This document is a report summarizing the achievements and progress of the University of Miami’s Shark Research and Conservation Program (SRC) in 2015.

SRC is a joint initiative of the Rosenstiel School of Marine & Atmospheric Science (RSMAS) and the Leonard and Jayne Abess Center for Ecosystem Science and Policy (CESP) at the University of Miami.
Dear SRC Friends, Colleagues and Supporters,

This past year was one of our most successful to date. We continued our shark research surveys in Miami, Palm Beach, South Africa and the Bahamas. During 61 days of sampling in Miami, we captured, sampled, and tagged 323 sharks of 12 different species! We also started new shark research projects in Japan, the Galapagos, and Brazil. Our Rescue A Reef program also achieved great things – 8 expeditions, in which 77 citizen scientists out-planted 421 corals, creating 147 meters of new coral reef off Miami. We also published numerous scientific papers on a variety of research subjects in top journals including *Ecology, Trends in Ecology & Evolution* and *Science*. Several of these papers were featured on the journal covers. Our satellite tracking data was used by the National Marine Fisheries Service to designate essential habitat for Atlantic highly migratory species. Our research was widely covered in the media, including Discovery Channel and National Geographic. We were also fortunate enough to once again participate in many community functions and festivals such as the Tortuga Music Festival and Frost Science Museum’s Underwater Festival. Our students presented at numerous scientific conferences, including the American Elasmobranch Society annual meeting. In terms of public outreach, in 2015 alone, as part of our shark research trips, we brought 1000 Citizen Scientists out on research vessels with us to participate in our science and learn about local conservation issues. Participants ranged in age from 10 to 80, came from 41 states including Washington, DC, and 51 countries, and included representatives from 78 schools, community organizations and public corporations.

These achievements could not have occurred without the dedication, passion and support of our students, staff, collaborators, donors, partners and institutions.

We thank you!

Neil Hammerschlag, Ph.D.

Director, Shark Research and Conservation Program
Research Assistant Professor
Rosenstiel School of Marine and Atmospheric Science (RSMAS) - Abess Center (CESP)

The mission of the University of Miami’s Shark Research and Conservation Program (SRC) is to advance ocean conservation and scientific literacy by conducting cutting edge scientific research and providing innovative and meaningful outreach opportunities for students through exhilarating hands-on research and virtual learning experiences in marine biology. Focusing primarily on the study and conservation of sharks, the Program’s full-immersion approach allows students to actively grow as future scientists.
American Elasmobranch Society (AES) Conference

SRC had a number of students attend the annual AES conference in 2015. Emily Nelson presented data on variations in body forms of apex predators and how that influences their broad scale movement patterns and ecological performance.

Alison Enchelmaier presented a poster on her ongoing masters work looking at changes in fish diversity of a restored mangrove habitat. The purposes of the annual meetings are to conduct society business, to hold technical sessions for oral presentations, posters and symposia, and especially to provide opportunities for continuing and new colleagues to meet and socialize.

Indeed, the annual meetings are the best venue for members to keep informed about each other’s work, and for students to enter the scientific community of ichthyologists and herpetologists.

Frost Science Museum’s Underwater Festival

The Frost Science Museum’s Underwater Festival, held for the 4th time in 2015, was devoted to educating the community on understanding more about what lies underneath out city’s surrounding 84 miles of water. This year’s theme was “Coasts, Reefs, and Open Oceans” and held in celebration of the global World Oceans Day and in honor of the oceans that link the world together and to help raise awareness of the current challenged faces. One of our own, PhD candidate, David Shiffman, represented the lab at the #Underwaterfest Twitter chat where he joined other marine experts to field questions from the public to discuss issues ranging from lionfish to sharks. Other fun events included a habitat restoration project and beach cleanup at Virginia Key where volunteers learned how to use marine conservation apps to document animals and plants inhabiting the beach.

Taste of the Sea

For the 2nd annual Taste of the Sea event, held in Miami, the SRC team was proud to share our research and conservation programs yet again with over 300 South Floridians. This event offered guests the ability to savor the finest responsibly sourced seafood dishes created by South Florida’s chefs and also participate in a chef “fish off” where guests voted on their favorite seafood creations. All proceeds from the event helped further marine conservation programs led by the Sea Delight Fund, dedicated to the conservation and protection of our oceans and promoting sustainable seafood. SRC was proud to join other incredible leaders in marine conservation such as the Marine Stewardship Council, World Wildlife Fund, the Loggerhead Marine Life Center, and Shark Team One.

Rock the Ocean

Our lab was thankful to be invited back to Ft. Lauderdale’s annual Rock the Ocean Tortuga Music Festival. This event is the perfect culmination of music, sunshine, and marine science-themed outreach, and what’s even better is that a portion of tickets sold goes to helping save our oceans. Hundreds of thousands of dollars have been given to The Rock the Ocean Foundation, an organization that helps conservation organizations both locally and globally. Our team is especially grateful to be a part of this event since it is known for hosting a Conservation Village, where festival patrons can learn about the marine environment and what role they can take to help the cause. The SRC team was able to meet with concert patrons and teach them about our research projects, and how they can be a part of shark conservation. It only seemed fitting to be a part of this great cause as 2015’s 5 core issues involved: shark conservation, turtle conservation, marine pollution, overfishing, and coral reef degradation. SRC was proud to join a stellar list of other organizations working towards shark conservation such as: Bimini Biological Field Station, the Guy Harvey Research Institute, and Oceana.


To read all of SRC’s scientific publications, please go to: https://sharkresearch.rsmas.miami.edu/research/scientific-publications

**Publications**

Evolutionary theory as a tool for predicting extinction risk.

We published a paper using evolutionary theory to predict extinction risk, and it was featured on the cover of *Trends in Ecology & Evolution*. Often, timely and proactive wildlife conservation requires strategies for determining which species are at the greatest risk of extinction. Trying to quantify extinction risk of a species is an important, yet difficult task for researchers, especially when introduced to human-induced changes to the environment which were not traditionally part of a species’ evolutionary past. The authors here suggested that evolutionary theory, particularly the concept of specialization, can be a useful tool to inform conservation assessments and could have significant role to play in aiding the ability of scientists to predict the vulnerability of a species in the face of anthropogenic impacts.

Intraguild predation and partial consumption of blue sharks (*Prionace glauca*) by Cape fur seals (*Arctocephalus pusillus pusillus*)

Another highlight for the SRC team was a feature on the cover of the *African Journal of Marine Science* looking at top-down effects of predators on ecosystem structure and dynamics. This paper examined the often-overlooked nature and consequences of interactions between upper-trophic-level predators. The research documented predation by a pinniped (seal) predator on a mid-size predatory shark. Using direct observations in South African waters, free-swimming blue sharks were seen captured and partially consumed by Cape fur seals. The significance of this study will help researchers understand the interactions between these two species but also the implications these interactions have in understanding the trophic ecology of pinnipeds – of which many populations have increased while numerous shark populations have declined.

Fish at Night Symposium

Our director, Dr. Neil Hammerschlag, served on the scientific advisory committee of the 2015 Fish at Night Symposium, hosted by the *Bulletin of Marine Science*. The symposium received over 50 abstracts from Australia, Canada, China, Mexico, South Africa, Spain, and the US. The purpose of the symposium was to stimulate the exchange of new knowledge, data, and ideas on behaviors, patterns, and processes operating underwater, in darkness. Relevant topics include nocturnal fish activities, technical aspects of night fishing/fisheries, diet fish distribution and abundance comparisons, and strategies adopted by fish and
This year we had 1,961 Drumlines Deployed across 61 Research Trips reeling in... for a total of 323 sharks caught in 2015.

Largest shark tagged: Great Hammerhead

Smallest shark tagged: Atlantic Sharpnose

Measurements: The SRC team takes a series of over 10 measurements during shark workups. These measurements can be used to examine growth patterns, estimate age, and determine body condition of the sharks. One of our collaborators, Dr. Duncan Irschick, analyzes the photos we take using computer programming to calculate metrics such as fin area and body shape.

What a ‘Typical’ Shark Workup Looks Like:

Stable Isotope Analysis: We use a technique known as stable isotope analysis to examine various aspects of shark feeding patterns. By using a very small amount of shark blood, fin, or muscle we can determine the chemical signatures of these tissues that provides insights into shark diet. For example, if a shark were to eat all barracuda its tissues would have a chemical signature indicative of eating barracuda, or if a shark ate all tuna its tissues would have a chemical signature indicative of eating tuna. This data may reveal what different sharks eat and how they share resources between species, which is critical for understanding how predators influence marine food webs.
Sand Creek Intermediate (SCI) School in Fishers, Indiana voted to change their mascot from the Aggies to the Sharks. In response to this change, students and staff felt they needed to do something to make their mascot more “real.” Through the leadership of a 6th grader, SCI launched “Mission Finn” (Finn being the name of their mascot). The school held a number of fundraisers including selling Finn T-shirts, bracelets, and even hosting a student vs. staff basketball game to raise money to adopt a shark. After months of fundraising, SCI became the proud sponsors of a 245 cm tiger shark. Finn quickly became famous, as the story of Finn’s adoption made it onto the local news station in Fisher, Indiana.

**Blood Work:** SRC conducts research to understand and minimize shark stress. Using our onboard laboratory, we are able to analyze blood samples within minutes of taking them. One of the blood parameters we assess is glucose levels. This allows us to gain a better understanding of the energy or fuel circulating in the blood during capture. When compared to how long the animals have been on the line, we can start to see how time spent on a fishing line impacts glucose levels across multiple species. This is important because the sharks rely on this energy, among other things, to power their muscles efficiently for survival. With that same onboard lab, we are able to get an idea of the red blood cell count, or hematocrit, that each shark has. This allows our team to get an idea of how the volume of red blood cells changes while a shark is on a fishing line. Additionally, we are able to separate plasma from the blood drawn from each animal to be later analyzed back at the lab. From the plasma we can get a variety of information from stress level indicators to hormones to see if female sharks are pregnant.

**Satellite Tags:** Every time the satellite transmitter of tagged shark breaks the surface of the water it sends a signal to a satellite, which records the shark’s location. These locations can then be analyzed using programs such as Google Earth and ArcGIS. The satellite tracks are a critical component of ongoing research by SRC to better understand residency patterns and migratory routes of tiger, hammerhead, and bull sharks. In addition, other satellite tags we use provide information including light levels, earth’s magnetic field, depth, and acceleration of the shark. This is important as we start to ask WHY our sharks undertake the movement patterns they do.

**Shark Satellite Track Spotlight**

**Finn the Tiger Shark**

“Living in Indiana, there are not sharks around! I discovered the SRC Adopt a Shark program on the Internet and decided to we need to make it happen for our school!”
- Student Council Member, Sand Creek Intermediate

“We have fun tracking Finn around the Atlantic. He is very active and has surfaced all over the place. We are glad that we participated in such a cool and worthy cause.”
- Bryan Alig, Assistant Principal, Sand Creek Intermediate

To track Finn and other sharks that we have tagged, please go to: http://sharkresearch.rsmas.miami.edu/education/virtual-learning/tracking-sharks

Total Length: 245 cm
Sex: Male
Date Tagged: March 15, 2015
Number of Surface Transmissions: 400
Urban Shark Project
By: Robbie Roemer, SRC Master Student

Climate change has the potential to impact the health and behavior of various marine life, from corals to sharks. At SRC, we are investigating the capacity of tiger and great hammerhead sharks to withstand increasing temperatures projected for our region as the 21st century progresses. Human-induced climate change is altering ocean chemistry at an unprecedented rate. By 2100, ocean temperatures in South Florida and the Caribbean are projected to rise by as much as 4°C, while ocean acidity also rises but oxygen levels drop. Most sharks move to waters that are better suited for optimal performance, so understanding a shark’s relationship with temperature is critical for predicting changes in its habitat. We are conducting one of the first studies to understand how an apex predatory shark’s energy usage and movements change in response to temperature during their migrations. Satellite tags, combined with sensors for temperature, depth, and acceleration enable us to estimate the optimal temperature range for these species, and in what environmental conditions their performance starts to decline.

To date, we have been able to calculate the energy usage, in relation to temperature, of a tiger shark over a year-long migration. And when looking at combined data from multiple tiger sharks, we found that this species spent a great deal of time above its optimal temperature range, most likely to take advantage of feeding and reproductive opportunities. Our director, Dr. Neil Hammerschlag, and colleagues have had the chance to observe first-hand tiger shark behavior in the Bahamas which supports this evidence. Annually, visits are made to Tiger Beach, where the researchers find pregnant female tiger sharks gestating. This is important to note since the temperature of the waters surrounding the Bahamas are some of the warmest along the shark’s entire journey.

This research project is just beginning! Over the next few years, our aim is to tag and sample many more tiger and great hammerhead sharks, giving us strong projections of the risks posed to these important apex predators from climate change as it continues to alter their environment.

How does climate change affect sharks?
By: Rachel Skubel, SRC PhD Graduate Student

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Acoustic biotelemetry, we investigate movement patterns and residency times of sharks in human-modified areas. By surgically implanting an acoustic transmitter within a shark we can monitor localized movements and how long certain individuals stay within a specific area. We currently have an underwater acoustic receiver system, placed on the benthic substrate of Biscayne Bay that listens for unique ultrasonic transmissions given off by the acoustic transmitter tags within our sharks. Through the cooperation of the Atlantic Cooperative Tagging Network, and the Florida Cooperative Tagging Network, we can even track these individuals if they leave Biscayne Bay or Floridian waters altogether. Additionally, we collect blood samples from sharks surveyed, allowing our team to compare the health of sharks in urban versus more pristine locations.

Results will provide our lab with important insights as to why sharks venture into these degraded habitats, and general health of the sharks that spend extended time in urbanized environments. Such data can be valuable for delineating zones of critical habitats, more informed conservation initiatives, and influencing future policy implication.

While our team awaits the first round of preliminary results, the most memorable experience I’ve had while researching was capturing, sampling, and tagging a juvenile great hammerhead shark off the Brickell seawall of Miami. This shark was also fitted with a satellite tag, giving us very valuable information as to where juveniles move and how long they stay in a degraded system such as downtown Miami. Many people do not realize that if a body of water is connected to the ocean, there is a chance a shark is swimming in those waters, no matter how improbable. Sharks have no boundaries, nor are they confined by fences.

In the coming months, our team hopes to retrieve, download, and redeploy the first round of acoustic receivers, run bioassay assessments of blood plasma samples, deploy roughly 20 more acoustic receivers and surgically implant more acoustic tags thanks to support from the Save our Seas Foundation. Stay tuned to see what our findings are!

Rescue A Reef

In 2013, SRC partnered with the University of Miami’s coral restoration program led by Dr. Diego Lirman to initiate a unique program called Rescue A Reef. The University’s coral restoration lab focuses on propagating threatened staghorn coral in underwater nurseries to create a sustainable source of healthy coral colonies for use in restoration activities. The lab’s research is complemented by Rescue A Reef, a citizen science program that educates and engages the community in coral reef conservation and restoration. Citizen scientists have the opportunity to join the University’s coral researchers on open-water coral restoration expeditions to receive an interactive learning experience in coral conservation. They learn about the ecological importance of coral reefs as well as the benefits of active restoration, all while assisting the Rescue A Reef team in their ongoing research.

The Rescue A Reef Program was officially launched in May of 2015 and hosted eight coral restoration expeditions with 77 citizen scientists during its first year. With the help of those citizen scientists, the Rescue A Reef team was able to outplant over 420 staghorn coral colonies equating to nearly 150 meters of hard coral structure transplanted back onto degraded reefs of the Florida Reef Tract. These colonies provide important habitat for other species and help return healthy structure to our reefs, so the efforts of our citizen scientists represent an ecologically significant impact on local coral reefs. Additionally, in 2015, Rescue A Reef hosted 17 educational events and seminars, reaching nearly 700 community members, including over 500 students! The program is still expanding its outreach in South Florida, collaborating with the newly built Frost Science Museum and the Miami Science Barge. In year two, Rescue A Reef plans to surpass these impressive efforts by outplanting 1,500 corals on 20 expeditions, while working to increase our reach in the community through outside events and seminars.
I have had the pleasure of working with the enthusiastic, hard-working, and passionate people in the SRC lab for almost three years and I cannot imagine working with a better team. While working in this lab I have had the opportunity to go on countless shark research trips (including one to the British Virgin Islands to tag sharks with Sir. Richard Branson) and have been able to interact with and collect data on some of the most fascinating species on the planet. In addition to being out on the water, I have also participated in many of SRC’s outreach initiatives including teaching students from the U.S. and Canada about marine conservation!

My research is primarily focused on the behavioral ecology of marine organisms. For my masters thesis I am currently studying when and where great hammerhead, tiger, and bull shark habitats overlap with U.S. longline fisheries. To do this, I recently completed a large literature review to identify the factors that influence the habitat use of the study species and I am currently using this knowledge to develop habitat suitability models for each species. These models will be used to identify critical habitat areas as well as to identify where and when these species are vulnerable to interacting with U.S. longline fisheries. The results of this study aim to help managers develop effective management strategies for great hammerhead, tiger, and bull sharks.
In 2010 I was introduced to Dr. Neil Hammerschlag, a young, passionate and innovative scientist who had just founded the Shark Research and Conservation Program. It was clear that he was blazing a new trail for marine science research and experiential outreach, something I was very much excited about! I had been looking for my final undergraduate internship opportunity, and the SRC Program seemed like a perfect fit. I asked Dr. Neil if he would ever consider having a media intern, to which he quickly responded, “Absolutely!” and put me to work. Over the course of those six months, we explored the possibilities for visual media at SRC: field photography, educational brochures, promo videos and an interactive multimedia project called Virtual Expedition. Little did I realize that his passion and deep-seated appreciation for sharks would be so contagious, turning me into an avid shark photographer and lifelong shark conservation advocate.

After graduation, it was clear that neither Dr. Neil nor I were ready to part paths, and so I joined the team as a full-time staff member, becoming the SRC Media and Virtual Learning Manager for the next three and a half years. It was a dream come true. The team was more like family than colleagues – supportive, encouraging, fun, and 100% trustworthy. I’m so proud of the work we were able to do together – establishing a visual identity for the program, creating a unique, information rich and highly engaging website, developing a central and organized multimedia library, exploring new methods for outreach and education, offering ongoing media internships to undergraduate and graduate students, and positioning the lab as an industry leader for innovative uses of science multimedia.

In 2014 I began my next chapter out on the Big Island of Hawaii, starting a media production company called Coral Cove Imagery, which offers a variety of photo and video services from topside, to underwater to aerial. Some of my favorite projects continue to be in the marine conservation and biotech fields. In addition to commercial production, I also have an online fine art photography gallery (with plenty of toothy shark images) that donates 30% of all proceeds to environmental research and conservation, with SRC as a primary beneficiary! To view my portfolio and purchase prints, visit: www.ChristineShepard.com.

Reflecting back on my time with SRC, it was not only foundational for my career, but also transformative for my life. I have so much appreciation and respect for Dr. Neil and the entire team at SRC. Congratulations on your continued success!
Our Satellite tracking data was used by the National Marine Fisheries Service to designate essential fish habitat (EFH) for Atlantic highly migratory species. A number of scientific papers published by SRC were referenced in the decision by NOAA, National Marine Fisheries Service (NMFS) into the report ‘Essential Fish Habitat 5-year Review for Atlantic Highly Migratory Species’ - released June 2015.

In addition to identifying and describing EFH for managed fish species, a review of information available on EFH must be completed at least once every 5 years. This review takes into account published scientific literature, unpublished scientific reports, information solicited from interested parties, and previously unavailable or inaccessible data. The data collected from our field research helped identify information gaps and research needs and was used to update current EFH ranges, including the investigation into the survival of great hammerhead sharks. Using SRC’s research, NOAA NMFS found that these sharks are inherently vulnerable to capture stress and mortality resulting from fisheries interactions.

Supporting Management of “Highly Migratory Sharks”

Reporting their findings the prestigious journal Science, an international group of biologists that included SRC’s Dr. Neil Hammerschlag, found that policies regulating the hunting of large carnivores do not always align with basic scientific data, which can undermine conservation efforts. The study revealed that current harvest levels following the recent de-listing of Northern Rocky Mountain population of gray wolves from the US Endangered Species list has led to decreased survival and reproduction, smaller packs, social disruption and a reversal from population growth to decline. This research has now been used to petition the U.S. Department of the Interior and the U.S. Fish and Wildlife Service to extend the Endangered Species List post-de-listing monitoring period for the gray wolves for an additional five years to ensure their survival and recovery.

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SRC staff and interns work closely with local educators to give high school students a chance to experience scientific research in marine biology. These experiences both promote environmental stewardship and foster scientific career pathways. Additionally, face-to-face teaching builds relationships between high school and college students.

**Student Field Trips**

One of the core components of the SRC Program is providing experiential learning opportunities to young adults. SRC offers empowering and inspiring educational experiences to groups of high school students throughout the year. Classes take an active role in research projects, learn the scientific method, and assist in protecting some of the world’s most threatened animals. Within the 2015 season, the team was able to embark on 61 research trips bringing over 1,380 people on the water to participate in hands-on science.

**Public Presentations**

SRC scientists and educators gave over 20 public presentations in 2015 to 800+ audience members ranging from elementary school children to leading marine scientists and communicators.
Community outreach is a core component of SRC’s work. In the United States, there is a lack of students entering STEM (science, technology, engineering and math) fields, particularly for minorities and women. Reaching youth across socioeconomic statuses is a priority for SRC - it allows us to share our exciting research, what it’s like to be a scientist, and share paths to education and careers in STEM. In 2015, our graduate students visited and video-chatted with classrooms all across Florida, teaching students of all ages about shark biology and threats facing sharks worldwide, the research projects our lab conducts to understand sharks in South Florida, and how the students can engage in marine conservation in their day-to-day lives.

We have also been a presence at conservation-oriented events around Miami - such as the Tortuga Music Festival in Ft. Lauderdale, the Underwater Festival at the Patricia and Phillip Frost Museum of Science, and Taste of the Sea in South Beach even as far as the Jacksonville Zoo for the North Florida Shark Festival. At these events we are able to engage with all ages about our program’s research and outreach, and create education opportunities with individuals we would not have otherwise reached.

The outreach highlight of my year was the Women in Science day in November, held at RSMAS. Seventh and eighth grade girls from the Miami-Dade area came to our campus on Virginia Key, where they took part in hands-on activities across a huge variety of disciplines in ocean science. Many of SRC’s talented female graduate students and researchers came together to share our personal journeys within shark science, and taught the girls about shark biology and conservation. It’s not a surprise that girls of this age can sometimes be discouraged from pursuing a career in STEM because of a lack of female role models. Myself and the other female researchers hope that by reaching these talented, potential future scientists and engineers, we can show them science is accessible, exciting, and full of strong, innovative women!

By: Rachel Skubel, SRC Intern

Q: Do your tags cause fin damage?

A: All tags are not permanent. They fall off over time and the application point heals back quickly. Some of our satellite tags are temporarily attached to the shark’s dorsal fin. However, sharks have minimal nerves within their fins. We’ve also recaptured satellite tagged sharks after months at liberty, and their fins appeared in good condition. The potential effects on the sharks are minimal considering the research and education it provides, which will help protect these threatened species.

Community Outreach
By: Rachel Skubel, SRC Intern

OUTREACH

Participant Summary

1381 individuals participated in SRC shark trips during the 2015 season

51 countries represented

41 states represented

195 new participants

oldest participant: 80

youngest participant: 10

Community Outreach

By: Rachel Skubel, SRC Intern
In late February, the SRC crew was lucky enough to be joined by Dominic Monaghan, host of Wild Things, a U.S. TV show that travels the world looking for the largest, weirdest, and most intense creatures alive! With a special on South Florida, Dom and his crew headed out on the boat from Key Biscayne for two days in search of sharks. The first day was quite successful with a total of 9 nurse sharks wrangled to the side of the boat, sampled and released! We even had a giant bull shark take our bait, but sadly the shark bent our hook before we could get it to the boat. On the second day, we managed to catch 2 huge bull sharks. Besides the normal work-up procedure that all of our animals experience, these two sharks received a special tag each, one acoustic and one satellite. The acoustic tag placed in the 219 cm female bull shark will allow researchers in our lab to see how she is utilizing urban environments through an array of receivers that we have anchored along the coast of Biscayne Bay. On a larger scale, the even bigger 290 cm female bull shark with the satellite tag will allow us to pinpoint her location each time she comes to the surface. With this technology, we can take a look into the secret life of this species and start to better understand where they are spending time. Overall, we had an amazing time with Dom and the rest of the SRC crew. Dom’s enthusiasm for sharks and all animals was contagious and we cannot thank him enough for joining us for two days of shark tagging!

We also had the honor of being filmed for feature shows documenting our research for National Geographic and Discovery Channel that will air in 2016.

Contributors

Thanks to the ongoing support of our donors, and granting organizations, we have been able to conduct cutting edge research while simultaneously reaching thousands of students and individuals to educate and inform them on the oceans and shark conservation. All support for this work is greatly appreciated.

Significant contributions in 2015 were made by amazing organizations, institutions and corporations including: The Batchelor Foundation, Save Our Seas Foundation, Leonard & Jayne Abess, Heffner Fund, Alma Jennings Foundation, The International SeaKeepers Society, TD Bank, The Rock the Ocean Foundation, University of Miami Citizens Board, and all the generous individuals and groups who have adopted sharks and made donations.

Notable Organizations that joined SRC’s trips in 2015:
2015 Group Photos from Student & Citizen Science Field Trips
ADOPT A SHARK

Researching these apex predators is neither easy nor cheap. So to ensure SRC’s satellite tracking study of sharks continues, the program accepts donations in the amount of $2,500, which covers the cost to purchase one new satellite tag. In return, donors are given the opportunity to name the adopted shark and follow the shark’s movements on our website using an interactive Google Earth map. Classes and entire schools are also welcome to collectively adopt sharks. The University of Miami is a Florida not-for-profit corporation and all donations are tax deductible as appropriate by law.

To pledge your support for SRC visit the “Donate” section of our website: SharkTagging.com.

The 2015 SRC Annual Report has been a collaborative effort between these primary contributors:

Chris Brown
Stephen Cain
Hannah Calich
Austin Gallagher
Neil Hammerschlag

Dalton Hesley
Sarah Hirth
Lindsay Jennings
Catherine Macdonald
Emily Nelson

Christian Pankow
Robbie Roemer
David Shiffman
Rachel Skubel
TOGETHER, WE ARE

MAKING WAVES.