



The Cetacean Monitoring Unit

S E A W A T C H
· f o u n d a t i o n ·

SPECIES INFORMATION SHEET

FIN WHALE IN UK WATERS

DESCRIPTION The fin whale, *Balaenoptera physalus*, is the second largest of all whales. In the northern hemisphere, females are from 20-24 metres, and males from 18.5-22 metres in length. In the southern hemisphere, both sexes grow ca. 1-2 metres larger. At close range, a distinctive feature is the lower jaw, which is white on the right, but black on the left. The baleen plates are black, with exception of the front third on the right side, which is cream-coloured or white. The body colour is a uniform slate grey, with a light grey, V-shaped chevron across the back behind, and a “blaze” on the right side of the head. Fin whales have a slender head, which looks V-shaped and flattened from above with a single prominent median ridge. They have a relatively small, backwards pointing dorsal fin with little curvature situated one-third from the back. The tail flukes are not usually shown when diving. The blow is tall (4-6 m high) and shaped like an inverted cone.

DISTRIBUTION AND STATUS The species occurs worldwide in mainly temperate and polar seas of both hemispheres. In the eastern North Atlantic, it is uncommon, occurring mainly in deep waters (200-4,000 m depth, particularly around the 1,000 m isobath) from Iceland and Norway south to the Iberian Peninsula, and east into the Mediterranean (particularly the Ligurian Sea). In northern Europe, fin whales are most frequently seen in the Norwegian Sea west of Norway, north and west of Scotland (particularly south and south-east of the Faroe Islands in the Shetland-Faroe Channel), off Southern Ireland east into the St George’s Channel, and across the Bay of Biscay. Most sightings in coastal UK waters come from the Shetland Islands, Outer Hebrides, SW Ireland and in the Celtic Sea between southern Ireland, West Wales and SW England. Although fin whales in polar seas may undergo a seasonal latitudinal migration, remaining there only during summer months, those further south around the British Isles appear to be present year-round. Most sightings in northern Britain occur between June and August, and in southern Britain between September and February, and there is some indication from sightings observations that fin whales make a general northward movement off NW Scotland from June to October.

No current estimates exist for the North Atlantic population as a whole, but recent sightings surveys indicate a total population numbering somewhere over 46,000 individuals, but still below its former size. A recent estimate of 3,500 for the western Mediterranean has been made from sightings surveys.

SOCIAL BEHAVIOUR Fin whales are usually seen singly or in pairs (mainly a mother with her dependent calf). They can form larger pods of 3-20 animals that may be part of a broader group that could number hundreds of individuals spread over a wide area, especially on the feeding grounds. Differences in group size may be due to the presence of different feeding situations or geographical segregation by sex or age class which is known to take place. Individuals may change their associations with one another over a short time period, suggesting fluid associations at least on the feeding grounds. Lunging behaviour has been frequently observed mainly when groups are present. Breaching also occurs occasionally, the animal typically landing on its belly. Surface sexual behaviour involving excited chases has also been described.

Fin whales are fast swimmers averaging 2-6.5 km/hour when feeding, 6-9 km/hour during normal travel, up to 30 km/hour in short bursts when migrating or cruising, and up to 41 km/hour when alarmed. They may dive to depths of over 480 metres.

Their main vocalisations are low frequency pulses (moans) from about 4-17 Hz (but can reach 125 Hz) lasting 0.5-1 sec and often repeated in series with regular intervals (5-45 sec). Short (2-30 repetitions) sequences produced by both sexes probably serve for communication over distances up to 30 km between widely spaced individuals. Long (up to 30 hours) patterned sequences of single or paired pulses with stereotyped repetition patterns (often interrupted by 20 min. rest periods) are produced by slow swimming adult males, mainly between October and April, and are thought to be song displays associated with mate attraction. Additional sounds include rumbles of very long duration (c. 30 sec) in frequency range 10-30 Hz, thought to be aggressive; and high (16-28 kHz) frequency clicks (duration 8.8 sec) recorded at close range.

REPRODUCTIVE BIOLOGY Females reach sexual maturity at 6-10 years, and males at 8-12 years of age. In exploited populations (e.g. Iceland), there is indication that animals have recently been maturing earlier. Fin whales can live to 85-90 years. Gestation is 11.25 months, and calves are born mainly in autumn and winter. Lactation lasts 6-7 months. The mean calving interval is thought to be between 2.7 and 3 years.

DIET Fin whales feed mainly on planktonic crustacea (mainly euphausiids such as *Meganyctiphanes norvegica* but also copepods), but they also take fish (e.g. herring, capelin, sandeel, mackerel and blue whiting), and cephalopods. A relationship between fin whale distribution and *Meganyctiphanes* abundance has been demonstrated in the western Mediterranean. The animals may use a variety of feeding methods ranging from engulfing prey from behind by distending the throat grooves and taking a large gulp of water and prey, to side- and lunge-feeding which may involve some herding of the prey into a tight concentration.

THREATS Fin whales were heavily exploited during commercial whaling, especially after the invention of steam catcher boats, which allowed the whalers to keep up with this fast-swimming species, along with the explosive harpoon gun in the mid-19th century. Scottish and Irish catches off the continental shelf edge between 1903-1928 almost certainly depleted the local populations, and the species became scarce in the region. Fin whales were given full protection from commercial whaling in 1986.

Collisions between fin whales and vessels are not uncommon. Ship strikes, particularly with ferries, is a known factor of mortality for fin whales in the Mediterranean Sea, and a reason for concern in areas of heavy traffic such as the Strait of Gibraltar and English Channel.

Noise and disturbance from vessels and industrial activities may also have a negative impact in some coastal areas, and concerns have been expressed about the impact that seismic sounds may have from oil and gas exploration along the Atlantic Frontier, north and west of the British Isles.

Fin whales are sometimes accidentally caught in fishing gear, for example in eastern Canada and the Mediterranean, whilst the collapse of capelin stocks off Newfoundland in the late 1970s was thought to have had a negative effect on summering populations.

FURTHER READING

- Aguilar, A. (2002). Fin Whale. Pp. 435-438. In: *Encyclopedia of Marine Mammals*. (Eds. W.F. Perrin, B. Würsig and J.G.M. Thewissen). Academic Press, San Diego. 1414pp.
- Edds, P.L. (1980) *Variations in the vocalisations of fin whales, Balaenoptera physalus, in the St. Lawrence river*. MSc thesis, University of Maryland, MD. 126pp.
- Evans, P.G.H. 1987. *The Natural History of Whales and Dolphins*. Christopher Helm, London. 360pp.
- Evans, P.G.H. 1995. *Guide to the Identification of Whales, Dolphins and Porpoises in European Seas*. Sea Watch Foundation, Oxford. 24pp.
- Evans, P.G.H., Anderwald, P., and Baines, M.E. 2003. *UK Cetacean Status Review*. Report to English Nature & Countryside Council for Wales. 160pp.
- Fairley, J.S. (1991) *Irish Whales and Whaling*. Blackstaff Press, Belfast. 218pp.
- Gambell, R. (1985) Fin whale *Balaenoptera physalus* (Linnaeus, 1758). Pp. 171-192. In *Handbook of Marine Mammals. Vol. 3 The Sirenians and Baleen Whales*. (Eds. S.H. Ridgway & R. Harrison). Academic Press, London. 362pp.
- Mitchell, E.D. (1974) Present status of Northwest Atlantic fin and other whale stocks. Pp. 108-169. In *The Whale Problem* (Ed. W.E. Schevill). Harvard University Press, Cambridge.
- Reid, J., Evans, P.G.H. and Northridge, S.P. 2003. *Atlas of Cetacean Distribution in North-west European Waters*. Joint Nature Conservation Committee, Peterborough. 68pp.