

VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 1, 2017

Bermuda turtle's journey reveals migration secrets and demonstrates the power of collaboration among researchers



David Godfrey / STC

The Bermuda Turtle Project (BTP), a joint project of Sea Turtle Conservancy (STC) and the Bermuda Aquarium, Museum and Zoo (BAMZ), has as its mission the promotion of sea turtle conservation in Bermuda through research and education. In 2016, as the project team carried out its 49th consecutive year of studying the green turtle aggregation that inhabits the

waters of the Bermuda Platform, a remarkable story unfolded that brought together at least a dozen individuals from three countries who collaborated in the interest of sea turtle conservation and research. The project's annual two-week netting session to capture and tag immature green turtles residing on

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*Inside: Adopted Turtles
Return to Tortuguero*

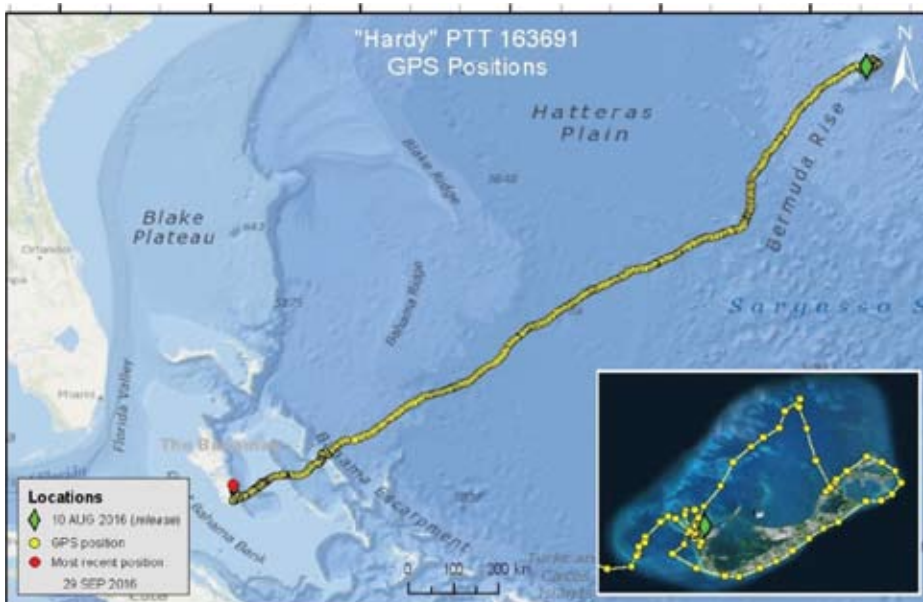


*A sneak peek into this
summer's Tour de Turtles!*

... from cover

Bermuda's seagrass flats took place August 8-18, 2016. Of the 225 turtles captured, three were selected to carry GPS-enabled satellite transmitters that were designed to reveal fine detail in the turtles' use of Bermuda habitats and record their movements around Bermuda or to distant foraging grounds. During the project's history, more than 160 long-distance migrations of Bermuda green turtles have been recorded based on tag returns, mostly to the extensive seagrass flats off the coast of Nicaragua, a distance of at least 1700 miles. But only 19 turtles have been followed using satellite transmitters that recorded their exact path of travel.

One of the three satellite transmitters deployed in 2016 (PTT 163691) was attached to a 67.1 cm green turtle (tag number MM991) captured at Somerset Long Bay, Bermuda, on August 10, 2016. After release, the turtle, nicknamed "Hardy," remained near Somerset Long Bay until August 21 when he began traveling clockwise around the Bermuda Platform. He continued local travel until August 27 when he headed southwest off of the Bermuda Platform, into the deeper waters of the North Atlantic. Once off the Platform, Hardy's travel rate increased to about 2.4 km/hr (1.5 miles/hr). He traveled WSW for nearly 1 month, arriving at Cat Island, in the Bahamas, on September 21. Hardy then continued westward for 8 days across a mixture of shallow platform and deep waters between the Bahamas islands. What was thought to be his final satellite location was recorded on



Hardy's GPS positions as recorded by the transmitter.

September 29 at the southeastern end of Andros Island. Hardy appeared to be continuing his migration when this transmission was received. Why the transmissions stopped was not clear.

To everyone's surprise, after nearly two months of silence, the transmitter began sending location data again on November 27, 2016. Using Google Earth, BTP team members Robert Hardy and Anne Meylan could see from their office at the Florida Fish and Wildlife Research Institute, that all of

VELADOR {bel.a.dor}

In Caribbean cultures, **Velador** translates as "one who stands vigil" —referring to turtle hunters who waited at night for turtles to come ashore. Now STC claims this title for its newsletter, and around the world STC's researchers and volunteers are replacing poachers as the new veladors. The **Velador** is published for Members and supporters of the nonprofit **Sea Turtle Conservancy**. STC is dedicated to the conservation of sea turtles through research, advocacy, education and protection of the habitats upon which they depend.

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the transmissions appeared to be coming from a house in the community of Bluff Settlement, a remote village on the southeastern coast of Andros Island. Recovering the transmitter would potentially mean recovering additional data, and it might enable the refurbishment and reuse of the valuable GPS transmitter.



Hardy being released with a GPS transmitter.

The team contacted Alan Bolten of the Archie Carr Center for Sea Turtle Research to try to find a sea turtle contact in the Bahamas who could investigate. Alan put the team in touch with Liz Brace of the Bahamas National Trust in Nassau, who in turn contacted one of the trust's wardens, Steve Smith, based on Andros Island. A flyer was produced and distributed in Bluff Settlement, showing the approximate location of the turtle's signal and seeking the community's assistance in locating the transmitter.

Weeks passed, and the BTP team was concerned that the battery on the unit would soon expire, greatly reducing the likelihood that the transmitter would be recovered. However, there was not much to do besides wait. On December 19, 2016, Anne received an email from Patrick Talbot, Curator of the Bermuda Aquarium, Museum and Zoo. He had just spoken by phone with McRoy Wilson, manager of the Andros office of the Bahamas Ministry of Tourism, who reported that the satellite tag was now in his office at the tourism department on Andros. Mr. Wilson had been contacted by the Bahamas National Trust warden and had retrieved the transmitter, then found Patrick's phone number on the message glued to it. Patrick passed Mr. Wilson's contact information to Anne and she called him immediately. Mr. Wilson confirmed that he had the tag and reported that it had been found by a diver on a reef along the east coast of Andros, and that when it was found, it was no longer associated with the turtle. This was consistent with the depth data transmitted by the tag when it was brought to the surface and resumed transmitting—

the tag had been at about 20 ft below the surface the entire time it was not transmitting. No other details about the tag's recovery were available.

The next challenge was to get the transmitter back to the lab in St. Petersburg where any untransmitted data could be downloaded. There is limited commercial airline service connecting the east coast of Andros with

the U.S. but Mr. Wilson had a quick solution—a small airline called Watermakers Air that lands at an airstrip close to his office on Andros. A call to Jennifer Valencia at Watermakers was all it took to arrange pick up at Congo Town airport the following morning, and delivery a few hours later at an airport in Ft. Lauderdale, FL. Jennifer called to report the transmitter's safe arrival and shipped it to the Florida Fish and Wildlife Research Institute in St. Petersburg, FL.

The tag was a bit battered but still entirely functional. Robert Hardy (for whom the turtle had been named) downloaded the data stored on it and discovered that a large amount of information had remained on the tag—not just from the final days of deployment, but from the entire journey Hardy made from Bermuda to the Bahamas. The number of GPS coordinates available for the travel path for this turtle increased from 365 to 785. With the added points, a remarkably complete track of the animal's migration could be mapped. In addition to location data (latitude and longitude), the transmitter also recorded data on depth, temperature, and diving behavior.

The fate of the turtle Hardy remains unknown, but because of the remarkable collaboration of people from the Bahamas, Bermuda and the United States, the satellite transmitter and some extremely important data on sea turtle migration were safely recovered. A big thanks to all!

By Dr. Anne Meylan
*Florida Wildlife Research Institution
 & STC Research Associate*

Tour de Turtles 2017

The 10th Annual Tour de Turtles is right around the corner! Officially kicking off the first week of August, this year's marathon migration promises to bring fun, education and new turtle friends.

Over the past 10 years, STC has released over 100 satellite-tagged turtles from research sites in Florida, Bermuda, Costa Rica, Panama, Cuba, El Salvador, Puerto Rico, Mexico and Nevis, West Indies. These turtles have provided invaluable data on migratory routes and foraging grounds for five sea turtle species in the Western Hemisphere. The public turtle releases conducted as part of each Tour de Turtles annually draw more than 5,000 people, and the online portion of the event has reached millions of avid turtle enthusiasts over the years.



This year, STC is placing satellite transmitters on a record 14 to 16 turtles and is hosting live sea turtle release events in Florida, Tortuguero, and Nevis. In addition to the public turtle releases, STC will also be tagging and releasing turtles in Panama and Cuba.

A schedule of public turtle releases is provided below. Mark your calendar so you don't miss any of the fun!

ANNA MARIA ISLAND LIVE TURTLE RELEASE

Date: June 19
Time: 8:00 a.m.
Location: Coquina Beach

NEVIS LIVE SEA TURTLE RELEASE

Dates: Sunday, July 16th & Monday, July 17th
Time: 8:30 a.m. - 9 a.m.
Location: Four Seasons Resort on Pinney's Beach, Nevis

FL KEYS REHAB SEA TURTLE RELEASE

Date: July TBA
Time: TBA
Location: Sombrero Beach, Florida Keys
Entrance: This event is free and open to the public.

TORTUGUERO LIVE SEA TURTLE RELEASE

Dates: August TBA
Time: 9:00 a.m.
Location: STC's John H. Phipps Biological Field Station, Tortuguero, Costa Rica

TOUR DE TURTLES KICK-OFF EVENT

Join Sea Turtle Conservancy as we kick off Tour de Turtles with a celebration featuring hors d'oeuvres, refreshments, live music, and a silent auction to benefit sea turtle conservation and habitat protection in Brevard County. All proceeds from the event support sea turtle conservation efforts.

TOUR DE TURTLES KICK-OFF PARTY

Date: Saturday, July 29th
Time: 6:00 p.m. - 8:00 p.m.
Location: Barrier Island Center
8385 S. Hwy A1A, Melbourne Beach, FL
Entrance: Cost: \$20 in advance or \$35 at the door.

LIVE SEA TURTLE RELEASE

Date: Sunday, July 30th
Time: 7:30 a.m. - 10:00 a.m.
(Turtles will be released promptly at 8 a.m.)
Location: Barrier Island Center
8385 S Hwy A1A, Melbourne Beach, FL

Make sure you subscribe to our E-newsletter or follow us on Facebook to receive updated information regarding releases.

Lighting Program Update



Before and after photos of pool lighting at a condo retrofitted as part of STC's Phase II Sea Turtle Lighting Project

Since 2014, STC has worked with private property owners the Florida Panhandle to reduce hatchling disorientation caused by beachfront lights. Funding from the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund has supported STC's efforts to retrofit lights using the newest sea turtle-friendly bulbs and fixtures.

Phase I of the project, which concluded last year, focused on properties in Gulf, Walton and Franklin counties and removed 4,491 unshielded fixtures and white lights. Nesting habitats in front of these properties were darkened significantly, and data shows the rate of hatchling disorientation went from 50 percent of all nests to 0 percent after the retrofits.

Phase II of the project, underway now, is retrofitting beachfront properties in Bay, Okaloosa, Santa Rosa and Escambia counties—also in the Panhandle.

As part of the project, earlier this year STC began conducting sea turtle lighting workshops for code enforcement and building professionals in Bay, Okaloosa and Escambia counties. The workshops have been well attended and helped increase awareness among participants about sea turtle biology, turtle lighting laws and best management practices for retrofitting exterior beachfront lights.

STC is also hosting a workshop on lighting at the International Sea Turtle Symposium in Las Vegas in April. Later in the year, STC will conduct 12 more lighting workshops for builders and code enforcement personnel around Florida, thanks to a grant from the Florida Sea Turtle Grants Program. For more information about STC's lighting program, visit www.conserveturtles.org

By Stacey Marquis
STC Lighting Specialist

Summer Spotlight

Eco Explorers Camp 2017

This special summer camp hosted by STC is where children make connections with ocean-to lagoon-habitats and wildlife while sharing fun adventures on the water! Camps sessions take place June 5-9, 12-16, 19-23, and 26-30 from 9 AM to 3 PM at the Barrier Island Center in Melbourne Beach, Florida. The cost is \$325 and is limited to 13 children each week. To enroll, email donnalee@conserveturtles.org or call 321-723-3556.



Activities include Talkin' Turtles, Island Crusin', Ocean Treasures, Sea Discoveries, Lagoon Treasures, Ocean Motion, Lovin' the Lagoon, and Critter Encounters.

2017 STC Legislative News

Several bills introduced to the 2017 Florida Legislature could impact sea turtles. STC is actively monitoring each bill and intervening where appropriate to maintain or increase protections for sea turtles. As this issue of the *Velador* goes to print, the legislature is at the halfway point of its 60-day session, so most of these issues will have been resolved by the time this article is read.

House Bill 1375 proposes big changes to Florida's Specialty License Plate (SLP) Program, including a provision that would "standardize" the design for all plates. If passed, attractive and popular tags like the Sea Turtle License Plate would be redesigned using a standard template with a plain background, letters on one side and just a small graphic depicting the cause on the other side. We believe this would be the death knell of the SLP Program.

Market research shows the main reason people are willing to pay extra money for a specialty tag is because they like the way they look on their vehicles. If the tags are no longer attractive, sales would decrease rapidly and all the great programs supported by the Sea Turtle Specialty Plate would suffer. For example, Florida's Marine Turtle Protection Program, which is funded almost entirely by the turtle tag, would see severe budget cuts. It would also mean less money for the Sea Turtle Grants Program, which supports many important research, education and conservation projects around Florida. STC is lobbying hard against this legislation and collaborating with numerous partners in the sea turtle community and other groups with specialty tags. Collectively, we are demanding that the language about standardizing tag designs is stricken from the bill. As of this writing, we are hopeful that the bill's sponsors will amend the legislation as requested. We especially want to thank all the "turtle folks" that have been contacting their legislators about this bad bill. We have heard from a number of legislators who acknowledge receiving a flood of calls and emails from turtle advocates.



Senate Bill 1590, sponsored by Sen. Jack Latvala, is this year's "beach bill." Local governments must apply to the state's Beach Management Funding Assistance Program when they want matching funds for beach nourishment projects. Projects are awarded funds based on a complicated ranking criteria. House Bill 1590 would simplify that criteria, while placing more emphasis on economic return on investment, storm damage reduction and other new criteria. Of significance to STC is that the new ranking criteria would award points to projects that enhance habitat and restore dunes. Importantly, the bill places a greater emphasis on inlet management to reduce erosion and restore the natural flow of sand along the coast. Engineered inlets are a primary cause of historic coastal erosion in Florida. The bill also raises the annual appropriation for beach projects (dune enhancement, beach nourishment and inlet management) from \$30 million to \$50 million.

For the third consecutive year, the legislature is considering a bill to limit disposable, single-use plastic bags like those used by most grocery stores. House Bill 93 and Senate Bill 162 would allow municipalities with populations under 100,000 to create a pilot program to regulate or ban disposable plastic bags. Plastic bags are ubiquitous in the coastal environment and can be mistaken as food by sea turtles and other sea life. Thirty eight coastal municipalities have passed resolutions in support of this legislation; unfortunately the bills are being opposed by the retail industry. The Senate bill still has a chance of passing, but the House bill has stalled. STC commends the effort to regulate single-use plastic bags, which has been spearheaded by the Surfrider Foundation, and encourages Floridians to support this forward-thinking legislation.

Senate Bill 1228 and House Bill 1031 would increase the penalty for wrongly possessing any species of marine turtle, hatchlings or their body parts to a third degree felonies. This would fix a glitch in the existing sentencing guidelines and ensures the crime is a level 3 offense. 🐢

By Gary Appelson
Coastal Policy Coordinator

Adopted Turtles Return to Tortuguero

Each year from July to September, Sea Turtle Conservancy researchers tag and collect data on green turtles that nest on the beaches of Tortuguero, Costa Rica. Many of these turtles are “adopted” by individuals or families in a symbolic show of support for STC’s work. If a turtle that you or your family sponsored was observed on the beach during the 2016 nesting season, your name will appear in list below:


Victor Armendariz	Nicole Koerner	Richard Testut
Steve and Barbara Astoria	Nora Kosakowski	Clair Roberts
Donna Augustin	Leona LaBasco	Eunice Roberts
Elizabeth Bauer	Leigh Ann Lazar	Henry & Samuel Rosenzweig
Mitch Berk	Allison Loftis	Lea Ruesing
Ann & Inga-Lena	Loging Family	Celine Schwarz
Beyer/Schutz	Michael Mason	Talea Shakun-Berkelhammer
Gabrielle Bolton	Carolyn McKnight	Mason Smith
Judy & Alan Brainard	Tracey Morrison	Koos Solleveld
Walter & Evelyn Bristol	Bettina Munderich	Mandy Stango
Warwick Lorne Brown	Olivia Nath	Kate Stout
Samuel Ceuninck	Jackson Nath	Kristin Swift
Janel Cherry	Courtney Peterson	Laura Trombley
Cris Currie	Charli & Anders Plant	Seneca Turnbull
Decking Family	Ken Rahn	Zeke White
Lisa DeLiso	Vicky & Grant Reeves	Molly, Elise, Josie and Gigi
Depaepe Family	Marilyn Rudin	Zachary
Oscar Dewitt		
Rosa Diaz		
Suzy Drewett		
Olwe Ernst		
Josua Ewald		
Susan Faust		
Brittany Frame		
Jean-Sebastien Gagnon		
Joshua Gallo		
Amanda Glass		
George Gring		
Andrea & Eva Hafner		
Sarah Helgesen		
Hooning Family		
Iona Hugo		
Ryan Inman		
Janssen Family		
Junesharyn Kennedy		
Barbara Kimbell		



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Special Offer for Mother's Day

Show your Mom some love with a Sea Turtle Adoption this Mother's Day!

Mother's Day is right around the corner! Looking for the perfect gift? For a donation of \$30 or more, you can adopt a sea turtle for the special Mom in your life. They will receive a personalized adoption certificate, a Sea Turtle Conservation Guide, window cling, sticker, bookmark, magnet, and a one-year subscription to STC's membership publication, all in a keepsake sea turtle folder. You can name your own turtle or choose to follow one of our satellite tracked turtles online!

If you want to make their adoption extra special, adopt a turtle at the \$55 level and receive a FREE springtime turtle plushy!

Visit www.conserveturtles.org or call 352-373-6441 today to adopt your sea turtle in time for Mother's Day!



LAST CALL for 2017 Sea Turtle & Cultural Expedition to Cuba

Join STC July 1st - July 8th, 2017 as we explore Havana, the Guanahacabibes Peninsula and the remarkable Viñales Valley in search of culture and sea turtles.

The deadline to sign up has been extended through April! Only a few spots remain.

For more information, please visit our blog at

<https://conserveturtles.org/join-stc-3rd-annual-sea-turtle-expedition-cuba/>