

HEBRIDEAN WHALE & DOLPHIN TRUST

News release

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Pictured: John Coe's tail fluke showing bite mark from shark

Hebridean harbour porpoise sightings rise – but basking shark sightings fall

Harbour porpoise sightings off Scotland's west coast increased in 2014 compared to last year but sightings of basking sharks dramatically and unexpectedly fell, during extensive marine research expeditions carried out by the Hebridean Whale and Dolphin Trust.

The charity's 2014 research season also revealed evidence of a shark attack on a member of an endangered group of killer whales thought to be the UK's only resident population of orca.

The latest studies, carried out between May to October, form part of the trust's unique long-term monitoring of whales, dolphins and porpoises – collectively known as cetaceans – in the Hebrides. Data on basking sharks are also collected during the surveys.

“This pioneering research is vital for effectively conserving the world-class biodiversity of Scotland's western seas – and for securing the long-term future of spectacular cetaceans and iconic basking sharks,” said Kerry Froud, the trust's Biodiversity Officer.

“Our findings add to knowledge about the region's cetacean distribution, abundance and habitat use, and allow us to make informed recommendations to protect these remarkable species.”

There were 574 groups of harbour porpoises encountered during 2014 – a 25% increase on 2013. This increased sighting rate of up to 8 groups per 100 km surveyed may have been due to conducive weather resulting in calm seas, making the unobtrusive porpoise easier to detect. HWDT has previously discovered that the Hebrides hosts one of Europe's highest densities of this species, the UK's smallest cetacean. Despite this, Scotland still has no protected area for this species which are required under E.U. directives.

Basking shark sightings fell by 33% to 16 from 32 in 2013 – showing a trend of decreasing sightings of the world's second biggest fish in the area over recent years. This does not necessarily indicate a reduction in population size, as possible explanations include a shift further offshore in the distribution of plankton, their favourite food. Furthermore, the distribution of plankton within the water column will also dictate where the sharks are feeding; they may still be present, but not feeding at the surface.

Notable highlights during 2014 included two separate encounters with what is believed to be the UK's only known resident population of killer whales – five males and four females known as the West Coast Community. This small, isolated population of orca has never produced offspring since studies began, raising fears that it faces imminent extinction.

Evidence of drama emerged when one of the males in the at-risk group, known as John Coe, was observed with a large area of his tail fluke missing. Consultations with experts suggest that this was almost certainly the result of a shark attack.

Another outstanding close encounter featured minke whales riding in the bow-wave of the research vessel Silurian. This is unexpected as minke whales are usually elusive and shy of boats. Meanwhile, in a disturbing development in July, an individual minke approached Silurian with what appeared to be

blue plastic strapping wrapped round and embedded in the front of its head. The crew was unable to disentangle the whale, in what was a stark reminder of people's impact on the marine environment.

Cetacean entanglement in fishing gear and litter can cause mobility problems, injury and even death, usually slow and agonising. Other human activities causing increasing stress on cetaceans and basking sharks include fisheries bycatch, climate change, pollution, underwater noise and damage to habitats.

Silurian – previously used in the filming of the BBC's The Blue Planet series – covered more than 4,500 nautical miles during the year. This is the equivalent distance of crossing the North Atlantic three times! It surveyed to the Saint Kilda archipelago – the remotest inhabited part of the British Isles – twice, rounded the Mull of Kintyre to the south and even reached Cape Wrath, mainland Britain's most north westerly point.

In total, the surveys – conducted by marine scientists and volunteers on board the trust's dedicated research yacht Silurian – recorded more than 1400 encounters with cetaceans and basking sharks, and recorded close to 600 hours of underwater detections of cetaceans using specialist listening equipment.

Good weather conditions for surveying allowed twice as many photo identification opportunities than in 2013. This technique allows individual cetaceans or basking sharks to be identified by their distinctive markings, often shedding new light on population sizes and social dynamics, and whether individuals interact with other populations. The latest results are currently being analysed.

During September, Silurian became a floating classroom for schoolchildren from several primary schools on the Isle of Mull, with fun educational activities about the local marine environment.

In October, Silurian spent eight days conducting visual and acoustic surveys within the area of NATO's Joint Warrior military exercise. Video-range tracking was carried out in order to document minke whale behavior during the exercise, and HWDT trialed a new piece of acoustic technology on loan from the Sea Mammal Research Unit at the University of St Andrews. The 'sound trap' is a self-contained underwater sound recorder and the acoustic data collected will be used to assess the presence of active military sonar and whether the vocalisations of cetaceans in the area are affected. The trust plans to monitor the massive Joint Warrior military exercise again in 2015.

The annual surveys depend on paying volunteers. In 2014, 65 dedicated volunteers clocked up 760 survey hours – working with marine scientists to conduct visual surveys and acoustic monitoring with hydrophones (underwater microphones) monitored by computers, and identifying individual cetaceans through photography of dorsal fins.

The trust – based in Tobermory on the Isle of Mull – is currently recruiting volunteers for its 2015 surveys, to live and work as a citizen scientist onboard Silurian for periods of almost two weeks from April to September. Participation costs cover boat expenses, support the trust's research programme and include accommodation, training, food and insurance. For details, contact Morven Russell at volunteercoordinator@hwdt.org, call 01688 302620, or visit www.hwdt.org.

Western Scotland's seas are one of Europe's most important habitats for cetaceans and one of the UK's most biologically productive areas. So far 24 of the world's 83 cetacean species have been recorded in the region, many being national and international conservation priority species.

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