

Title:

Gaining a Clutch on Sand Tiger “Sea Dogs” Using Spot-a-Shark USA

Abstract:

The sand tiger shark (*Carcharias taurus*) faces significant population decline, prompting urgent conservation measures. This paper explores the movement patterns and site fidelity of sand tiger sharks along the eastern coast of North Carolina, utilizing data from Spot-a-Shark USA, a citizen science project engaging SCUBA divers to photograph encountered sand tiger sharks. Spot-a-Shark focuses on the spot patterns (similar to freckles of a human) to identify new, unmatched sharks, while also accounting for sharks photographed once again, at a different point in time (also known as a pattern match). Through an examination of 46 uploaded images, including 41 new unmatched encounters and 5 pattern matches, the study further investigates the number of revisits to NC shipwrecks among pattern matched sharks, as well as overall bodily markings and sex for all images. Pattern matched sand tigers revisiting tendencies highlight the importance of site conservation for species survival. Despite the limited sample size, the study underscores the significance of continuous monitoring efforts facilitated by citizen science initiatives like Spot-a-Shark USA. By quantifying behavioral and migratory patterns, researchers can inform conservation policies aimed at protecting sand tiger shark habitats and bolstering population resilience.