



# LOGGERHEADLINES

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

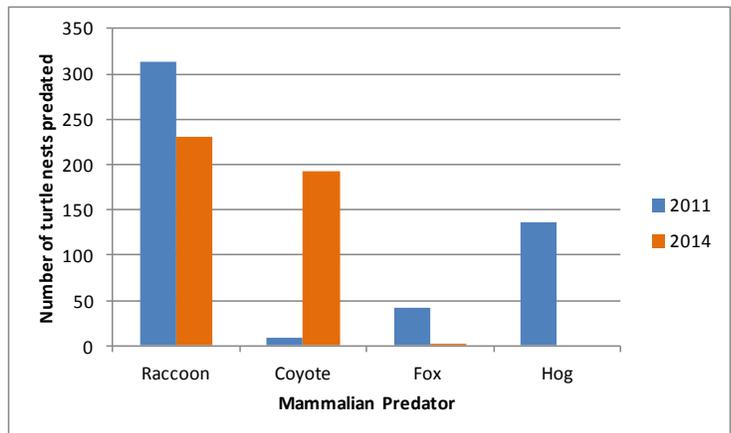
DNR

## 2014 SEA TURTLE NESTING SEASON SUMMARY—Statewide Nesting



Despite record nest counts the previous year, 2014 was a low nesting year for sea turtles in South Carolina. There were 2,087 loggerhead nests observed on project beaches during the nesting season which runs from May through September. The season also included eight green nests, the highest recorded number in a season, and two leatherback nests for a total of 2,097 sea turtle nests statewide. Results of the ongoing [genetics study](#) indicated a single turtle laid six of the eight green nests, all in Garden City, SC. Overall nest hatch success and hatchling emergence success was 61%

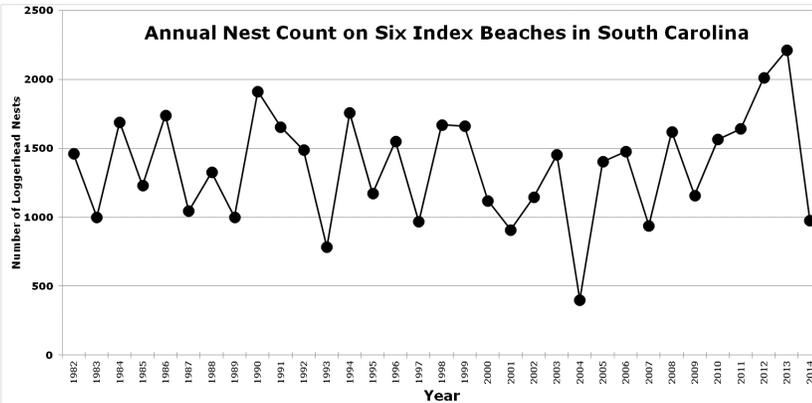
and 58%, respectively. Nests impacted by predation continue to be a challenge. The graph at right shows the number of nests lost to mammalian predators in the 2011 and 2014 nesting seasons. Predator management efforts targeting hogs in recent years drastically reduced their impact on sea turtle nests. An outbreak of distemper reduced fox numbers on beaches where fox predation was a problem. Raccoons have long been the dominant culprit of nest loss but recently coyotes have emerged as a new predator with seven project beaches now experiencing losses. Management techniques used to protect nests require adjusting to ever-changing situations specific to individual areas.



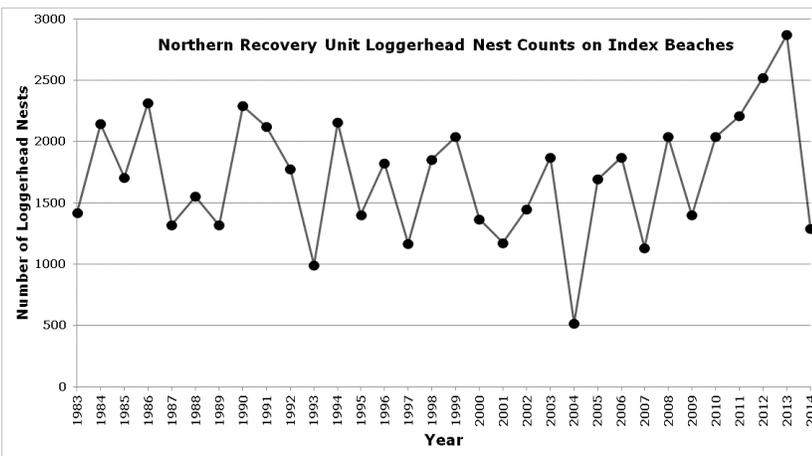
Nest counts for individual beaches surveyed along the coast can be found on page 8. Nest protection efforts this year helped approximately 129,648 hatchlings successfully make it to the ocean. Visit the online nest database hosted by [SeaTurtle.org](http://SeaTurtle.org) for more detailed information on the nesting season: [www.seaturtle.org/nestdb/?view=2](http://www.seaturtle.org/nestdb/?view=2).

## LONG-TERM NESTING TRENDS—Index Beach Survey

South Carolina has six index beaches with projects that have been conducting standardized ground surveys for loggerhead nests since 1982. These beaches include South Island, Cape Island, Lighthouse Island, Edisto Beach State Park, Edisto Beach, and Fripp Island. These six beaches represent approximately 41% of the nesting effort. After an unprecedented four year increase in nesting since the ground survey began, we had an anticipated decrease. Due to the cyclical nesting patterns of sea turtles as turtles do not necessarily nest every year but every two, three, or four years. Index beach nest numbers for 2014 (n=977) were approximately 20% below our 33 year average of 1,236 nests.



The figure above shows annual loggerhead nest counts on index beaches in South Carolina from 1982-2014. Historically speaking, nesting in S.C. prior to 1982 was much denser relative to current nest counts with over 2,000 nests solely on Cape Island in the early 1970's. This is compared to an annual average of 1,000 nests on Cape Island in recent years. The figure below shows the annual loggerhead nest count on index beaches in the Northern Recovery Unit that includes North Carolina, South Carolina and Georgia.



**STRANDINGS, REHABILITATION and POST-MORTEM**

Stranding numbers in 2014 (n=135) were slightly higher than 2013 (n=126), but lower than the 10-year average of 138. The species composition of turtles included 83 loggerheads, 35 Kemp's ridleys, 14 greens, and three leatherbacks.

Twenty seven of the 135 sea turtles stranded alive; eleven loggerheads, 13 Kemp's ridleys and three greens. Identified stranding causes included 13 caught on hook and line by recreational fisherman (all Kemps and one green), five boat strikes, four disease, and two nesting females where one disoriented into the marsh and the other became entangled in wires on the beach. One turtle was cold stunned,

The South Carolina Marine Turtle Conservation Program began in 1977 with beach management research. The program further developed in the early eighties with the formation of the nest protection and stranding volunteer networks along the coast of South Carolina. Today, the program encompasses research, management, monitoring and education within the local, regional, and international communities. We are indebted to the continued passion, dedication and effort of our staff, partners and volunteers.

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The South Carolina Department of Natural Resources prohibits discrimination on the basis of race, color, gender, national origin, disability, religion or age. Direct all inquiries to the Office of Human Resources, Post Office Box 167, Columbia, SC 29202.

This program is funded in part with grants from NOAA Fisheries and the US Fish and Wildlife Service under Section 6 of the Endangered Species Act. Data presented in Loggerheadlines are not to be used in any publication, product, or commercial application without prior written consent of the data owner.

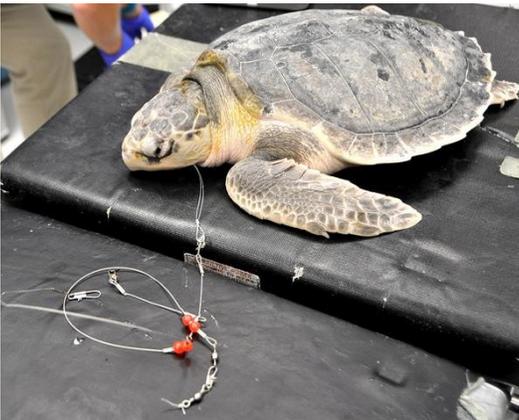
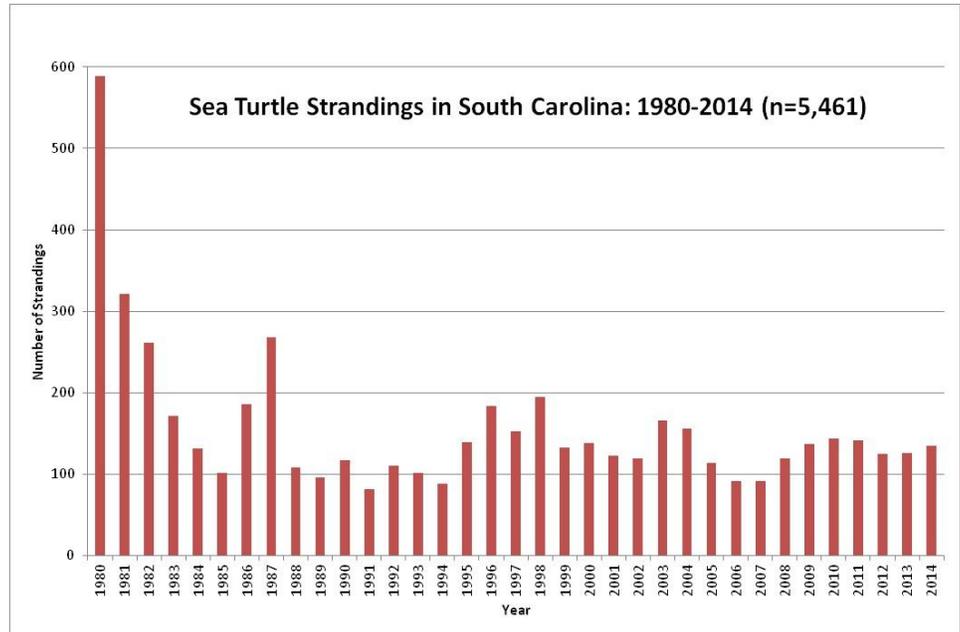


DNR

one exhibited neurological disease, and one turtle was stung by a ray during capture by the in-water trawl survey. For more information on strandings in South Carolina please visit: [www.seaturtle.org/strand/](http://www.seaturtle.org/strand/).

Of the 27 that stranded alive, seven were accessed and immediately released; one was euthanized due to trauma and one died during transport. The remaining eighteen sea turtles were admitted into the South Carolina Aquarium

(SCA) Sea Turtle Rescue Program. Of those admitted, nine recovered, were tagged and released. Two animals subsequently died, one additional animal was euthanized and currently six animals stranded in South Carolina remain under rehabilitation at the aquarium.



Thirteen sea turtles were necropsied in 2014. Seven were Kemp's ridleys, four were loggerheads, one green and one leatherback. Two of the 13 were adults. Twelve of thirteen were sexed - eight females and four males. The causes of death were determined as follows: three died of disease, four from boat strike trauma, two from hook and line and four had no apparent injuries. These four died acutely having no wounds, presumably healthy animals with lots of body fat and eating at the time of death.

Our first **Fibropapillomatosis (FP)** case in South Carolina was confirmed by Dr. Shane Boylan. It is an immature green turtle from Edisto with boat strike wounds admitted over the Labor Day weekend. The FP presented as a quarter inch polyp type growth on the underside of the front flipper. This turtle is still undergoing rehabilitation. Neighboring Georgia reports seeing about a dozen FP cases in the past two years. (Photograph of live Kemps by Barbara Bergwerf.)

**SOUTH CAROLINA AQUARIUM** - In 2014 the SCA Sea Turtle Rescue Program admitted a record 37 turtles, the most treated at one time. Eighteen were South Carolina strandings and 19 were cold stunned sea turtles from Massachusetts. Twelve rehabilitated turtles and one captive-reared turtle were released into the wild, bringing the total number of releases to 144 since the first turtle release in 2001. Additionally, two non-releasable turtles were transferred to permanent homes in other aquariums. Huge thanks to the sea turtle community for your support of the program. Keep up on the latest news from the SCA Sea Turtle Rescue Program by visiting [www.scaquarium.org](http://www.scaquarium.org).



**TAG RECAPTURES** - This year SCDNR tagged thirteen rehabilitated and exhibit sea turtles. The return of nesting females and recovery of stranded turtles previously tagged with flipper or PIT tags is documented. The table below provides details of recovery location and original tagging location for animals encountered in 2014.

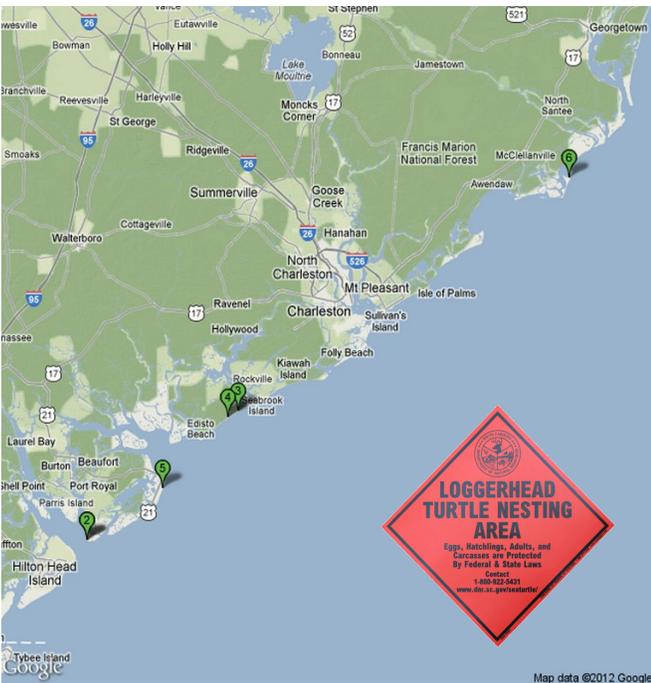
Tag Recovery Type/Location/Date	Original Tag Location/Date
Stranding-dead loggerhead Ocean City, MD 9/4/14	Cape Island, SC 6/25/00
Stranding-dead male loggerhead Sand Island, SC 7/18/14	SCDNR in-water study 6/24/14
False Crawl-Fripp Island, SC 7/14/14	Wassaw Island, GA 6/18/2008, Nested in 2011, 3x in 2014
False Crawl-Hilton Head Island, SC 7/9/14	Wassaw Island, GA 6/24/14
Stranding-live Kemps caught by a fisherman 6/18/14	New England Aquarium 11/20/2008, cold stun event, Rehabbed and released in Florida 4/6/2009
Stranding-dead loggerhead Hilton Head 4/28/14	St. Lucie Power Plant, Fl, intake canal 7/18/11
Stranding-dead leatherback Wadmalaw River 4/22/14	Nature Seekers in Trinidad, year unknown

**SEATURTLE.ORG:** Have you visited our wonderful resource [seaturtle.org](http://www.seaturtle.org)? This web site has become the online source for all sea turtle news, events, jobs, current research and information. Sea-turtle.org hosts our online nest, genetic and stranding databases. Show your support for this great resource by visiting the site or donating today:  
<http://www.seaturtle.org>.

[seaturtle.org](http://www.seaturtle.org)

**NORTHERN RECOVERY UNIT LOGGERHEAD DNA PROJECT**

The 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 to answer several basic loggerhead sea turtle nesting questions. Answers to these questions and others will help biologists better understand how the loggerhead population is doing.



To date, samples from 38,536 nests have been collected from GA, NC, and SC. Dr. Joe Nairn and Dr. Brian Shamblin have successfully assigned a DNA ID code to 33,544 (87.0%) of these samples identifying **7,467** unique females. The map to the left is an example of one SC nesting loggerhead. She laid six nests on five beaches in SC: Bay Point Island (two nests), Botany Bay Plantation, Edingsville Beach, Hunting Island State Park, and Cape Island in the Cape Romain National Wildlife Refuge.

For complete information on the status of this project, please visit: [www.dnr.sc.gov/seaturtle/genetics.htm](http://www.dnr.sc.gov/seaturtle/genetics.htm).

## NETWORK AND REGIONAL UPDATE



**NORTH CAROLINA** - The loggerhead nest number for 2014 in North Carolina was 545, which is roughly 30% below the annual average based on the previous 15 years of data. In addition, there were 16 green turtle nests and two Kemp's ridley nests observed in 2014. In terms of stranded turtles, there were 640 sea turtle records in the stranding database in 2014. The primary known causes of stranding were cold-stunning (24%), incidental capture (19%), and watercraft interactions (9%). Nearly all 2014 records in the stranding database were juvenile green, loggerhead or Kemp's ridley turtles. Read more about the North Carolina Sea Turtle Project here: <http://www.seaturtle.org/groups/ncwrc/>.

**GEORGIA** - After several consecutive years of record nesting, 2014 turned out to be an average nesting year for loggerheads in Georgia. We ended the season a few nests shy of the 26-year average of 1,215 nests (2014 total: 1,201). The summer was relatively free of tropical storm related activity and nest predation was low through a combination of nest screening and predator removal. Nest hatching and emergence success was relatively high at 68% and 63%, respectively. The UGA genetics lab identified 331 females using the Georgia coast including one female that was back for the first time since she was tagged with a satellite transmitter in 2005. Two green and leatherback nests were also located by sea turtle cooperators. Overall, it was a thoroughly average year with good hatching and emergence success.

A total of 124 strandings were documented on the Georgia coast in 2014. Loggerheads were the most common species (80) followed by Kemp's ridleys (26), green turtles (15), and Leatherbacks (3). Over the last 26 years, we have seen significant declines in loggerhead ( $P=0.03$ ) and leatherback ( $P=.002$ ) strandings in Georgia. Green turtle strandings have significantly increased and Kemp's ridley strandings have shown no trend over the time-series.

Boat collision injuries (31%) and presumed fishery mortalities (35%) are the primary cause of strandings in Georgia. In addition, cooperators documented 44 incidental captures, 40 of which were alive. Incidental captures include sea turtles found floating (not stranded on the beach) or captured incidental to otherwise legal activities such as dredging (2), fisheries research (24), educational programs (4), or recreational fishing (5). Over 68% of the stranded turtles were necropsied. We used the data to assess the effects of human activities on sea turtle population recovery including commercial and recreational fisheries, boating activity, and offshore development projects. For more information on the Georgia Sea Turtle Recovery Efforts visit: <http://www.georgiawildlife.com/Conservation/SeaTurtles>



### Current DNA Regional Results from 38,536 Nests (as of January 22, 2015)

DNA Samples Assigned: 33,544

Unique Individual Females in Nesting Region: 7,467

Unique Females Nesting in SC: 4,311

Unique Females Nesting in SC 2014: 584

Females with Only One Recorded Nest: 1,721

Max Number of Beaches Visited: 9

Nests per Female in a season: 4.49

Mean Site Fidelity Index: 26.22 km

Minimum Site Fidelity Index: 0.0 km

Max Site Fidelity Index: 663.92 km

Mean Internesting Period: 8.82 days

Max Number of Nests attributed to a turtle: 7

**FLORIDA** - In 2014, loggerhead turtle nest numbers remained high and leatherback turtle nesting reached a new record in the state, according to the Florida Fish and Wildlife Conservation Commission (FWC). The FWC and partners perform two complementary annual surveys: a statewide survey that began in 1979 which documents nearly all sea turtle nesting in Florida, and an index survey which pools data from 32 beaches that have consistent monitoring during a specific 109-day window in order to detect trends in nesting. The total statewide nesting count for Florida for 2014 is not yet available. However, data from the index nesting beach program indicate loggerhead nest counts in 2014 were slightly higher than in 2013. 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. Green turtle nesting trends show an exponential increase over the last 26 years, although counts in 2014 were much lower than last year. This was expected because green turtle nesting patterns tend to follow a two-year cycle with wide year-to-year fluctuations. Green turtle nest counts in 2011 and 2013 set two consecutive high records. Although nesting at a much lower level than loggerheads, leatherback nest counts reached a new record high in the state in 2014, showing a slight increase over the previous high in 2009. The trend in leatherback nesting shows an exponential increase over the last 26 years. For information on sea turtle nesting in Florida, visit: [www.myfwc.com/research/wildlife/seaturtles/nesting/](http://www.myfwc.com/research/wildlife/seaturtles/nesting/).

**SCDNR REGIONAL IN-WATER SURVEY** - A total of 417 trawling events resulted in the capture of 106 loggerheads, 23 Kemp's ridleys, and one juvenile green sea turtle.

Loggerhead overall catch rates in 2014 were the lowest since this survey began in 2000. Catch rates for loggerhead sea turtles measuring 75.1 to 80 cm SCLmin were the second highest since survey inception, which bodes well for recruitment of these turtles into the reproductive component of the population, provided of course that annual survival rates remain at least stable.

Kemp's ridley catch rates in 2014 represent a decline for the second consecutive year since peak catch rates were observed in 2012. Although catch rates for Kemp's ridley sea turtles in this trawl survey in 2014 were nearly double peak catch rates for this species in our survey prior to 2011, because annual nest counts for this species in the Gulf of Mexico also declined during the same timeframe we will continue to monitor changes in catch rates for this species cautiously. The smallest (16.2 cm SCLmin) Kemp's ridley sea turtle observed in our surveys to date was captured in 2014 (photo).

The green sea turtle captured measured 32.2 cm SCLmin and was only the 15th green sea turtle captured in as many field seasons, with all but two of these 15 green sea turtles having measured 24.7 to 32.2 cm SCLmin.

Acoustic telemetry: Coded acoustic transmitters were attached to 14 juvenile loggerhead sea turtles. Acoustically-tagged sea turtles were captured off Charleston, SC ( $n=7$ ) and Brunswick, GA ( $n=7$ ). This tagging allows for passive listening of their movements in and around the two channels. These capture-tagging locations were selected due to continuous monitoring of the respective shipping channels and adjacent coastal waters with acoustic receivers as part of an on-going NMFS-funded study managed by the SCDNR in partnership with the GADNR.

Satellite telemetry: Two male loggerheads were tagged with satellite transmitters. The first satellite transmitter ("Mater") was deployed near Altamaha Reef, GA. The second satellite transmitter ("O'Neal") was deployed five days later near Hilton Head Island, SC. For more information on In-Water Sea Turtle Research, visit: [www.dnr.sc.gov/marine/sturtles](http://www.dnr.sc.gov/marine/sturtles).



**NORTHEAST COLD STUN SEASON** - The 2014 Massachusetts cold-stunned sea turtle season was the largest on record, involving more than double the number of turtles as the next largest year. In the months of November and December, Massachusetts Audubon's Wellfleet Bay Wildlife Sanctuary responded to 1,232 live and dead sea turtles on the shores of Cape Cod. Of these, there were 30 green, 3 likely hybrids, 18 loggerheads, 1043 Kemp's ridleys, and 138 of unknown species (these numbers are preliminary). Over 750 of the turtles survived long enough to be admitted into rehabilitation at the New England Aquarium, where they were triaged and either began medical treatment on site or were stabilized to make a trip to other long term rehabilitation facilities. In total, 552 turtles were transported to facilities throughout the East Coast and Gulf of Mexico, including the South Carolina Aquarium who are caring for 19 turtles from Massachusetts. It was a huge collaborative effort, involving the sea turtle stranding and salvage network, state and Federal partners, and caring volunteers. Photograph courtesy of Kate Sampson, NOAA.



**2015 SEA TURTLE CALENDAR** - This calendar is dedicated to those who work with sea turtles on the beach, and at sea turtle rehabilitation facilities along the eastern United States. Their dedication and your financial support are critical to the future of the species. Learn how you can help - visit their websites and get involved! This calendar represents the photographic skills of photographers from Costa Rica to Charleston, SC. Visit [www.bergwerfgraphics.com](http://www.bergwerfgraphics.com) to order the 2015 Sea Turtle Calendar. A donation from the sale of each calendar is given to the South Carolina Aquarium Sea Turtle Rescue Program.



**SEABIRD NESTING** - DNR biologists survey seabird nests every summer to determine nesting trends of these colonial birds on each island and statewide. This season, biologists counted 4,701 Brown Pelican, 7,808 Royal Tern, 2,812 Sandwich Tern nests, and ~800 Black Skimmer nests in South Carolina. Black Skimmers, which have had several years of low nesting success, had over 100 chicks fledge from Deveaux Bank this year, a welcome sight. 2014 was especially exciting because of the return of nesting Brown Pelicans and Royal and Sandwich Terns to Bird Key Seabird Sanctuary. Bird Key, just off of Folly Beach in Charleston county, used to be the largest pelican nesting colony in the Southeast. The last year pelicans nested on the island was in 2004. This year there were over 200 pairs of nesting pelicans. For additional information, contact SCDNR biologist Felicia Sanders at [SandersF@dnr.sc.gov](mailto:SandersF@dnr.sc.gov). Photograph of Brown Pelicans by Christy Hand.



**MARINE MAMMAL STRANDINGS** - South Carolina experienced another high number of marine mammal strandings in 2014 with 96 animals being reported (89 bottlenose dolphins, 3 pygmy sperm whales, 2 pilot whales, 1 harbor seal, and 1 unknown dolphin); down from the record-high of 117 in 2013 but still twice the historical average. This increase in strandings again was due to a morbillivirus epidemic that ravaged the coastal bottlenose dolphin migratory stocks along the east coast from New York to Florida. Strandings began to slow in October 2014, a year after the outbreak hit South Carolina. NOAA CCEHBR in Charleston would like to thank all the sea turtle volunteers who assisted during this difficult time, 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](mailto:pates@dnr.sc.gov)), Wayne McFee ([wayne.mcfree@noaa.gov](mailto:wayne.mcfree@noaa.gov)), or Rob Young ([ryoung@coastal.edu](mailto:ryoung@coastal.edu)).

### RESEARCH AND PUBLICATIONS

Brig, C. E. 2014. Assessment of Loggerhead Sea Turtle (*Caretta caretta*) Nest Management Tools in South Carolina. Thesis, Clemson University, Clemson, South Carolina, USA.

Etheredge, Cady. 2014. Ecology and Impacts of Coyotes (*CANIS LATRANS*) In the Southeastern United States. Dissertation, Clemson University, Clemson, South Carolina, USA.

Fisher LR, Godfrey MH, Owens DW (2014) Incubation Temperature Effects on Hatchling Performance in the Loggerhead Sea Turtle (*Caretta caretta*). PLoS ONE 9(12): e114880. doi:10.1371/journal.pone.0114880

**RESEARCH PERMITS** - SCDNR Marine Turtle Conservation Program welcomes research proposals. Proposals must demonstrate that the proposed activity will add to the conservation of marine turtles. We respectfully ask that research proposals be submitted between the months of November to March prior to the preferred start date or nesting season. This allows the SCDNR program staff time to review your application. Submission of the application form does not constitute issuance of a permit. Permit applications can be found on our website at <http://www.dnr.sc.gov/seaturtle/permit.htm>.

**2014 Sea Turtle Nest Numbers**

Waties Island	10	Sand Island	49	Morris Island	no survey	Pine Island	0*
North Myrtle Beach	6	South Island	101	Folly Beach	22	Beaufort interior	6*
Myrtle Beach	2*	Cedar Island	25*	Kiawah Island	142	Harbor Island	19
Myrtle Beach State Park	1	Murphy Island	5*	Seabrook Island	32	Hunting Island	39
Long Bay Estates	0	Cape Island	556	Deveaux Bank	16*	Fripp Island	37
Surfside Beach	0	Lighthouse Island	189	Botany Bay Island	55	Pritchards Island	30*
Garden City	6	Racoon Key	8*	Botany Bay Plantation	103	Little Capers Island	16*
Hungtington Beach S.P	12	Bull Island	64	Interlude	9*	St. Phillips Island	5*
Litchfield Beaches	13	Capers Island	3*	Edingsville Beach	33	Bay Point Island	22*
Pawleys Island	4	Deweese Island	3	Edisto Beach S.P	54	Hilton Head Island	131
Debordieu/Hobcaw	31	Isle of Palms	11	Edisto Beach	41	Dafuskie Island	36
North Island	90*	Sullivans Island	6	Otter Island	53*	<b>TOTAL</b>	<b>2,097</b>

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

**VOLUNTEER APPRECIATION**

Each year, the SCDNR Marine Turtle Conservation Program recognizes individual volunteers from throughout the state for their outstanding services. Nominees are those individuals who have gone above and beyond the call of duty to promote conservation of sea turtles in our state. These volunteers are stewards of the environment and have made a positive impact in their communities through donation of their valuable time. This year, our Nest Protection Volunteer of the Year was **Buddy Lawrence** from Hunting Island State Park, and **Amber Kuehn** from Hilton Head received the Stranding Volunteer of the Year Award. Buddy has worked with the DNR Marine Turtle Conservation Program for over 13 seasons. In addition to conducting nest surveys on the beach, he has done extensive work on Hunting Island beach to reduce predation by raccoons and to help mentor new volunteers. This year alone, Amber has helped with over 9 strandings and has helped to transport many live animals to the aquarium. Her help has been pivotal in reducing transport time for sick and injured turtles needing treatment. In addition to her stranding activities, she also leads the Hilton Head nest protection project and has recently opened her own ecotour business, [Spartina Charters](#). We were so happy to recognize Buddy and Amber for their service this year. Congratulations on a job well done!



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**VALUE OF VOLUNTEER TIME** - in 2010, a new initiative to document volunteer time was implemented through the [SeaTurtle.org](http://SeaTurtle.org) online reporting system. Documenting volunteer time is important for matching federal grant dollars (financial support for the program) and emphasizing the public's support of sea turtle conservation in South Carolina. This grant matching power is critically important to our program especially as funding for natural resources decreases. Visit here to learn more: [www.seaturtle.org/volunteer/](http://www.seaturtle.org/volunteer/). Documenting this time would not be possible without [SeaTurtle.org](http://SeaTurtle.org).

Year	No. Participants	Hours	Miles	Value
2012	365	20,866	88,575	\$390,088
2013	379	19,277	88,647	\$363,859
2014	380	16,735	87,416	\$321,211

**SEA TURTLE PROGRAM OFFICE GETS ENVIRONMENTALLY FRIENDLY**



[Clemson Extension's Carolina Clear Program](#) hosted a rain garden workshop at the Fort Johnson Marine Resources Center as part of the Master Naturalist in training program. Master Naturalist students constructed a new demonstration rain garden at the SCDNR's sea turtle office. Clemson Extension agents also installed a 120 gallon rain cistern. In partnership with Carolina Clear, this rain garden and associated cistern will serve an educational purpose as a storm water best management practices demonstration site. We welcome visitors to view this and other demonstration sites located at the Fort Johnson Marine Resources Center in Charleston, SC.



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## ANNOUNCEMENTS FROM THE SEA TURTLE OFFICE

**Southeast Regional Sea Turtle Meeting** on Jekyll Island, GA; 4-7 February 2015. Visit: <http://www.serstm.org/>.

**35th Annual Sea Turtle Symposium** in Dalaman, Mugla-Turkey; 19-24 April 2015. Visit: <http://iconferences.seaturtle.org/>.

**SC CTurtle List Serve:** Keep up with all sea turtle news in SC and beyond by joining our list serve. If you would like to join, please send an email to [seaturtles@dnr.sc.gov](mailto:seaturtles@dnr.sc.gov)

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

**Educational Resources:** Please visit our education page for sea turtle educational materials: [www.dnr.sc.gov/seaturtle/outreach.htm](http://www.dnr.sc.gov/seaturtle/outreach.htm).

**Living Lowcountry Series:** Former SCDNR turtle technician Justin Jay continues his local conservation film series. See his latest segment **Sea Turtles—Part 1** at [www.livinglowcountry.org](http://www.livinglowcountry.org)

**2014 Seasonal Staff:** Appreciation for a job well done to our seasonal program staff and interns this past season. Sean Miller and Michael Collins in Charleston, Trent Austin and Abi Delgiorno at the Tom Yawkey Wildlife Center and Heritage Preserve in Georgetown, and Ashton Turner and Meredith Hinton at the Botany Bay Plantation Wildlife Management Area located on Edisto Island.

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### 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>

