



Basking Sharks Travel the World Experts agree to tackle the mystery of missing migrations using photo-identification and satellite tags

The exciting discovery that a basking shark tagged in the Isle of Man had crossed the Atlantic Ocean to reach Newfoundland, has been followed by the revelation that other basking sharks tagged off the coast of the North-eastern USA have travelled to the Bahamas and the Caribbean. One or two have even been tracked crossing the equator all the way to the northern and central coasts of Brazil. These studies were made using electronic tags, cutting edge technology in marine research. Once attached, the tags track the sharks' movements and locations and the data are transmitted to the scientists via satellite on a pre-programmed date. Until now scientists had thought that the numbers of basking sharks found on each side of the North Atlantic, South Atlantic, North Pacific and South Pacific were essentially separate populations. "These latest results are really quite amazing," said Dr. Gore, who led the Save Our Seas Foundation (SOSF) supported team that tagged the Isle of Man shark. "This raises the possibility that a shark we see in Britain could cross to North American one year, and turn up in Brazil the next!"

These discoveries, however, highlight the fact that little or nothing is known about any corresponding migrations of southern hemisphere or Pacific Ocean sharks. At a Save Our Seas Foundation conference last week in the Isle of Man basking shark researchers agreed to coordinate their efforts in an attempt to solve the remaining mysteries. Knowledge of such migrations is proving increasingly vital in order to better protect the species. Populations of basking sharks in other parts of the world have been drastically depleted, and as Canadian scientists Scott Wallace described during the conference, in the northern Pacific they may have been exterminated. Dr. Gore explained, "The basking sharks seen in the Isle of Man might travel to other parts of the world to repopulate them, but if there is inadequate protection in those countries, they may never return."

The scientists will collaborate in a scheme to both assess the numbers of the animals and to track their movements, using both satellite technology and photographs. Scientists from a dozen countries, including New Zealand, Canada, the USA, and the Seychelles, as well as the UK, Ireland, and France attended the meeting. The new scheme will use close up photographs of the sharks' fins, which show above water when the sharks are feeding near the surface, to identify as many individuals as possible.

Photo-identification projects such as this have been used on a wide range of animals including elephants, penguins, whales and dolphins. Detailed photographs, which enable researchers to recognise individual animals after they have travelled hundreds or thousands of miles, are crucial for piecing together migratory routes and social behaviour. Especially important in the case of the basking shark, an endangered species, is estimating the size of the population. One estimate from a few years ago, based on genetic analysis, suggested that the global population might be fewer than 20,000. In the Pacific, basking sharks are relatively rare, but in northwest Europe, where the animal is now protected the population is recovering. Good numbers have already been seen this year in Cornwall and the Isle of Man. "We are not sure what is happening," explained Dr. Rupert Ormond, chief scientist of the Save Our Seas Foundation, one of the co-sponsors of the conference. "We need the main research groups, and interested members of the public, to collaborate in determining what proportion of the sharks we have already photo-ID'd, and since we know the total number of sharks in our catalogue, we can estimate roughly how many sharks there are altogether."

The new scheme will develop a European Basking Shark Photo-Identification Catalogue, to which researchers in Cornwall, the Isle of Man, Ireland, Scotland and France have already agreed to contribute. Al Reeve of the Plymouth-based Shark Trust, who is taking the lead in developing the necessary database and web-site, commented "Photo-identification really is a very powerful technique; and while photographs taken with powerful telescopic images may be needed to identify many of the sharks, even snap-shots taken by tourists can enable us to recognise some individuals, who because of encounters with boats and fishing gear, can have highly distinctive scars and tears on their fins."

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