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## Sea Turtle Directory

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## Sea Turtle Nesting Data



© Matthew Godfrey

Palm Beach County's beaches are some of the most densely nested in the United States. Sea turtles can be found in our waters year round, but in the spring and summer, large numbers of adults congregate off our beaches and along the reefs. Look at these graphs that show the high nesting of [loggerhead](#), [green](#), and [leatherback](#) turtles, as compared to the rest of the east coast of the United States.

Nesting on our beaches begins as early as March. Early nesters are usually leatherbacks with the more numerous loggerheads arriving in significant numbers in May. Nesting continues into August and tapers off in early September. The female sea turtle crawls ashore at night to dig a nest, deposit her eggs, cover the nest and return to the water. While on the beach, sea turtles are timid and vulnerable and can be easily frightened away if disturbed. It takes between one to three hours for the female turtle to lay her approximately 110 ping pong ball-sized eggs.

A number of researchers, volunteer groups and agencies monitor sea turtle nesting in Palm Beach County. These surveys are conducted during nesting season by trained staff/volunteers permitted by the Florida Fish and Wildlife Conservation Commission. Nests are identified to species by the turtle's tracks and size/shape of the nest.

Palm Beach County sea turtle nesting data by year: [1998](#); [1999](#); [2000](#); [2001](#); [2002](#); [2003](#); [2004](#); [2005](#); [2006](#); [2007](#); [2008](#); [2009](#); [2010](#); [2011](#); and [2012](#).

Palm Beach County sea turtle nesting densities from [2003 - 2012](#).

ERM coordinates the collection of sea turtle nesting data from beaches when the County has an active shoreline protection project, including Jupiter/Carlin, Juno Beach, Singer Island, and Ocean Ridge.

[Yearly reports](#) summarizing the effects of Palm Beach County Shoreline Protection projects on sea turtles are also available.

Other organizations/individuals in Palm Beach County that monitor the beach include:



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- ❖ [Loggerhead Marinelife Center](#) [External Link]
- ❖ [John D. MacArthur Beach State Park](#) [External Link]
- ❖ [Sea Turtle Conservation League of Singer Island](#) [External Link]
- ❖ [Gumbo Limbo Nature Center](#) [External Link]
- ❖ [Statewide Atlas of Sea Turtle Nesting Occurrence and Density](#) [External Link]
- ❖ Sue Fleming (Palm Beach Shores), DB Ecological Services (Singer Island/Palm Beach/Ocean Ridge), Bob Schonfeld (South Palm Beach), Phil Stone (Lake Worth/Manalapan), Chris Redgate (Lantana), Jackie Lorne (Gulfstream), John Fletemeyer (Delray Beach), Barbara James (Highland Beach).



# Florida Fish and Wildlife Conservation Commission

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## Leatherback Nesting In Florida

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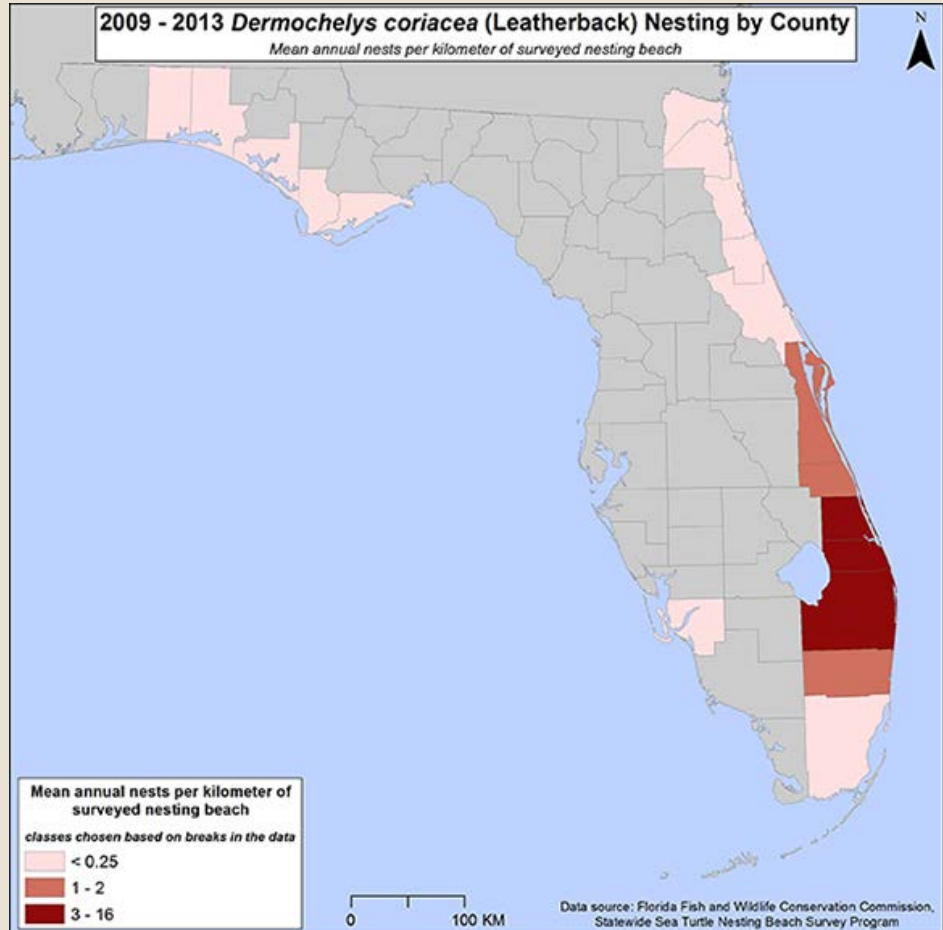
[Publications](#)

*Florida is the only state in the continental U.S. where leatherback turtles regularly nest.*

With the exception of a few nests on the west coast, leatherbacks nest almost exclusively on the east coast of Florida. In fact, about 50 percent of leatherback nesting occurs in Palm Beach County.

Leatherback sea turtles are named for their rubbery shell and are the largest sea turtles. Adults can weigh between 700 and 2,000 pounds and reach 4 to 8 feet in length.

Leatherback nesting in Florida occurs from April through July. A female will nest at intervals of two to three years, laying between six to nine nests per season. They lay about 80 fertilized eggs and then cover them with a layer of about 30 unfertilized eggs. This layer serves as protection from predators like birds and raccoons and also regulates the temperature.



**FWC Facts:**

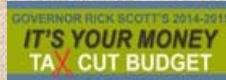
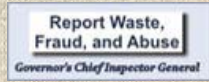
**Hard corals are corals with 6 tentacles or multiples of 6 (e.g., 6, 12, 18, 24). Octocorals have 8 tentacles.**

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## Index Nesting Beach Survey Totals (1989-2013)

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*The Florida Index Nesting Beach Survey records sea turtle nest counts on a standardized set of index beaches. Researchers use the annual survey to determine nesting trends.*

Since 1989, the Fish and Wildlife Research Institute (FWRI) has coordinated the Index Nesting Beach Survey, a detailed sea turtle nesting-trend monitoring program conducted in conjunction with the Statewide Nesting Beach Survey. The index survey uses standardized data-collection criteria to measure seasonal nesting and allow accurate comparisons between beaches and between years. Consistent effort by location and date and specialized annual training of beach surveyors make the index program suited to these trend assessments. Approximately 30 percent of Florida's beach length is surveyed under index-survey criteria.

FWRI coordinates data collection through a network of surveyors, including federal, state and local park personnel; other government agency personnel; members of conservation organizations; university researchers; and private citizens. FWRI staff train beach surveyors and compile data from the annual surveys.

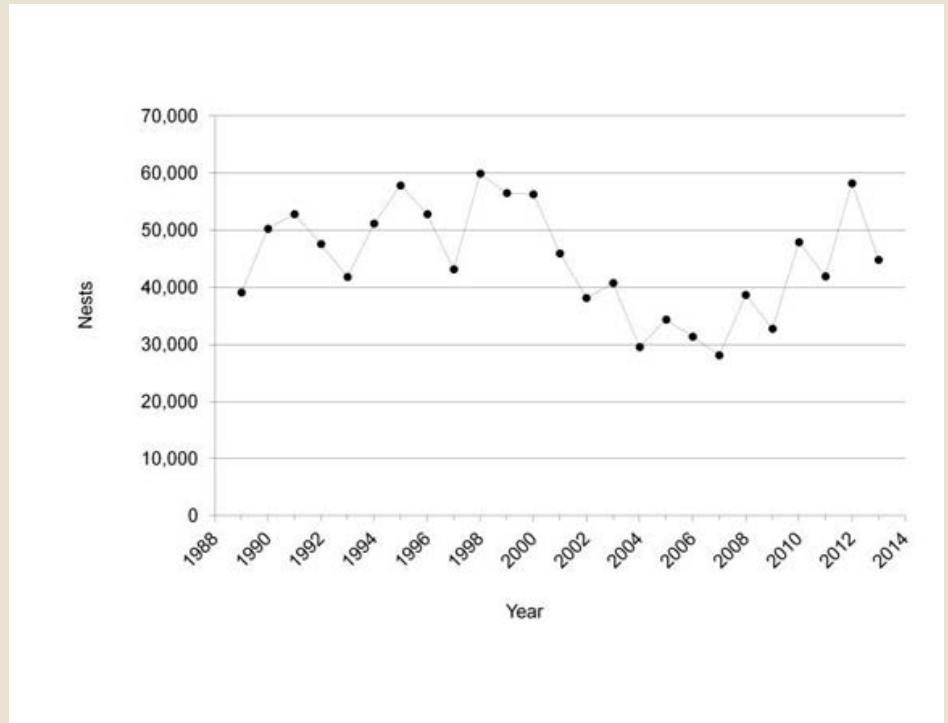
At a core set of index beaches monitored since 1989, trained surveyors monitor 320 kilometers of nesting beach (nearly 200 miles) divided into zones that average 0.8 kilometers (approximately a half mile) in length. These core index beaches represent the Atlantic and Gulf coasts of peninsular Florida. Beach surveyors monitor core index zones daily during a 109-day sea turtle index-nesting season (May 15 through August 31). Researchers record nests and nesting attempts by species, nest location and date. Index nest counts represent approximately 69 percent of known loggerhead nesting in Florida, 74 percent of known green turtle nesting and 34 percent of known leatherback nesting.



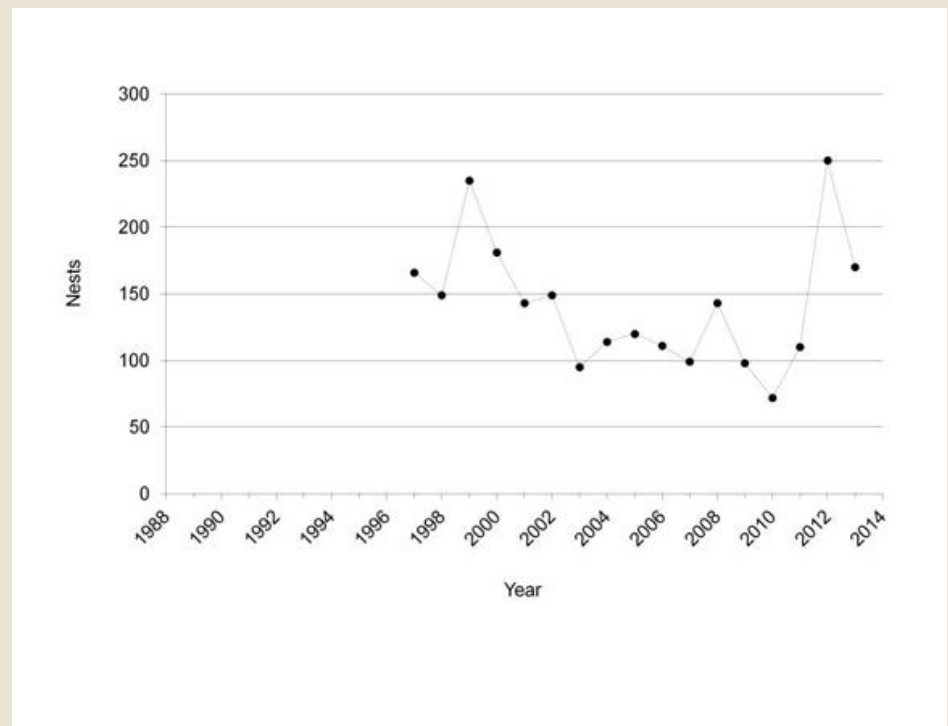
A loggerhead sea turtle throws sand over a nest, concealing her eggs, on an index beach in Brevard County.

**Loggerhead Nests**

Observed loggerhead nest counts on Florida's 26 core index beaches varied from a peak of 59,918 in 1998 to a low of 28,074 in 2007. In the most recent nesting season (2013), nest counts fell below those of the previous high year. Index beaches in the Florida Panhandle, which are not part of the set of core beaches, also had high loggerhead nest counts in 2012 and lower counts in 2013.



Annual loggerhead nest counts on core index beaches. From 1989 through 2013, annual counts ranged from 28,074 to 59,918 nests. Survey effort remained nearly identical. These data represent peninsular Florida and exclude an additional set of beaches in the Florida Panhandle and southwest coast that were added to the program in 1997.



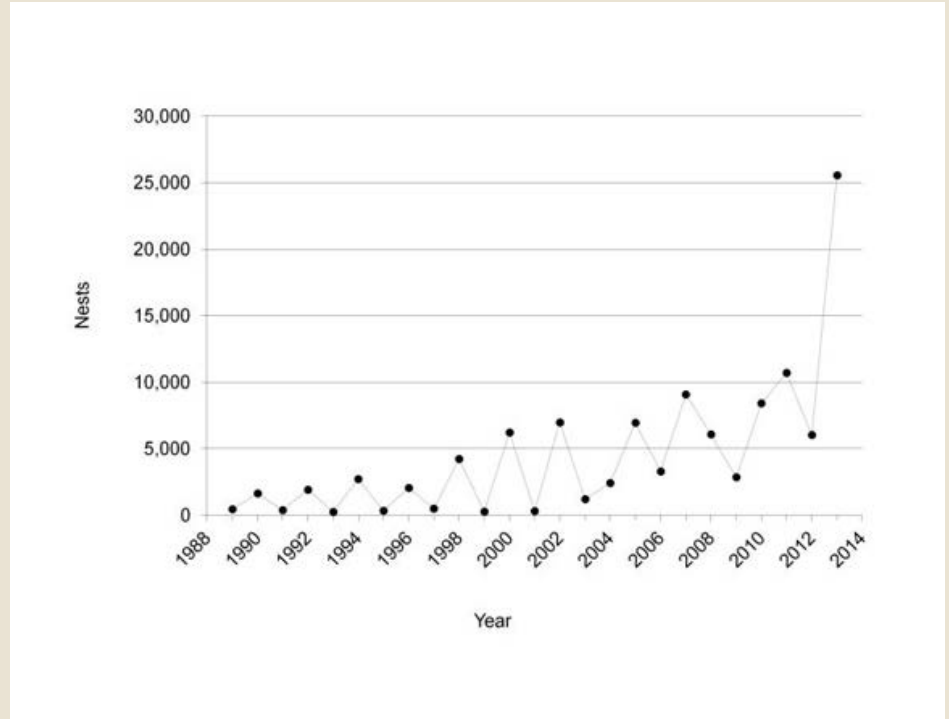
Annual loggerhead nest counts on Florida Panhandle Index beaches. Between 1997 and 2011, there was a general decline in the annual number of nests counted on Panhandle Florida index beaches; however, 2012 and 2013 saw high nest counts in comparison to the previous decade.

Concern over declines in annual loggerhead nest counts prompted researchers to conduct

a detailed analysis of the species' nesting trends since 1989. Download a 2009 journal article about the research:  
[Decreasing Annual Nest Counts in a Globally Important Loggerhead Sea Turtle Population.](#)

### Green Turtle Nests

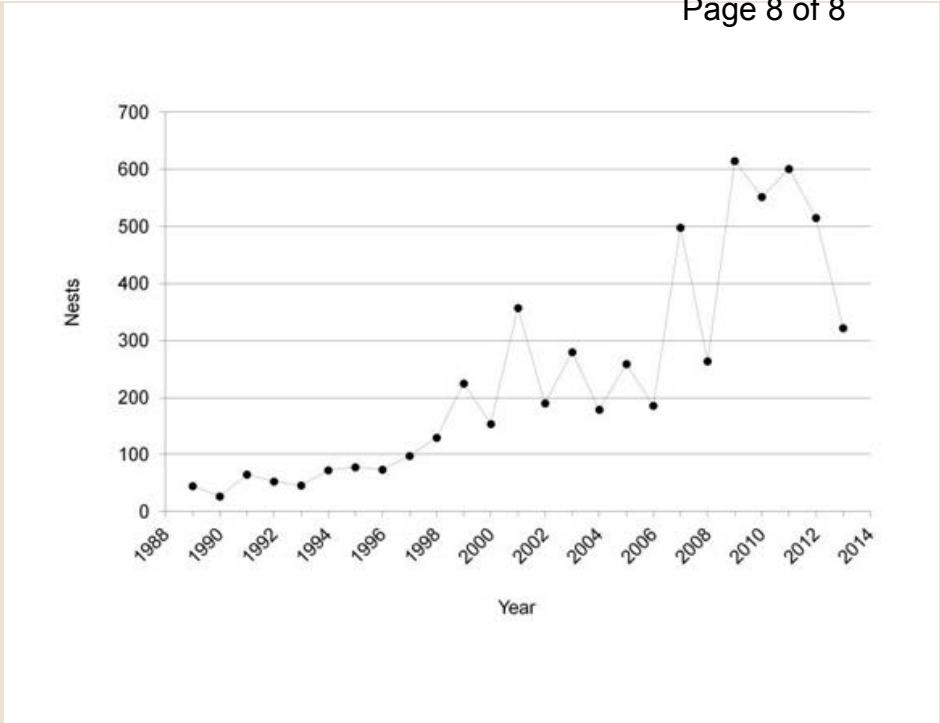
Green turtle nest counts have increased approximately one hundredfold since counts began in 1989 – a trend that differs dramatically from that of the loggerhead. The nest count for 2013 was more than twice the count from the next highest year.



Annual green turtle nest counts on core Index beaches. Since 1989, nest counts have ranged from 267 to 25,553, peaking in 2013. Numbers show a mostly biennial pattern of fluctuation, with the 2013 counts exceeding twice the next highest year.

### Leatherback Nests

Surveyors counted 322 leatherback nests on core index beaches in 2013. These counts do not include leatherback nesting at the beginning of the season before May 15; however, the index provided by these counts remains a representative reflection of trends. Similar to nest counts for green turtles, leatherback nest counts have been increasing exponentially.



Annual leatherback nest counts on core Index beaches. From 1989 through 2013, leatherback nests at core index beaches numbered from 27 to 615.

**FWC Facts:**

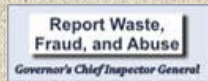
**A harmful algal bloom, or HAB, is a high concentration of toxic or nuisance algal species that negatively affects natural resources or people.**

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