Some sharks return to the same sites to breed for decades

December 16 2022, by Patrick Whittle

In this photo provided by Connor F. White, scientists Wes Pratt, left, and Nick Whitney, measure an adult nurse shark on the nurse shark courtship and mating ground in the Dry Tortugas, Fla., on June 24, 2022. Scientists say some species of shark return to the same breeding grounds for decades at a time, and live longer than previously thought. Credit: Connor F. White via AP
Some species of shark return to the same breeding grounds for decades at a time, and live longer than previously thought, scientists studying the animals off Florida say.

Scientists with the New England Aquarium found that nurse sharks returned to the waters off the Dry Tortugas, 70 miles (113 kilometers) from Key West, to mate for up to 28 years. They also found that the sharks' life span appears to extend at least into their 40s, rather than about 24 years as previously believed.

The researchers published their findings in October in the journal *PLOS ONE* as part of the world's longest running study of shark mating behavior. The research sheds new light on the way sharks breed and the role their environments play in their reproduction, said Nick Whitney, a senior scientist with the aquarium and a co-author of the study.

"This is the first example that has shown long-term use of a mating ground," Whitney said. "To observe natural shark behavior in the wild is incredibly rare to begin with and to observe mating behavior is really unusual."

Scientists have known nurse sharks have used the waters off the Tortugas as a breeding ground since at least the late 19th century, but the question of whether the sharks returned to the area lingered. The researchers with the aquarium tagged 118 sharks from 1993 to 2014 and found that more than two-thirds returned to the breeding grounds in subsequent mating seasons.

The scientists wrote that this evidence of long-term fidelity to one site "reveals the importance of identifying and protecting mating sites for this and other" species.

Members of the research team said they did not guess the same animals
would continue **mating** at the site for years at a time. Of all the sharks returning to the site, nearly 60% were monitored for more than 10 years and 13% were monitored for more than 20 years.

David Shiffman, a marine biologist at Arizona State University who was not involved in the study, said the work could open up new perspectives on sharks and how they migrate and make use of habitat.

That could be a key to helping conserve them, he said.

"Some of the better-known shark species are highly migratory, regularly crossing oceans. So to learn that other species are homebodies that use the exact same habitat year after year is fascinating," Shiffman said.

The Dry Tortugas is a remote group of islands in the Gulf of Mexico that is beloved by divers and birdwatchers. The area's status as a breeding ground for nurse sharks could be jeopardized by a direct hit it suffered during **Hurricane Ian** in September, Whitney said.

The scientists have not yet been able to find out if their underwater monitoring stations held up through the storm, they said. They also don't yet know if sharks have come back. Female sharks come into the shallows in the area to get ready to give birth in September and October, said Ryan Knotek, an associate scientist with the aquarium and study co-author.

The site's vulnerability is a good reason to protect both the sharks and their **breeding grounds**, Whitney said.

"These **sharks** clearly have a strong interest to return to this state," he said. "This was a shark that was once thought to be a sedentary couch potato of a shark. It turns out they are much more active."

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