



A baby sea turtle shows off its satellite tracker.

 Close Caption

Jim Abertheny, NMFS permit 1551

MARCH 20, 2014

A Sea Turtle's "Lost Years"

Researchers uncover clues to a marine mystery

BY JACQUELINE ADAMS | FOR SCIENCE WORLD MAGAZINE

A new study has turned up clues to a long-standing sea turtle mystery. Hatchling turtles swim out to sea, then go "missing" until they show up a few years later near the shores where they hatched. No one ever knew where they went or what they did during these "lost years." That's been a problem for scientists trying to help these threatened and endangered species. As Jeanette Wyneken, a biologist at Florida Atlantic University, said in a NOAA Fisheries podcast, "If you're dealing with managing a species and you do it at sea, you kind of need to know where [the animals are]."

Researchers wanted to track turtles with new, solar-powered satellite tags that are small enough for the babies to carry. But when researchers glued tags to the *carapaces*, or upper shells, of loggerhead turtles, the fast-growing hatchlings shed the tags along with layers of their carapaces. Because the carapace is made of *keratin*, the same material in fingernails, the scientists decided to talk to a manicurist. She suggested painting acrylic nail fill on the spot where a tag would attach. The acrylic coating kept the turtle shells from peeling, and the tags finally stuck.

After the researchers released the loggerheads, the turtles followed currents that flow in a circle around the Atlantic Ocean. Some turtles swam to the middle of the circle, where a large amount of seaweed floats. They stayed mostly on the surface, soaking up the sun. The tags transmitted data for up to 220 days. Katherine Mansfield, a marine biologist at the University of Central Florida, told the radio show Science Friday, "The key to our tagging success was really the acrylic base coat."

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