMENT

Director: Kevan L. Main, Ph.D.

MISSION: Dedicated to finding innovative and cost-effective methods to produce aquatic species for food and for fisheries and habitat restoration.

2009 Programs and Managers:

MARINE AQUACULTURE RESEARCH: Kevan L. Main, Ph.D. Developing technology and husbandry techniques to farm high-value marine species to restore declining recreational fisheries and to advance Florida's food fish aquaculture industry. Research is focused on culture methods and sustainable marine recirculating aquaculture systems to produce snook, redfish, long-spined sea urchins and coral for stock enhancement and pompano for food.

STURGEON COMMERCIAL DEMONSTRATION: James T. Michaels, MS. Developing and demonstrating sustainable freshwater recirculating systems and techniques to produce caviar and sturgeon for high-value food markets and to promote the industry in Florida. The program and its technology will help relieve pressure on wild stocks and fill the current gap of supply vs. demand for food fish.

ADDITIONAL STAFF: Brian Babbitt • Constance Beaulaton, BS • Stephen Corbett • Terri Deppe, BS • Curtis Gionet • John Holly, BS • Michael Nystrom, MS • Matthew Resley, MS • Brian Richard • Nicole Rhody, MS • Randy Shine, AS • Wade Tappan.

COASTAL ECOLOGY

Director: Ernest D. Estevez, Ph.D.

MISSION: Studies the effects of human uses of water on coastal resources, especially rivers, bays and estuaries, and develops and applies multi-disciplinary research tools to understand the effects of river flow regulation, industrial and municipal discharges and storm water runoff on coastal ecosystems.

2009 Programs and Managers

BENTHIC ECOLOGY: James Culter, MS. Explores life in and on the bottoms of Florida's rivers, estuaries and oceans and conducts nationally significant studies at electric power stations. The program also discovers and explores submerged sinkholes and caverns on the west Florida shelf.

CHEMICAL ECOLOGY: L. Kellie Dixon, Ph.D. Monitors



coastal water quality in Southwest Florida, develops new methods for real-time detection of human wastes in rivers and estuaries, determines seagrass light requirements, and conducts meta-analyses of very large data sets relating red tide and water quality.

COASTAL RESOURCES: Ernest D. Estevez, Ph.D. Develops methods and applications to use mollusks and other invertebrates as markers to portray ecological conditions and guide management in tidal rivers, and creates ecological condition indices to improve resource management.

ADDITIONAL STAFF: Nichole M. Becker, BS • Camia M. Buehler, BS • Maya J. Dobrzeniecka, BS • Emily R. Hall, Ph.D. • Susan R. Hemme, MS • Patricia J. Minotti, BA • Ari Nissanka, D.Sc. • Lori J. Zaworski, BS.

ADJUNCT AND VOLUNTEER SCIENTISTS: James Fountaine, Ph.D. • Bruce Boese, Ph.D. • William Ellis, Ph.D. • Tom Fraser, Ph.D. • John Morrill, Ph.D.

SCIENCE CENTERS (continued)

CORAL REEF RESEARCH

Director: David Vaughan, Ph.D.

MISSION: Dedicated to monitoring, understanding and restoring coral reefs in collaboration with the Florida Keys National Marine Sanctuary and other research organizations in Florida Keys.

2009 Programs and Managers:

CORAL REEF SCIENCE AND MONITORING: Erich Bartels, BS. Evaluates the biology and health of coral reef ecosystems through projects such as BleachWatch, Reef Resilience Monitoring, Marine Ecosystem Event Response and Assessment Project and The Staghorn Nursery Project.

CORAL REEF RESTORATION: David Vaughan, Ph.D. Seeks to develop systems and techniques to grow coral and other species, such as sea urchins, for replanting in depleted reef systems, and for scientific study.

MARINE MICROBIOLOGY: Kimberly Ritchie, Ph.D. Seeks to establish health assessments for Florida coral reefs, establish microbial baselines of coral communities and studies the application of beneficial bacterial interactions to corals and their symbionts.

ADDITIONAL STAFF: Cory Walter, MS • Dave Wilson, BS.

ADJUNCT STAFF: Rutiger Bieler, Ph.D.

ECOTOXICOLOGY

Director: Richard H. Pierce, Ph.D.

MISSION: Investigates the source, fate and effects of natural biotoxins (red tide toxins) and chemical pollutants (pesticides, petroleum, industrial contaminants, pharmaceuticals) in the marine environment, including the ecology of harmful marine algae that produce biotoxins. Develops and implements new technologies to identify and monitor toxic substances, the organisms that produce them and the resulting effects. A major focus is assessing impacts from exposure and discovering ways to reduce public health and natural resource exposure and risk.

2009 Programs and Managers

AQUATIC TOXICOLOGY: Dana Wetzel, Ph.D. Investigates chemical contaminants concerning impacts on marine mammals and other marine organisms, advancing diagnostic technology through a biomarker laboratory

to evaluate adverse effects at the molecular level. This approach has been implemented in the arctic, sub-tropical and tropical environments providing a global perspective of the contaminants that put marine mammals at risk. A special application assesses consequences of exposure on fertility and reproductive fitness.

CHEMICAL FATE AND EFFECTS: Michael Henry, BS. Investigates natural biotoxins and chemical pollutants in the marine environment, including sources, exposure routes, bioaccumulation and persistence in affected organisms, as well as trophic transfer. A major focus is providing cause-and-effect relationships between exposure and adverse impacts in order to reduce the risk to natural resources and public health.

ENVIRONMENTAL HEALTH: Barbara Kirkpatrick, Ed.D. Investigates how airborne biotoxins impact public health, accomplished through field exposure studies. This program identifies problems and develops creative ways to disseminate information to educate resource managers, public health officials and the public about dangers and how to mitigate adverse impacts. A major focus is innovative technology (the Beach Conditions Report™) to accomplish the information and education outreach goals.

PHYTOPLANKTON ECOLOGY: Gary Kirkpatrick, Ph.D. Investigates phytoplankton behavior, photophysiology and bloom dynamics of Florida's red tide to understand how harmful algae function at cellular, community and ecosystem levels. To accomplish this, the Sarasota Operations of the Coastal Ocean Observation Laboratories (SO COOL) expanded to apply state-of-the-art sensor, satellite and web technology to coastal ocean issues focusing on red tide and marine algal communities.

ADDITIONAL STAFF: Patricia Blum, AA • Anamari Boyes, BS • Cory Boyes, AA • Robert Currier, AAS • Alan Hails, BS, PE • Karl Henderson, Ph.D, PE • August Kotlewski, BA • Rebecca Medvecky, BS • Katherine Nierenberg, MS • Valeriy Palubok, MS • Bradley Pederson, MS • Erin Pulster, MS.

ADJUNCT SCIENTISTS: Terence Evens, Ph.D. • Gary Fahnenstiel, Ph.D. • Scott Glenn, Ph.D. • David Millie, Ph.D. • Gary Rand, Ph.D. • Eric Schofield, Ph.D. • Edward VanVleet, Ph.D. • Aswani Volety, Ph.D. • Steven LeGore, Ph.D. • Rodrick, Ph.D. • Oscar Max Eric Schofield, Ph.D. • Edward VanVleet • Aswani K. Volety, Ph.D.

SCIENCE CENTERS (continued)

FISHERIES ENHANCEMENT

Director: Kenneth M. Leber, Ph.D.

MISSION: Strives to substantially increase the knowledge of how to preserve and responsibly enhance economically and ecologically important coastal fish and invertebrate populations.

2009 Programs and Managers

Fisheries Assessment and Ecosystem Management: Kai Lorenzen, Ph.D., William and Lenore Mote Eminent Scholar in Fisheries Ecology, Imperial College, London. Develops mathematical models to assess the potential of fishery management options used to preserve fish populations, such as catch limitations, habitat conservation and restoration and marine fisheries enhancement.

FISHERIES HABITAT ECOLOGY: Aaron A. Adams, Ph.D. Advances knowledge about fish habitat use, habitat connectivity throughout the life cycle, essential fish-habitat requirements and the relative contributions of different fish habitats to fish population size. These studies provide better understanding of which species benefit most from conserving, restoring or adding habitats. Dr. Adams is also Executive Director of Bonefish and Tarpon Trust, a non-profit organization dedicated to preservation of bonefish, tarpon and permit for the future.

MARINE STOCK ENHANCEMENT: Kenneth M. Leber, Ph.D. Studies focused on developing and testing responsible marine stock enhancement technology and protocols to help restore depleted populations, augment fishery yields and advance basic knowledge about wild stocks. Develops optimal stocking strategies (fish size, release habitat, timing of releases, magnitude of releases, acclimation measures, etc.) and strategies for using conservation hatcheries to help with conservation and restoration of endangered species, such as those found in coral reef communities.

ADDITIONAL STAFF: Andrew Barbour, BS, MS student • Ross Boucek, BS • Nathan Brennan, Ph.D. • Terri Deppe, BA • Rachael Sommer, BS • Tom King, Ph.D. • Carole Neidig, MS.

ADJUNCT SCIENTISTS: H. Lee Blankenship, MS • Sasha Koulisch, Ph.D. • Martin Moe, MS • Ken Nedimyer • Bill Pine, Ph.D. • Juliane Struve, Ph.D. • Carl Walters, Ph.D.

MARINE MAMMAL AND SEA TURTLE RESEARCH

Director: John E. Reynolds, III, Ph.D.

MISSION: Provides information to enhance the understanding of the biology and habitat requirements for marine mammals and sea turtles to help inform management decisions, promote effective conservation; and provides professional leadership support for students and programs worldwide.

2009 Programs and Managers

DOLPHIN AND WHALE HOSPITAL/SEA TURTLE

REHABILITATION HOSPITAL: Lynne A. Byrd, BA, Certified Board Veterinary Technician. Our hospitals provide optimal care of live-stranded animals, while also collecting data on biology, physiology and medicine. Serves as a regional resource and interacts closely with Mote's Sea Turtle Conservation and Research Program and Sarasota Dolphin Research Program.

MANATEE RESEARCH: John Reynolds III, Ph.D. Partners with other organizations to answer questions about manatee biology, health and behavior to understand the species, inform management decisions and educate the public. Works in conjunction with Mote's Aquatic Toxicology Program to conduct research on contaminants, biomarkers and other aspects of marine mammal biology in marine mammals in Alaska and internationally. Has helped develop Caribbean-wide action plans for manatees and other marine mammals.

SARASOTA DOLPHIN RESEARCH: Randall S. Wells, Ph.D. Studies coastal and offshore dolphins in the southeast U.S., Argentina and elsewhere to understand their biology, health, behavior and ecology and the human factors – including environmental contaminants – that impact them. Responsible for follow-up monitoring of rehabilitated dolphins for Mote and other institutions. The program is a partnership with the Chicago Zoological Society and done in conjunction with colleagues worldwide.

SEA TURTLE CONSERVATION AND RESEARCH: Tony Tucker, Ph.D. Coordinates turtle monitoring activities in Sarasota County to aid assessment of beach nourishment projects. Satellite tags on nesting females are tracking the migratory paths and inter-nesting habitat use for the largest loggerhead turtle rookery in the Gulf of Mexico.

SCIENCE CENTERS (continued)

SENSORY BIOLOGY AND BEHAVIOR: William Tavolga, Ph.D. Research on sensory and cognitive processes in a variety of marine mammals and fishes. Projects range from ultrasound reception in certain fishes to touch and hearing sensitivity in manatees. Leading participation in a series of NOAA-sponsored conferences on the effects of man-made noise in the ocean on marine life.

STRANDING INVESTIGATIONS: Gretchen Lovewell, BS. Provides 24-hour response to marine mammal and sea turtle strandings in coastal Southwest Florida and offers logistical stranding support to state manatee biologists. Studies seek to understand the natural history of cetaceans and sea turtles and evaluate long-term mortality trends.

ADDITIONAL STAFF:

(1) Andrew Stamper, DVM (consulting veterinarian) • Charles Froomjian • Kathy Klingelberger, MS • Mary Mankze, BA • Christine Skey, BA • Patrick Walsh (2) Sheri L. Barton, MS • Jennifer Helseth, BS • Deirdre Semeyn, BS • Jay M. Sprinkel, BA (3) Jason Allen, BS • Brian Balmer, MS • Aaron Barleycorn, BS • Kim Bassos-Hull, MS • Elizabeth Berens-McCabe, MS • Deb Fauquier, DVM • Jennifer Hebert, MS • Katie McHugh, MS • Gene Stover (4) Kristen Mazzearella, MS • Kendra Garrett, MS • Ryan Welsh, BS • Sarah Hirsch, BS • Jenna Cormany, BS (5) Emma Jugovich BS

ADJUNCT SCIENTISTS: Nelió B. Barros, Ph.D. • Gordon B. Bauer, Ph.D. • Heidi E. Harley, Ph.D. • Leszek Karczmarski, Ph.D. • David A. Mann, Ph.D. • William McLellan • Anne B. Meylan, Ph.D. • D. Ann Pabst, Ph.D. • Arthur N. Popper, Ph.D. • James A. “Buddy” Powell, Ph.D. • Stephanie Presti Lantry, Ph.D. • Butch Rommel Ph. D • Michael Salmon, Ph.D. • Laela S. Sayigh, Ph.D. • Lori Schwacke, Ph.D. • Peter L. Tyack, Ph.D. • Graham A.J. Worthy Ph.D. • Jeanette Wyneken, Ph.D.

(1) Animal Care Hospitals • (2) Sarasota Dolphin Research Program • (3) Manatee Research • (4) Sea Turtle Conservation and Research • (5) Stranding Investigations Program

SHARK RESEARCH

Director: Robert E. Hueter, Ph.D.

MISSION: Dedicated to the scientific study of sharks, skates and rays; research ranges from molecular biology and biomedical studies of sharks in the laboratory to ecological, fisheries and conservation studies of shark populations in the sea. Designated by the U.S. Congress as a national center for shark research in 1991.

2009 Programs and Managers:

MARINE BIOMEDICAL RESEARCH: Carl Luer, Ph.D. Studies disease resistance, biochemistry, reproduction and embryonic development of sharks, skates and rays.

MARINE IMMUNOLOGY: Cathy Walsh, Ph.D. Characterizes cellular immune function in elasmobranchs, identifies immune regulatory factors and characterizes environmental stressors in marine vertebrate health.

SHARK BIOLOGY: Robert E. Hueter, Ph.D. Studies shark abundance, behavioral ecology, feeding mechanisms, sensory systems, fisheries and conservation of sharks.

ADDITIONAL STAFF: Jamie Brennan, BS • Stephanie Leggett, BA • John Morris, BS • Mercedes Smith, BS • Nicholas Whitney, Ph.D.

SCIENTISTS-IN-RESIDENCE: Eugenie Clark, Ph.D. (Mote Founder and Trustee) • Jose Castro, Ph.D. (NOAA) • H. Wes Pratt, BS (NOAA, retired).

ADJUNCT SCIENTISTS: George Benz, Ph.D. • A.B. Bodine, Ph.D. • Jeffrey Carrier, Ph.D. • Charles Colle, Ph.D. • Leo Demski, Ph.D. • Michelle Heupel, Ph.D. • Gary Litman, Ph.D. • Philip Motta, Ph.D. • R. Glenn Northcutt, Ph.D. • Colin Simpfendorfer, Ph.D. • Gregory Skomal, Ph.D. • Clayton Smith, Ph.D. • Robert Thommes, Ph.D.

RESEARCH HIGHLIGHTS, 2009

While it would be impossible to detail all of the projects that Mote researchers participated in this year, we've pulled together a sampling of highlights to provide an overview of the breadth and depth covered at the Lab and the many areas our experts are investigating.

AQUACULTURE RESEARCH AND DEVELOPMENT

MARINE AQUACULTURE RESEARCH:

- Mote Aquaculture Research Park hosted a two-day workshop in September to share years of research findings on designing and evaluating inland Marine Recirculating System Technology, which allow Mote staff to raise marine sport fish 17 miles inland in 100 percent recirculated water.
- Two redfish fingerling production trials were completed in the new multi-tank zero-discharge marine recirculating system. Successful trials resulted in harvest of more than 49,000 Phase III redfish. Mote maintained excellent water quality conditions and documented production parameters and costs. Spawning research focused on identifying diet and environmental cues to improve maturation of pompano and snook.

STURGEON COMMERCIAL DEMONSTRATION PROGRAM

- Mote's Siberian sturgeon caviar was featured at Monterey Bay Aquarium's "Cooking for Solutions 2009," highlighting the importance of sustainable farming and fishing methods. Mote's Sturgeon Program received the 2009 Cordon d'Or Gold Ribbon International Culinary Academy Award for Sustainability on the Florida Scene. The Sarasota County Economic Development Corporation also highlighted Mote's aquaculture research and development efforts in its Strategic Plan as one of six key areas that the region should focus on to expand expertise and business opportunities.
- Caviar production hit a record harvest of 418 kilograms. The Program's caviar is being marketed around the country to purveyors in Florida, New York, Seattle and South Carolina. Sturgeon meat is routinely shipped to wholesalers throughout Florida and as far away as New York City. Sturgeon production on the farm has expanded and, by the end of the year, Mote had more than 150 metric tons of fish swimming in our tanks.



COASTAL ECOLOGY

BENTHIC ECOLOGY

- Mote scientists and collaborators marked the return of scallops to two depleted areas in 2009 following joint efforts to restore scallops in 2008. Scallops in Boca Ciega Bay have built a sizable population with an average of 14 scallops per 600 square meters (/600m²) per monitoring site, whereas scallops in Pine Island Sound have regained moderate numbers after two years with no scallops found. Four of the fourteen sites had scallop numbers on a level considered to be sustainable (average density >25 scallops/600 m²) while most other sites were in the transitional category (5-25 scallops/600 m²).
- Mote staff also found the exotic "titan" barnacle (*Megabalanus coccopoma*) at New Pass in Sarasota County – the first reported sighting on Florida's

RESEARCH HIGHLIGHTS (continued)

west coast of this large, pink barnacle native to the tropical west Pacific. No additional barnacles have been found to date. Due to the large size and relatively rapid growth, *Megabalanus* may have the potential to displace native barnacles; its potential threat to local marine life is unknown but under investigation.

CHEMICAL ECOLOGY

- Mote scientists developed a way to detect detergent dyes that unmistakably identify septic tank sewage in natural waterways in real time. Their new method, which they have successfully tested on Florida's west coast, is designed to pinpoint where scientists should sample water to measure bacteria and viruses from human waste pollution.
- This year Mote scientists also collected data on the initial stages of a small red tide bloom off Sanibel Island. Scientists rarely observe harmful algae blooms at their beginnings, which are localized and short-lived.

COASTAL ECOLOGY

- Mote scientists developed, tested and are now regularly using a new method to describe the ecological condition of tidal creeks – important but unstudied ecosystems. Sixteen creeks in Sarasota County can now be ranked according to their condition, allowing local governments to focus restoration and preservation efforts with the most efficiency. The method is now being used monthly in selected streams to determine their response to seasonal changes.
- The Program played a leadership role in defining the effects of climate change on Florida's ocean and coastal resources, including reports for the public that explore what is definitely known, what is probable and what is possible in the near and long-term future. The most comprehensive report is available at www.dep.state.fl.us/oceanscouncil.

CORAL REEF RESEARCH

MARINE MICROBIOLOGY PROGRAM

- Mote scientists and collaborators at the University of South Florida's College of Marine Sciences

showed for the first time that beneficial bacteria living on corals can exchange genes with one another in the reef environment. Their discovery reveals a novel way that these bacteria can share useful traits – such as disease prevention – to benefit corals through symbiosis (a relationship that helps both organisms).

- Mote scientists and collaborators at the University of Florida also continued studying how symbiotic bacteria communicate to help define biological control parameters to control coral disease.

CORAL REEF RESTORATION PROGRAM

- Mote researchers and collaborators significantly improved methods for raising the larvae of long-spined sea urchins (*Diadema sp.*) in the lab, allowing thousands more to survive than in previous years. Raising long-spined sea urchins is a key step for restoring coral reefs, which need these urchins to eat algae that can harm corals if left unchecked. These urchins declined steeply in the 1980s, and Mote scientists hope to bolster wild populations by growing and releasing urchins. Mote scientists improved survival rates by keeping larvae in a U-shaped container and using air bubbles that turned on and off to circulate the water.
- Also in 2009, Mote scientists added two new temperature-controlled outdoor tanks for growing corals on land and added more species to their genetic bank of corals – a step toward their end goal of transplanting corals to replenish damaged reefs.

CORAL REEF SCIENCE AND MONITORING PROGRAM

- Mote scientists significantly expanded their offshore nursery and restoration efforts for the staghorn coral (*Acropora cervicornis*) – a species considered threatened under federal law – with collaborators from The Nature Conservancy and other partners throughout South Florida and the Caribbean.
- Mote scientists also helped to coordinate community-based reporting and removal of invasive lionfish in the Florida Keys with collaborators from the Florida Keys National Marine Sanctuary, the National Oceanic and Atmospheric Administration, the U.S. Geological

RESEARCH HIGHLIGHTS (continued)

Survey and the Reef Environmental Education Foundation. Lionfish are a quickly spreading nonnative fish that eat native reef species and are expanding into Florida reefs.

ECOTOXICOLOGY

AQUATIC TOXICOLOGY PROGRAM:

- Mote scientists and collaborators measured fertility potential in endangered and protected marine species using a test designed for humans for the first time as part of Mote's new Analytical Biomarker Laboratory for the Environment. The test is just one of the many new technologies Mote scientists plan to use in whole environmental health assessments for marine species in response to a variety of stressors, such as chemical pollution, disease and habitat loss.
- Mote scientists, working with government officials and scientists from Caribbean island nations were successful in establishing a Caribbean environmental health program to help address the significant environmental challenges faced by these countries.

CHEMICAL FATE AND EFFECTS PROGRAM:

- Mote scientists completed a study to determine the concentration and persistence of mosquito control pesticides in National Wildlife Refuges in the Florida Keys. Based on their findings, scientists at Florida International University are studying in the lab how these pesticides affect organisms other than mosquitoes, to analyze the risk to these other species. Their analysis will help the U.S. Fish and Wildlife Service to validate their own methods for determining to make mosquito control efforts less risky for other species in National Wildlife Refuges in the Florida Keys.
- Mote scientists also found that red tide toxins accumulate in shellfish over the long term as metabolites – substances produced by the animals' metabolisms – which travel up the food chain as the shellfish are eaten. The researchers hope to determine how these metabolites could affect the health of humans and other species.

ENVIRONMENTAL HEALTH PROGRAM:

- Mote scientists expanded the highly successful Beach Conditions Report™ developed at Mote to include 33 major county beaches along Southwest Florida and Panhandle. The system relies on lifeguards and other trained observers who use personal digital assistants to relay twice-daily updates on conditions related to red tide – such as respiratory irritation among beach goers and fish kills – plus updates on rip currents, red drift algae and which flags lifeguards are flying. Access the Report™ at www.mote.org/beaches or by calling 1-941-BEACHES.
- In collaboration with Sarasota Memorial Hospital, Mote scientists published a review on admissions to the Emergency Room for gastrointestinal illness, both during a red tide and with no red tide. The data indicate that GI illness increases during red tide, perhaps from people consuming recreationally harvested shellfish and/or consuming whole fish instead of filleted meat – but not at a consumption rate high enough to cause Neurotoxic Shellfish Poisoning. This study is an initial analysis; further studies using larger data sets are needed to validate results.

PHYTOPLANKTON ECOLOGY:

- Mote scientists continued investigating how various kinds of phytoplankton (microscopic marine algae) in Florida waters relate to the algae that causes Florida red tide, *Karenia brevis*, to better understand the factors that influence the formation, growth and end of red tides. By studying natural phytoplankton communities off Florida's Gulf Coast for the past 10 years, they've shown that the amount of cyanobacteria (blue-green algae) tends to drop when red tide algae becomes more abundant, suggesting that *K. brevis* eats cyanobacteria – a result that supports others' findings in lab settings.
- Three BreveBusters™ – Florida red tide detectors designed by Mote scientists – are scheduled to be installed by Mote staff in coastal waters of Veracruz, Mexico. This is the first permanent installation outside of U.S. waters. Previously, one BreveBuster was deployed on a two-week research

RESEARCH HIGHLIGHTS (continued)

cruise in the Mediterranean Sea and one was deployed during two one-week cruises around the Galapagos Islands.

FISHERIES ENHANCEMENT

FISHERIES HABITAT ECOLOGY

- A three-year Mote study revealed for the first time that adult snook along Florida's Gulf Coast beaches return repeatedly to the same spawning grounds – crucial information for fisheries managers who need to know which habitats these popular sport fish depend on. Mote scientists tagged snook for identification and found that those they recaptured later nearly always revisited the same barrier islands within a single year and between years. A pilot snook study to use remote antennae to monitor movements of PIT-tagged juvenile snook in mangrove creeks has expanded to a full scale study and provided unprecedented precision on survival estimates – information essential to fisheries and habitat management.
- Mote scientists and Bonefish and Tarpon Trust collaborators expanded their research to monitor the movements of bonefish (*Albula vulpes*) to include Caribbean-wide tagging of this popular but little-studied sport fish. Mote's program now includes the Bahamas, Belize, Venezuela and Cuba, with Mexico to be added in 2010. By revealing where bonefish go, Mote scientists are helping to inform marine resource managers who are considering designating marine protected areas as one way to preserve catch-and-release fisheries for bonefish in the Caribbean. Mote also supported the organization of the Third International Bonefish and Tarpon Symposium at International Game Fish Association headquarters in Dania Beach, Fla., in November 2008.

MARINE STOCK ENHANCEMENT

- Mote is working closely with Florida's Fish and Wildlife Conservation Commission and its Fish and Wildlife Research Institute to encourage anglers to help gather genetic samples from tarpon from throughout Florida. This partnership, which is also working with Bonefish and Tarpon Trust,

gathered 2,251 samples from anglers, resulting in 36 total tarpon recaptures (23 in 2009). Six of fish were recaptured 300 days or more after the first genetic samples were taken. The farthest movement between captures was 88 miles. Some 250 anglers from Texas, Louisiana, North Carolina, South Carolina, Mexico, Trinidad, Bahamas, Puerto Rico, French Guyana, Angola, Panama, Nicaragua, Costa Rica and Cuba have sent in samples with the primary research focus in Florida.

- Partnering with a number of sponsors and supporters, Mote hosted several successful outreach events in 2009 to educate the public about the importance of conservation and marine stock enhancement. These events included fishing clinics at Mote Aquaculture Research Park for children ages 6 to 15 and the 11th Annual William R. Mote Snook Shindig. Public reviews of these events were outstanding and involved Mote staff and volunteers and local stakeholders, fishing guides and representatives from local organizations.

MARINE MAMMAL AND SEA TURTLE RESEARCH

ANIMAL REHABILITATION HOSPITALS

- Staff at Mote's Dolphin and Whale Hospital successfully treated and released a young female bottlenose dolphin that was found stranded on Siesta Beach on December 16, 2008. The dolphin, nicknamed Ginger, was released after less than two months of treatment to Sarasota Bay, where Mote scientists have visually monitored her, keeping track of her using a small VHF radio transmitter. By the time Ginger was released, Mote volunteers had spent 1,320 hours monitoring her condition, providing vital information to the medical team. Ginger ate nearly 4,000 live pinfish – that's 35 pinfish fed five times a day at about \$1 per fish. Partial funding for Ginger's rehabilitation came from a grant from Jane's Trust.
- Staff at Mote's Sea Turtle Rehabilitation Hospital successfully treated nine sea turtles, releasing four green (*Chelonia mydas*) sea turtles, four loggerhead sea turtles and finding a permanent home for one

RESEARCH HIGHLIGHTS (continued)

non-releasable green turtle at the Henry Doorly Zoo in Omaha, Neb. One of the loggerhead turtles brought to the hospital for treatment in 2009 was wearing an identification tag that had been attached by Mote researchers in 1988 as she nested on Casey Key. Over the years, Mote staff had seen this particular turtle 12 times. Nicknamed Vicki Lee, the adult female loggerhead was treated for five months for anemia, low body weight and lethargic loggerhead syndrome. Upon her release in September, Mote scientists outfitted Vicki Lee with a satellite tracking tag. Follow her at www.seaturtle.org/tracking.

MANATEE RESEARCH PROGRAM

- Program scientists, their colleagues from Mote's Aquatic Toxicology program, and collaborators from Beckman Coulter and East Tennessee State University showed that a fertility test, or assay, designed for humans also works for marine mammals and likely for other marine protected species. Measuring fertility could provide powerful new insight into the conservation status of wild populations and the success of aquaculture programs and breeding programs in zoos and aquariums.
- Program staff are also playing an integral part in the development of research and conservation programs worldwide, with special emphasis on the wider Caribbean region. Program scientists have conducted conservation and research work (or are beginning work) in Mexico, the Dominican Republic, Puerto Rico, Guadeloupe, Barbados, Trinidad and Tobago, Colombia, Aruba and Curacao. The Program's work involves monitoring marine mammals and environmental health, with implications for human health as well.

SARASOTA DOLPHIN RESEARCH PROGRAM

- The Program was invited to participate in several important national and international workshops because of its unique long-term data about the Sarasota Bay dolphin population. The program was created in 1970 and is the world's longest-running study of a dolphin population. The program was invited to participate in the International Whaling Commission's workshop in Sienna, Italy, on the potential effects of climate change on cetaceans,

and by the European Cetacean Society to give the keynote address on potential effects of climate change on non-polar cetaceans at their annual meeting in Istanbul. To date, the Program's scientists have identified the long-term resident bottlenose dolphins of Sarasota Bay as occupying an "ecological cul-de-sac" that increases their vulnerability to the potential effects of increases in water temperature.

- Dolphin health assessment research in Sarasota Bay, including measurements of environmental contaminant concentrations in dolphin tissues, is being applied as a baseline for comparisons with bottlenose dolphins at highly contaminated sites, such as Brunswick, Ga., for identifying health impacts of environmental contaminants.

SEA TURTLE CONSERVATION AND RESEARCH PROGRAM

- Through a five-year satellite tracking project on how frequently sea turtles nest and how many nests they lay, Mote scientists found that U.S. population estimates for loggerhead sea turtles (*Caretta caretta*) should be substantially lowered – a critical finding for a 2010 proposal to shift loggerheads from threatened to endangered under federal law.
- Satellite tracking of loggerheads also showed that these turtles forage in parts of the Gulf of Mexico where long-line fishermen focus efforts to catch reef fish. Because turtles can be snagged on long lines and drown, the findings resulted in a change in fishery rules.

SENSORY BIOLOGY AND BEHAVIOR PROGRAM

- Mote scientists completed several phases in the first long-term experiment to reveal that manatees have a keen sense of touch both through their facial whiskers and their highly sensitive body hairs. The only other mammal known to have these highly sensitive body hairs is the rock hyrax, a terrestrial relative of the manatee. Manatees can detect particle displacements at low frequencies of less than a micron. Mote scientists presented their work at multiple scientific conferences. They also published a paper revealing that manatees could precisely locate where certain types of sounds were coming from. Hugh and Buffett are the world's only manatees trained to participate

RESEARCH HIGHLIGHTS (continued)

in research this extensive. Through this research, Mote scientists are helping to reveal how wild manatees perceive and react to different cues in their environment.

- Mote scientists also reported new findings on the hearing of loggerhead turtles – particularly for low frequency sounds. Through ongoing research with Mote’s resident loggerhead sea turtles, Shelley and Montego, researchers showed that loggerheads detected low frequency sounds between 50 and 800 Hz with the best hearing between 100 and 400 Hz. Even in this most sensitive range, hearing thresholds were quite high, indicating poor sensitivity to sound stimuli. Evoked potential measures, indirect measures that use neural responses to sound to measure hearing range, are quite similar to behavioral hearing assessments undertaken. By studying sea turtles’ hearing abilities, Mote scientists hope to better understand how noisy underwater operations – such as dredging and offshore drilling – can affect wild populations.

STRANDING INVESTIGATIONS PROGRAM

- The Stranding Investigations Program welcomed two new employees: program manager Gretchen Lovewell and staff biologist Emma Jugovich.
- Mote staff presented their findings of congenital scoliosis – a birth defect causing an unusual curve to the spine – in two bottlenose dolphins during the 18th Biennial Conference on the Biology of Marine Mammals in Quebec, Canada. Scoliosis in dolphins is likely underreported in the scientific literature.

MARINE IMMUNOLOGY PROGRAM

- Research showed that red tide toxins from the harmful alga *Karenia brevis* can impact major gene networks and affect important human immune cell responses.
- Changes in gene expression in loggerhead sea turtle immune cells rescued from red tide toxin exposure were documented for the first time. This may reflect changes in immune competence in these animals, demonstrating serious sub-lethal impacts that harmful algal blooms can have on marine life.

SHARK BIOLOGY PROGRAM

- Mote shark biologists conducted two research expeditions in Cuban waters with collaborators from the University of Havana, revealing a previously unknown nursery area for the tiger shark off Cuba’s western coast. U.S. and Cuban scientists can rarely form such successful collaborations due to a long-term trade embargo that severely restricts travel between the two nations.
- Staff received two National Science Foundation grants for experimental studies of shark sensory biology and swimming hydrodynamics with collaborators at the University of South Florida, Boston University and the University of Alabama. These studies are answering some long-standing questions on how sharks are so efficient in swimming and finding prey, which may provide new biomimetic engineering solutions for a variety of human applications.

CENTER FOR SHARK RESEARCH

MARINE BIOMEDICAL RESEARCH PROGRAM

- Staff were able to produce mixtures of novel peptides from shark immune cells that showed dramatic cytotoxic activity against human tumor cell lines, providing a new source for developing new therapies that can fight human cancers.

EDUCATION HIGHLIGHTS

Jim Wharton, Vice President

Mote Marine Laboratory's Education Division provides opportunities for life-long learning and presents on-site experiences for students through school and public programs, summer camps and special adult-oriented lectures. Mote also provides distance-learning programs that reach students thousands of miles away from our campus in Sarasota, Fla. The Education Division consists of three centers: Distance Learning, School and Public Programs and Volunteer and Intern Resources. Mote Educators reached nearly 30,000 students in preschool through college in 2009 via field trips, summer camps, fishing clinics, internships and our Center for Distance Learning, which delivered more than 500 programs in the 2008-2009 school year and is taking bookings for the remainder of the 2009-2010 school year. Mote also reached students in under-served communities by providing full or partial scholarships to a number of students who attended our programs, including 48 Boys & Girls Club summer campers.

ADDITIONAL NEW VENTURES INCLUDED:

- Collaboration with University of Central Florida researchers to assess how our Mommy and Me at Mote preschool programs contribute to our students' cognitive and motor skill development
- Presenting seminars on early childhood science education at the National Science Teachers Association Regional Meeting
- A revamped First Year High School Internship program
- Educational travel programs to the Galapagos Islands.
- And hosting the Florida Marine Science Educators Association Annual Conference, a gathering of educators from around the state.

Mote's record summer camp registration (708 students) in 2009 represents a 22 percent increase over 2008 – a record in a time when summer camps were suffering all over the nation. School programming numbers in 2008-2009 represent a 20 percent increase over the 2007-2008 school year (6,739 vs. about 5,600 students). These increases underscore Mote's



commitment to seeking new and better ways to make marine science fun, relevant and accessible to children and their families.

The Center for Volunteer and Intern Resources supports the many ever-changing needs of Mote Marine Laboratory and Aquarium. Approximately 1,300 volunteers support Mote in its mission of science and education. At the 2009 Annual Volunteer Awards Ceremony, 300 volunteers were honored and recognized for their dedication and service. Sixteen received the "President's Call To Service Award," our nation's highest volunteer service award.

Mote's College Intern Program provides college students valuable field and laboratory experience at Mote in their chosen area of study. More than 125 interns joined us in 2009 from colleges throughout the country and world.

EDUCATION HIGHLIGHTS (continued)

SOME ADDITIONAL HIGHLIGHTS

- Mote's Center for Distance Learning continued its work to join cutting-edge technology with new and exciting programming by offering students the opportunity to combine a love of the sea with their knowledge of digital tools. During "Digi-Know How?" summer camp, students learned how to shoot and edit their own video and prepared presentations using this and other mediums, which they presented to their parents at the end of each week-long session.
- The Center's Digital Docents project also continued its trek nationwide. This project combines stationary visual and tactile exhibits with live, interactive programming via videoconferencing. Funding has been secured to refurbish these exhibits and ready them for rental in 2010. Funding from the U.S. Department of Education is also enabling Mote to develop a second generation of these exhibits, with the first focused on the coral reefs of the Florida Keys. This exhibit will form a small theatre for interactive programming and will tour schools in 2010, and then be available as an on-demand rental exhibit.
- Mote Aquarium is the main venue through which Mote Marine Laboratory communicates its cutting-edge research findings.

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AQUARIUM HIGHLIGHTS

Dan Bebak, Vice President

Mote Aquarium is one of Southwest Florida's major regional attractions – drawing the highest number of visitors of all the cultural organizations in Sarasota County. In 2009, attendance remained strong with 287,928 visitors. We also worked to increase visitorship and engage the public with new exhibits and several new programs offering a new level of interaction between guests, staff and our animals. We also believe that we have an obligation to learn from our resident animals and use that information to help support species in the wild.

NEW EXHIBITS

- Sea Turtles: Ancient Survivors gave us the opportunity to draw the links between our Sea Turtle Research and Conservation Program and how the public can support sea turtles in the wild. This exhibit has received positive reaction from the public and will work to serve as a model for future exhibit development as we strive to connect Mote research to our exhibitry.
- The expanded Seahorse Conservation Laboratory gives us the opportunity to showcase the ways Aquarium staff work on animal conservation. The Laboratory highlights our seahorse breeding program and its role in supporting wild seahorse populations by providing an alternative source for animals at Mote and at more than 20 AZA-accredited institutions nationwide.

NEW PROGRAMMING

- We created Birthday Party at Mote packages, geared toward children that include a range of options families can choose for marine-themed birthdays.
- Breakfast at Mote is geared more toward adult groups, providing special opportunities for touring the Aquarium before we open to the general public. This tour includes a continental breakfast.
- Morning Rounds, geared toward older children and adults, is the first hands-on experience we're offering. Through this program, guests have the opportunity to learn much more about the care and feeding of our animals and do some hands-on activities, including feedings.



ANIMAL CARE

Aquarium staff is also dedicated to maintaining the physiological and psychological health of its animal collection – a key element of our AZA accreditation – while increasing the scientific knowledge about the animals through husbandry and research training. All of the resident animals housed at Mote Aquarium in the Ann and Alfred Goldstein Marine Mammal Research and Rehabilitation Center voluntarily participate in husbandry training in order to facilitate veterinary procedures. Husbandry training allows staff to precisely monitor the health of the animals as well as continue to gain new insights and baseline values of clinical parameters. The data obtained from Mote Aquarium's resident animals has allowed for the assessment and treatment of injured/ill wild animals to be greatly improved.

AQUARIUM HIGHLIGHTS (continued)

Mote Aquarium's Manatee Care and Research Program has been investigating the sensory processes and physiological adaptations of the Florida manatee for a number of years. Manatees Hugh and Buffett participate in numerous behavioral research studies focusing on the hearing and tactile sensitivities of manatees. By gaining a better understanding of how manatees hear and perceive their surroundings, researchers can determine if their hearing is being compromised in the wild and contributing in their inability to avoid boats. Manatees have a unique attribute amongst the mammalian class: tactile hairs located all over their bodies.

Mote Aquarium's resident sea turtles are also helping us explore turtle sensory processes as well. In addition to the husbandry training program, we are investigating turtle hearing capabilities to provide researchers with insight about whether man-made noise is causing direct (hearing loss) or indirect (disruption of mating/nesting cycles) harm to wild sea turtle populations.

And our resident dolphins, Moonshine (a pantropical spotted dolphin) and Harley (a spinner dolphin), are also working with researchers to expand our knowledge about the sensory capabilities of these lesser-studied dolphin species. We are also looking at the hearing capabilities of these mammals. The data obtained from the behavioral project will be compared to and used to calibrate auditory evoked potentials previously obtained from the dolphins.

In addition to obtaining hearing curves for these two species, a mobile screening device is being constructed that can rapidly assess hearing in stranded cetaceans. The training conducted with all of our resident animals and the knowledge obtained from our research with them allows for the better care of our animals, enhanced rehabilitation procedures of injured/sick animals that strand on beaches and improved management of the wild populations.

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ADJUNCT PROGRAMS

PROTECT OUR REEFS

Since 2003, Mote has administered the funds generated through sales of the Protect Our Reefs specialty license plate to Florida drivers. In addition to providing an extremely important source of financial support for the Center for Coral Reef Research, funds generated through plate sales also support a grants program.

In 2009, the grants program awarded 14 grants worth \$410,000 for coral reef research, conservation and outreach programs. These grants are designed in-part to provide initial funding for new research investigations with the idea that the projects will eventually lead to larger and more critical investigations.

THE MARINE POLICY INSTITUTE

Director, Frank Alcock, Ph.D.

The Marine Policy Institute at Mote Marine Laboratory was created in 2006 to improve the connection between science and society by providing timely, credible policy assessments and advice to decision-makers and stakeholders about the environmental realities of the choices they make.

One important function of the Institute is to analyze scientific results, findings and related information and put it in a format that is most useful for decision makers and the public. The Institute develops, coordinates and conducts research projects that seek to better connect the human dimensions of marine ecosystems – the legal, economic and social aspects – and their relevance for policy decisions. In 2009, the Institute's Deputy Director Barbara Lausche, JD, completed a major policy assessment titled "Policy Tools for Local Adaptation to Sea Level Rise." This assessment sought to discover what policy tools and opportunities were available for Florida governments – at the local and state levels – and how they could begin to act now to build strategies that would allow them to adapt to climate-associated sea level rise. The release of the assessment coincided with a symposium on Land-Sea Interactions in Southwest Florida. The two-day symposium at Mote focused on coastal zone planning in the context of changing land-sea interactions in the Southwest Florida region.

The Institute's director also responded to public questions about oil drilling off the coast of Florida. As part of Mote's efforts to be an honest broker in public discussions that involve marine resource management, Dr. Frank Alcock served as co-author for a Collins Center report to Florida's Century Commission on oil and natural gas drilling. (View the report online at www.mote.org/mpi.)

The Marine Policy Institute's major funding is provided by The Gulf Coast Community Foundation of Venice.

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FINANCIAL REPORT

The Consolidating Statement of Financial Position and Statement of Activities included are excerpts from our complete set of financial statements audited by Kerkering, Berberio & Co., P.A., for the years ended Dec. 31, 2009 and 2008. The complete set of audited financial statements can be obtained from Dena Smith, chief financial officer, or downloaded from www.mote.org/2009audit.

MOTE MARINE LABORATORY, INC. AND SUBSIDIARIES CONSOLIDATING STATEMENT OF FINANCIAL POSITION DECEMBER 31, 2009 AND 2008 (SUMMARIZED COMPARATIVE TOTALS ONLY)

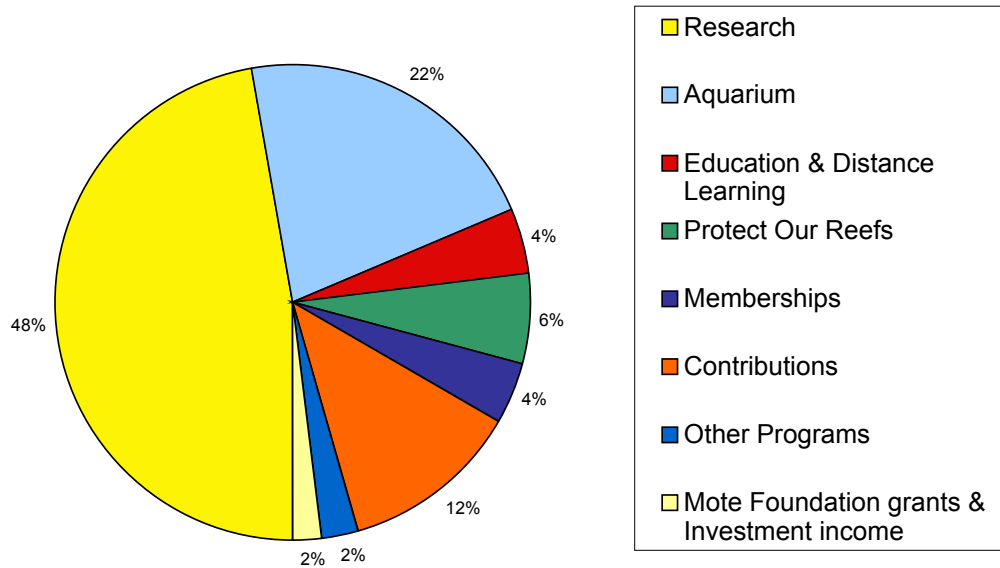
	2009 Consolidated Total	2008 Consolidated Total
<u>Assets</u>		
Cash and cash equivalents	\$ 2,377,325	\$ 2,478,320
Accounts receivable	91,458	138,290
Accounts receivable-related party	599,998	-
Due from Mote Marine Foundation, Inc.	14,797	1,586
Research grants receivable	1,299,910	2,235,795
Bequest receivable	25,000	-
Pledges receivable	55,441	98,089
Inventory	3,528,728	179,514
Prepaid expenses and other assets	89,869	58,424
Donated assets held for sale	21,000	1,078
Land	7,498,190	7,498,190
Construction in progress	-	141,195
Property and equipment, net	22,992,977	23,984,445
Beneficial interest in the net assets of Mote Marine Foundation, Inc.	<u>9,630,083</u>	<u>8,805,065</u>
Total Assets	\$ <u>48,224,776</u>	\$ <u>45,619,991</u>
<u>Liabilities and Net Assets</u>		
Liabilities		
Accounts payable	617,102	1,188,992
Accrued payroll	625,827	601,217
Memberships relating to future periods	531,269	525,690
Funds advanced on research programs	2,382,041	2,563,610
Line of credit	4,057,871	3,968,668
Notes payable	<u>5,707,403</u>	<u>6,405,379</u>
Total liabilities	<u>13,921,513</u>	<u>15,253,556</u>
Minority Interest	1,875,241	
Net Assets and stockholders equity		
Unrestricted	21,798,762	21,662,644
Temporarily restricted	1,914,850	1,046,776
Permanently restricted	<u>8,714,410</u>	<u>8,812,458</u>
Total Net Assets	<u>32,428,022</u>	<u>31,521,878</u>
Common stock		
Retained earnings	-	(1,155,443)
Total Stockholders Equity	<u>-</u>	<u>(1,155,443)</u>
Total net assets and stockholders equity	<u>32,428,022</u>	<u>30,366,435</u>
Total Liabilities, Net Assets and Stockholders Equity	\$ <u>48,224,776</u>	\$ <u>45,619,991</u>

MOTE MARINE LABORATORY, INC. AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF ACTIVITIES
YEARS ENDED DECEMBER 31, 2009 AND 2008
(SUMMARIZED COMPARATIVE TOTALS ONLY)

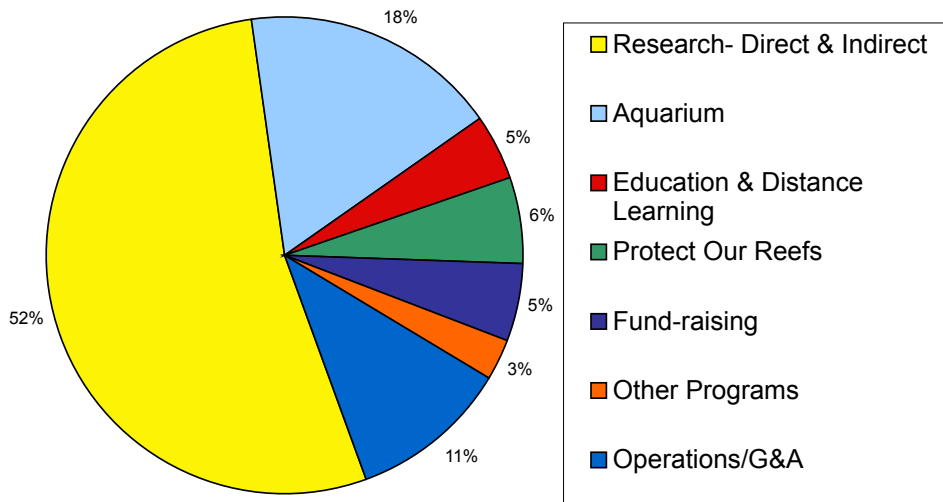
	<u>2009</u>	<u>2008</u>
	Consolidated	Consolidated
	Total	Total
Support, Revenue and Reclassifications		
Program revenue		
Research revenue		
Federal	\$ 3,138,455	\$ 3,337,773
State	2,925,309	3,636,475
Other	1,917,109	3,722,396
Aquarium		
Admission fees	2,514,197	2,484,103
Gift shop	994,687	1,030,537
Other	256,369	259,685
Fish and caviar sales	265,886	-
Memberships	750,805	770,900
Education	764,177	781,245
Protect Our Reefs-License Plate	1,053,905	1,036,551
Other programs	407,052	428,593
Contributions		
Construction	56,800	354,837
Aquarium	295,772	609,841
Other programs	1,386,873	1,433,576
Contributions for endowment fund	-	550
Contributions-non cash	404,053	327,222
Grants from Mote Marine Foundation, Inc.	316,801	438,295
Investment income	29,476	59,993
Unrealized (loss) gain on investments, net	2,512	(4,409)
Realized loss on investments, net	(358)	(1,176)
Realized gain on disposal of assets	5,500	8,026
Change in value of Mote Marine Foundation, Inc	825,018	(4,151,286)
Net assets released from restrictions	-	-
Total support, revenue and reclassifications	<u>18,310,398</u>	<u>16,563,727</u>
Expenses		
Cost and expenses		
Cost of products sold	162,120	-
Processing and packing	25,371	-
Selling, general and administrative	30,362	-
Interest	994	-
Other	50,543	-
Program services		
Research	8,993,888	11,459,644
Education	859,249	926,950
Aquarium	3,321,924	3,599,498
Protect Our Reefs-License Plate	1,058,400	1,051,600
MAP facility management	909,380	699,159
Other	549,318	781,377
Supporting services		
Administrative and general	2,032,310	1,767,516
Fund raising	1,007,880	1,200,441
Total expenses	<u>19,001,739</u>	<u>21,486,185</u>
Decrease in net assets/net loss before forgiveness of debt, equity earnings in subsidiary income and minority interest	(691,341)	(4,922,458)
Minority Interest In MESI	124,757	-
Decrease in net assets/net loss	<u>(566,584)</u>	<u>(4,922,458)</u>
Net assets/retained earnings at beginning of year, as originally stated	30,366,435	35,258,893
Prior period adjustment	2,628,171	-
Net assets/retained earnings at beginning of year	<u>32,994,606</u>	<u>35,258,893</u>
Net assets/retained earnings at end of year	<u>\$ 32,428,022</u>	<u>\$ 30,336,435</u>

FINANCIAL REPORT (continued)

Mote Marine Laboratory
Revenues 2009
 Total \$17,485,361

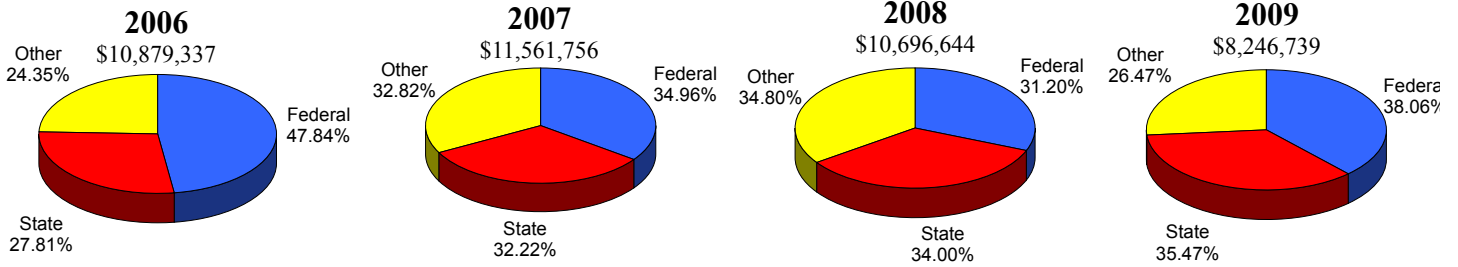


Mote Marine Laboratory
Expenses 2009
 Total \$18,876,962

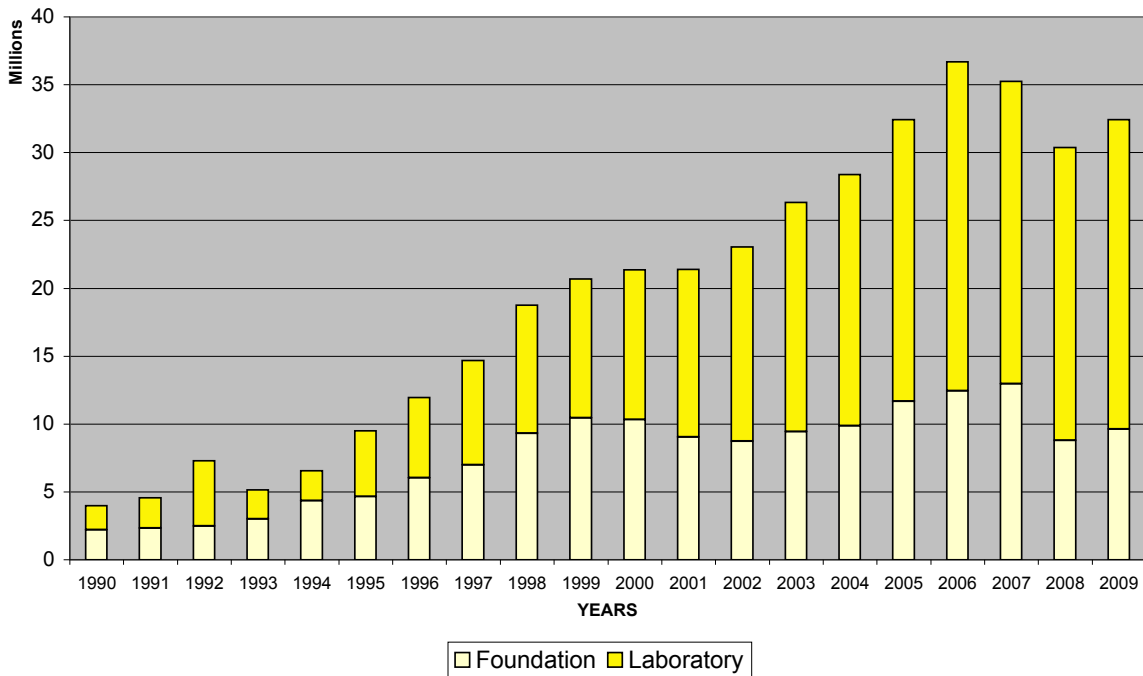


FINANCIAL REPORT (continued)

RESEARCH REVENUES



TOTAL NET ASSET GROWTH 20 YEARS 1990-2009



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LIBRARY AND PUBLICATIONS

ARTHUR VINING DAVIS LIBRARY

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Since 1955, Mote staff has produced more than 1,400 technical reports and 950 peer-reviewed papers. The Arthur Vining Davis Library at Mote has been providing resources, reference and research for more than 30 years.

Its 23,000 volume print collection, e-resources and special collections are maintained for the support of marine research and education. The Library is open to the public for research – appointments are suggested.

Mote research is contained in Mote Technical Reports and Collected Papers Volumes 1 through 15 and are available for public review in the Library.

In 2009, the Library wrote and received a digitization grant through the Library Services and Technology Act from the Institute of Museum and Library Services, administered by the Florida Department of State, Division of Library and Information Services.

The project involves digitization of historical research and data on the coastal ecology of Florida, particularly Southwest Florida from the 1930s to the present.

The digital documents from the grant, including numerous Mote reports, can be accessed through the Lab's institutional repository, DSpace, found online at www.mote.org/dspace.

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COLLABORATIONS & PARTNERSHIPS

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Biscayne National Park (Miami, FL)
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Centers for Disease Control and Prevention (Atlanta, GA)
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Conservancy of Southwest Florida, The (Naples, FL)
Cornell University (Ithaca, NY)
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FLW-Walmart Redfish Tour (Benton, KY)
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Florida Department of Health (Tallahassee, FL)
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Hubbs-SeaWorld Research Institute (Orlando, FL)
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New Gate School (Sarasota, FL)
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Sea Mammal Research Unit (St. Andrews, Scotland)
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Texas Parks and Wildlife Department (Austin, TX)
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Whalenet/ Wheelock College (Boston, MA)
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Florida Ocean Alliance
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The Oceanography Society
Science and Environment Council of Sarasota County
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FIN

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