Green Turtle Nesting Shatters all Records in Florida

Something remarkable is happening with the green turtle population that nests in Florida and up the east coast of the United States. As the 2013 nesting season draws to a close, the numbers being reported by track surveyors give real hope for the recovery of this iconic endangered species. In particular, the trend for green turtle nesting in the Archie Carr National Wildlife Refuge on Florida’s central east coast is evidence of an inspiring conservation success story brought about by over 30 years of support and collaboration among public agencies, nonprofit groups like Sea Turtle Conservancy (STC), researchers from the University of Central Florida and local citizens with a strong sense of stewardship for this globally important turtle rookery.

It has been clear for at least 10 years that green turtle nesting is on the rise in Florida. In fact, the increase in nesting has followed an exponential curve—leading many conservationists to declare the Florida population of green turtles as the fastest growing colony of this species in the world. Growth rates in Florida have even surpassed the celebrated increases in green turtle nesting documented by STC in Costa Rica, though the Tortuguero colony is still significantly larger then the population nesting in the U.S.

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Tragic News Impacting Sea Turtle Conservation in Costa Rica

Although there is much good news to report regarding increases in green turtle nesting at Tortuguero, Costa Rica, STC unfortunately has some very sad news to share as well. As many readers may already have learned through media reports this summer, an unprecedented tragedy recently occurred in Costa Rica, when Jairo Mora Sandoval, a young Costa Rican biologist who monitored sea turtle nesting, was killed (reportedly by turtle poachers/drug traffickers) while conducting a beach patrol at Moín, a public beach located about 50 miles south of STC’s project site in Tortuguero.

Jairo worked for the Wider Caribbean Sea Turtle Conservation Network (WIDECAST) and represented a hopeful generation of talented young biologists in Latin America. Needless to say, this tragedy has shaken the entire conservation community in Costa Rica and around the world. STC, along with a coalition of sea turtle protection organizations with ties to Costa Rica, worked closely together to advocate for swift justice—even setting up a reward fund for the prosecution of responsible parties. We also have been working with the government of Costa Rica to honor Jairo’s memory by declaring Moín as a protected area for sea turtles. Most importantly, STC is working to improve security for sea turtles, as well as the dedicated staff and volunteers who monitor the beaches where we and other organizations work.

This summer STC’s Costa Rica staff was very busy meeting with other turtle conservation groups, local law enforcement officials, and representatives from the Costa Rican Coast Guard and environmental agencies to address security issues and to develop a meaningful long-term response. Although there is great concern about Jairo’s murder and what it means for conservation efforts in the region, STC is encouraged to report that everyone involved is absolutely dedicated to improving security measures to ensure that nothing like this ever happens again. If there is any bright spot to this tragedy, it is a heightened awareness on the part of Costa Rican officials that they must work harder to ensure protection of sea turtles and other coastal resources, and they must collaborate more closely with groups like STC, WIDECAST and others.

Unfortunately, data collected by STC this year in Tortuguero shows that egg poaching is still a problem, and we are mindful that the presence of conservationists on the beach is more important than ever. In addition to beefing up our own patrols, STC is working to facilitate greater presence on the beach by local park guards and law enforcement personnel. So far, Costa Rican officials are responding with greater levels of patrols and enforcement action.

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Despite the recent positive trends in nesting, no one predicted what has occurred this year in the Carr Refuge and throughout the southeast. The number of nests deposited by green turtles this summer in Florida shattered all previous records. Nesting in the Carr Refuge alone has more than doubled the previous record high, which was set just two years ago. Nesting increases also have been observed this year in South Carolina, North Carolina and Georgia as well. Even South Florida, which doesn’t get nearly as many nests as Central Florida, has seen a doubling of green turtle nests this season.

“It’s just a miracle,” said Dr. Llew Ehrhart in a recent interview with the Miami Herald. “This is one of the greatest positive stories in the history of wildlife conservation in America, mostly because they were decimated so badly.”

Dr. Ehrhart is a retired University of Central Florida biologist who coordinated nest monitoring in the Archie Carr Refuge for decades. He and his students from UCF have documented turtle nesting along much of the Brevard County coastline since 1982. Ehrhart’s data about loggerhead nesting on this stretch of coast helped justify the establishment of the Carr Refuge along a densely-nested, 20-mile stretch that runs from Melbourne to Vero Beach. Though the Carr Refuge encompasses just a small fraction of the Florida coast, about 25% of all the sea turtle nesting in Florida occurs within the Refuge boundary.

Throughout the 80s, Dr. Ehrhart rarely counted more than 50 green turtle nests in the area that would become the Carr Refuge. By the early 1990s, after the beach had been designated by Congress as the first federal refuge for sea turtles in the U.S., nesting slowly climbed into the hundreds, and over the last decade the number of green turtle nests started to exceed 1,000 nests in alternating years. A common trend with green turtles is their alternating high and low nesting years, a feature first reported by Archie Carr while directing STC’s green turtle monitoring project at Tortuguero, Costa Rica. In the Archie Carr Refuge, the record level for green turtle nesting took a major jump in 2011, when the number exceeded 6,000 for the first time since monitoring began. Now just two years later, that record high has been eclipsed by a new record of just under 13,000 green turtle nests.
To what do we credit this amazing success story? What we are seeing is most likely the result of over 30 years of conservation efforts on behalf of U.S. sea turtle populations really starting to pay off. Those efforts include coastal lighting ordinances requiring the use of turtle-friendly beachfront lighting to prevent the disorientation of nesting turtles and hatchlings; restrictions on the use of coastal armor- ing and other habitat-destroying structures to combat beach erosion; coastal land acquisition programs that have preserved important stretches of nesting habitat such as the Carr Refuge; a ban on the use of gillnets in Florida waters enacted in 1994 that decreased incidental capture of green turtles; and, of course, the federal requirement that all shrimp trawlers use Turtle Excluder Devices that allow turtles to escape trawl nets before they drown. These all have greatly aided in the recovery of green turtles, but most sea turtle conservationists agree that the single most important conservation step occurred in 1978, when the green turtle was added to the federal list of endangered species. The Endangered Species Act banned the harvest of eggs, turtle hunting, and any sale of sea turtle meat, domestic or imported.

It should not be surprising that when we finally stopped eating green turtles and killing them to make things out of their shells and skin, the species would begin to make a come back. The growth of green turtle populations observed by STC in Tortuguero coincides with major conservation actions implemented 30 and 40 years ago in Costa Rica—roughly the time it takes a hatchling to reach reproductive age and begin nesting on the beach where it was born. The exponential growth of green turtles in Florida follows similar conservation actions taken about three decades ago. Our investments in the recovery of this species are maturing, and hopefully the interest will continue to compound.

While it is appropriate to celebrate the amazing success story for green turtles, we must remain vigilant in their protection. Sea turtles of all species still face a number of daunting threats, such as widespread development of their nesting beaches, shoreline armoring, light pollution, interactions with commercial fisheries and marine pollution. STC will continue addressing threats to sea turtles here in the U.S. and abroad so one day all sea turtle populations will begin to recover as green turtles are doing now in Florida.

**STC’s Role in the Archie Carr Refuge**

STC has been an active supporter and advocate for the Archie Carr National Wildlife Refuge since the idea was first conceived over 25 years ago. Our organization played a significant role in establishing the refuge in 1989, and STC was a founding member of the Archie Carr Working Group, a coalition of public and private entities set up to expand, protect, manage and promote the Refuge. STC continues to help secure funds for land acquisition and management, and we directly coordinate a number of habitat improvement programs in the Carr Refuge, including dune restoration projects, beach clean ups and a program that helps beachfront residents convert their lights to the latest turtle-friendly technology. Our annual migration tracking studies of turtles in the refuge are yielding important information about what these turtles do when they leave the Refuge, which helps direct conser-
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To further improve protection efforts in the area, STC and other conservation groups in Costa Rica are advocating for the establishment of a new protected zone that will extend from Moin Beach north to the Tortuguero National Park boundary. The beach in Tortuguero already is a national park, and thus afforded extra protections under Costa Rican law. Expansion of the coastal protection zone all the way down to Moin will add important safeguards to this entire stretch of coastline and the sea turtles that nest there.

To improve the capacity of law enforcement and resource management personnel on the Caribbean coast of Costa Rica, STC is developing plans to conduct a series of training programs for regional Costa Rican law enforcement and protected area managers at our Tortuguero field station. The program, to be conducted in partnership with the Center for Protected Area Management and Training (CPAMT) at Colorado State University, is aimed at improving awareness of sea turtle protection laws among public officials who frequently rotate into and out of the region.

Sea Turtle Conservancy
And they are off! 12 Turtles Compete in the annual Tour de Turtles Migration Marathon

This summer Sea Turtle Conservancy (STC) kicked off its sixth annual Tour de Turtles with the tagging and release of 12 sea turtles, representing five different species, fitted with satellite transmitters. All 12 turtles are off and swimming, with their daily movements being carefully tracked online at www.tourdeturtles.org. This year’s Tour de Turtles, a popular education program that incorporates STC’s migration research into a fun online program followed by tens of thousands of people around the world, included public turtle releases in Costa Rica, Panama, Nevis, Florida and Bermuda.

The official start of the race commenced with the release of four loggerhead turtles in Florida the last weekend of July. Two loggerheads sponsored by a variety of Disney programs (see full list of sponsors on the next page) were released Saturday, July 27, in front of Disney’s Vero Beach Resort. Another two loggerheads were released in front of a huge crowd on Sunday, July 28, at the Barrier Island Center, located in the heart of the Archie Carr National Wildlife Refuge. An estimated 1,500 people gathered to watch as STC released the final two female loggerhead sea turtles, named ‘Ripley’ and ‘Johnny,’ into the ocean to begin their migrations.

This year marks the first time a rehabilitated turtle, in this case a Kemp’s ridley, is competing in the Tour de Turtles. The turtle, named ‘Tampa Red,’ was rescued by the Florida Aquarium in March when she suffered from buoyancy issues caused by a red tide bloom. Red tide can cause physiological problems in sea turtles that interfere with their ability to dive below the surface. After being rehabilitated, Tampa Red was released from Bunche Beach on July 29, making her the first Tour de Turtles competitor to be released on the West coast of Florida.

“We’re very excited to have Tampa Red swimming in this year’s race,” said Daniel Evans, STC’s Research and Technology Specialist. “It is our first time following the movements of a rehab turtle and a Kemp’s ridley. It will be very interesting to see where she travels.”

Before releasing each turtle, STC scientists attach a satellite transmitter to its shell. The transmitters allow STC and the public to track the turtles for one to two years as they migrate from their nesting beaches to their foraging grounds. Turtle fans can follow the turtles’ migrations online for free, cheering on their favorite competitor and learning about some of the threats sea turtles face.

These threatened and endangered competitors swim with the goal of being the turtle to swim the furthest distance in three months. Just like with people who run marathons, each Tour de Turtles competitor is swimming to raise awareness about a particular cause. The Causes Challenge raises awareness about threats to sea turtles, such as boat strikes or marine pollution. By supporting a turtle’s cause, audiences raise money and awareness about some of the many obstacles facing sea turtles.
Some interesting facts about contestants in the 2013 Tour de Turtles:

• ‘Mora,’ a green sea turtle released from Tortuguero, Costa Rica, on July 6, was named after Jairo Mora Sandoval, a Costa Rican biologist who was tragically killed in May while monitoring a sea turtle nesting beach south of Tortuguero (see Up Front on page 2).

• ‘Cruz,’ a green sea turtle released from Tortuguero, Costa Rica, on July 7, was named after Guillermo “Billy” Cruz, STC’s first Vice President and recipient of the Archie Carr Lifetime Achievement Award, who passed away this summer (see back).

• ‘Calypso Blue II’ and ‘Panama Jackie,’ both leatherbacks, were released from STC’s brand-new research station in Soropta Beach, Panama.

• A juvenile turtle released in Bermuda was sponsored by Turtle & Hughes, Inc., a lighting and electrical company with a turtle named ‘Relay’ as its corporate logo—also the name given to the turtle now being tracked in the Tour de Turtles.

• Two loggerheads sponsored by Disney were given the names ‘Carrie’ and ‘Claire,’ which are characters in the new Disney/Pixar film “Monsters University.”

• Two hawksbill turtles named ‘Banjo’ and ‘Cari-belle’ were sponsored by the Four Seasons Resort Nevis as part of an ongoing partnership with STC that supports research and educational programming for children on the island.

Follow the progress of all these turtle competitors online at: www.tourdeturtles.org 🌐
Feds Designate Critical Habitat for Loggerhead Sea Turtles: What does it Mean?

In 2007, a petition was presented to the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) requesting that they uplist loggerhead sea turtles from threatened to endangered. As a result, in 2010 NMFS announced the identification of 9 Distinct Population Segments of loggerheads (discreet populations based on genetics and range) and proposed that the two Pacific segments be uplisted from threatened to endangered status. This change in federal status triggered a requirement under the Endangered Species Act (ESA), which required federal agencies to identify and label so called “critical habitat” (CH) for all loggerhead sea turtle populations. Since sea turtles nest on the beach and utilize essential marine areas for mating and foraging, CH had to be designated for both terrestrial and marine habitats.

In March 2013, FWS finally announced its draft proposal designating terrestrial CH for the Northwest Atlantic loggerhead population segment, which included beaches along 739 miles of coastline from North Carolina to Mississippi. The proposal includes 84% of all nesting habitat for loggerheads in the United States. STC and many other organizations submitted comments supporting the CH designations for beaches.

In July 2013, NMFS issued its long-awaited draft rule designating CH in the marine environment. NMFS proposed critical habitat for 36 separate marine areas within the Northwest Atlantic loggerhead’s range, including nearshore reproductive habitat (extending from the shoreline out to 1.6 km in an area used by hatchlings leaving the beach and by adult females during internesting); areas used for breeding, foraging, and wintering; migratory pathways (including the narrow migration route hugging the Florida coastline from Cape Canaveral to the Keys); and open ocean pelagic habitats with concentrations of floating Sargassum mats that are utilized by hatchlings and sub-adult loggerheads.

So what does the CH designation mean? The critical habitat label is given to areas essential for the survival, recovery and conservation of the species that may require special protections. It focuses on physical or biological features of the habitats that support the life history needs of the species.

The designation affects all future federal activities in those areas by adding an additional layer of
review for certain types of coastal development, beach nourishment and fisheries management when permitting decisions for these activities include a federal connection. Unfortunately, most types of beachfront development and sea wall construction do not include any federal oversight. Therefore, the CH designation would not impact state permit decisions about these activities. However, if a federal agency is involved in approving or funding an activity that impacts these habitats, they must ensure the activity does not result in “destruction or adverse modification” of critical habitat. The federal agencies also must protect the known biological and physical features of the habitats that are essential to conservation.

CH designation is not a silver-bullet answer to protecting loggerhead habitat, and there is a lot of confusion about what the designation really means. Some coastal governments and development interests are objecting to designations, especially for nesting beaches. They fear it will curtail coastal development, limit public access to beaches, or otherwise harm local economies. These fears are exaggerated and unfounded, as sea turtles already are protected under the ESA. For example, a federal permit for beach nourishment already includes extensive “terms and conditions” that must be met to protect endangered sea turtles. Designating the beach as critical habitat will not add significant additional requirements to the federal permit.

A critical habitat designation does not impose restrictions on non-federal lands unless federal funds, permits, or activities are involved. The designations do not affect activities by state or local governments or by individuals unless a federal permit is required. Importantly, the designations help highlight the significance of these areas so the public and city and state governments can better plan coastal activities and mitigate threats to nesting habitat or in-water habitats. Additional federal funding may also be available to states for activities that benefit loggerhead nesting habitat. Critical habitat does not limit public access or affect beach activities such as surfing, swimming, fishing and sunbathing. It also does not affect land ownership nor does it establish any preserves or refuges.

Loggerheads migrate many miles to reach their nesting beaches each year. The CH designations for beaches could add some increased scrutiny of federally-permitted activities that help ensure nesting turtles return to healthy beaches to lay their eggs. STC believes what is good for sea turtles is also good for beaches and the public. The same holds true for the marine habitats. The critical habitat designations support this belief by helping keep our beaches and marine waters clean and healthy while preserving their valuable ecological and economic benefits.

By Gary Appelson
Florida Policy Coordinator

The FWS announcement and CH maps can be found at www.fws.gov/northflorida/
Information about the NMFS designations can be found at www.nmfs.noaa.gov/pr/species/criticalhabitat_loggerhead.htm

Sea Turtle Conservancy supports Florida’s Water and Land Legacy Initiative to place a constitutional amendment on the 2014 ballot. To download a petition and for information visit www.FloridaWaterLandLegacy.org
What do Sea Turtles have to do with Sloths? Community-based Conservation in Action

Sea Turtle Conservancy (STC) believes community involvement and buy-in are among the most important components to ensuring the success of long-term conservation efforts, as evidenced by our ongoing work with local communities in the island archipelago of Bocas del Toro, Panama. STC’s commitment to involve these communities in local conservation efforts is beginning to foster a wider conservation ethic, one that goes beyond just sea turtles.

Since 2003, STC has worked to protect sea turtles at a variety of critical nesting sites in the Bocas del Toro Province of Panama. Most of the local communities historically have depended heavily on these turtles as a staple food source and to generate income through the sale of turtle eggs, turtle meat and jewelry crafted from the shell of hawksbill turtles. Although it has been a challenge to confront long-instilled traditions and shift practices and mindsets, STC has worked tirelessly to educate and involve community members in monitoring, research and tourism ventures that help create sustainable livelihoods.

While the beaches of Bocas del Toro are important nesting habitats for critically endangered leatherback and hawksbills, the mangrove forests of Escudo de Veraguas, an undeveloped island just off the coast of STC’s project site at Chiriqui Beach, are home to another critically endangered species—one that is found nowhere else in the world—the pygmy three-toed sloth (Bradypus pygmaeus).

On September 9th, STC’s field staff in Bocas del Toro was asked by community leaders to help settle a situation in which concerned members of the community were trying to prevent eight of these endemic and incredibly rare sloths from being removed from the wild and shipped to private, for-profit zoos in the U.S. and Panama City. This particular species of sloth is classified by the IUCN as Critically Endangered, as there are only 79 documented individuals remaining.

Community members had learned that the eight small sloths were at the local airport, where members of a team from the Dallas World Aquarium (DWA) were preparing to load them on a plane. Two of the animals were destined for a zoo in Panama City and the rest were to be taken back to Dallas. The DWA claimed that exporting the sloths was part of an ongoing conservation project, and...
that results from their studies and captive breeding attempts would ensure the longevity of the species in the case of a natural disaster. However, moving 10% of the remaining wild population of a critically endangered, endemic species into captivity could have serious repercussions on an already-small gene pool. While the DWA claimed they planned to re-introduce the sloths bred in captivity back into the wild, there have been few successful sloth re-introduction programs in the past and none with this particular species, about which very little is known.

The community was furious at this attempt to remove a local natural resource and demanded that the sloths be returned to their natural habitat. This reaction from the community signaled a significant shift in local attitudes about wildlife conservation. Not long ago, people in this area might have seen the sloths as commonplace or even as a source of food. Now members of the community are taking action to protect this local endangered species.

A spontaneous, community-wide protest put pressure on authorities to detain the flight that was meant to take the DWA team and sloths back to Panama City. The protests later moved to the hotel where the sloths had been kept after they were captured, and a heated dialogue ensued between community leaders and representatives of the DWA. The community demanded that if DWA wanted to perform research on the sloths, that they do so in situ “as the turtle people do.” STC’s work in the region was repeatedly highlighted as an appropriate model for on-site conservation and research, one which successfully protects the species in question with very little intervention or manipulation, while also allowing for involvement of the local communities.

After mounting pressure by the protesters and the arrival of local and national press, DWA representatives finally announced that they would not export the sloths, and they offered to fund the gas needed to return the sloths to the island. On September 10th, STC field staff loaded the sloths into their boat, accompanied by a group of local citizens and representatives of the Smithsonian Tropical Research Institute. Staff and community members were able to help the sloths climb back into the branches of the mangroves they call home.

This sloth incident was an indicator of the growing environmental ethic spreading through Bocas del Toro, highlighting the power of communities to protect and advocate for the appropriate use of their natural resources. It was also a vibrant reminder of the importance of involving communities in conservation efforts. STC is pleased to see that the impact of its conservation efforts has moved beyond sea turtles, providing community-based conservation models that can be replicated in the region to protect other endangered species.

For updates, additional photos and videos, visit www.conserveturtles.org/turtleblog

By Shannon Thomas
Community-based Turtle Tourism Coordinator
In Memoriam

Guillermo “Billy” Cruz was a former Vice President of Sea Turtle Conservancy and recipient of the Archie Carr Lifetime Achievement Award. He was STC’s first vice president, and in Archie Carr’s words, played an “indispensable” role in the establishment of STC’s long-term conservation program at Tortuguero, Costa Rica.

Billy Cruz was born in May 1924 in San Jose, Costa Rica. Billy first met Archie Carr in Honduras in 1955, where Archie was serving as a visiting zoology professor at the Pan-American Agricultural School. Billy was one of his brightest students. Upon learning of Archie’s interest in sea turtles, Billy reportedly was the first person to tell Dr. Carr of rumors about a large green turtle nesting colony at Tortuguero…and the rest is history.

After joining the Board of STC (formerly Caribbean Conservation Corporation), Billy worked tirelessly for more than 30 years to promote sea turtle conservation in Costa Rica. He took STC’s message to the highest levels of Costa Rican government and personally arranged to have José Figueres, then President of Costa Rica, join Dr. Carr at Tortuguero to witness the nesting of a sea turtle. During their turtle walk, Archie and President Figueres happened upon a turtle hunter in the process of slaughtering a turtle on the beach—an event that would set in motion Costa Rica’s longstanding commitment to turtle conservation and the eventual establishment of Tortuguero as one of the country’s first national parks in 1972.

Billy Cruz passed away quietly in the presence of family and friends earlier this year at the age of 89. Billy left behind a wife, Graciela Sandoval, a daughter, Marianela Cruz Salgado, and two grandchildren, Rebeca and Jose Roberto Salas Cruz, the latter of which regularly volunteers with STC at Tortuguero. One of the green turtles released at Tortuguero this summer with a satellite transmitter that is being tracked as part of the Tour de Turtles was named “Cruz” in honor of Billy’s tremendous contribution to sea turtle conservation.

David Godfrey (left) and Mario Boza (right) present Billy Cruz (center) with the Archie Carr Lifetime Achievement Award.