



The Cetacean Monitoring Unit

S E A W A T C H
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SPECIES INFORMATION SHEET

NORTHERN BOTTLENOSE WHALE IN UK WATERS

DESCRIPTION The northern bottlenose whale, *Hyperoodon ampullatus*, is probably the best-studied species within the beaked whale family, *Ziphiidae*. Males are from 8.5-9.8 metres and females 7.5-8.7 metres in length. The most distinctive feature of the species is the bulbous forehead (particularly pronounced in adult males) and its relatively short, dolphin-like beak. There are two teeth at the tip of the lower jaw, which only erupt in adult males. The dorsal fin is relatively tall and sickle-shaped, and situated nearly two-thirds of the way along the back. As in other beaked whales, the tail flukes lack a central notch. The body colour is chocolate brown, to yellowish (depending on whether there is a growth of diatoms over the skin), and adult males have a white patch on the forehead. At sea, the blow is bushy, about 2 metres high, and slightly forward-pointing.

DISTRIBUTION AND STATUS The range of the northern bottlenose whale is restricted to the North Atlantic, where it occurs mainly in cold temperate and sub-arctic waters. The species favours deep ocean trenches, such as occur off Newfoundland (particularly “the Gully”), western Norway, and in the Barents Sea. Its migration pattern is more complex than a mere north-south movement, and some populations seem to be resident year-round. The distribution seems to be strongly influenced by that of its major prey - squid of the genus *Gonatus*.

Northern bottlenose whales are found mainly in deep waters of greater than 1,000 m depth, often over submarine canyons and adjacent to the continental shelf edge, although they sometimes enter more shallow waters (300 m or less depth), and in January 2006, one even found its way up the river Thames to the city of London! In waters adjacent to the UK and Ireland, the species is sighted primarily in the Faroe-Shetland Channel, Rockall Trough, and southern Bay of Biscay, but it has been seen on occasions in coastal waters, for example around the Isle of Skye or off Northern Scotland.

No detailed population estimates exist for the North Atlantic, but following the IWC North Atlantic sightings surveys (NASS) in 1987 and 1989, an estimate of 40,000 northern bottlenose whales was made. The species appears to be still locally abundant in at least some areas. Sightings in UK shelf waters are few, mainly in August, with no particular pattern or trend in the last 35 years.

SOCIAL BEHAVIOUR Northern bottlenose whales are usually found in small groups of 1 to 4 animals, with few aggregations containing more than 10. There appears to be some segregation by sex and age classes, with mature males tending to separate from female groups after the mating season. In the Gully off Newfoundland, the social organization of animals can best be described as a fission-fusion society, but adult males seem to form long-term bonds with other males. The animals are curious and will often approach stationary or slow-moving vessels. This behaviour along with the fact that they would not leave a wounded group member until it died, was exploited by 19th and 20th century whalers. Northern bottlenose whales routinely dive to 800m or deeper, and can go to depths of at least 1500m, remaining under water for over an hour. They sometimes spy-hop, tail-slap and breach, as dolphins do.

REPRODUCTIVE BIOLOGY Both sexes reach sexual maturity at about 7 years of age. Adults are thought to live to between 40 and 50 years. Gestation is about 12 months, possibly more, and most calves are born in spring and early summer. Lactation lasts at least one year. The mean calving interval is thought to be 2 years.

DIET The main prey of northern bottlenose whales are deep-water squid of the genus *Gonatus* (particularly *Gonatus fabricii*), although they also eat squid of other species, as well as herring, deep-sea fish, and shrimps. The presence of sea cucumbers and starfish in some stomachs suggests that the species feeds mainly at or near the sea floor.

THREATS Northern bottlenose whales were first hunted by Scottish whalers in the second half of the 19th century, but by the end of that century the fishery was dominated by Norway. Like sperm whales, the species possesses a spermaceti organ, which has made it particularly valuable for the whalers (the oil was used for cosmetics and other products). The fishery was closed for economic reasons in 1973. Although some populations were reduced as a result of commercial whaling, especially in the eastern North Atlantic, there has been some debate about the extent of the depletion.

In more recent times, threats have come mainly from acoustic disturbance. Like other deep-diving beaked whales, northern bottlenose whales are particularly vulnerable to mid-frequency active sonar used by the military to detect submarines, and the species may also be negatively affected by sound disturbance from other sources such as oil and gas exploration.

FURTHER READING

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