



LOGGERHEADLINES

SCDNR SEA TURTLE PROGRAM SAYS FAREWELL TO 33 YEARS OF SUPPORT

The sea turtle program said goodbye to Tom Murphy and John Coker who retired at the end of 2008 after 33 years of service. Tom and John have provided the backbone of this program in the form of research and field operational support. Tom envisioned and designed research projects and John made them happen with his ingenuity. In the seventies, they documented post-nesting movements using sonic telemetry. In the eighties, they used radio telemetry with a creative design by John to float the transmitter behind the turtle so it could be tracked continuously at sea. Congratulations to both of them for receiving the prestigious Meritorius Service Award from the SCDNR Board and joint recognition by the Association of Fish and Wildlife Agencies and the US Fish and Wildlife Service. Tom and John will be greatly missed. Thank you, Tom and John, for your dedication and support of the sea turtle program.

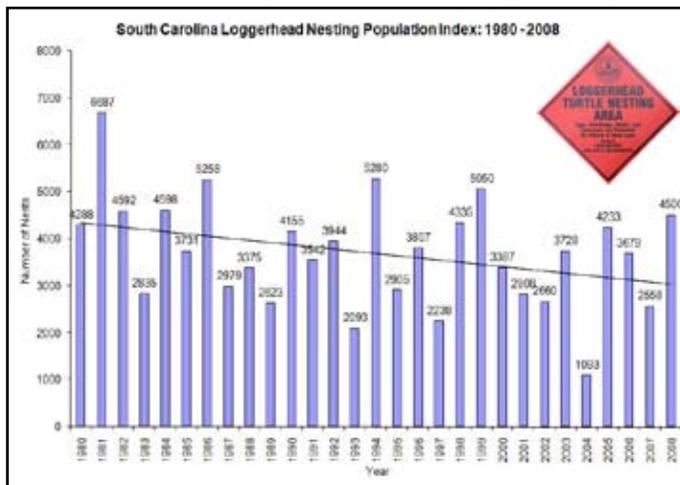


NESTING IN 2008 - SEVENTH HIGHEST YEAR ON RECORD



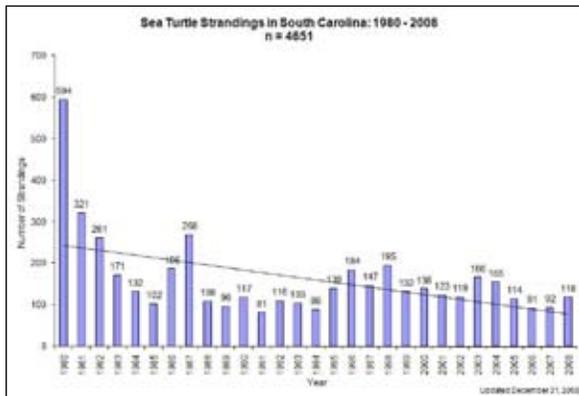
Loggerhead nesting in South Carolina closed as the seventh highest year on record since 1980. The 2008 state estimate is 4500 nests. Although the 2008 nesting season was productive, it did not reverse the long-term declining trend. The season also included one Kemp's ridley, five leatherback and one green nest. The Kemp's ridley nest was the second nest on record in South Carolina and was located approximately two miles from the first ridley nest laid in 1992. The temporal pattern of the leatherback nests indicates that this was one female that nested at least five times along our coast. Photograph by Ann Wilson.

Projects	2007	2008
Waties Island	17	13
North Myrtle Beach	ND	5
Myrtle Beach	ND	15
Myrtle Beach S.P.	2	7
Huntington Beach S.P.	5	10
S.C.U.T.E.	62	121
Sand Island	ND	33
South Island	85	170
Cape Island	531	1114
Lighthouse Island	178	211
Bull Island	116	106
Dewees Island	7	18
Sullivans/Isle of Palms	26	30
Folly Beach	20	63
Kiawah Island	98	232
Seabrook Island	16	62
Botany Island	83	144
Botany Bay Plantation	29	235
Edingsville Beach	57	46
Edisto Beach S.P.	65	50
Edisto Beach	66	49
Harbor Island	18	21
Hunting Island	64	60
Fripp Island	14	35
Pritchards Island	26	34
St. Phillips	7	14
Hilton Head Island	112	200
Daufuskie Island	19	62
TOTAL	1723	3160



STRANDING, POST-MORTEM AND REHAB NEWS

Strandings in 2008 (n = 118) were greater than 2007 (n = 92), but not different from the 10-year mean of 133. Of these 118, 18 turtles stranded alive (2 were released, 5 are undergoing care at the SC Aquarium and 11 died shortly after stranding). There were 2 strandings reported during January through March, 14 in April, 27 in May, 32 in June, 20 in July, 9 in August and 14 September through December. The species composition of those stranded was 74 loggerheads, 10 green, 27 Kemp’s ridleys, 4 leatherbacks and 3 unidentified. By county, Horry = 25, Georgetown = 16, Charleston = 54, Beaufort = 19, Colleton = 4 and Jasper = 0. Twenty-nine post-mortem exams were performed. Sixteen indicated an acute death (7 of these interacted with watercraft), 10 indicated chronic mortality and 1 could not be rated due to decomposition.



We are excited to announce that that the SCDNR Sea Turtle Program has been awarded a grant from NOAA that will go towards the development of a necropsy lab at the Hollings Marine Laboratory. This lab will provide a more sterile environment for the collection of health and disease-related data from fresh, stranded sea turtles.

It has also been a big year for tag returns. Three additional tag recaptures have been reported to us since July bringing the total to six tag returns for 2008. A tagged loggerhead was found on the Isle of Palms on 7/7/2008. This turtle was originally tagged on 6/16/2006 on Wassaw Island, GA. An injured loggerhead nesting on Pritchard’s Island had tags indicating it had been previously tagged on the same beach. A loggerhead nesting on Cape Island on 8/1/2008 was flipper tagged from Wassaw Island while nesting there on 6/2/2008.

In 2008, eight sea turtles were admitted to the South Carolina Aquarium’s Turtle Hospital. The species include two Kemp’s ridleys, four loggerheads and two greens and the injuries include partial drowning, boat strikes and cold-stunning. The November 24th arrival of four cold-stunned sea turtles from North Carolina brings the patient count to an all time high of 12! With 12 sea turtles representing three different species, this is a great time to visit the Aquarium and take a hospital tour. You can get tour information, patient updates and much more at www.scaquarium.org. Photographs by Barbara Bergwerf.



The South Carolina Marine Turtle Conservation Program began in 1977 with beach management research. The program further developed in the early eighties with 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 volunteers and staff.

- Program Staff**
 DuBose Griffin ~ Coordinator
 Charlotte Hope ~ Wildlife Biologist
 Erin Bundo ~ Admin Program Support
 Kelly Sloan ~ Field Technician
 Thomas Murphy ~ Research Support
 John Coker ~ Research/Equipment

Marine Turtle Conservation Program
 SC Department of Natural Resources
 Post Office Box 12559
 Charleston, SC 29422

Voice ~ (843) 953 - 9015
 Fax ~ (843) 953 - 9353
 Email ~ coastbio@dnr.sc.gov
 Web Site ~ www.dnr.sc.gov/seaturtle/

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, PO 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. If consent is given, the data provider must be cited appropriately after approval of use is obtained.



NETWORK NEWS



SCUTE - Pawleys Island: Several years ago we started measuring and recording tracks left on the beach by nesting loggerhead sea turtles. We measure two dimensions, lateral on the left side and transverse, from the "vee" points on the rear flippers. We wanted to see if we could identify multiple nests laid by the same turtle during the nesting season. In 2008 we were able to validate this identification. Our first nest on Pawleys Island was laid on May 19th. We measured the tracks and noted that the left rear "vee" mark was partial and very faint. Fifteen days later we observed a nesting loggerhead at dawn. The track measurements and left flipper print were identical and, as the turtle returned to the ocean, we visually observed the old injury on the left rear flipper – probably an old shark wound. Yet 11 days later we observed the same measurements and left rear flipper print. These



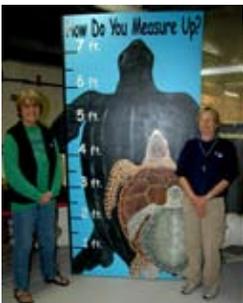
three nests occurred within 1200 feet of each other and were each re-located to high dunes; the clutch counts were 116, 113 and 120. No other tracks matching these were observed on Pawleys Island during the remainder of the 2008 nesting season. We believe the facts of identical spatial measurements, 11-15 days between nesting events, consistent nest sizes, and faint left rear flipper "vees," coupled with visual observation of this turtle's rear flipper, together validate the use of track measurements with between-nest time periods to identify specific loggerheads during a nesting season. Photographs by Phil Schneider. ~ Dr. Phil Schneider

Edisto Beach: The Edisto Beach Christmas parade was held the Saturday after Thanksgiving and as always the Edisto Beach Loggerhead Turtle Project was in attendance. This year our entry consisted of Mrs. Edisto with local school children following behind with turtle shells they decorated themselves and signs promoting turtles on our beach. In a town of only 600 residents, it was fun to get the local kids interested and learning about turtles. The entry won second place in the homemade float category. Special thanks to volunteers Nona Rowcliffe and Becky Rose for heading up this effort, and to all that turned out to help and walk. To learn more about our program please visit our web site: <http://members.seaturtle.org/edistoisland/> ~ Jamie Gaabo



SC Aquarium Sea Turtle Exhibit: The South Carolina Aquarium currently has four loggerhead and three green sea turtle hatchlings under the husbandry staff's care. The loggerheads hatched on the Isle of Palms on September 4th and the greens hatched on South Island on November 5th. There are also four juvenile loggerheads, which hatched on Seabrook Island on 20 August 2006, currently on display in the Sea Turtle exhibit. They are all doing very well and will be released offshore next summer. It has yet to be determined whether the green or loggerhead hatchlings will take their place in the exhibit. ~ Shannon Teders

Isle of Palms: Mary Alice Monroe and Barbara Bergwerf, members of the Island Turtle Team on Isle of Palms, have just returned from a week at Playa Grande on the Pacific coast of Costa Rica. They were there to attend the Board of Directors meeting of the Leatherback Trust (<http://www.leatherback.org/>) works in Costa Rica to protect the nesting beaches of the highly endangered Pacific leatherback. Their principle goal is to guarantee the land adjoining the beach at Playa Grande will not be developed. Photograph by Barbara Bergwerf.



In other news our project recently donated \$2,500 to the SC Aquarium Sea Turtle Hospital. In addition to raising these funds, we were able to supply materials and labor to

build and paint a "How Do You Measure Up?" board which shows the actual sizes of sea turtles ranging from Kemp's ridleys to leatherbacks. Beverly Ballow and Barbara Bergwerf, who both volunteer there, provided the labor which included painting the turtles. Now children and adults who tour the hospital can compare their height to different species of sea turtles. ~ Mary Pringle

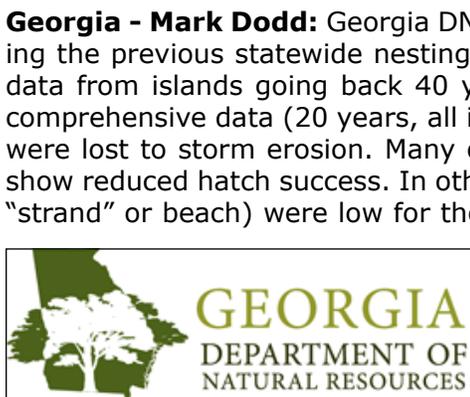
Leatherback, Green and Kemp's Ridley Hatch Success: The clutch count (in parenthesis) and hatch success for the "other" species that nested in South Carolina are as follows: green (136), 8%; Kemp's ridley (84), 63%; five leatherback nests: Kiawah 1 (23), 30%; Folly 2 (55), 49%; Bull 3 (61), 61%; Garden City 4 (42), 86%; Cape 5 (50), 84%.

Protect Beach-Nesting Birds: Remember from April to August beach-nesting birds congregate along the coast of South Carolina to breed. These include least terns and black skimmers that nest in groups called colonies and Wilson's plovers and American oystercatchers that nest singly. They nest above the high tide line and lay their eggs in nests that are a little more than a scrape in the sand. Eggs and chicks are camouflaged so they will not be seen by predators. Downy chicks leave their nests soon after hatching and wander between the dunes and water's edge to be fed. Young chicks may hide and rest in tire ruts below and above the high tide line. Beach nesting birds are extremely sensitive to human disturbance. Every time a bird is forced to fly, it burns valuable energy it needs to survive. When people wander too close to nesting areas, adults leave eggs and chicks exposed to extreme temperatures and predators. So please avoid driving above the high tide line where birds are possibly nesting. Be aware of birds calling loudly. This may indicate you are too close to a nest or chicks. Walk and drive carefully, especially at ends of islands and inlets, watching for cryptic eggs and chicks. These birds are declining and need your help. If you have questions about beach nesting birds, please contact SCDNR biologist Felicia Sanders: sandersf@dnr.sc.gov. Photograph by Barbara Bergwerf. ~ Felicia Sanders



REGIONAL UPDATE

North Carolina - Matthew Godfrey: In North Carolina, 2008 was an interesting year. There were 841 loggerhead turtle nests observed, which is higher than the average (715 nests) based on the previous 10 years. There were also eight green turtle nests observed. The total number of stranded turtles was also above average in 2008: 528 total stranded turtles were observed (both alive and dead). The average number of strandings based on the previous 10 years is 459 strandings. The high number in 2008 was due in part to a mass stranding event that was observed in Cape Lookout Bight on 7 January 2008: 33 juvenile green and 2 juvenile loggerheads were found freshly dead on a short stretch of beach. Also, between 18-29 November, volunteers reported 62 live cold-stunned turtles, with several more reported in the two weeks after that. Many of these animals were admitted to the two rehabilitation centers in NC, but also rehabilitation centers in Georgia, South Carolina and Virginia helped out by taking in some of these turtles.



Georgia - Mark Dodd: Georgia DNR cooperators located a total of 1,648 loggerhead nests in 2008 surpassing the previous statewide nesting record of 1,504 nests set in 2003. Although the long time-series trend data from islands going back 40 years show an overall declining trend in nesting, data from the shorter comprehensive data (20 years, all islands) show a stable population. Approximately 10% of nests statewide were lost to storm erosion. Many of the remaining nests were inundated multiple times and will probably show reduced hatch success. In other sea turtle news, sea turtle strandings (dead turtles washing up on the "strand" or beach) were low for the third year in a row. We are on pace to have the lowest stranding total reported since the inception of the stranding network in 1980. Of particular interest, we have lost only three nesting females to trawler or boat collision mortality this season as compared with 8-10 in previous years. Sea turtle strandings generally represent approximately 20% of the true mortality occurring offshore. The remaining 80% of carcasses are eaten by sharks or decompose before reaching the beach. There-

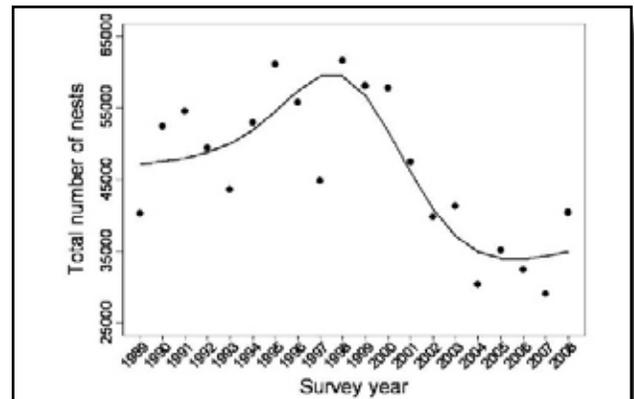
fore, the reduction in adult female strandings (from 8 to 3) represents a significant decline in adult female mortality (approx. 25 nesting females).

Georgia - Brian Shamblin: We conducted genetic sampling along the entire Georgia coast this year with the goal of identifying the female for every nest laid on Georgia's 13 project beaches. We collect skin samples from tagged turtles and collect a single viable egg from nests during morning surveys on non-tagging beaches. Beyond filling in gaps in the tagging data, we plan to use the genetic data to estimate nesting female population size, the average number of nests laid per female, and the site fidelity of individual turtles- how far apart they lay all their nests. We have identified 450 individual loggerheads nesting in Georgia during the 2008 season based on skin biopsies and egg shells processed so far. The data are only approximately 80% complete right now, but the average observed clutch frequency for females laying at least one nest on Blackbeard is 3.2 nests per female, ranging from 11 turtles only observed nesting once (on Blackbeard and nowhere else along the Georgia coast) to 4 turtles laying 6 nests. I have not run any official relatedness analysis on the 2008 samples yet, but based on nest matches there are over a



dozen pairs of turtles that have genetic similarities that we would expect from full sisters. A couple pairs of these are comprised of a Georgia turtle and a South Carolina turtle. Thank you to those of you who collected samples on Hilton Head, Kiawah and South Islands this season. We will compare these flipper samples with nesting female DNA from Georgia to match nests to any females that have strayed between Georgia and the sampled beaches. This will provide important data on the proportion of turtles exchanging beaches on different spatial scales.

Florida - Blair Witherington: Florida's 2008 nesting season will inspire lively debate between optimists and pessimists at least until next season. Loggerhead nest counts from Florida's Index beaches were up in 2008. "Up" in this case was a count of 39,789 nests, which was better than the lowest year recorded (2007, with 29,044) but lower than the high in 1998 (61,298 nests). Historically, loggerhead nests at Index beaches represent about 71% of the state's total nesting. Trend analysis of the last 20 years (1989–2008) of nest survey data showed a decrease of 26% in the annual nest density over the 20-year period, and a 41% decline since 1998. Although loggerhead nest numbers in 2008 were higher than in 2007, the increase did not reverse the long-term declining trend.



Nest counts for green turtles and leatherback turtles in Florida have shown an opposite trend from loggerheads over the same period. Fewer nests for both of these species were recorded in 2008 than in 2007, but this did not change the long-term increasing trends. On Index beaches in 2007, there were 9455 green turtle nests and 517 leatherback nests—the highest since the Index-beach trend-monitoring program began in 1989. The lower counts in 2008 (6385 green turtle, 265 leatherback nests) seem to be part of a biennial cycle. Florida's Index beaches typically receive about 72% of the state's green turtle nesting and 36% of leatherback nesting. Optimists and pessimists are also debating next year's forecasts.

Florida - Allen Foley: As of November 30, we've documented 1,216 sea turtle strandings in Florida. The previous ten-year (1998-2007) average number of sea turtle strandings in Florida from January through November is 1,161. The number of loggerhead strandings in Florida through November is about average (650 in 2008 and an average of 669 during 1998-2007) but the number of green turtle strandings in Florida through November is about 100 above the average (423 in 2008 and an average of 320 during 1998-2007). For more information, please visit: http://www.floridamarine.org/features/category_main.asp?id=1289.

ANNOUNCEMENTS FROM THE SEA TURTLE OFFICE

Upcoming Events

February 17-19, 2009: 29th Annual International Sea Turtle Symposium in Brisbane, Australia. The theme for the ISTS 29 is Creating - Community - Collaboration. For more information, visit: www.seaturtle.org.

seaturtle.org

Loggerheadlines Available Online

Loggerheadlines can be read online at www.dnr.sc.gov/seaturtle/. Please let us know if you would like to use this resource and prefer not to get a hard copy in the mail. We're always looking for ways to save paper and trees! We are also reducing our newsletter to one issue per year. To keep up-to-date on the South Carolina sea turtle nesting season, please visit our web site often.

South Carolina CTurtle List Serve

If you would like to join this list serve, please send an email to coastbio@dnr.sc.gov.

Carolinas' Beach Vitex Task Force

Please continue to report any possible locations of beach vitex by submitting a report form online. It is important that the plant not be removed until it has been positively identified. Please visit: www.beachvitex.org/.



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SCDNR Marine Turtle Conservation Program

PO Box 12559

217 Fort Johnson Road

Charleston, SC 29422

Voice: (843) 953 - 9015

Fax: (843) 953 - 9353

Email: coastbio@dnr.sc.gov

Web Page: www.dnr.sc.gov/seaturtle/



SCDNR Needs Your Support! Citizens of South Carolina can support DNR through the purchase of the endangered species license plate and Check Off for Wildlife. The Endangered Wildlife Fund is the foundation of support for threatened and endangered wildlife in South Carolina. Look for line 26 on the long form (SC1040) or line 13 on the short form (SC1040A) of the South Carolina Department of Revenue Individual Tax Return form, then complete and submit Form I-330. Help us keep wildlife in your life!

