

VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 2, 2021

Satellite-Tagged Leatherback Turtle “Hope” Returns to Nest in Florida for Second Consecutive Year—a First!



Leatherback turtle “Hope” returns to the water after nesting on Jupiter Island, FL. Photo credit: Chris Johnson, Florida Leatherbacks Inc.

After a 17,000 km round trip migration up to the coast of New Jersey and down towards the Caribbean, leatherback turtle “Hope” returned to Jupiter Island, FL to nest just 1.5 km from her previous nest, which she laid in May 2020. Leatherback turtles typically nest every 2-3 years, and it’s very rare for one to nest in consecutive years. This is the first time researchers have had the chance to track a leatherback turtle that’s nested consecutive years!

• Hope was equipped with a satellite transmitter
• last May by Sea Turtle Conservancy (STC) and
• Florida Leatherbacks Inc. researchers as part
• of STC’s annual Tour de Turtles “migration
• marathon” education program. The satellite
• transmitter allows the researchers and the public
• to track Hope’s location online and follow her
• migration. Hope was sponsored and named by
• Turtle & Hughes, Inc., a fourth generation family-

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Inside: FL Legislative Update



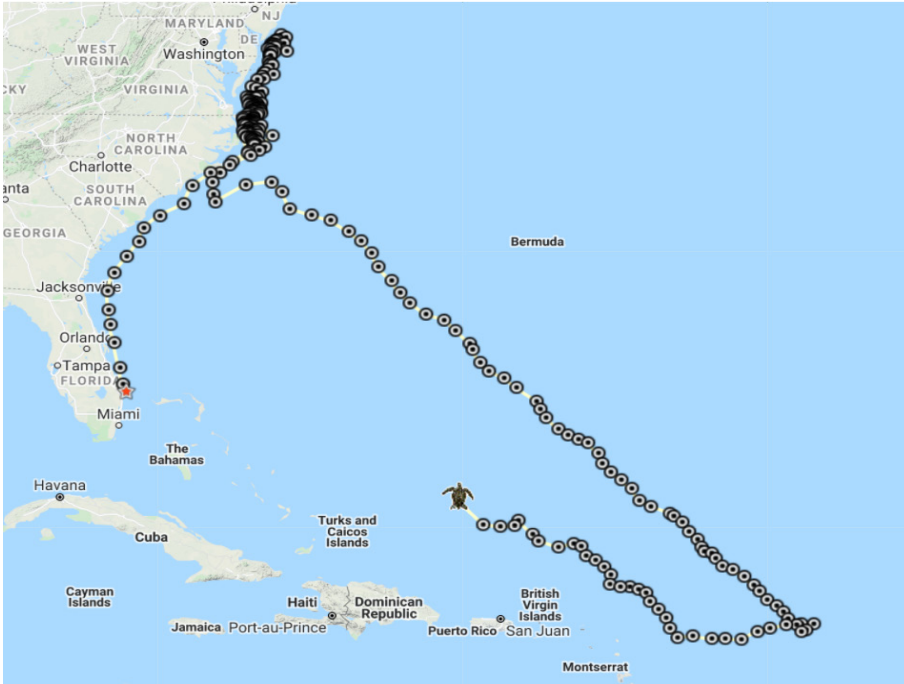
Sea Turtle TECH at the BIC

... from cover

owned business and one of the nation's largest electrical and industrial distributors.

“Hope provides an incredible opportunity to track the same leatherback a second time from a nesting beach,” said Dr. Daniel Evans, STC Research Biologist. “She was an interesting turtle to follow in 2020, so we are excited and curious to see whether or not she follows her previous path.”

Hope developed a legion of dedicated fans who enjoyed checking her location online every day and following her incredibly unique track.



Hope's original migration map which shows the location she stopped transmitting

After transmitting for nearly nine months, Hope's location stopped updating while she was located about 250 miles north of Puerto Rico. This can happen for a number of reasons—the tracking device may be damaged, have fallen off completely, or could be covered in biofouling which prevents it from sending a signal. Hope's fans stood by hoping to see her signal come back online one day. Researchers were also hopeful she would start transmitting again, as her track indicated she may be returning to Florida, which would be an extremely unique event.

With no signal from Hope for almost two months, researchers from Florida Leatherbacks, Inc. were surprised when they came across a familiar turtle during their nightly track survey on March 29. It was Hope! It turns out, her satellite transmitter had fallen off, but they were able to identify her by metal flipper tags and a PIT tag, or microchip. They were able to re-apply a satellite transmitter to continue tracking her, a very rare opportunity.

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. 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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Panama Research Coordinator
Cristina Ordoñez

Panama Assistant Research Coordinator
Raúl García Varela

Panama Education & Outreach Coordinator
Xavier Ow Young

Sea Turtle Conservancy

4581 NW 6th Street, Suite A

Gainesville, Florida 32609

Phone: (352) 373-6441

Website: www.conserveturtles.org



“We were incredibly excited and honestly quite shocked when the team found her again this year,” said Kelly Martin of Florida Leatherbacks Inc.”
 “We were even more thrilled that we had another satellite transmitter ready to go. This is the first time we have been able to track an endangered leatherback that has nested two years in a row and provides a very unique opportunity to look at behaviors that aren’t usually easy to track.”

In May 2021, Hope was encountered nesting yet again but her new transmitter was no longer attached. It seems the attachment method failed or the transmitter came off while Hope was mating. We were hoping to encounter her yet again with a transmitter on hand but unfortunately it didn’t happen. However, we were able to satellite tag five new leatherback turtles in Florida this year, and five more in Panama as part of the 2021 Tour de Turtles. These turtles are all available to track now at www.tourdeturtles.org. Read on to learn more about some of our new turtles!



STC staff apply a satellite tag to a nesting leatherback in Panama

Meet a few of our 2021 Tour de Turtles Leatherback “Competitors!”

Turtle’s Name: Vesper
Sponsor: Wildlife Collections
Nesting Beach: Hutchinson Island, FL
Fun Fact: After nesting, Vesper traveled further south between nests than any other leatherback FLI researchers have tracked before.

Turtle’s Name: Eunoia
Sponsor: NOGU
Nesting Beach: Soropta, Panama
Fun Fact: STC researchers believe that Eunoia may have been satellite tagged before, but lost her flipper tags, so were unable to identify her previous satellite tag number.

Turtle’s Name: Indigo
Sponsor: STC
Nesting Beach: Jupiter Island, FL
Fun Fact: When Indigo was first identified in 2015 she was only observed three times. However, her satellite tag allowed FLI researchers to locate eight nests in 2021! This stresses the importance of satellite tagging these animals!

Track these turtles and more at www.tourdeturtles.org 

STC advocates against harmful bills during 2021 Florida Legislative Session

Florida's globally-important sea turtle populations face myriad anthropogenic threats, with coastal armoring and artificial lighting being among the most urgent. During the 2021 Florida Legislative Session held in March and April, Sea Turtle Conservancy (STC) advocated against two bills that would have greatly worsened both of these threats.

One of the bills (HB 1133 and SB 1504 – Coastal Construction and Preservation) sought to weaken the regulation of coastal armoring, which would have facilitated a rapid expansion of sea wall construction along important sea turtle nesting beaches in Florida. Seawalls block turtles from reaching the upper portion of the beach, causing them to nest in less-than-optimal nesting areas lower on the beach where their nests are more susceptible to waves and inundation.



This photo illustrates a sea turtle "false crawl" in front of a sea wall. The nesting turtle tried to find a place to lay her eggs but instead crawled along the sea wall, using valuable energy, before returning to the ocean.

In addition, studies have shown that fewer turtles emerge onto beaches with seawalls than onto adjacent, non-walled, natural beaches. Sea walls also disrupt natural beach dynamics and increase the rate of erosion down the beach. This can create a 'domino effect' that necessitates more and more seawalls, destroying sea turtle and shorebird nesting habitat.



Coastal armoring cuts off the upper portion of the beach, causing sea turtles to lay their eggs in less optimal locations closer to the water.

Introduced by Representative Tom Leek and Senator Tom Wright, whose districts include parts of Volusia and Brevard Counties, the bill would have eliminated any consideration of whether upland structures are actually vulnerable to erosion before qualifying for a sea wall. If a beachfront property owner requested a permit to build a sea wall (or sought a permit for a wall already installed illegally), the Florida Department of Environmental Protection (FDEP) would be forced by law to grant the permit. This process would result in no consideration of impacts to the beach, neighbors, other natural alternatives or federally protected sea turtles.

After STC learned of the bill, Executive Director David Godfrey and Holly Parker-Curry with Surfrider Foundation met with the primary bill sponsor. As is often the case with short-sighted legislation like this, the bill was designed to appease a particular group of local constituents whose request for a sea wall permit was denied because their homes are not actually vulnerable or eligible for sea walls. In attempting to resolve a narrow local issue, the sponsors were willing to roll back protection for sea turtles and coastal habitat throughout Florida.

Following vocal opposition by STC and our colleagues, both the House and Senate versions of the bill died in their first committees. However, this issue is likely to come back during future legislative sessions, as beachfront property owners continue to face the impacts of sea level rise and coastal erosion in Florida. STC will continue to advocate for natural solutions to

this worsening problem, including the use of living shorelines, beach nourishment, managed retreat from heavily eroding beaches and stricter policies on where people can build on the coastline.

Another bill sought to strip local governments of their ability to regulate certain building design elements on private homes. This developer-backed legislation was not intended to directly impact sea turtles, but the wording was so vague that it would have inadvertently eliminated the ability of coastal counties and municipalities to enforce sea turtle lighting regulations. Language in the bill would have prevented local governments from regulating any “exterior nonstructural architectural ornamentation” on single- and two-family homes in Florida. The bill, S.B. 284 and H.B. 55 – Building Design, was introduced by Senator Keith Perry and Representative Toby Overdorf. Since the exterior lighting used on homes would fall under definitions contained in the bill, if passed the legislation would have undermined all local sea turtle protection ordinances that prohibit unshielded white lights during sea turtle nesting season, which could result in an increase in sea turtle disorientations statewide.

After alerting the Florida Fish and Wildlife Conservation Commission’s (FWC) Legislative Affairs office about the potential impacts of the bill, STC drafted an amendment that, if added to the legislation, would ensure sea turtle protection ordinances remained intact. Despite numerous attempts to get the bill’s sponsors to acknowledge the unintended glitch and support our amendment, this approach was getting us nowhere. Eventually, STC contacted Senate Majority Leader Debbie Mayfield, whose district includes the Archie Carr National Wildlife Refuge in Brevard and Indian River



Although they are smaller than multi-family condominiums and resorts, single- and two-family homes can produce harmful artificial light that can disorient sea turtles.

Counties. Senator Mayfield took the issue very seriously, knowing how important sea turtles are to her constituents.

With her leadership, STC’s amendment was eventually added to version of the bill that eventually passed. STC is appreciative of all of our partners at FWC, the Surfrider Foundation, Florida Conservation Voters and within the Legislature who moved this amendment forward. We are particularly grateful to Sen. Mayfield for her leadership on this matter.

Although STC’s work on these two bills

resulted in good outcomes for sea turtles in 2021, another round of bad bills for sea turtles is likely to arise next year. If a proposal is particularly damaging to sea turtles, STC will alert its members and followers and encourage them to contact

representatives

in the Legislature. We have defeated harmful proposals together in the past, and we are confident that we will have the same success in the future. 🌊

By Stacey Gallagher, Development Coordinator & David Godfrey, Executive Director

****Make sure you subscribe to our e-newsletter and/or follow us on social media @conserveturtles to receive Action Alerts and other legislative updates. Email lexie@conserveturtles.org with questions or to sign up now!****

Sea Turtle Grants Program (STGP) awards \$415,000 to turtle conservation organizations in Florida

The Sea Turtle Grants Program (STGP), funded by the sale of Florida's "Helping Sea Turtles Survive" specialty license plate, recently awarded \$415,463 to 26 different projects benefiting Florida sea turtles as part of the 2021-2022 grant funding cycle. Each year the STGP, which is administered by STC, distributes money to coastal county governments, educational and research institutions and nonprofit groups through a competitive application process. The sea turtle specialty license plate also is the primary source of funding for the Florida Fish and Wildlife Conservation Commission's Marine Turtle Protection Program.



The following organizations received grants for their approved projects for the 2021-2022 cycle:

- **Florida State University:** Investigating loggerhead sea turtle embryonic tolerance to wave exposure and ground-water inundation
- **Inwater Research Group:** Behavioral responses of green and loggerhead sea turtles to fishing gear and bycatch reduction technologies
- **University of Florida - Whitney Laboratory:** Health impact of near-ubiquitous plastic ingestion in Florida's young turtles
- **University of Florida – Dept. of Wildlife & Conservation:** Turtle/Vessel Interactions: Observing Flight Initiation Distances of Florida *Chelonia mydas* in the Crystal Bay Area
- **FL State Parks Foundation:** Sea Turtle Ambassador Aquarium Repair & Upgrade, MacArthur Beach State Park
- **University of Central Florida:** Late-Season Sea Turtle Nesting in Central and South Brevard County, Florida
- **Clearwater Marine Aquarium:** Stop and Look! Raising Awareness with Three Types of Educational Materials
- **Sea Turtle Conservancy:** Partial Funding for a Truck for In-water Research, Stranding Response and Other Programmatic Uses
- **The Turtle Hospital:** Sea Turtle Rehabilitation Endoscopic Equipment
- **Gulf Specimen Marine Lab:** Sea Turtle Educational and Interactive Exhibit
- **Clearwater Marine Aquarium:** Medical equipment for sea turtle rehabilitation
- **Sea Turtle Preservation Society:** STPS Education Center Update/Modernization
- **Gulfarium C.A.R.E. Foundation:** C.A.R.E. Sea Turtle Hospital Digital Radiography
- **University of Central Florida:** Connecting Sea Turtle Health & Ecology on the Archie Carr Wildlife Refuge
- **Loggerhead Marinlife Center:** Establishing baseline demographics and health of a globally important loggerhead rookery: Year 2
- **Gulfarium C.A.R.E. Foundation:** C.A.R.E. Chillers for Rehabilitation Habitats
- **Florida State Parks Foundation:** Lighting the Way for Sea Turtles at Sebastian Inlet State Park
- **University of Central Florida:** Molecular Identification of Sea Turtle Diet Items using Colon Swab DNA
- **The Florida Aquarium:** Sea Turtle Transport Vehicle for The FL Aquarium's Sea Turtle Rehabilitation Program
- **Escambia County BOCC:** Escambia County Sea Turtle Conservation Program Capacity Building to reduce the impact of artificial light on nesting and hatchling sea turtles
- **Florida State University:** Caught on Camera: The Secret Lives and Foraging Behaviors of Loggerhead Turtles in Florida's Big Bend
- **Stella Maris Environmental Research:** Expanding sea turtle conservation on Brevard south beaches: Lighting effects on hatchling orientation
- **The Turtle Hospital:** Sea Turtle Rehabilitation Anesthesia Machine
- **Mote Marine Lab:** CO2 Surgical Laser for the Sea Turtle Rehabilitation Hospitals at Mote Marine Lab
- **Gulf World Marine Institute:** Expansion of Sea Turtle Rehabilitation Capacity
- **Marine Environmental Education Center at the Carpenter House:** Sea Turtle Threats Educational Display

Sea Turtle TECH STEM Mentor Program

Inspiring Future Stewards of the Archie Carr Refuge

Sea Turtle Conservancy at the Barrier Island Center on the Archie Carr National Wildlife Refuge launched the Sea Turtle TECH (Technology Education Challenges Horizons) STEM (Science, Technology, Engineering and Math) Mentorship Program during summer 2021.

This program is helping train the next generation of sea turtle stewards and conservation professionals in the real-world tools, technology and techniques necessary for success in 21st century conservation careers. STC will reach up to 40 middle schoolers and teens from underserved, diverse backgrounds, who have been historically underrepresented in conservation careers, with hands-on STEM workshops. STC is partnering with the Boys and Girls Clubs in Indian River and Brevard Counties and Club Esteem in Brevard County. All of the participants are from counties within the Archie Carr Refuge. We are empowering and inspiring these students to gain self-representation in STEM fields, increase their confidence in their ability to achieve a STEM career, gain a broader understanding of who achieves STEM careers, and develop or reinforce an interest in pursuing a STEM career.



STC is offering 20 interactive, hands-on STEM mentorship workshops with professionals from the Archie Carr Working Group, a collaborative network of 15 organizations working together to preserve, conserve, manage, educate and advocate for the Archie Carr Refuge. STEM workshops include exploring drone use in conservation, designing and engineering remote operated vehicles, discovering citizen science apps, utilizing GPS devices, observing nesting sea turtles, studying marine ecology by snorkel and boat, observing a sea turtle nest dig, and learning the calculations scientists use to determine if a nest of hatchlings disoriented during their journey to the ocean.

Through an associated project, STC hired four near-peer mentors, two college students and two high school students for summer 2021 to participate in a new Conservation Career Training program at the Barrier Island Center. The interns lead small group discussions with the Sea Turtle TECH participants as prior work has shown that youth connect easily with mentors from age groups nearest to their own. The interns are assisting with all manners of nature center operations as well and working in the field with conservation professionals. This tiered mentorship approach also provides opportunities for the interns to build their communication and leadership skills, knowledge of local ecology, increase their confidence in STEM, and participate in scientific research.

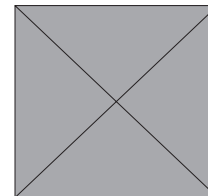
We are grateful to our partners and our sponsors: the Sea Turtle Grants Program, Quail Valley Charities, and the Community Foundation for Brevard County. Due to their generosity we are able to provide a full scholarship to all program participants and train the conservation leaders of tomorrow. 🌊


Sarah Rhodes-Ondi
Community Stewardship Coordinator





4581 NW 6th Street, Suite A
Gainesville, FL 32609
(352) 373-6441
Fax: (352) 375-2449
stc@conserveturtles.org
www.conserveturtles.org



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New Staff Spotlight

STC welcomed new staff member Casie Hain to our lighting team in May. Casie graduated from The University of Rhode Island with a Bachelors in Political Science and a Bachelor's in Marine Affairs and then completed her Master's in Environmental Policy at Drexel University. Growing up in Pennsylvania did not discourage her from pursuing her passion of sea turtles and conservation. Her past experiences leading up to working for STC were conducting Olive Ridley nesting surveys in Costa Rica, working for the SCDNR on Loggerhead nesting surveys, and being an Endangered Species Observer on hopper dredges. Casie had had the opportunity to do nesting surveys on very remote and underdeveloped beaches, and is now excited to darken the coasts and protect vital nesting habitat with STC's Lighting Team!



Pictured above (left) is Casie when she was just one year old, already showing her love and enthusiasm for sea turtles! Her other hobbies include traveling, jigsaw puzzles, playing with her kitties, and cooking and eating new vegan recipes. Please join us in welcoming Casie to STC!