



July 6, 2008

Aquarium biologists investigate N.C. turtles

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NEWPORT - Two Newport Aquarium biologists and a Thomas More College professor have teamed up to protect loggerhead turtles off the coast of North Carolina.

They traveled to the beaches where the turtles lay their eggs and attached a satellite monitor to the top of the turtles' shells.

"Unfortunately, the largest threat to these animals is the fishing industry where incidental capture of turtles in fishing gear greatly depletes the population annually," said Keri Siegert, a biologist at the Newport Aquarium. "If we can monitor their aquatic behaviors, we can then begin to understand trends in their life cycles, which will inform us to the highest concentration of the turtles in our oceans at any given point in the year. With that information, we can work with the government and the fishing industry to regulate the amount of fishing in these areas of the ocean and likely decrease the devastation by catch."

Siegert was accompanied to North Carolina's Bald Head Island by another aquarium biologist, Jolene Hannah, and Thomas More biology professor Chris Lorentz.

Lorentz said the turtles with reddish-brown shells are commonly 500 pounds or more and can live up to 100 years.

"Their life cycle is an interesting one," he said. "Hatching from eggs on the sandy beaches of the U.S., they spend the first years of their lives crossing the Atlantic Ocean to the Sargasso Sea (a region of the North Atlantic bounded by ocean currents) before reaching maturity. Once mature, the turtles will return to breed at or near their 'birthplace' and spend their lives along the coast as adults."

Although the scientists can track the turtles' journey by satellite, the process begins with manual labor. They begin by building a box around a female turtle who has just laid her eggs.

"The turtle is first cleaned by scrubbing the carapace (shell) and scraping off the barnacles," said Siegert. "Then, the satellite tag can be applied to the upper portion of the carapace using a two-part epoxy, and the only thing visible once the epoxy is on is the antenna. This entire area is then reinforced with a marine epoxy paint to finish the process. Then, the turtle is released. The eggs are protected with a wire cage. The cage is buried 3-4 feet deep into the sand around the nest."

Lorentz said this work will help them protect the places turtles live.

"If there are particular areas, such as feeding grounds or refuges, where the turtles are concentrated or spend an inordinate amount of time, then it might be best to target those areas for preservation and protection from degradation," he said.

Tracking the turtles was funded by the WAVE Foundation, the nonprofit arm of the Newport Aquarium. The turtles' progress can be followed at

www.seaturtle.org/tracking.
