

# tributaries

Membership Magazine of the South Carolina Aquarium

Spring 2013  
Vol. 48



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### **Lasers light the way**

Explore how the Sea Turtle Hospital is using laser therapy to help alleviate pain and stimulate healing with some of our patients.

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### **SHARK!**

Dive in and learn about the recent sightings of great white sharks in the Lowcountry and why we have little to fear.

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### **To Eat, or Not to Eat...**

Hey kids! Test your knowledge of sustainable seafood. Learn about how the foods we eat can impact the future health of the ocean.

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# From the President



**Kevin Mills, President and CEO**  
kmills@scaquarium.org

"You work for the Aquarium?  
You must have such a  
cool job!"

I hear that a lot when  
meeting people for the first  
time. They're right – I do  
have a cool job. I get to come  
to work and rub shoulders  
with guests who are having  
a great time, watch staff and  
volunteers care for sick and

injured sea turtles, and see kids transformed by the experiences  
they have with our educators.

And that's just the part the public can see. So much more happens  
behind the scenes at the Aquarium that is truly amazing, like our  
innovative use of laser therapy in our Animal Care Facility. Thanks  
to a partnership with LiteCure LLC, our veterinarian was recently  
able to speed the rate of cellular repair in a number of recovering  
sea turtles.

As you'll read inside, a new interactive exhibit will bring medical  
stories like this to vivid life so that *all* of our guests can experience  
first-hand what it is like to work at the Aquarium and to care for  
animals. Debuting this summer, the exhibit will include a "port-  
hole" glimpse into our actual working medical facility.

All of us at the South Carolina Aquarium are proud to serve in  
this profession – and we're not alone.

That's why I am especially excited to have the opportunity to  
welcome more than 600 aquarium and zoo colleagues from around  
the country to Charleston in April, for the mid-year meeting of  
the Association of Zoos and Aquariums (AZA). We will exchange  
ideas and best practices about conservation, animal care, marketing,  
safety, distance learning – literally every aspect of our trade.  
It's through our membership in AZA that we improve, and  
commit to maintaining the highest professional standards.

Thank you for making our work possible, and for supporting  
the South Carolina Aquarium.

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## South Carolina Aquarium Hours

March – Aug. Open Daily 9 a.m. – 5 p.m.  
Building closes at 6 p.m.

Sept. – Feb. Open Daily 9 a.m. – 4 p.m.  
Building closes at 5 p.m.

Closed Thanksgiving Day and Christmas Day.

## Membership Department Hours

Mon. – Fri. 9 a.m. – 5 p.m.

## Phone Numbers (843 Area Code)

General Information 720-1990

Group Reservations and  
Advance Ticketing 579-8600  
or (800) 722-6455

Special Event Information 579-8656

Institutional Advancement Office 579-8626

Membership Phone 579-8518

Volunteer Information 579-8560

## Photography

The South Carolina Aquarium reserves the  
right to use photos taken of visitors while  
they are at the Aquarium or Aquarium-  
related events for publicity purposes.

## Our Mission

The South Carolina Aquarium inspires con-  
servation of the natural world by exhibiting  
and caring for animals, by excelling in  
education and research, and by providing  
an exceptional visitor experience.

**The South Carolina Aquarium is a  
501(c)(3) not-for-profit organization  
and relies on the generosity of individu-  
als, foundations and corporations.**

**To find out how you can help support  
the South Carolina Aquarium, contact  
us at (843) 579-8626 or  
development@scaquarium.org.**

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# ! Aquarium News



## 100th Sea Turtle Release

The South Carolina Aquarium Sea Turtle Rescue Program reached a major milestone this winter with the release of the program's 100th successfully rehabilitated sea turtle.

A loggerhead sea turtle affectionately named "Gumby" was released on December 27, 2012. The juvenile loggerhead arrived at the Aquarium's Sea Turtle Hospital on June 26, 2011 after washing ashore on Kiawah Island. When the South Carolina Department of Natural Resources delivered Gumby to the Aquarium's Sea Turtle Hospital, the animal weighed just 6 pounds and suffered from a list of serious problems, including low bone density, shell deformities and extreme lethargy. After months of medical treatment and therapies, the Aquarium staff veterinarian medically cleared the animal for release. The release took place in the Gulf Stream

off the North Carolina coast in an area where turtles Gumby's size commonly overwinter.

As the 100th sea turtle to be returned to the wild by the South Carolina Aquarium Sea Turtle Rescue Program, Gumby's story is a testament to the dedication, skill, and compassion of the program's staff. Since the program's inception in 2000, these professionals have worked tirelessly to care for several different species of threatened and endangered sea turtles. Because each species of sea turtle is now considered to be at risk of extinction, primarily via threats caused by humans, treating the sick and injured is an important step in their ongoing conservation. The South Carolina Aquarium remains committed to continuing its mission of work and research to ensure that sea turtles not only survive these modern threats, but secure a healthy future in our oceans.

## October Turtle Release

On a cool October morning, the South Carolina Aquarium Sea Turtle Rescue Program joined staff from the National Aquarium in Baltimore to release three rescued sea turtles off of the Charleston coast: "Olympian," a juvenile green sea turtle; "Merigo," a juvenile Kemp's ridley sea turtle; and "Charlie," a loggerhead sea turtle. All were released offshore from a boat. Merigo was brought to the Aquarium's Sea Turtle Hospital after being cold-stunned; Charlie was injured by a stingray; and Olympian, the turtle from the National Aquarium, was brought to their facility with over-inflated lungs. Staff from the National Aquarium drove down to South Carolina to release Olympian because the water off the Maryland coast was too cold. We were happy to be able to help them release their healthy turtles back into the wild!

## Terrapin Tagging

If you've been in our *Saltmarsh Aviary* exhibit lately you may have noticed something on our terrapin turtles. That little device on their shells is actually a tag. We are helping the South Carolina Department of Natural Resources determine the best method of attaching transmitters to terrapins. Biologists will begin tagging terrapins in the wild this spring, and will gather data on their behavior for about a year.



## SHOW YOUR MEMBERSHIP CARD AND SAVE!

### Charleston County Parks and Recreation

(843) 795-4FUN

Present this coupon to receive **Buy One, Get One Half Off** a "Try It Pass" at the East Coast Paddlesports and Outdoor Festival at James Island County Park April 19-21, 2013.

May not be combined with any other offers or discounts. For more information on the East Coast Paddlesports and Outdoor Festival, visit [ccprc.com/outdoorfest](http://ccprc.com/outdoorfest).



### Take advantage of your discounts!

Aquarium members receive discounts on Sea Turtle Hospital Tours, the Aquarium Gift Shop, and the Sea Turtle Café! Remember to show your membership card and take advantage of all your benefits!









## A GLIMPSE INTO

# *Animal Care*

They arrive at the South Carolina Aquarium's Sea Turtle Hospital in bad shape, hanging on to life, possibly breathing their last breaths. Sea turtles, an ancient and imperiled species, now face extinction, making it more important than ever to help sea turtle populations become healthy again.

The good news is that veterinarians are consistently searching for new tools that can help these amazing reptiles recover successfully from injury and illness. One of the most promising modern advances is laser therapy.



As a non-profit, the Aquarium receives amazing support from the community, and medical care for our sick and injured sea turtles is no different. In the fall of 2012, Jennifer Oliverio from LiteCure, LLC contacted staff veterinarian Dr. Shane Boylan about using the company's Companion Therapy Laser on the Aquarium's animals. Mrs. Oliverio wanted to see whether laser therapy would benefit any of the Aquarium's animals, and Dr. Boylan jumped at the opportunity. He already had the perfect patients in mind.

#### What is laser therapy?

Once the stuff of Grade B sci-fi movies, lasers have proven their worth in a variety of practical uses, especially in the medical and veterinary fields. In laser therapy, light in the near-infrared spectrum is applied to injuries to stimulate healing and relieve pain without sensation or side effects. In animals, photobiomodulation, also known as low-level laser therapy, shows promise as a new treatment option.

#### How does a laser heal?

The science behind laser therapy is fascinating. When an animal is injured or undergoes a trauma, cells become damaged. Cellular damage drastically reduces – and may even halt – the production of ATP, the chemical responsible for fueling injury repair and pain relief. That's where the laser comes in. The laser beams packets of light energy into the damaged tissue, causing the cells' mitochondria (cellular power plants) to spring into action, stimulating production of increased amounts of ATP. The correct laser dose can relieve pain and inflammation while improving the rate of healing.



### The flipper is flapping, the injury is healing and the turtles are happy!

The donated laser-therapy treatment is aiding the recovery of several of the hospital's sea turtle patients. "Bristol," "Birdie," "North Island" and "Ollie" were admitted with a variety of injuries and were in early stages of recovery when cold laser therapy began. The hospital staff feel the laser has proven beneficial to each.

North Island, a 90-pound loggerhead sea turtle, arrived at the hospital after being injured by a stingray barb. The laser was used on the injury once and the wound made dramatic improvement soon after. Birdie, a Kemp's ridley (the most endangered of the seven sea turtle species), came to the hospital with monofilament fishing line badly entangled around the neck and two flippers. Dr. Boylan decided to use the laser on the ligature marks (made by entanglement in fishing line) to help with Birdie's pain, inflammation and healing. Treatment for Ollie and Bristol (both endangered green sea turtles) has been a bit more intense because both had severe boat strike injuries. The laser was used on Ollie's most serious injuries which included trauma to the carapace (shell) and skull. Bristol, on the other hand, is still receiving laser treatment on a weekly basis.



Bristol arrived at the Sea Turtle Hospital soon after the facility began using the medical laser and was suffering from severe breaks in the bones of both front flippers and a fractured carapace. Dr. Boylan and Mrs. Oliverio got started immediately with a few treatments every week and then slowly weaning the therapy as Bristol's injuries improved. Hospital staff has observed a dramatic difference in Bristol. The sea turtle's flippers are now fully functional despite still having fractures and the carapace is almost completely healed!



**With your support, we can continue our efforts to provide treatment for sick and injured sea turtles, and further our research efforts to provide innovative care. If you would like to help our patients by making a donation, please call (843) 579-8626 or visit [scaquarium.org/support](http://scaquarium.org/support).**



### Sea turtles aren't the only ones benefiting from laser therapy.

A green moray eel recently joined the list of Aquarium animals receiving laser therapy. The eel, one of the Aquarium's oldest residents, had been unable to swim after injuring its spine. It only took a few treatments to get him moving again, and though the eel isn't back to 100 percent health, we hope to get him there with more treatment.

## COMING SOON

Have you ever wondered how we care for the animals at the Aquarium? Starting this summer you'll get an inside look at what goes on behind-the-scenes in our new exhibit that showcases our Animal Care Facility.

This 800-square-foot treatment area opened in 2012 and includes a surgical suite, a necropsy area, a pharmacy, a radiology room and an office for staff veterinarian Dr. Shane Boylan. Visitors will be introduced to animal care through multiple interactive elements and a viewing window into the actual surgical suite.

A virtual tour will take visitors from room to room, explaining what goes on in each area. You'll see case files from our records that tell the stories of interesting and unique medical treatments we've given Aquarium animals. For those who enjoy a hands-on approach to learning, the facility offers an interactive diagnostic station where visitors can take simulated "x-rays" and use a high-tech microscope.

**This exhibit is made possible through the generosity of The Lakeside Foundation.**