



DNR

LOGGERHEADLINES

A publication of the Marine Turtle Program - sea turtle conservation since 1977



2015 SOUTH CAROLINA STATEWIDE SEA TURTLE NEST COUNT SUMMARY

2015 Sea Turtle Nest Numbers							
Waties Island	6	Sand Island	175	Morris Island	4*	Pine Island	12*
North Myrtle Beach	17	South Island	210	Folly Beach	98	Beaufort interior	10*
Myrtle Beach	3*	Cedar Island	59*	Kiawah Island	321	Harbor Island	54
Myrtle Beach State Park	2	Murphy Island	15*	Seabrook Island	75	Hunting Island	82
Long Bay Estates	0	Cape Island	1,357	Deveaux Bank	16*	Fripp Island	78
Surfside Beach	1	Lighthouse Island	397	Botany Bay Island	200	Pritchards Island	94*
Garden City	7	Raccoon Key	36*	Botany Bay Plantation	326	Little Capers Island	62*
Hungtington Beach S.P	12	Bull Island	140	Interlude	14*	St. Phillips Island	9*
Litchfield Beaches	19	Capers Island	14*	Edingsville Beach	66	Bay Point Island	56*
Pawleys Island	17	Deweese Island	5	Edisto Beach S.P	178	Hilton Head Island	325
Debordieu/Hobcaw	40	Isle of Palms	31	Edisto Beach	102	Dafuskie Island	54
North Island	222*	Sullivans Island	7	Otter Island	83*	TOTAL	5,111

*Number represents a minimum nest count because these beaches are not surveyed every day.

NORTHERN RECOVERY UNIT LOGGERHEAD DNA PROJECT

Georgia DNR, North Carolina Wildlife Resources Commission, and the SCDNR sea turtle programs are participating in a multi-state genetics research project in conjunction with the University of Georgia. The project aims to answer several basic loggerhead sea turtle nesting questions and provides insight into the status of the overall population. 2015 completes the sixth season of sample collection for this regional, co-operative research project!



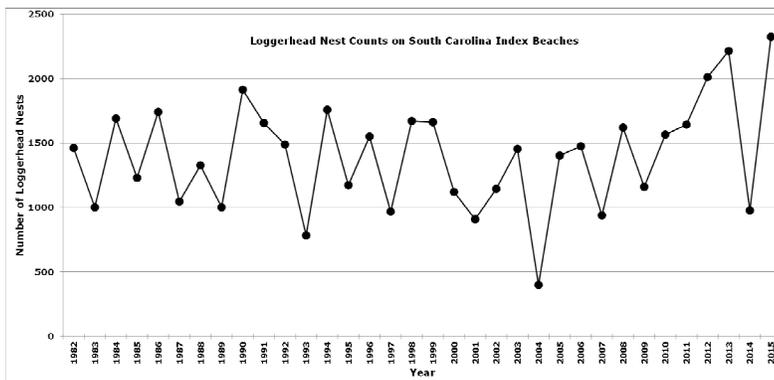
To date, samples from 50,232 nests have been collected from GA, NC, and SC. Dr. Joe Nairn and



Dr. Brian Shamblin at the University of Georgia have successfully assigned a DNA ID code to 43,550 (86.7%) of these samples identifying **8,329** unique females. The map to the left is an example of one SC nesting loggerhead. The green points represent nest locations. This female laid nests on both North Carolina and South Carolina beaches in 2015. By using a multi-state approach, researchers are able to evaluate nesting patterns throughout the region. For complete information on the status of this project, please visit: www.dnr.sc.gov/seaturtle/genetics.htm.

LONG-TERM NESTING TRENDS

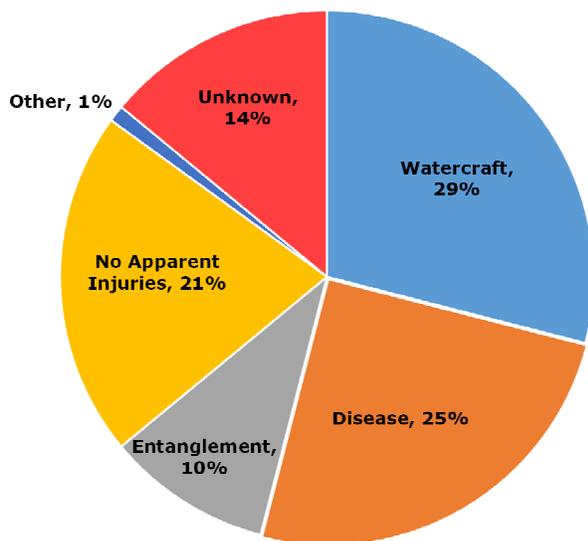
South Carolina has six index beaches with projects that have been conducting standardized ground surveys for loggerhead nests since 1982 (South Island, Cape Island, Lighthouse Island, Edisto Beach State Park, Edisto Beach, and Fripp). Loggerhead nests from these six beaches totaled 2,322 in the 2015 season, making 2015 the highest *index beach* nest count on record!



STRANDINGS and REHABILITATION

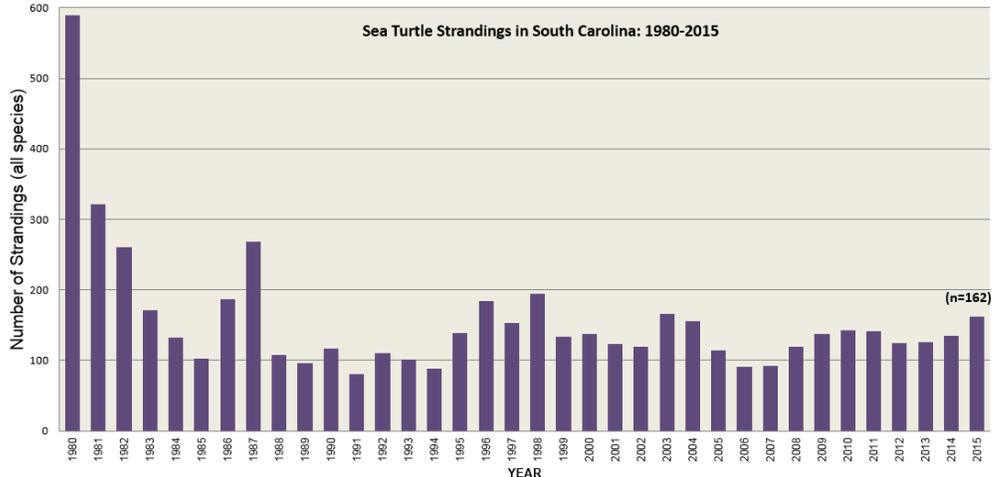
Stranding numbers in 2015 (n=162) were considerably higher than the 10-year average of 138. The species composition of turtles included 103 loggerheads, 17 greens, 36 Kemp’s ridleys, five leatherbacks, and one turtle of undetermined species.

2015 Probable Cause of Stranding (live and dead)



Forty-four of the 162 sea turtles stranded alive; 27 loggerheads, four greens, 11 Kemp’s ridleys, and two leatherbacks. Identified stranding causes for these live turtles included 13 caught on recreational hook and line(11) and entanglement (2), 19 due to disease, one from shark injury, six to watercraft, one with intestinal impaction and four that were unknown or unable to be properly assessed.

Of the 44 that stranded alive, 11 were deemed healthy and released on site and three died during transport. Thirty sea turtles were admitted into the South Carolina Aquarium (SCA) Sea Turtle Hospital with two later transferred to another facility in North Carolina. Of those remaining, twelve recovered, were tagged and released. Nine died, and seven remain under rehabilitation at the SCA sea turtle rescue program.



In 2015, cataracts continued to be observed in rehabilitated turtles. SCA veterinarian, Dr. Shane Boylan, first diagnosed cataracts in a South Carolina sea turtle in 2014. Dr. Anne Cook, a local consulting veterinarian performed corrective surgery on the animal to restore sight. Five additional turtles presented with this problem this year and successful corrective surgery has been performed on four of those animals to date.

South Carolina Aquarium Sea Turtle Rescue Program—2015 was an extremely busy year with 30 live SC turtles admitted in only six months (23 loggerheads, four Kemp’s ridleys, two greens, one leatherback). The first stranding in March, a 450-pound leatherback rescued by SCDNR off South Island, is one of few leatherbacks successfully treated and released



from a rehabilitation facility. Most of the patients that followed were debilitated loggerheads which are not only large but take a great deal of time to recover. Because of space constraints, four loggerheads were transferred to NC to finish rehabilitation. Thirty-five releases in 2015 bring the total number to 179 at year-end. The SCA thanks the entire SC sea turtle community for helping them attain these fantastic numbers. The Sea Turtle Hospital expansion is slated to break ground in September 2016 and open in spring of 2017. Visit www.scaquarium.org for patient updates, expansion information and much more. Photograph of leatherback sea turtle by Barbara Bergwerf.



TAGGING AND RECAPTURES

The Marine Turtle Conservation Program tagged 34 turtles in 2015 prior to being released. All of these were rehabilitated at the South Carolina Aquarium. Nineteen originated from a cold stunning event in Massachusetts that occurred in 2014, and 14 turtles stranded in South Carolina originally, including one animal brought in by the SCDNR Marine Resources Division In-Water sea turtle research project. Tagging of these turtles will allow biologists to track their progress should they be encountered again.



Tagged Turtle Status	Original Tag Location	Recapture Location
Nesting- loggerhead	Wassaw, GA (nesting) 6/26/15	Fripp Island, SC (nesting) 7/7/15
Stranded- Kemp’s ridley	Cold-stunned in Massachusetts, rehabbed by SCA, released on Isle of Palms, SC 2013	Hatteras, NC (dead) 11/9/15
Stranded- loggerhead	SCDNR In-Water research project, offshore SC 2003	Charleston Harbor Interior, SC (dead) 8/24/15

REGIONAL AND NETWORK UPDATE

SCDNR REGIONAL IN-WATER RESEARCH SURVEY - A total of 328 trawling events off SC, Georgia and Florida resulted in the capture of 118 loggerheads, 23 Kemp’s ridleys, and two green sea turtles.

Eight loggerhead and one green sea turtle captures in 2015 represented recapture events. Five of the loggerheads were previously tagged by our survey, including two recaptured in the same week after being tagged in the very first year (2000) of the research survey. Two recaptured loggerhead sea turtles were originally tagged on Wassaw Island, GA (2011, 2015) and the third was originally tagged following capture in a NMFS trawl survey off Jekyll Island, GA in 2013. The 99.2cm (SCLmin) green sea turtle recaptured off Capers Island, SC was originally captured in Florida Bay, FL in 1995; during its 20 years at large this turtle more than doubled in size.



Acoustic telemetry: Fifteen acoustic transmitters were attached to juvenile loggerhead sea turtles. Acoustic receivers, maintained by various research studies managed by the SCDNR and GADNR, later detected eight of them (2,303 detections total) between 30 May and 20 August 2015, mostly on receivers associated with artificial reefs and shipping channels in both states.

Satellite telemetry: Four adult male loggerhead sea turtles received satellite transmitters after being captured off Jekyll Island, GA, Edisto Island, SC and Amelia Island, FL. Unfortunately, only one of these four transmitters provided location data after mid-October, this transmitter is still active and the over-wintering distribution of “Fuerte” can be monitored at http://www.seaturtle.org/tracking/index.shtml?project_id=828.



NORTH CAROLINA - The loggerhead nest count for 2015 in North Carolina was 1,252, which is considerably higher than average (800 nests). In addition, there were 41 green turtle nests, one Kemp's ridley, and two hawksbill nests observed in 2015. There were 794 stranded sea turtles reported in 2015. Majority of strandings were greens. The primary known causes of stranding were incidental capture (19%), cold-stunning (9%), and water-craft interactions (7%). Read more about the North Carolina Sea Turtle Project here: <http://www.seaturtle.org/groups/ncwrc/>.

GEORGIA- It was again a big nesting year for loggerheads in Georgia with 2,319 nests reported. One Kemp's ridley, one leatherback, six of unknown species, and six green turtle nests were also located by sea turtle cooperators for a total of 2,333 nests statewide.



In 2015, cooperators documented 66 incidental captures, 55 of which were alive, and 53 of which were immediately or eventually released. Incidental captures include sea turtles found floating (not stranded on the beach) or captured incidental to otherwise legal activities such as dredging (5), fisheries research (12), educational programs (7), or recreational fishing (31). A total of 166 strandings occurred on the Georgia coast in 2015. Loggerheads were the most common species (87) followed by Kemp's ridleys (58), green turtles (16), and leatherbacks (2). Over the last 27 years, Georgia biologists have seen significant declines in loggerhead ($P=0.006$) and leatherback ($P=.003$) strandings in Georgia. Green turtle strandings have increased and Kemp's ridley strandings have shown no trend over the time-series. For more information on the Georgia Sea Turtle Recovery Efforts visit: <http://www.georgiawildlife.com/Conservation/SeaTurtles>.



FLORIDA - In 2015, loggerhead turtle nest numbers remained high (approximately 89,000 nests statewide) and green turtle nesting reached a new record in the state (approximately 37,000 nests statewide), according to the Florida Fish and Wildlife Conservation Commission (FWCC). The total finalized statewide nesting count for Florida for 2015 is not yet available.

However, data from the index nesting beach program indicate loggerhead nest counts in 2015 were higher than in the last two year (2013-2014) but lower than 2012 (the second record high year since the beginning of the INBS program). Loggerhead nest numbers in Florida show a complex pattern: nest counts have increased, then decreased, then increased again. Despite the variable pattern, the overall trend in this species' nest numbers is positive. The trend for green turtles shows an exponential increase in nesting over the past 27 years.

In 1989, biologists documented 464 green turtle nests on index beaches. In 2011, the index count was 10,701; in 2013, it was 25,553 and this year the number of green turtle nests on index beaches reached a new record of 27,975. The index count represents about 68 percent of green turtle nesting statewide. Although nesting at a much lower level than loggerheads, the trend in leatherback nesting shows an exponential increase over the last 27 years. For information on sea turtle nesting in Florida, visit: www.myfwc.com/research/wildlife/sea-turtles/nesting/ .

MARINE MAMMAL STRANDINGS - South Carolina experienced the lowest number of marine mammal strandings since 2010 in 2015 with 56 animals being reported (44 bottlenose dolphins, 8 pygmy sperm whales, 2 dwarf sperm whales, 1 striped dolphin, and 1 Atlantic spotted dolphin); down considerably from the record-highs of 117 in 2013 and 96 in 2014. This 'return to normal' in strandings was due in part to the absence of the morbillivirus epidemic that ravaged the coastal bottlenose dolphin migratory stocks along the east coast from New York to Florida in 2013-14. Strandings began to slow in October 2014, a year after the outbreak hit South Carolina. Two bottlenose dolphin cases involved crab pot line entanglements within five days of each other following the historic 'thousand year' rainfall event that caused severe turbidity in the water column. Other human interaction cases included an entanglement in a large line deliberately tied to the tail and a monofilament line entanglement. NOAA CCEHBR in Charleston would like to thank all the sea turtle volunteers who assisted during 2015, and would welcome any members who would like to become volunteers for the SC Marine Mammal Stranding Network, particularly in Charleston County, contact either Michelle Pate (pates@dnr.sc.gov), Wayne McFee (wayne.mcfee@noaa.gov), or Rob Young (ryoung@coastal.edu).

VOLUNTEER APPRECIATION- Each year, the SCDNR Marine Turtle Conservation Program recognizes individuals from throughout the state for their outstanding services. These individuals are stewards of the environment and have made a positive impact in the conservation of sea turtles.

This year, the SCDNR Nest Protection Award went to the **Cape Romain National Wildlife Refuge staff and volunteers**. The refuge beaches boast the highest density nesting area for the Northern Recovery Unit (NC, SC, GA) nesting population of sea turtles, with nearly 1,900 nests observed this year. Dedicated refuge volunteers continue to put in long days of work on this important loggerhead nesting rookery. Limited staff, high nest density and logistical issues accessing these remote islands required staff to work from two to four extra hours a day to get the job done which can amount to ten hours a day of grueling work in the summer heat. Nest protection efforts on the refuge takes an incredible amount of dedication and perseverance. Big thanks to all the Refuge staff and volunteers for their work!



Dr. Shane Boylan from the South Carolina Aquarium was recognized for his incredible commitment to the care of injured and sick sea turtles, receiving the SCDNR Stranding Award. During his eight-plus years of service in South Carolina, he has cared for nearly every live sea turtle to reach our shores. He has contributed countless weekend, evening, and holiday hours, and has even endured the occasional adventure to remote islands in South Carolina to help SCDNR rescue sick sea turtles. His care has given many animals a second chance at life in the wild and chance to advance their species into the next generation.



Joe Pezzullo, long standing volunteer from the Kiawah Island Turtle Patrol was presented an honorary award from the MTCP for his retirement from the Turtle Patrol. The award was inscribed "In appreciation for his many years and contributions to the recovery efforts for the Loggerhead Sea Turtle 1996-2015" and was awarded to Joe on October 27th 2015 during the annual Kiawah Island Sea Turtle volunteer dinner. Joe was a sea turtle nest protection and stranding response volunteer for 29 years and the nesting permit holder for the last nine of those.

The Marine Turtle Conservation Program would also like to recognize the Santee Cooper and South Carolina Electric and Gas service utilities for their support of sea turtle conservation efforts in South Carolina. In addition, [seaturtle.org](http://www.seaturtle.org) for continued support of research and conservation efforts in the sea turtle community. It is the online source for all sea turtles news, events, jobs, current research and information both here in South Carolina hosting our online nest, genetic and stranding databases and around the world. Show your support for this resource by visiting the site at <http://www.seaturtle.org>. A huge round of THANKS to all of our dedicated nest protection cooperators and volunteers who continue to make sea turtle conservation a success in South Carolina.



seaturtle.org



ANNOUNCEMENTS FROM THE SEA TURTLE OFFICE

World Turtle Day: The South Carolina Aquarium will host turtle-themed activities Saturday, May 21, 2016

36th Annual Sea Turtle Symposium on Sea Turtle Biology and Conservation Lima, Peru; 29 February — 4 March, 2016. Visit: <http://symposium.internationalseaturtlesociety.org/#/>

South Carolina Department of Natural Resources Facebook Page: get up-to-date information on our state's natural resources. On the web at: <https://www.facebook.com/South-Carolina-Department-of-Natural-Resources-49096224094/>

Adopt-a-Sea-Turtle-Nest: You can adopt-a-nest in South Carolina. Proceeds benefit the individual projects and SeaTurtle.org. For more information visit www.seaturtle.org/nestdb/adopt/.

Educational Resources: Please visit our education page for sea turtle educational materials: www.dnr.sc.gov/seaturtle/outreach.htm.

2015 Seasonal Staff: Appreciation for a job well done to our seasonal program staff and interns this past season: Michael Collins—sea turtle technician in Charleston, Michael Stewart—sea turtle technician, Caroline Simms (CofC) intern and Elizabeth Davis (USC) intern at the Tom Yawkey Wildlife Center and Heritage Preserve in Georgetown, as well as, Dan McNamee—sea turtle technician and Morgan Paris (USC) intern at the Botany Bay Plantation Wildlife Management Area located on Edisto Island.

Photo Credits- Page 1: F. Mauney (USFWS), B. Bergwerf, S. Campbell, Fripp Island Turtle Team; Page 4: B. Bergwerf, M. Arendt; Page 6 USFWS Cape Romain; all others by SCDNR

SCDNR Marine Turtle Conservation Program
P.O. Box 12559
217 Fort Johnson Road
Charleston, SC 29422
Voice: (843) 953-9015
Fax: (843) 953-9282
Email: seaturtles@dnr.sc.gov
Web Page: www.dnr.sc.gov/seaturtle/



Support Sea Turtle Conservation and help us keep wildlife in your life!

- *Direct donation to Marine Turtle Conservation Program to fund seasonal interns or students
- *Buy or renew an endangered species license plate
- *Contribute to the Check Off for Wildlife Fund

Visit: <http://www.dnr.sc.gov/seaturtle/support.htm>

