

New Irish research reveals the secret lives of tiger sharks

June 7 2019, by Thomas Deane



A tiger shark is released after tagging in the Bahamas. Credit: Diego Camejo

A team of scientists led by experts from Trinity and a US-based NGO

have just returned from the Bahamas where they learned all about the secret lives of the region's tiger sharks.

Cutting-edge bio-logging devices fixed to the sharks are providing a suite of biological information that has never been collected before, which will help the team assess how the global climate crisis may impact these [apex predators](#).

Tiger sharks are classified as 'near threatened' by the International Union for the Conservation of Nature, with commercial and artisanal fishing pressure and infrequent (once every three years) reproduction contributing to this status. Several countries continue to cull populations of tiger sharks given perceived risks to human swimmers, despite some regions having seen declines in shark abundance of ~ 75% in [recent decades](#).

These huge (up to 5m in length) animals are found in tropical and sub-[tropical oceans](#) worldwide but have always been difficult to study given their aquatic lifestyle. The scientists involved in the current study got around this issue by using their biologging devices on the sharks—with sensors recording video, body [temperature](#), swimming activity and orientation as the animals went about their normal routine.

By measuring how temperature influences the sharks' behaviour and swimming performance, the team will be better placed to predict how these animals will respond to future climate change.

Assistant Professor in Zoology in Trinity's School of Natural Sciences, Dr. Nicholas Payne, said:

"We are all really excited by the initial results. These animals can be incredibly hard to study in their [natural habitat](#), and it's only recently that the technology is becoming available which allows us to make the kinds

of observations we need.

Unlike us, these sharks don't have great physiological mechanisms for controlling their body temperature. As a result, if the temperature of their habitat changes, then so does their performance. Our [new data](#) will help us understand how tiger sharks respond to variation in temperature and that will ultimately allow us to make more accurate forecasts of what will happen to these animals if global temperatures continue to change."

CEO of non-profit Beneath The Waves, Dr. Austin Gallagher, sees this kind of research as an important step toward shark conservation. He said: "Apex marine predators like [tiger sharks](#) have a critical regulating influence on marine ecosystems, and the more we can learn about their ecology and physiology, the better equipped we'll be to manage and conserve their populations into the future. Our new data are exciting because they are helping reveal some of the secrets behind where these sharks go and what they do."

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Beneath The Waves is a not-for-profit shark research and conservation organisation based in the US. You can read all about their work [here](#).

Provided by Trinity College Dublin

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