Hurricane Irma destroys record number of turtle nests on Florida coast

By Kevin Spear, Orlando Sentinel, adapted by Newsela staff on 10.27.17
Word Count **871**
Level **MAX**

Rachel Santulli works for Marine Turtle Research Group at Archie Carr National Wildlife Refuge in Brevard County, Florida. She monitors nighttime nesting of sea turtles, surveying hatching activiity at daybreak. During an excavation, she found a live, baby green turtle. She released it and watched as it crawled into the Atlantic surf. Photo by: Kevin Spear/Orlando Sentinel/ TNS.

Beaches along south Brevard County in Florida are a world-class refuge for sea turtles. These beaches had a record number of nests — until Hurricane Irma mauled Florida last month.

About half of nearly 16,000 green turtle nests were obliterated by the storm. This is a "devastating" blow to this year's reproductive efforts of the threatened species, according to scientists.

Remarkably, however, Irma could prove to be a blip in the survival trajectory of green turtles, said Kate Mansfield. She is director of the University of Central Florida Marine Turtle Research Group.

Green turtles had an astonishing surge this year. They progressed from rarely appearing in the 1980s at Central Florida's Atlantic Ocean beaches to dwarfing the longstanding dominance of loggerhead turtles.

Getting significant credit for the trend are laws enacted in the United States and internationally that protect nests and eggs. Also helpful were measures that discourage bright lights on beaches that can disorient the creatures.

"If we keep having these big turtle turnouts on the beach, I think we are going to do all right," Mansfield said.

She and other experts did note one caveat, though. The turtles may not bounce back if the spate of damaging storms continues. Hurricane Matthew hit Florida a year ago. Then, there was Irma in September.

"One year's storm is sad but not a big deal in the big scheme of things," said Simona Ceriani. She is a research scientist with the Florida Fish and Wildlife Conservation Commission. "It's the frequency of storms that matters."

Ceriani said green turtles statewide were having phenomenal success leading up to Irma.

Sea turtles on the state's east coast, she said, were harder hit by the storm than those along the west coast and Panhandle.

The state monitors 223 beaches, which are studied by more than 150 groups. Many of these groups won't provide this year's numbers until next year.

For more than 30 years, the University of Central Florida (UCF) group has concentrated on the Archie Carr National Wildlife Refuge. The refuge spans 20 miles along south Brevard and north Indian River counties. Turtle activity there accounts for up to 35 percent of nesting in the United States.

Weighing 200 to 350 pounds, loggerheads start nesting in April. Green turtles are heavier. They weigh 300 to 350 pounds and show up beginning in June.

Because loggerhead turtle nesting winds down sooner, that species was less troubled by Irma. About a quarter of nearly 10,000 nests were lost.

To an unknowing eye, stretches of Archie Carr appeared this summer as if bombed or bulldozed; it's what happens when loggerhead and green turtles plow up sand for more than 25,000 nests.

UCF turtle biologists have mental maps of Archie Carr beach. They have learned to read the jumble of holes, humps and tracks as if reading a morning report from the reptiles.

"We have GPS, but I've been on this beach so many times I don't really need it," said Rachel Santulli. She is a UCF graduate and former intern with the turtle group, which now employs her.

With the morning sun just above the horizon, Santulli stopped her ATV on the beach. She was pausing to consider a circuitous adventure by a green turtle on a beach about as wide as a neighborhood street.

"She went up the beach and there she started pitting," Santulli said, referring to the initial effort to scrape out a cavity for a nest.

"She started her laying process and decided she didn't like that spot," Santulli explained. The turtle must have gone "all the way down, went back all the way back over there, back up the dune and that's where she nested," she said. She pointed out the turtle's track along a giant "S" route meshed with other tracks. "The whole process probably took about two hours."

The UCF researcher also found where a turtle had nested on top of another nest.

That's a sign of how densely packed Archie Carr is with nests. But it has happened this year only about 300 times. That is just a small fraction of all nests, Mansfield noted.

Another indication of the intense activity at Archie Carr is what's missing: The beach does not bear the wood stakes, signs and exclusion-zone ribbons prevalent at other beaches.

If that were done at Archie Carr, the resulting thicket of stakes could obstruct turtles from moving around, Santulli said.

Making sense of tracks and nests is best done while the sun is low and shadows are more pronounced, she said.

A gritty task for her came after the sun was higher and hotter. Then Santulli dug through a nest where eggs had hatched. The effort was to document the number of empty shells and the nearly dozen that failed to hatch. This included some eggs containing viscous, stinking liquid.

Also deeply buried was a living, wiggling hatchling that, unlike its siblings, wasn't able to tunnel out of the nest.

"Nothing beats this," Santulli said, as she carried the hatchling to the surf. "This is definitely one of the best parts."

Quiz

1 Select the paragraph from the article that suggests human efforts have helped increase the numbers of green sea turtles.

(A) Beaches along south Brevard County in Florida are a world-class refuge for sea turtles. These beaches had a record number of nests — until Hurricane Irma mauled Florida last month.

(B) Green turtles had an astonishing surge this year. They progressed from rarely appearing in the 1980s at Central Florida's Atlantic Ocean beaches to dwarfing the longstanding dominance of loggerhead turtles.

(C) Getting significant credit for the trend are laws enacted in the United States and internationally that protect nests and eggs. Also helpful were measures that discourage bright lights on beaches that can disorient the creatures.

(D) She and other experts did note one caveat, though. The turtles may not bounce back if the spate of damaging storms continues. Hurricane Matthew hit Florida a year ago. Then, there was Irma in September.

2 Which sentence in the article supports the conclusion that this year was a particularly bad year for sea turtles?

(A) About half of nearly 16,000 green turtle nests were obliterated by the storm.

(B) Remarkably, however, Irma could prove to be a blip in the survival trajectory of green turtles, said Kate Mansfield.

(C) "One year's storm is sad but not a big deal in the big scheme of things," said Simona Ceriani.

(D) Turtle activity there accounts for up to 35 percent of nesting in the United States.

3 Read the following paragraph from the article.

> *"She started her laying process and decided she didn't like that spot," Santulli explained. The turtle must have gone "all the way down, went back all the way back over there, back up the dune and that's where she nested," she said. She pointed out the turtle's track along a giant "S" route meshed with other tracks. "The whole process probably took about two hours."*

What does this paragraph explain that other paragraphs do NOT?

(A) how sea turtles have been affected by this year's storms

(B) how researchers from UCF are able to help sea turtles

(C) how sea turtles decide where to create their nests

(D) how a baby sea turtle was unable to get out of its nest

4 Read the following paragraph from the article.

> *Because loggerhead turtle nesting winds down sooner, that species was less troubled by Irma. About a quarter of nearly 10,000 nests were lost.*

How does this paragraph contribute to the entire article?

(A) It provides context as to why loggerhead turtle numbers have grown over the years.

(B) It argues that green sea turtles need our protection more than loggerhead sea turtles.

(C) It explains how UCF researchers have been able to successfully help sea turtles.

(D) It provides an example of how not all turtles were affected by this year's storms.