

Researchers Find Sea Turtle Habitat In St. Joseph Bay

The waters of St. Joseph Bay are home to a previously unknown feeding ground for endangered green turtles, University of Florida researchers have discovered.

A large number of young turtles come to the bay to feed on sea grass and bulk up for the rigors of adult life, and the area's growing human population could pose a threat to the feeding ground, the researchers say.

"With more people using the bay for fishing and other recreational purposes, there's some cause for concern," said Erin McMichael, a graduate student in interdisciplinary ecology at UF's Institute of Food and Agricultural Sciences. "We know that turtles can be injured by boat strikes and fishing lines, and increased use of the bay could damage the sea grass beds that provide a food source for the turtles."

McMichael and Ray Carthy, a researcher at the Florida Cooperative Fish and Wildlife Research Unit, have spent the past three years studying the use of coastal habitats by green turtles along the coast of the Florida Panhandle, a study that included use of satellite transmitters to track the turtles' movements. Though green turtles are still found in the world's warmer climes — including much of the U.S. Atlantic and Pacific coasts and all of the Gulf of Mexico coast — the turtles are now considered threatened throughout much of their range, and are listed as endangered in Florida.

For most people, mention of sea turtles brings to mind the image of hatchlings emerging from nests on the beach and struggling toward the ocean, but green turtles lead complex lives largely unseen by humans. In their early years, they ride ocean cur-

rents for hundreds of miles in seaweed mats, feeding on smaller animals and fish eggs. As they approach maturity, the turtles settle in shallow waters near coasts, where they feed on sea grass. Full-grown turtles spend their lives in various coastal feeding areas, returning to the beach to lay their eggs.

But much is still unknown about the details of the turtle life cycle and the travels of different turtle populations. In early 2001, Carthy and McMichael set out to fill some of the gaps in that knowledge. Their plan was to capture and tag green turtles in St. Joseph Bay, to track their movements, look at their use of habitat and measure their growth upon recapture.

While the researchers were awaiting permits to conduct the captures, the unexpected happened: Nearly 400 green turtles, stunned by the cold, washed up on the shores of the bay. Small numbers of stunned turtles routinely turn up on Florida shores during cold spells, but this was one of the largest cold-stunning events ever recorded in the U.S.

Most of the stunned turtles were rehabilitated, tagged by state wildlife officials, and released into the Gulf of Mexico, where the water is warmer. Carthy and McMichael have since recaptured 43 of the turtles in St. Joseph Bay, indicating that their presence there in 2001 was more than a fluke.

"There has been some speculation that the turtles enter the bay, which has a relatively small entrance, and



Marisol Amador

Erin McMichael holds a green sea turtle captured in St. Joseph Bay. The bay is a newly discovered feeding ground for the endangered turtles.

can't find their way out again," McMichael said. "But I think our data show they're not just lost. If you take them out of the bay, they'll come back."

The researchers say the bay is a temporary home for turtle "teenagers" — juveniles between 5 and 15 years old that live in shallow coastal waters and feed off sea grasses while growing to maturity. One reason for the attraction, the researchers say, is the relatively undeveloped nature of St. Joseph Bay, which is just now beginning to see the kind of development boom that has lined much of Florida's coast with resorts and neighborhoods.

"With the development that already exists along the coast, there aren't many feeding grounds that are left undisturbed," Carthy said.

The finding emphasizes the need for responsible development around the bay, the researchers say.

"This time we have a chance to get it right," McMichael said. "St. Joseph Bay is one of the most pristine bodies of water in Florida. In the rush to develop the Panhandle, we need to be careful not to damage it."

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