

Tagging project confirms Sea of the Hebrides importance to basking sharks

January 21 2016

A pioneering three-year project to learn some of the secrets of Scotland's basking sharks by using satellite tag technology has shown an area off the west coast to be truly important for these giant fish.

Sharks tracked during the Basking Shark Satellite Tagging Project tended to spend most of their summer in the Sea of the Hebrides and returned to the same area the following year, according to the final project report published by *Scottish Natural Heritage (SNH)* today (Thursday).

Between 2012 and 2014, 61 basking sharks were tagged in the project, a partnership between SNH and the University of Exeter (UoE), and the first known to use a variety of satellite tagging technologies and to track the near real-time movements of basking sharks.

Tags were attached to the sharks near the islands of Hyskier, Coll and Tiree, where each summer large numbers of basking sharks can be seen feeding near the surface. The tagged sharks were particularly drawn to the waters around these islands which are an exciting place for wildlife watchers. Scientists at SNH and UoE believe the sharks return each year to feed in the area's plankton-rich seas. The sharks' behaviour suggests the waters could also be important to the sharks for other reasons and that they could benefit from a proposed marine protected area (MPA) off the [west coast](#).

Dr Suzanne Henderson from SNH, who is managing the project said:

"It's been really exciting to learn that the same individual basking sharks return in consecutive years to use Scottish waters. It's something we thought happened—but we now have the first proof that this occurs. It really does emphasise that the Sea of the Hebrides is highly important for this migrating species."

Protecting highly mobile species, such as basking shark and whales, is difficult due to the large areas they cover. So identifying and managing areas where the animals gather to feed, or for important life-cycle events, such as courtship, can play an important role in their conservation.

As part of the Scottish MPA Programme, SNH has recommended that an area of the Sea of the Hebrides from Skye to Mull be designated an MPA to protect the basking sharks, and also minke whales. Scottish Ministers are currently considering the proposal.

Suzanne said: "As well as cruising around and feeding at the surface the sharks can be seen showing courtship-like behaviours, such as jumping clear of the water, known as breaching and swimming around nose-to-tail. These social behaviours suggest that the sharks return to the area not just to feed on the plankton bloom but for other reasons too, perhaps even to find a mate."

From autumn onwards the tagged sharks dispersed widely, leaving the shallow coastal waters for deep sea. Some were seen to head south as far as the Iberian Peninsula and North Africa, some headed west of Ireland and others remained relatively close to Scotland throughout the winter.

The Irish and Celtic Seas are also important for the basking sharks, the world's second largest fish after the whale shark. According to the report most of the sharks that headed south in the autumn used these seas as a migration corridor towards the Isle of Man and southwest England.

Cabinet Secretary for Rural Affairs, Food and the Environment, Richard Lochhead said: "The world's second largest shark, the basking shark, is an iconic species for marine conservation. Up until now we have not known as much as we would have liked about what they do in our seas and how best to ensure their continued presence alongside us, however this satellite tracking study confirms the Sea of the Hebrides is an essential destination in the migratory cycle of these gentle giants, where large numbers are seasonally sighted.

"This partnership between our scientific advisors at SNH and the University of Exeter has succeeded in uncovering more of the basking shark's secrets and furthering our knowledge of their behaviours, such as returning year on year to the same places at the same time. The results of this valuable work will help us along the path of getting the Marine Protected Area network right by ensuring the ecological processes and places basking shark depend upon are afforded the protection they need to endure."

Tags which provided information on the sharks' vertical movements suggest that the fish are able to adapt to various habitats and changes in their environment. A variety of behaviour was recorded, although sharks were found generally heading to deeper water at night in the summer months, returning to the surface during the day. Seven of the tagged sharks were found at depths greater than 1000m during winter months.

Dr Matthew Witt from UoE said: "We have learnt so much about Scotland's basking sharks through this work. It is the first project to use such a range of the latest tagging technologies and this has allowed us to reveal the horizontal and vertical movements of basking sharks with high levels of accuracy.

"We have gathered large amounts of data from the tags, which performed exceptionally well. But to collect much of this information

we needed to retrieve the tags after they had detached from the sharks, so we are extremely grateful to the public whose remarkable beach-combing abilities saw more than a quarter of the tags returned to us.

"It's been a truly exciting project with many highlights and challenges along the way. It has improved our understanding of the life history of basking sharks and confirmed that the Sea of the Hebrides is a special place for these captivating fish. We hope our combined efforts yield a more secure future for basking sharks in coastal and offshore waters and that the impact of the project reaches far, influencing marine spatial planning policy, public engagement and the global conservation agenda."

Provided by University of Exeter

Citation: Tagging project confirms Sea of the Hebrides importance to basking sharks (2016, January 21) retrieved 12 May 2024 from <https://phys.org/news/2016-01-tagging-sea-hebrides-importance-basking.html>

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