

Mesoplodon bidens (Sowerby, 1804)

English: Sowerby's beaked whale, North Atlantic beaked whale

German: Sowerby-Zweizahnwal

Spanish: Zifio de Sowerby, ballena picuda de Sowerby

French: Baleine à bec de Sowerby, Mésoplodon de Sowerby

Family Ziphiidae

1. Description

Adults are bluish grey or slate coloured, with grey to white flanks and belly. Young are generally paler and have fewer scars than the adults. The two flattened, triangular tusks of adult males erupt from the lower jaw, at about 37% of mandible length from the tip of the rostrum (Macleod and Herman, 2004; Jefferson et al. 2008). The largest specimen was 5.5 m long (Reidenberg and Laitman, 2009).

M. bidens has one of the most northerly distributions of all the beaked whales, which should help with identification. However, parts of its range overlap with other *Mesoplodon* species, especially Gervais' beaked whale, Blainville's beaked whale, and True's beaked whale, and it is likely to be difficult to distinguish it from these with any certainty at sea (Carwardine, 1995), however documented sightings are reported (Hooker and Baird, 1999).

2. Distribution

<http://www.iucnredlist.org/details/13241/0/rangemap>

Distribution of Mesoplodon bidens (Taylor et al. 2008; © IUCN): temperate and subarctic waters in the eastern and western North Atlantic (Pitman, 2002).

Sowerby's beaked whale occurs in the temperate North Atlantic, the distribution range being delimited clockwise from Massachusetts to the Labrador Sea, Iceland, northern Norway south to the Azores, Madeira and the Canary Islands (Jefferson et al. 2008). There are no records off the NW African continent (K. van Waebeek, pers. comm.).

According to C.D. MacLeod (pers. comm.) Sowerby's beaked whale is known mainly from approx. 150 strandings, an exceptionally high number for the genus. In the western North Atlantic, 11 strandings were reported (Lien and Barry, 1990). Most records stem from the eastern North Atlantic, especially around Britain. However, Carlstroem et al. (1997) observed two Sowerby's beaked whales at 71° 30'N, 04°00'E in the Norwegian Sea. Kinze et al. (1998) reported a stranding from the Danish North Sea coast and Smeenk (1995) found a stranded specimen on the Dutch coast. Sowerby's beaked whale is unlikely to live in the Baltic Sea, where the water is too shallow (Carwardine, 1995). There is one stranding report from Italy (Carwardine, 1995), but the species is only vagrant in the Mediterranean (Jefferson et al. 2008). Stray specimens have also been recorded from Florida (C.D. MacLeod, pers. comm.). Although there are more recorded strandings of this whale on British and European coasts, its range appears to be generally offshore throughout the cooler parts of the North Atlantic.

M. bidens is the most northerly recorded mesoplodont species in the North Atlantic, followed by *M. mirus*. The distribution of *Mesoplodon* species may relate to variations in water temperature (MacLeod, 2000).

3. Population size

Unknown

4. Biology and Behaviour

Habitat: Although it is one of the most commonly stranded *Mesoplodon* species, there have been few sightings at sea, and it is poorly known. De Buffrénil (1995b and references therein) mentions that two sightings north of Scotland and west of the Orkney Islands were in waters several hundreds of meters deep. Hooker and Baird (1999) observed groups of Sowerby's beaked whales in the Gully, a submarine canyon off eastern Canada, on four occasions, in water depths of between 550 and 1500 m.

Behaviour: Hooker and Baird (1999) observed Sowerby's beaked whales to dive for between 12 and 28 minutes. Blows were either invisible or relatively inconspicuous. During all surfacings the long beak projected from the water well before the rest of the head or back was visible. While surfacing behaviour was generally unremarkable, one individual tail-slapped repeatedly.

Schooling: According to De Buffrénil (1995b and references therein) stranded animals usually occur singly. In those cases where two animals stranded together, these were mother-calf pairs. However, at least occasional formation of larger groups is supported by two strandings of *M. bidens* in Newfoundland; one in 1986 with 6 individuals and a second stranding in 1987 which involved 3 whales (Lien et al. 1990). Hooker and Baird (1999) found that group size in the Gully varied from 3 to 10 individuals. A mixed-composition group was observed on one occasion, consisting of at least two female-calf pairs and 2 to 4 adult males (based on the presence of visible teeth and extensive scarring). Another group consisted of three quite heavily scarred and therefore presumably male animals.

Food: Stomachs of freshly killed *M. bidens* primarily contained bottom-dwelling deep-water (greater than 400m) fish of between 100 and 200mm length (Gannon et al. 1998). Ostrom et al. (1993) evaluated the diet of Sowerby's beaked whales based on isotopic comparisons among north-western Atlantic cetaceans and found that the species feeds mostly on small, offshore squid.

5. Migration

Little is known about migration; most northerly animals may migrate with advancing and retreating ice, and some populations may move towards the coasts during summer. Year-round strandings are recorded, but most occur from July to September. Animals probably live some distance offshore (Carwardine, 1995; de Buffrénil, 1995b and references therein).

According to Mead (1989) there does not seem to be any seasonality in the European stranding records. The only country for which enough records exist (n =41) to allow an analysis of seasonality is the United Kingdom. Strandings have been reported in every month except February, with a tendency towards a broad peak in the summer (July-September). According to C.D. MacLeod et al. (pers. comm.) most strandings of Sowerby's beaked whales

on eastern coasts of the UK occurred in late summer and autumn which may coincide with a southward movement.

6. Threats

Occasionally, individuals were caught incidentally in fishing gear (De Buffrénil, 1995b), e.g. in Newfoundland small-scale fishery (Jefferson et al. 1993). A number have been incidentally killed by whalers off Newfoundland, Iceland and in the Barents Sea (Jefferson et al. 2008).

Waring et al. (2001) report that for 1989-1998 observed by-catch rates in pelagic drift gillnets along the US East Coast amount to 24 Sowerby's beaked whales. These were caught exclusively in the area from Georges Canyon to Hydrographers Canyon along the continental shelf break and (continental) slope during July–October. Catches of other beaked whale species were significantly lower.

7. Remarks

Range states (Taylor et al. 2008) :

Belgium; Canada; Canary Islands (Spain), Denmark; France; Germany; Gibraltar; Iceland; Ireland; The Netherlands; Norway; Portugal; Spain; Sweden; United Kingdom; United States of America (USA)

The species is categorised as "Data Deficient" by (the) IUCN and is not listed by CMS. Listed in CITES Appendix II.

8. Sources

See "Genus *Mesoplodon* – Beaked Whales: Introduction and Sources"

© Boris Culik (2010) Odontocetes. The toothed whales: "*Mesoplodon bidens*". UNEP/CMS Secretariat, Bonn, Germany. http://www.cms.int/reports/small_cetaceans/index.htm

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