

VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 2, 2017

It's a Jungle Out There: Sea Turtles and Jaguars Interact in Tortuguero National Park



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Editor's Note: Since the late 1990s, Sea Turtle Conservancy researchers in Tortuguero, Costa Rica, have been documenting a steady increase in the number of nesting green turtles preyed upon by jaguars. Not surprisingly, the number of direct jaguar sightings by STC personnel walking the beach also has increased over this time period. Despite this somewhat concerning

trend, the number of turtles killed each year by jaguars is quite small in proportion to the size of the nesting colony, and the loss from predation, so far, has only a negligible impact on recovery efforts for Tortuguero's green turtles. Meanwhile, there is growing evidence that Tortuguero's turtle population plays a major role in the survival, health and unique

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Inside: First loggerhead turtle released for the 2017 Tour de Turtles!



Photo by Amy Waterbury

Statewide Sea Turtle Friendly Lighting Workshop Schedule

... from cover

behavior of an important population of jaguars. In order to gain a better understanding about the jaguars found in Tortuguero, researchers with Coastal Jaguar Conservation initiated a project to coordinate monitoring of the population. STC invited the group to submit a guest article to the Velador to update our readers about what they have learned so far; and STC is working to build a collaborative relationship with the group in order to contribute to the project's goals.

In 2011, Master's degree student Stephanny Arroyo Arce came to Tortuguero National Park, Costa Rica to build upon the existing jaguar monitoring project established by Global Vision International (GVI) in 2005. This collaboration forms the basis of what would become Coastal Jaguar Conservation project (CJC) in 2014, which is currently managed by Stephanny and ecologist Ian Thomson.

One of the main goals of the project is to better understand the predator-prey interaction between the jaguar (*Panthera onca*) and the four species of sea turtles that nest in Tortuguero-green turtle (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), hawksbill (*Eretmochelys imbricata*) and loggerhead (*Caretta caretta*).



Green sea turtle entering the ocean at Tortuguero National Park.

As numbers of predation events increased year after year, it became evident that the local jaguar population was adapting and thriving due to the near year-round levels of readily available prey (in the form of sea turtles). The high availability of prey provided this elusive feline with a perfect habitat, and made Tortuguero a suitable home for both a resident and migratory population of jaguars—as well as making it a suitable site for breeding and raising young.

The high prey availability has allowed the project to study the social structure of jaguars, a species that has always been considered a solitary

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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carnivore. Due to the cryptic nature of the jaguar throughout its geographic range, this kind of information is extremely hard to document, but the unique characteristics of Tortuguero (e.g. aggregate prey distribution in a small area) have facilitated the documentation of rare and atypical behaviours in this feline (e.g. a faculty for scavenging, smaller territories with greater overlap between individuals, display of nursing behaviour), some of which have never been documented in the wild before.



Thanks to these efforts, one of the main achievements has been the recent extension of the “Absolute Protection Zone” within TNP by the Costa Rican government (ACTo-SINAC), which aims to regulate human presence to ensure protection of the natural habitat of jaguars for future generations.

Due to the importance of Tortuguero National Park (TNP) for the conservation of the jaguar, this project is working with the local government, local communities and other conservation organizations to support the protection of this unique area, which will be essential for the long-term survival of both the jaguars and Tortuguero’s sea turtles.

• The Coastal Jaguar Conservation project is supported by and collaborates with Idea Wild, The Rufford Foundation, Panthera Costa Rica, Global Vision International and the Tortuguero Conservation Area. If you would like more information about Coastal Jaguar Conservation, you can contact Ian Thomson at ianitthomson@hotmail.com or Stephanny Arroyo Arce at sturnina@gmail.com. 🌐

By Ian Thomson & Stephanny Arroyo Arce
Coastal Jaguar Conservation

Summer Spotlight

Lighting display finds new home in Longboat Key Publix

Shoppers in Longboat Key, Florida, will now get to learn about sea turtle lighting as they are picking up their groceries. In June, town officials moved the Sea Turtle Conservancy’s three-sided sea turtle lighting display from town hall to the Publix in Longboat Key, a heavily-trafficked store. Terry Gans, Longboat Key mayor, wrote a letter to the Publix’s general manager to thank him for hosting the display.

“The display greatly enhances the outreach efforts of the Town to educate residents and visitors about the importance of protecting our nesting and hatching sea turtles,” Terry Gans wrote. “Far more people are exposed to the display and information at Publix than while it was housed at Town Hall. It exponentially increases our reach in raising

awareness of our beaches as nesting habitat for this endangered species.”

• The Sea Turtle Conservancy created four traveling sea turtle lighting displays, funded by the Sea Turtle License Plate Grants Program in 2013, to educate beachfront residents about the three golden rules of sea turtle lighting: keeping it low, shielded and long (wavelength). We thank the Longboat Key Publix for hosting the lighting display! 🌐



Lighting display in Longboat Key Publix

Tour de Turtles 2017

Loggerhead released from Anna Maria Island for the 2017 Tour de Turtles race

Before the sun came up at Coquina Beach on Anna Maria Island in late June, Sea Turtle Conservancy Research Coordinator Dan Evans was scrubbing the shell of a large loggerhead sea turtle, preparing the shell for a satellite transmitter. An audience of onlookers had already formed to see the turtle two hours ahead of its release time. One family was visiting Anna Maria Island from Canada and happened to stumble upon the scene, and another was visiting from Iowa. For most, it was the first time they had seen a sea turtle in real life. Evans applied the transmitter at 6:30 a.m. and after the epoxy was dry at 8:30 a.m., she was released back into the ocean to start her journey.

This release was made possible by Anna Maria Island Turtle Watch and the turtle's sponsor, Waterline Marina Resort & Beach Club. They named the turtle Eliza Ann, named for the wife of Samuel Plimsoll, the man who invented the waterline in 1876. She is the first loggerhead to participate in the 2017 Tour de Turtles race, which officially begins on August 1, 2017.

Eliza Ann is special not only because she is just the second turtle to be tagged off of Anna Maria Island, but also because of her size. She measured in at 109 cm curved carapace length, or about three and



Photo by Amy Waterbury

a half feet long, making her one of the biggest loggerheads in Tour de Turtles history!

Eliza Ann is swimming to raise awareness about the threat of light pollution to hatchling and adult sea turtles. This threat is especially relevant in Florida and other coastal communities. This month, a nesting loggerhead sea turtle was found swimming in a homeowner's pool in the Florida Keys and likely ended up there because she became disoriented by a white, unshielded light. For more information on the threat of artificial lighting to sea turtles, visit STC's website and click on Programs > Beachfront Lighting.

You can track Eliza Ann's Tour de Turtles journey online by visiting tourdeturtles.org or conserveturtles.org and clicking on "Turtle Tracker." 🐢

By Stacey Marquis
Development Coordinator and
Lighting Project Specialist



Eliza Ann making her way back to the ocean.



Spectators safely watch Eliza Ann return to the ocean.

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

Lighting Program Update

First statewide lighting workshops begin

The Sea Turtle Conservancy's lighting team received a Sea Turtle License Plate Grant in May to give lighting workshops to local code enforcement and building professionals throughout the Florida peninsula. This is the first time that STC has presented around the entire state. The workshops are meant to educate professionals in communities adjacent to nesting beaches on the importance of sea turtle friendly lighting and how to implement it.

The workshop focuses on sea turtle biology, the laws regarding sea turtles and lights and the best management practices for mitigating problematic light. Many of Florida's local governments have existing lighting ordinances to help darken beaches but lack the will and the way to make that happen. In addition to the workshops, STC will also host condensed lighting presentations for beachfront residents that focus on ways to make their homes sea turtle friendly.

The lighting team has already completed presentations in the Northeast and East Central regions of the Florida peninsula. At each location, the lighting team distributed a pre- and post- quiz to determine if the participants gained knowledge from the workshops. At both workshops, participants' average quiz scores increased. The East Central



Lighting specialist, Lauryn Wright, speaks at a workshop.



Lighting specialist, Stacey Marquis, speaks at a workshop.

region's average quiz scores went from a 74 percent to an 88 percent and the Northeast region's average quiz scores went from a 74 percent to a 94 percent!

Below are the general times and locations for the workshops and presentations:

<i>Month/Year</i>	<i>Location</i>
July 2017	Southeast region: Fort Pierce, Jupiter
January 2018	South region: Pompano Beach, Miami Beach
March 2018	Southwest region: Naples, Port Charlotte
April 2018	West Central region: Sarasota, Clearwater

If you have specific questions about the workshops or public presentations, please email:

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Lauryn Wright (lauryn@conserveturtles.org) 

By Stacey Marquis
*Development Coordinator and
Lighting Project Specialist*

Residents and sea turtle permit holders help protect Florida's beaches

During STC's many years of witnessing the activities that occur on the beach after significant storm events such as nor'easters or hurricanes, one thing is abundantly clear and consistent; impacted coastal property owners engage in a wide range of activities to try to quickly restore their property and their dunes. It is understandable that property owners feel vulnerable after storm events. Most seek permits and engage in lawful actions to rebuild and protect their property from future storms. However, problems arise when property owners fail to apply for the required state permits and engage in illegal construction activities.

These activities can harm sea turtles and can actually inhibit natural beach recovery. After Hurricane Matthew many property owners, especially in the most impacted areas in northeast Florida, ignored state permitting guidelines. Illegal and unpermitted activities included such things as new dune crossovers extending way out on the active beach, decks constructed seaward of the dunes and over turtle nesting habitat, continuous sand fencing constructed parallel to the beach effectively blocking sea turtles from accessing the upper beach,



Fence and dune crossover illegally constructed on an active nesting beach.

dunes replanted with sod instead of native vegetation, and non-beach quality sand being dumped on the beach.

The Florida Department of Environmental Protection (DEP) regulates and permits activities that take place on the beach. However, agency staff can't be everywhere after storm events as property owners and local governments rush to rebuild structures and infrastructure. Also, these activities often take place in people's backyards out of sight of the public. STC works with concerned local residents and especially sea turtle Permit Holders to help identify illegal activities on the beach and report them to



Unpermitted deck built over the nesting beach. Decks constructed on the beach are problematic under any beach permitting scenario.

state and local authorities. Sea turtle monitors often play a critical role after storms since they are on the beach daily and also often have an understanding of coastal regulations and laws.

Following Hurricane Matthew local residents and sea turtle Permit Holders in northeast Florida were instrumental in assisting DEP in reporting illegal activities that could harm the beach. DEP could then act to bring these new structures into compliance with state laws or insist on their removal. Enforcement of state and local laws designed to protect sea turtles and the beach is good for Florida, since a healthy and resilient beach and dune system benefits everyone, helps local economies recover, and helps protect all beach-dependent animals. 🐢

By Gary Appelson
Coastal Policy Coordinator

Membership

Kindergarten class helps sea turtles with special service project

Ms. Caitlin Whiting of Audubon Park Elementary in Orlando, Florida reached out to the Sea Turtle Conservancy several months ago to see if there was a service project her kindergarten class could help with. They were getting ready to learn about the ocean and marine animals, so she wanted to do a big project on ocean debris and sea turtles during this unit. Her goal was for the young students to develop a hands-on service project instead of just a typical fundraiser that would help turtles in some way. We suggested that her classroom help out with STC's recycling program, TerraCycle!



Students proudly display their sea turtle adoption certificates after class service project success.

TerraCycle is a company that collects and upcycles hard-to-recycle items such as chip bags, toothbrushes, granola bar wrappers, shampoo bottles, makeup containers, etc. While these items are often recyclable, they cannot be put in a regular recycling bin. TerraCycle steps in to recycle this “trash,” and they also make a donation to STC for the items we send in. Typically, each individual item is worth between 1-10 cents. Since partnering with TerraCycle, we have been able to keep more than 25,000 pieces of trash out of landfills and the ocean, and also received more than \$350 in donations!

TerraCycle requires that items are sent in bulk so that it is as eco-friendly as possible. This means that the more people we have collecting trash with us, the better! Working with classrooms to collect items is a huge help, and is a great way to teach students about marine debris and recycling.

Throughout the class' TerraCycle service project, Ms. Whiting adopted a turtle for each student and also had a Distance Learning Skype Presentation with STC Research and Technology Specialist Dan Evans. The students learned all about how marine debris affects sea turtles and ways they could help. They also got their family and friends involved as they collected trash items from them. At the end of their service project, Ms. Whiting's class had collected more than 500 pieces of trash that most likely would've ended up in a landfill or as marine debris if not for this special program.

Thank you, Audubon Park Elementary!

If you're interested in learning more about STC's TerraCycle programs and ways to get involved, email lexie@conserveturtles.org. 



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Skip the Straw Campaign

STC encouraging restaurants to reduce plastic straw waste

Sea Turtle Conservancy has been working with restaurants in Gainesville and in coastal areas to implement a straw-on-demand policy. The policy is simple: Instead of automatically providing a straw with each drink at a table, servers wait for guests to ask for a straw. One restaurant in Gainesville called Satchel's has utilized the policy for around two years. The owner has noticed that the majority of guests do not ask for a straw, which reduces the amount of plastic that is produced by the restaurant that can end up in the digestive systems of wildlife.

Americans use more than 500 million straws daily and plastics are already negatively affecting more than 660 marine wildlife species. Sea turtles are especially impacted by plastic waste.

To reduce plastic waste even further, restaurants can offer paper straws instead of plastic, which are biodegradable. The common complaint about paper straws is that they can get soggy in drinks, but companies are improving their design and are creating them to be more durable. One company called Aardvark offers straw samples for restaurants to try before purchasing.

Are you a restaurant owner or customer who wants local restaurants to reduce their plastic straw consumption? Email Stacey Marquis at stacey@conserveturtles.org for more information. 

By Stacey Marquis
Development Coordinator and
Lighting Project Specialist

5 REASONS TO GO STRAWLESS

SAVE SEA TURTLES



Like humans, a sea turtle's mouth cavity is connected to its nasal cavity; if accidentally ingested, a straw may become lodged in the turtle's nose. Less straws in the environment helps sea turtles stay alive!

CUSTOMER SUPPORT



According to Nielsen data, global online consumers were willing to pay more to shop from companies that are socially and environmentally responsible. Knowing that restaurants skip the straw may encourage customer loyalty.

ORDER LESS STRAWS, SAVE MONEY



Many restaurants use more than 1 million plastic straws a year. By skipping the straw or only offering them upon request, restaurants can save thousands of dollars every year.

NONPROFIT PARTNERSHIP



By adopting a straw-upon-request policy, restaurants can align with nonprofits that are helping to save wildlife, such as the Sea Turtle Conservancy and the Ocean Conservancy.

REDUCE CARBON EMISSIONS



Straws and other plastics are made from petroleum, which emits carbon dioxide into the atmosphere during its production, contributing to global warming. Less straw production = less carbon emissions.

Do you want your restaurant to go strawless? Email stacey@conserveturtles.org to learn more.

SOURCES:

<https://conserveturtles.org/information-sea-turtles-threats-marine-debris/>
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