

Marine species research paper examples

[Environment](#), [Animals](#)



Introduction

Unlike what is suggested by its name, the long-finned pilot whale, known by the scientific name: *Globicephala melas*, is not really a whale but belongs to the family of dolphins. It is classified under the order Cetacea (cetaceans, whales), the suborder Odontoceti (suborder of toothed whales) and the family Delphinidea (dolphins). This species is classified under “ Data Deficient (DD)” and on the International Union for the Conservation of Nature (IUCN) red list (Dolphin Fund, 2011). This species is mostly threatened by the activities of man but other threats such as diseases and ingestion of heavy metals exist. Usually, the long-finned whale is caught by fishing gear such as trawling nets (Dolphin Fund, 2011). It is estimated that 1, 000, 000 long-finned pilot whales exist today. This paper provides research on various aspects of this species such as geographical location and preferences, physical attributes, diet, predators, threats, and protection methods.

Physical Characteristics

The long-finned pilot whale is one of the largest types of dolphins. It is the second largest in the dolphin family after the killer whale in terms of size. The newborns are between 1. 6-2. 0 meters in length and have a weight of about 100 kilograms. Adult females have a length of about 5. 7 meters while the males are 6. 7 meters long (Dolphin Fund, 2011). Males can go up to an average weight of 2, 300 kg. The females are much smaller and hardly exceed 1, 300 kg. In terms of appearance, pilot whales have a square-like and bulbous melon or forehead overhanging the mouth. Their beaks are extremely short and their mouth rides almost to the eyes. They have flippers

that are extremely long, making up to one-fifth of their body length (Heide, Mikkelsen, Ofstad, Dietz, Andersen, & Stefansson, 2003). Their flippers are sickle-shaped and have pointed tips. Their dorsal fin has an extended base which is falcate-shaped. Pilot whales are dark grey in color and have a light grey patch on their chest, a saddle patch behind their dorsal fin and a whitish streak behind each eye, which extends just to the tip of the dorsal fin. Their mouths consist of 9 to 12 pairs of very sharp teeth which are conical in shape (Heide, Mikkelsen, Ofstad, Dietz, Andersen, & Stefansson, 2003). The gestation period is between 12 and 15 months while calving happens once in 3-5 years. The calves have a size of about 1.8 meters at the time of birth. They nurse for close to 22 months. Longer nursing periods are associated with stronger bonds with the mother. Males engage in mating fights which may involve biting, butting, ramming and biting.

Geographical distribution

This species is vastly distributed and may be found in sub-polar or temperate waters. However, they are not present in the North Pacific. They are found in cooler waters as compared to their short-finned counterparts. The long-finned variety of the pilot whales is divided into two categories: *G. m. Melas* found in the north and *G. m. Edwardii* found in the south. The southern subspecies may be found approximately 20- 65 ° S often in the coasts of Argentina, Chile, Australia, New Zealand and South Africa. The northern subspecies are found in the North Atlantic Ocean in Moroccan and Azores coasts (American Cetacean Society, 2012). It may also be found in Greenland and Newfoundland. Generally, they have a preference for submerged banks, continental shelf edges and in high relief areas.

Diet and feeding behavior

The pilot whales are significant predators of the outer continental shelf (Northeastern United States). But by inspection, they have just 40-48 teeth, which is a small number when compared to the 120 found in other species of the dolphin family. The fewer number of teeth has been described by some researchers as a revolutionary trend where squid eaters have a fewer number of teeth. Their teeth are used primarily for grasping/ catching prey (Heide, Mikkelsen, Ofstad, Dietz, Andersen, & Stefansson, 2003). Little information exists about their feeding preferences. This is because direct observation of their foraging methods is very difficult. However, stomach contents of these animals have been examined. Their diet consists of squids, other cephalopods as well as small fish. Adult pilot whales have been known to consume quantities of up to 143 kilograms of food on a daily basis. The pilot whales hunt in groups and concentrate their prey by circling them. While hunting, they make high-pitched whistles for coordination.

Threats

The primary threats to pilot whales include hunting and entanglement in fishing gear. In some instances, pilot whales are incidentally taken, entangled or caught by a variety of fishing gear such as longlines, trawl and gillnets. Whalers benefit from the strong social bond among the pilot whales. This is because the pilot whales live and move in large schools making them vulnerable to human attacks. In the 19-20th century, this species of dolphins were driven and herded into tighter groups by sperm whalers from the US. They were then harpooned for meat, oil and blubber. This was done in the North Atlantic while the processing happened in Newfoundland. Today, there

are shore-based hunters from the Faroe Islands (Denmark) who target this species. Drive fisheries have historically happened in Greenland, Iceland, Norway, Falkland Islands and Scotland.

This species has also faced non-human threats such as Morbillivirus which affects them in the North Atlantic. There is the danger species may spread the disease to other marine creatures that are in direct or indirect association with them. Another threat faced by this species is the presence of heavy metals in their habitats. Other contaminants have also been discovered in their natural environment. The evidence of this is found in the blubber of the pilot whales. If passed through the marine food chain or consumed by humans, they may pose serious health risks.

Hunting Methods

In the Faroe Islands, whale hunting is a cultural practice which has been carried out for a long time. Although it is regulated today by Faroese authorities, there are disputes between the Faroese authorities and the International Whaling Commission (IWC), based on the competence of the IWC in legal aspects of small cetaceans. The Faroese hunts are known as grindadrap and are organized communally where all members are allowed to participate. The method of fishing involved driving the whales to a specific location using many boats. The locations chosen were usually those that slope from the shore into the deep waters. The whales were then stabbed to death and pulled to shore. Due to the brutality involved in this practice, however, whaling equipment has been restricted by law to ropes, hooks and assessing poles. When these requirements are observed, the driving of the pilot whales can be done. Whaling is done when the weather

favors the drive procedure. When the pilot whales are surrounded by the boats, lines with stones tied to them are dropped into the waters behind the whales. By advancing the lines, the whales are driven to the marked fjord or beach where the whales land on the beach. The pilot whales that do not beach are stabbed using a sharp hook (gaff) and pulled to shore. The dead pilot whales are then arranged into wharves and butchered. Traditionally, all hunters and families have an equal share of the catch (meat and blubber). The hunt practiced in the Faroe Islands is noncommercial but some portions of the meat, blubber and oil are sometimes sold to hotels and restaurants. There are three main objections to the hunt of the pilot whales. First is the cruelty that the animals are subjected to during the hunt. Although the Faroese authorities outlawed the use of harpoons and excessive force in the 1880s, the hunting process subjects the animals to panic, shock and brutal cutting, which have drawn sharp criticisms from animal rights activists. The second objection to the hunt is the bloody nature of the practice. The waters are reddened by the blood and although the long-term effects of this are not known, some toxins and diseases found in the whales may spread to other marine species.

Aquaculture

Long-finned pilot whales adapt well to captivity. This makes them ideal for zoos and aquariums. This type of captivity is mostly commercial because people pay to see these animals in zoos. The World Association of Zoos and Aquariums (WAZA) keep a few pilot whales in aquariums but only for the purposes of protection (NOAA, 2010). WAZA have discouraged the practice of capturing pilot whales for purposes other than conservation. This is

because the methods used for capturing may injure or torture the animals psychologically. It is difficult to farm this animal because of its big size which may lead to size constraints. Issues with handling and safety of the pilot whale have made farming it difficult. However, its apparent comfort in captivity is an advantage for future attempts in farming this species.

Conservation efforts

According to the IUCN, this species belongs to the red list. This is a list of threatened species. In 2005, the National Marine Fisheries Service (NMFS) convened a conference to address the by-catch of both categories of pilot whales in the Atlantic waters. This conference defined strategies which were in-keeping with the Marine mammal Protection Act (MMPA) (Shafroth, 2009). The strategies, regulatory as well as non-regulatory, involved stepwise management approaches meant to reduce serious mortalities and injuries to pilot whales. Research recommendations were made to allow better understanding of the interaction of pilot whales and Risso's dolphins with long-line gear (Shafroth, 2009). Regulatory measures suggested and implemented include making sure that long-line fishing vessels have observers. These observers ensure that injuries to Risso's dolphins and pilot whales are minimized (Shafroth, 2009).

Conclusion

The Long-finned pilot whale, known scientifically as *Globicephala melas*, belongs to the family of dolphins. They are mostly found in sub-polar or temperate waters with a current population of about 1 million. Adult females have a length of about 5.7 meters and a 1,500 kg weight while the males

are 6.7 meters long and can go up to an average weight of 2,300 kg. They are hunted for meat, blubber, oil and fertilizer through drive fishing. Threats to this species are primarily human although diseases and toxins negatively affect their populations. They have been placed by the IUCN on the “red list” of species which are threatened. Conservation efforts have been made to reduce injuries to them through fishing equipment as well as to reduce their mortality rates.

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