

KILLER WHALES (*ORCINUS ORCA*) IN UK WATERS

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In UK coastal waters, the summer months tend to produce an increase in the number of sightings of our most charismatic marine mammal species, the Killer Whale *Orcinus orca*. There can be few people who are not familiar with this species; it was well known to ancient tribes and whaling fleets, and is greatly publicised in the media, a star of aquarium shows, and the focus of long-term wild studies worldwide. Despite this, sightings of wild Killer Whales are generally scarce in all but a handful of favoured locations.

Killer Whales are found throughout the world's oceans and are one of the most widely ranging of all mammal species. However they are more abundant in productive cool temperate and polar regions than in tropical waters. Reaching a length of up to 8 m, with a striking black and white colouration and a tall (up to 1.8 m) dorsal fin in mature males, it is almost impossible to confuse the Killer Whale with any other cetacean species.

In recent years, researchers have revealed surprisingly complex social patterns among Killer Whale pods. Long-term studies involving photo-identification of whales have been carried out in Washington State and British Columbia, Monterey Bay, Alaska, Argentina, Norway, Iceland and the Crozet Islands. Photographing both the dorsal fin and the lightly pigmented 'saddle' behind the fin, enables researchers to identify and track individual animals and their long-term associations and movements. Such studies have indicated that Killer Whales remain in stable family pods of closely related whales throughout their lives. Females are long-lived (80 yrs) resulting in complex matriarchal-based societies and enabling younger animals to inherit specific pod traits and behaviours.

Killer Whale pods exhibit wide geographic variation in range, group size and behaviour. In particular, prey type and hunting strategy determine the distribution and ecology of each pod. Killer Whales are top marine predators and indeed the name 'killer whale' came from whalers who observed them feeding on the tongues of dead baleen whales and christened them 'whale killers'. They take a wide variety of prey including other marine mammals (cetaceans, pinnipeds, sea otters), fish, birds (particularly penguins), turtles and

cephalopods. Each pod shows adaptations for hunting the dominant prey source within their habitat, and specialised behaviour such as deliberate beach-stranding while pursuing seals in Argentina and co-operative 'carousel' feeding on Herring *Clupea harengus* in Norwegian fjords, are taught to offspring and inherited by generations of whales within the pod.

Within Britain and Ireland, Killer Whales tend to occur in small groups of less than 8 animals (Evans 1988) and are wide-ranging. Sightings are more frequent during the summer months, and are distributed primarily along the western seaboard and within northern regions of the North Sea (Evans 1988). Their predominantly western distribution has been demonstrated during 2002, where sightings have been reported from Shetland, Orkney, Western Isles, Aberdeenshire, Pembrokeshire, Irish Sea, Wexford, Cornwall and the Scillies (British Wildlife Cetacean Reports, 2002). Sightings in the English Channel and southern North Sea are rare.

The movement of Killer Whales within UK waters is poorly known, but particular 'hotspots' for sightings include the Western and Orkney Isles and in particular the waters around the Shetland Islands, where the Shetland Sea Mammal Group (SSMG) have established a photo-identification project for the species. Within Shetland coastal waters, sightings of Killer Whales peak during June and July, and groups are relatively small averaging a total of 4 to 6 animals. Whales have been observed hunting and feeding upon Common Seal *Phoca vitulina*, Grey Seal *Halichoerus grypus* and Harbour Porpoise *Phocoena phocoena* in Shetland waters, and it is possible that pods move inshore during the summer months specifically to exploit marine mammal populations. Observations even suggest that Killer Whales in Shetland waters will intentionally strand on suitable beaches (e.g. Easter Quarff) in pursuit of pinnipeds, as well documented for whales in Patagonia. Killer Whales entering coastal Shetland waters often take a rather predictable track through Yell Sound and around the south mainland, and it is likely that they routinely check various seal haunts for potential prey.

Killer Whales are also abundant in the waters along the continental shelf edge approx. 80 km to the north of Shetland between May and July and during the winter months. Surveys by the Joint Nature Conservation Committee (JNCC), and records from seismic survey and fishing vessels suggest that large pods of Killer Whales (occasionally 50-100 animals) may occur in these waters (Pollock *et al.* 2000). In contrast to coastal Killer Whales feeding on marine mammals, those in offshore Shetland waters occur probably in response to Mackerel *Scomber scomber* movements. It is possible that these animals may be part of a larger population of NE Atlantic Killer Whales that enter Norwegian fjords during October and November to prey upon Herring.

Killer Whales are also regular visitors to the Orkney and Western Isles, but sightings are scarcer than in Shetland probably due to a smaller network of observers. A distinctive bull Killer Whale known locally as 'John Coe' has been recorded around Skye and Mull for several years, suggesting that the same animals return annually to the area. Weather conditions in the Western and Northern Isles inhibit observations during much of the winter period, and it is unclear at present whether Killer Whales are as seasonally distinct in these localities as records suggest.

Killer Whales are reported regularly from offshore installations in the central and northern North Sea but there are no records from the southern sector

(Weir 2001). In coastal North Sea waters, the species infrequently occurs in the Moray Firth and off Aberdeenshire and occasionally ventures south to the Farne Islands, an important haul-out for Grey Seals. In recent years, Killer Whales have been sighted in small numbers along the coast of Northern Ireland, in the Irish Sea, and off the coasts of Cork, south-west Wales, the Scillies and Cornwall, particularly during May. Nothing is currently known about these animals, although their occurrence off Cornwall has been linked to movement of Basking Sharks *Cetorhinus maximus* in the region, a potential prey of the Killer Whale. During the summer of 2001, three Killer Whales took up residence in the waters within and surrounding Cork harbour in southern Ireland. The occurrence of these enigmatic mammals feeding upon Salmon *Salmo salar* and other fish within Cork city centre was an unforgettable experience and again indicated the versatility of the Killer Whale as a predator.

Seeing Killer Whales in UK waters is often a question of being in the right place at the right time, and the more hours spent sea-watching the more likely you are to be rewarded. I have personally spent hundreds of hours on headlands in Shetland with no luck, only to arrive on a rainy day at Ardnamurchan Point on the west coast of Scotland and immediately find the dorsal fins of six Killer Whales transiting by. The rewards are well worth waiting for!

References

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