

Two Dutch Caribbean Tagged Tiger Sharks Follow Similar Migration Patterns in the Caribbean

Two years ago the DCNA organized the first of its kind shark tagging expedition to the Saba Bank and St Maarten as part of the Dutch Postcode Lottery funded "Save our Sharks" project. Eight shark researchers with a support crew and two camera teams captured and tagged tiger sharks on St Maarten and the Saba Bank using an expedition ship. During the expedition, scientists and conservationists from the Saba Conservation Foundation (SCF), Nature Foundation St. Maarten (NFSXM), Florida International University (FIU) and Sharks4Kids equipped five tiger sharks with satellite tags in order to track their movements and presence to determine how best to manage and protect these important apex predators.

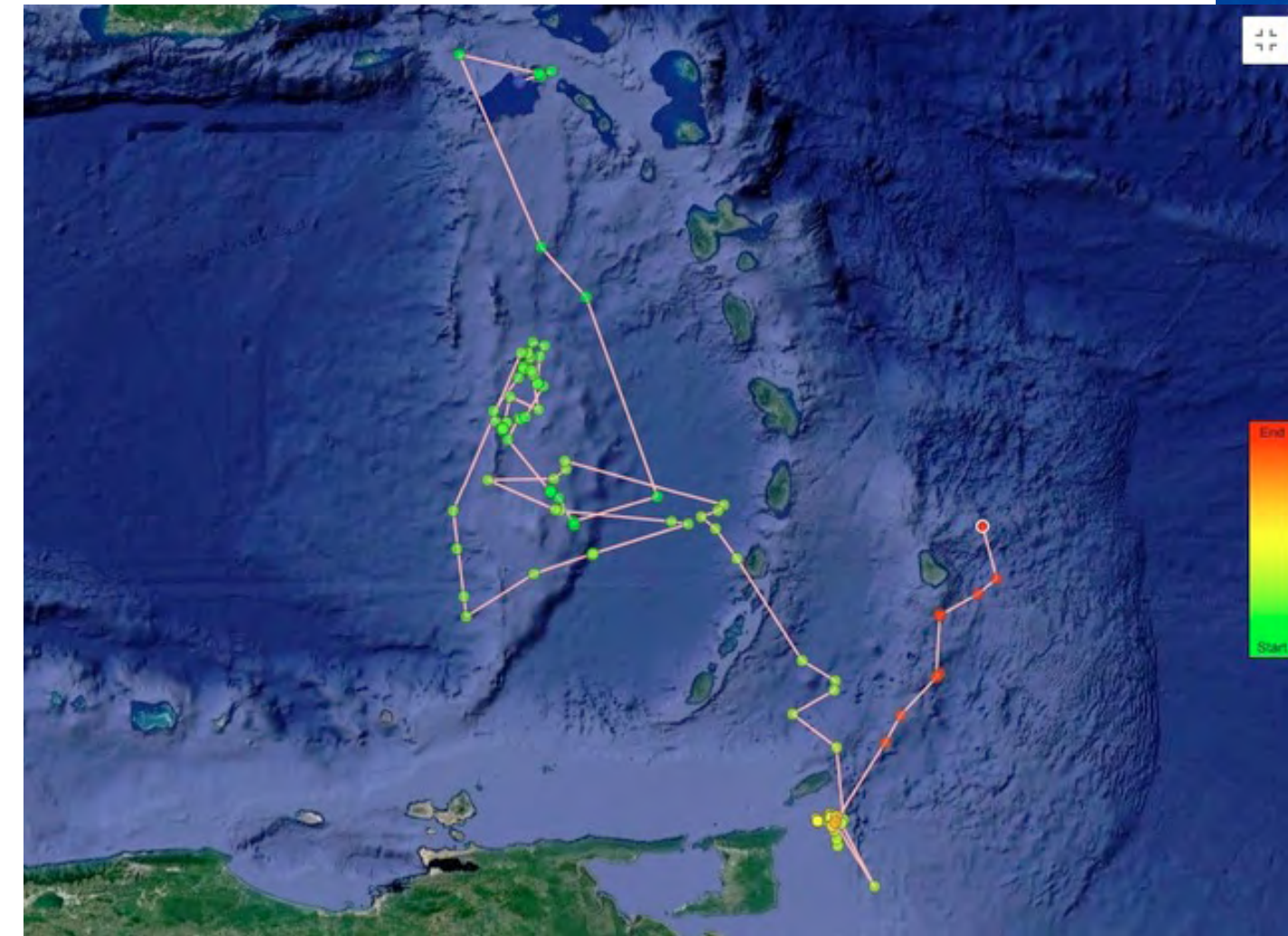
Wildlife Computer SPOT (Smart Position or Temperature Transmitting) satellite tags were attached to the first dorsal fin of large tiger sharks. These tags transmit to satellites, which allow the sharks to be tracked through the ARGOS satellite system for up to 4 years. The tag uses radio transmissions, so the satellite unit must be exposed to air in order to transmit. Each time the dorsal fin breaks the surface a geo location provides an approximate location with an accuracy of up to 250 meters.

Up to now, two tiger sharks with satellite tags named 'Sea fairy' and 'Quinty' have provided the research team with some interesting preliminary results. The sharks indicate a

similar migration track following the Aves ridge, a ridge in the Eastern Caribbean Sea of about 500 km in length probably of volcanic arc origin.

"The preliminary data we have been receiving is starting to show some interesting results in terms of the migratory patterns of tiger sharks in the Eastern Caribbean Sea. Not only is this data important but it is also critical for the transboundary management of a marine species critical to the health of our Caribbean Sea. Sharks are apex predators and as such keep the ocean food chain healthy, a food chain which in turn supports regional fisheries for example. With recent shark finning and fishing activities occurring in the wider Caribbean including incidents in Curacao, Dominica and Aruba it behooves nation states in the Caribbean to establish a Wider Caribbean Management Plan for the species," commented Tadzio Bervoets, Project Manager for the DCNA Save our Shark Project.

Shark Quinty was tagged under the supervision of Dr. Mike Heithaus on the Saba Bank. This 3.43 meter female tiger shark provided regular location updates. Quinty left the Saba Bank following the Aves ridge down south and subsequently swam all the way to Trinidad and Tobago, a territory known for its shark finning activities. The last received location of Quinty was close to Barbados about a year ago.



The track of Tiger shark Quinty through the Caribbean



A tiger shark being tagged in St Maarten waters

Photo by: © Melanie Meijer zu Schlochtern

Another Shark dubbed Sea fairy was the first shark which was equipped with a satellite tag in this region and surfaced very frequently, providing researchers with a wealth of location and movement information. Sea fairy was a 2.40 meter female tiger shark at the moment it was tagged in the waters of St Maarten. She stayed the first months around St Maarten while doing forays to Anguilla, St. Barths, Saba and the Saba Bank. In May 2017 Sea fairy mi-grated south following the Aves ridge in a similar movement pattern as tiger shark Quinty. After spending two months at the Aves ridge Sea Fairy explored the open Caribbean Sea and headed to Puerto Rico and Dominican Republic. The last location received for Sea Fairy was close to Puerto Rico also about a year ago.

"Sea fairy's movement patterns can indicate a nursing area for tiger sharks around St. Maarten, spending their juvenile years in sand and seagrass habitat before migrating around the Caribbean when large enough in size and maturity. It is interesting to see that both actively tracked sharks are showing similar migration routes following the Aves ridge, which may supply the sharks with an abundant food source" stated Nature Foundation's Project Officer Melanie Meijer zu Schlochtern.

"In the coming year, we will expand our shark movement study and will install another sat-ellite tag on a tiger shark on St. Maarten and two more sharks will be equipped with a sat-ellite tag on Aruba. This research will improve our understanding of the life characteristics of sharks and will provide knowledge about the population structure, abundance and mi-gration of sharks in the Caribbean" explained Melanie Meijer zu Schlochtern.

Sharks are often portrayed as being dangerous killing machines, however the facts show the opposite. Occasionally shark bites do happen, however no unprovoked attack has been ever recorded on St. Maarten. It is more likely that one gets killed by a coconut falling on ones head than by a shark. The species are actually the victims of human impacts such as poach-ing, finning, overfishing and irresponsible coastal development pressure. Worldwide over 100 million sharks are killed per year resulting in half of all shark species being threatened or endangered with extinction.

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