Sei whales

Balaenoptera borealis

Classification

The sei whale *Balaenoptera borealis* is in the same genus as the blue *(B. musculus)*, fin *(B. physalus)*, Bryde's *(B. edeni)* and minke *(B. acutorostrata)* whales. These Balaenoptera species, along with the humpback whale *Megaptera novaeangliae*, are rorquals: that is to say, they have baleen plates rather than teeth, and also have pleated ventral grooves which enable them to distend their throats. The literal translation of the term "balaenoptera" refers to the fact that these species have a dorsal fin, and distinguishes the genus from other baleen whales such as gray whales and right whales, which do not.

The name ***"sei whale"*** is derived from the Norwegian seje, for pollack or coalfish, because the two species used to arrive off Norwegian waters at the same time each year. In The Book of Whales, Richard Ellis notes that the sei whale has ***"been named for a fish by the two nations that hunted it most - sejhval by the Norwegians and Iwashi-kujira, or sardine whale, by the Japanese."*** As Ellis notes, such nomenclature is ironic given that the sei whale is ***"not primarily a fish eater."***

Behavior, natural history and diet

Sei whales tend to travel in groups of two to five individuals, although larger aggregations occur periodically. Fast swimmers in bursts - R.C. Andrews, writing in 1916, likened the sei whale to the cheetah in that respect - they may in fact be the fastest of all cetaceans.

Sei whales are almost exclusively plankton feeders. In the North Pacific, a Japanese study (Nemoto and Kawamura, 1977) of the stomach contents of 21,713 seis that had been killed by whaling showed that 9,665, or 44.5%, had empty stomachs. Only 3% had been eating fish, and 82.7% of those with food in their stomachs had been feeding on planktonic animals called copepods. Their diet is reflected in their baleen plates, which have very fine hair on the inner surfaces, making the baleen better adapted to sieving smaller organisms from the water.

Sei whales mostly inhabit offshore waters and rarely come inshore. This contributed to their not being described by science until two or three decades later than most of the other rorquals, and is a contributing factor to their being relatively little studied or understood to this day.

Distribution and movements

Sei whales feed in cold water during summer, although they may not penetrate into as high latitudes as some other species. Their winter distribution is presumably dispersed in offshore waters of the tropics and subtropics. Genetic studies have determined the existence of separate populations in the Northern and Southern Hemispheres, but have failed to identify separate populations within ocean basins. In the North Pacific, two or three populations have been proposed; in the North Atlantic, as many as eight have been suggested, although for management purposes only three are recognized.

Uniquely among whales, seis frequently appear suddenly in an area for days, weeks, or months, and then disappear completely for years. This is presumably a response to localized environmental factors enabling them to exploit temporarily abundant prey species on an opportunistic basis.

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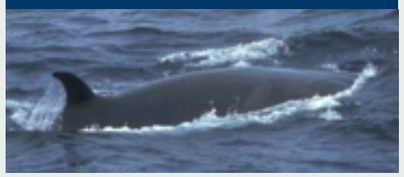

Commercial whaling - a history of over-exploitation

Commercial hunting of sei whales did not begin until the late 19th century, when around 4,000 sei whales were hunted off North Norway between 1885 and 1900. Subsequently, seis were hunted in the North Atlantic from land stations in Canada, the Faeroe Islands, the Iberian Peninsula, Iceland, Ireland, Norway and Scotland; in the North Pacific by pelagic fleets and from land stations in California, Canada, Japan, Kamchatka, and Kuril; and in the Southern Hemisphere from Brazil, Chile, Peru, South Africa, and South Georgia.

The largest catches by far, however, were by the Antarctic pelagic fleets. Initially the sei was not hunted much by these fleets: it was fast and hard to catch, its blubber was thin, and the larger blue whales and fin whales were preferred targets. But with the collapse of first blue and then fin whale populations in the Southern Hemisphere, the sei whale, as the next-largest species, became the focus of the commercial whaling industry and by the 1965/66 season accounted for 71.9 per cent of the Antarctic catch.

According to International Whaling Commission (IWC) statistics, a total of 203,538 sei whales were killed in the Southern Hemisphere in the 20th century, with over half this total taken in the Antarctic in just 12 years, from 1959 to 1971. Not surprisingly, catches dwindled rapidly thereafter: the IWC quota for 1976/77 was 1,995 seis; for 1977/78 it was 855; and for 1978/79 it was 84. That was the last year of sei whaling in the Southern Ocean. The hunting of seis had ended in the North Pacific four years earlier, and here too the damage had been extensive: Japan killed about 29,400 seis along their coast between 1910 and 1975; the Soviets and Japanese together killed about 31,700 during pelagic operations between 1952 and 1975. Altogether, North Pacific whaling accounted for almost 75,000 sei whales. The consequent drastic decline in population numbers resulted in the IWC declaring North Pacific seis a protected stock from 1976. Commercial whaling for seis in the North Atlantic continued until the moratorium came into effect in 1986, although Iceland continued to hunt small numbers under the guise of "scientific research" for four years, and some subsistence catches took place off Greenland.

Population numbers and status

Sei whale population numbers were not known with any confidence prior to exploitation and still are not. However, it is certain that commercial whaling caused considerable declines throughout the species' range. In 1980, it was estimated that the Southern Hemisphere population had been reduced to around 24,000 from an initial level of 100,000 or so. In the North Pacific, the most recent study, in 1977, indicated a decline from 42,000 in 1963 to 8,600 in 1974. Figures in the North Atlantic are the most uncertain, although some surveys have suggested a figure of around 10,000.

There have been no recent population estimates. The 2000 IUCN Red List of Threatened Species classifies the species as Endangered, meaning it faces a "very high risk of extinction in the wild in the near future." This is based on the IUCN criterion that there has been an estimated total decline of at least 50% in worldwide abundance over the last three generations.

Japan's planned scientific whaling

Japan has submitted a proposal to the IWC Scientific Committee to expand its research whaling program in the North Pacific, beginning in 2002. In addition to increasing from 100 to 150 the number of Northern minke whales taken each year, the proposal calls for the taking of 50 sei whales a year. In a press release dated 1 March 2002, the Institute for Cetacean Research (ICR) stated that the increase is "based on urgent scientific need to collect data on the competition between whales and fisheries."

The release continues by claiming that "it is estimated whales consume three to five times the amount of marine resources as are caught for human consumption." The species taken under the research program "are abundant in the North Pacific and they are very large animals - this means they consume huge amounts of marine resources."

This argument - that whales eat large amounts of fish that would otherwise be available to commercial fisheries - is becoming increasingly prevalent in statements from Japan's whaling industry. In a recent book, Japan's deputy IWC commissioner Masayuki Komatsu argues explicitly that ***"Humans and whales are competing for fish,"*** that ***"Whales are eating the fish to depletion,"*** and that ***"We need to cull whales in order to achieve sustainable use of the fish."***

There is absolutely no evidence to support any of these contentions. The ICR figures of global fish consumption by whales are concocted by extrapolating flawed estimates of the percentage of body weight consumed by an individual whale daily, and have been repudiated by independent studies. The notion that whales are contributing to the decline of fish stocks fails to acknowledge the obvious: that both whale and fish populations were massively larger one hundred years ago, and that the real problem is the commercial fishing industry. The idea that "culling" whales would lead to an increase in fish for human consumption is far too simplistic, and fails even to consider the impacts of seabirds, other marine mammals, and, especially, predatory fish. It also disguises the fact that the vast majority of food consumed by baleen and sperm whales is, depending on the species, plankton or deep-sea squid - neither of which are commercially fished by humans.

This last point is even more apposite with regard to sei whales. As we have seen, every single observation - of sei whale behavior, stomach contents, and even the nature of their baleen plates - shows categorically that seis are predominantly eaters of tiny plankton smaller even than the krill consumed by their relatives, and not of fish.

The ICR further justifies its proposal by claiming that sei whales "are not endangered" - which, as we have seen is patently untrue. The aforementioned ICR press release claims that sei whale numbers in the North Pacific have grown to 30,000 in the last 25 years. This figure is stated as fact, even though it is based on no evidence whatsoever. Indeed, in 1999, ICR director Dr. Seiji Ohsumi submitted a paper to the IWC which claimed the population numbered just 9,110. Any criticism of, or challenge to, the IUCN classification of the species must be submitted through the formal IUCN review procedure.

The IWC and its Scientific Committee have consistently criticized Japan's "research" whaling program. Japan's extension of this program to sei whales in the North Pacific is the most blatant misuse yet of the lethal research provision in the IWC convention.

What is WWF doing

WWF works in the International Whaling Commission (IWC) to ensure that endangered species of whales, including sei whales, are never again threatened by whaling. WWF is also lobbying the IWC and its scientific committee to address the new threats to sei and other endangered whales, including the threats from marine pollution, prey depletion, climate change, and by-catch.

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What needs to be done

- **The Japanese government's long-standing abuse of the provision in the 1946 International Convention for the Regulation of Whaling (ICRW) that allows IWC members to conduct lethal scientific research on whales, without the agreement of the IWC, must be ended. In particular, such "scientific whaling" should be ended in whale sanctuaries, on the high seas, and for all threatened species, including sei whales.**

- **The IWC should recognise that whaling countries' proposals to "cull" whales because they are alleged to consume "too many commercial fish stocks" have no valid scientific foundation.**

Sei whales

The biologist R.C. Haldane, writing in 1909, opined that the sei whale was the **"most graceful of all whales, as its proportions are so perfect."**

Sleek and slender, the sei is in fact similar in shape and proportions to the blue and fin whales, although it is substantially smaller than both: generally between 17 and 21m long, compared with 24-27m for fin whales, and over 30m for blues. Despite the size disparity, differentiating between the species is not easy, particularly from a distance. Seis bear an even closer resemblance to Bryde's whales, and are virtually indistinguishable from them in the field.

Seis are a dark bluish-gray in color above, and this coloration generally extends along the sides and under the flippers. The ventral surface is mostly covered with irregular white patches. Sei whales also frequently have round pitted scars on their body, which apparently are the result of bites from the small cookie-cutter shark *(Isistius brasiliensis)*.

For further information on WWF's Species Programme visit www.panda.org/species

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WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable resources is sustainable
- promoting the reduction of pollution and wasteful consumption

WWF

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