

Many Dry Tortugas loggerheads actually Bahamas residents

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Many loggerhead sea turtles that nest in Dry Tortugas National Park head to rich feeding sites in the Bahamas after nesting, a discovery that may help those working to protect this threatened species.

Researchers from the U.S. Geological Survey used satellites to track the population of loggerheads that nest in the Dry Tortugas - the smallest subpopulation of loggerheads in the northwest Atlantic - and found the turtles actually spend a considerable portion of their lives in the Bahamas, returning to the Dry Tortugas to nest every two-to-five years. They then spend three-to-four months nesting in the Dry Tortugas before returning to the Bahamas.

This new information will help resource managers better identify areas to target for [conservation efforts](#).

"Collaborative conservation efforts focused on protecting important loggerhead residence and foraging areas between the United States and Bahamas could offer significant protection for the Dry Tortugas loggerheads," said USGS Research Ecologist Kristen Hart, lead author of the study. "Two other subpopulations of loggerheads that nest in Northern and Peninsular Florida and also travel to residence areas in the Bahamas would benefit from this protection as well."

The current estimate of the subpopulation of loggerheads that nest in the Dry Tortugas hovers between 258-496 females. Populations of the turtle are difficult to estimate. Loggerheads start nesting when they are

approximately 25 years old, and then nest every two-to-five years until they die. Researchers have found that marking females that return to the same beach to nest every two-to-five years is the most practical way to get an indication of population size.

The northwest Atlantic population of [loggerhead turtles](#) is listed as "threatened" under the Endangered Species Act, which provides them protection from intentional harm or harvest and protects their most important habitats within the United States and its waters.

In this study, researchers tracked marked turtles over six nesting seasons. Results showed the turtles selected almost the exact same residence area in the Bahamas during their second tracking event. In addition, tracking data showed that individual residence areas generally did not overlap, leading the scientists to believe that loggerheads at this foraging ground may establish territories.

Turtles tagged in more than one Dry Tortugas nesting season showed similar migration paths and timing as compared to their own previous migrations. Their migratory paths included the Florida Strait, a major shipping fairway where ship strikes could threaten the turtles.

After traveling through non-protected waters from the Dry Tortugas, the turtles primarily selected residence areas in non-protected zones once reaching the Bahamas. Although direct turtle harvest has been illegal in the Bahamas since 2009, commercial fishing has the potential to impact the loggerheads' food resources and poses a direct threat to them as they can become entangled in lines attached to gear.

Loggerhead sea turtles are primarily carnivorous and feed mostly on shellfish that live on the bottom of the ocean, such as horseshoe crabs, clams, mussels, and other invertebrates. Their powerful jaw muscles help them to easily crush the shellfish. Once reaching sexual maturity, the

turtles nest every two-to-five years, depositing two-to-six clutches of 75 to 120 eggs approximately every two weeks during the nesting season. After nesting, they migrate back to their foraging site.

The Northwest Atlantic loggerhead nesting numbers declined sharply in the 1990s followed by an increase over the last six years making it difficult to assess the trend at this point. Scientists remain concerned about the ongoing threats to this population which include loss or degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; nest predation by native and non-native predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; disease; and incidental take from channel dredging and commercial trawling, longline and gill net fisheries.

Future studies to characterize the resources within residence areas and individual loggerhead behaviors at their residence areas will also help to guide conservation efforts.

The study, "Bahamas connection: residence areas selected by breeding female [loggerheads](#) tagged in Dry Tortugas National Park, USA," by Kristen M. Hart, USGS; Autumn R. Sartain, a contractor with the USGS; and Ikuko Fujisaki, University of Florida, is available [online](#).

Provided by United States Geological Survey

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