Guide to the Great whales

In total, 1.5 million whales were killed by commercial whalers in the fifty years from 1925 to 1975, the year that Greenpeace began its long running campaign to stop commercial whaling. Many of the world's whale populations had been taken to the brink of extinction and this massive destruction was only stopped when the International Whaling Commission (IWC) imposed a moratorium on all commercial whaling in 1986. Of the nine countries still whaling when the moratorium decision was taken, seven had ceased by 1990, but two countries, Japan and Norway, did not.

By exploiting loopholes in the IWC convention, both countries are still killing whales and have put considerable resources into pushing for a resumption of commercial whaling. The factors that led to massive over-exploitation in the past remain and Greenpeace continues to actively campaign for an end to all commercial whaling under whatever guise it is perpetrated.

This guide is intended to give some basic information on all the great whale species that have been targeted by whalers over the centuries and are currently covered by the IWC moratorium. All bar one, the sperm whale, are baleen whales, feeding on small crustaceans or fish which they strain out from the water by means of the baleen plates growing from the roofs of their mouths. The sperm whale is however a toothed whale, which mainly hunts squid in deep waters.

All whale population estimates are approximate due to the inherent difficulties in their calculation and are often the subject of much controversy in the IWC Scientific Committee. As a result of this uncertainty, it is often difficult for scientists to ascertain whether a particular whale population is increasing, decreasing, or remaining stable.

The status given for each species is the threat category ascribed to it by the International Union for the Conservation of Nature (IUCN). For more information visit http://www.iucn.org/

The threat of extinction may be more or less immediate for different populations of a particular species.

Blue Whale
Balaenoptera musculus

Length: 21 – 27 m (69 – 72 ¼ ft)
Weight: 100 – 120 tonnes
Distribution: Worldwide
Status: Endangered
Population: c. 6,000 – 14,000

Blue whales are the largest animals on earth - the longest blue whale ever recorded was a female from the Antarctic which measured a staggering 33.58m. Despite their huge size, blue whales feed almost exclusively on krill, shrimp-like creatures (euphausiids) which form dense swarms that are easily engulfed by the whales.

Weighing as much as 120 tonnes, blue whales were exceedingly valuable to the whalers and were the first species to be massively over-exploited in the Antarctic whaling grounds. Today the Antarctic population probably numbers less than 1,000 individuals compared with an original population of around 250,000. There is no evidence to suggest any recovery for this population despite the fact that the IWC have afforded this species complete protection since 1964. In total there are now somewhere between 6,000 and 14,000 blue whales worldwide and they are classified as an endangered species.

Fin Whale
Balaenoptera physalus

Length:18 – 22 m (59 – 721/4 ft)
Weight:30 – 80 tonnes
Distribution: Worldwide
Status: Endangered
Population: c. 120,000

After the blue whale, the fin whale is the second longest whale, with some individuals reaching more than 26 metres, though the average length is much less. A fast swimmer, it was the development of mechanically powered vessels in the early 20th century, together with harpoon guns and inflation lances (used to inflate whale carcasses with compressed air to keep them afloat) that gave the whalers the means to target this species.

Norway, which had pioneered much of this new whaling technology, was the first nation to start whaling in the Antarctic. It was soon joined by the UK and during the 1930s by Japan and Germany as well. The whalers began by targeting the largest species of whale, the blue whale, and as this species became more scarce, they switched to the next largest, the fin whale. In the Southern Hemisphere alone, three quarters of a million fin whales were taken by the whaling industry, almost half of these in a single decade, the 1950s.

Fin whales are found all over the world, but are most common in the Southern Hemisphere. Like the majority of baleen whales, they are highly migratory. Their migratory behaviour is not yet well understood, but they seem to spend summers in high latitudes feeding and winters in warmer waters where they breed and give birth.

Sei Whale
Balaenoptera borealis

Length: 12 – 16 m (39 ½ - 52 ½ ft)
Weight: 20 – 30 tonnes
Distribution: Worldwide
Status: Endangered
Population: c. 40,000 – 60,000

Sei whales have been reported from most oceans and seas, although they appear to favour temperate and oceanic waters. Sei whales are deep water animals and are usually found far from shore. Like most of the other baleen whale species, sei whales spend the winter months in temperate waters, and the summer months in higher latitude feeding grounds, though sei whales tend not to penetrate as far south as the other baleen whales.

In general, their movements are less regular and predictable than some other whale species. The sudden appearance of sei whales in a particular area from which they've previously been absent may be due to the sudden local abundance of a favoured prey species.

Unlike the other members of the *Balaenoptera* family or rorquals (blue, fin, Bryde's and minke whales), and in common with the right whales, sei whales regularly feed on copepods. Copepods are tiny crustaceans, smaller than krill and about the size of a grain of rice. In order to successfully capture these organisms, the sei whale has evolved an effective straining mechanism made up of the very fine fringes of hair on the inner surface of its 300-380 ashy-black baleen plates.

Bryde's Whale
Baleonoptera edeni

Length: 11.5 – 14.5 m (37 ¾ - 47 1/2 ft)
Weight: 12 - 20 tonnes
Distribution: Warm waters Worldwide
Status: Data deficient
Population: c. 90,000

Comparatively little is known about this species of whale, but it is unusual in that it is the only baleen whale that stays in warm water all year long, preferring water temperatures of above 20 C. It is therefore mostly found in tropical and subtropical waters around the globe.

The current status of this species is unknown and it is hard to determine much from past whaling records as its physical similarity to other species, especially the sei whale, meant that in the past, catches of this species were often misrecorded.

Bryde's whales are one of the two new species targeted by the Japanese whaling fleet as part of their expanded hunt in the North Pacific, known as JARPN II.

Minke Whale
Balaenoptera spp.

At its 52nd meeting the International Whaling Commission's Scientific Committee recommended that the IWC should recognise two separate species of minke whale - the Common minke and the larger Southern minke whale which is found in the waters around Antarctica. Both species are currently hunted by the only two countries which are still commercial whaling – Norway and Japan.

Common Minke Whale
Balaenoptera acutorostrata

Length: 7 – 9.2 m (max)
Weight: 5 – 10 tonnes
Distribution: North Atlantic, North Pacific
Status: Lower risk (near threatened)
Population: See species text

This is the species hunted by Norway. The Norwegian minke hunt is not as small-scale and traditional as Norway would make us believe. Modern Norwegian minke whaling only began in 1930, after many other larger species had already been severely depleted, and for decades was subject to weak regulations that did little to restrict operations.

The exact size of the Northeast Atlantic population of minke whales is the subject of much controversy with the IWC's Scientific Committee currently accepting two different population estimates (67,500 and 118,000) as being equally valid. The higher figure was derived from a 1995 Norwegian survey on which three quarters of the observers were whalers. One of the areas covered by this survey , the North Sea block, was also covered by several ships as part of an independent survey (the SCANS survey) the previous year.

Whereas the SCANS survey estimated a population of 3,600 minke whales for the North Sea block, the Norwegian survey produced an estimate of over 20,000. That the higher figure may be an overestimate is given further credence by the failure of the Norwegian whalers operating in the North Sea to kill their allocated quotas in any of the past five years.

A fast swimmer, helped by its streamlined shape, a minke whale may swim at speeds of 30km/hour. When travelling, minke whales normally only take one or two breaths between dives and the blow is small and quick. All of these factors make the minke whale hard to spot and are the reason why the whalers require calm seas to hunt.

This species is also targeted by Japan, which, since 1994, has been taking a self-allocated quota of 100 minke whales each year from the population inhabiting the North Pacific.

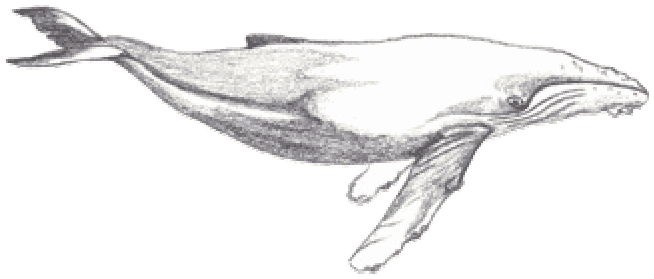
Southern Minke Whale
Balaenoptera bonaeerensis

Length: 7 – 10.7 m (max)
Weight: 5 – 10 tonnes
Distribution: Southern Hemisphere
Status: Lower risk (conservation dependent)
Population: See species text

Once considered too small to hunt (but slightly larger than the common minke) the minke whales inhabiting Antarctic waters were not targeted in any great numbers until the 1970s. This population of minkes is perhaps the only population of great whales still approaching close to its pre-exploitation levels and ensuring the continued protection of this population was one of the factors that led the International Whaling Commission (IWC) to establish the Southern Ocean Sanctuary in 1994.

Despite the IWC moratorium and the sanctuary designation, Japan continues to kill 440 minke whales in the Southern Ocean each year under the guise of so-called 'scientific' whaling. The population estimate of 750,000 for this species that Japan has used to justify its whaling was reviewed by the IWC Scientific Committee at its 52nd meeting in Adelaide and was found to be no longer valid. New calculations suggest a figure that is 'appreciably lower' but the Scientific Committee has not been able to say if this figure is correct.

Humpback Whale
Megaptera novaeangliae



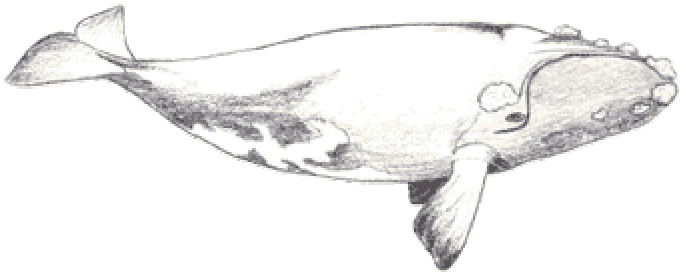
Length: 11.5 – 15 m (37 ¾ – 49 ¼ ft)
Weight: 25 – 30 tonnes
Distribution: Worldwide
Status: Vulnerable
Population: 12,000 – 15,000

The humpback is possibly the best known and most popular whale. It has many distinguishing features - including very long flippers in proportion to its body and broad tail flukes which range from all white to all black. Using photo-id techniques, whale scientists are able to identify individual whales by these tail patterns as no two whales are exactly the same.

Spectacular behaviour such as breaching and flipper slapping makes it very popular with whale-watchers. The curiosity of the humpback often brings them close to boats, a habit which often meant death in the whaling days.

Humpbacks can be found pretty much all over the world, preferring coastal and shelf waters. In winter they migrate to feed in cold-water latitudes, in summer they return to warmer breeding grounds, covering thousands of kilometres in between.

Right Whales
Eubalaena spp.



The right whales are so named because the early whalers considered them to be the 'right' whales to hunt. Slow moving and so easy to kill, these whales were easy to recover once dead as their bodies float due to their high oil content.

Right whales are easily distinguishable by the callosities found on their heads. Callosities are rough growths of skin and occur on the chins, lips, tops of the heads and above the eyes of right whales. The pattern of these growths is unique to each whale, and though naturally black or grey, they are colonised by millions of parasitic whale lice, giving them a yellow or red colour.

The International Whaling Commission's Scientific Committee now recognises three distinct species of right whale, the southern right whale, *E. australis*, the North Pacific right whale, *E. japonica*, and the North Atlantic right whale, *E. glacialis*. The eastern population of North Pacific right whales is so small that every individual sighting is reported in the scientific literature, while the western population of North Pacific right whales may number in the hundreds. This lack of information makes it impossible to determine the North Pacific right whale's status.

North Atlantic Right Whale
Eubalaena glacialis

Length: 11 – 18 m (14 ¾ - 19 ¾ ft)
Weight: 30 – 80 tonnes
Distribution: East Coast of US & Canada
Status: Endangered
Population: c. 300

The North Atlantic Right Whale is close to becoming extinct. Despite having been internationally protected since 1935, this species has failed to recover. Eradicated from a large proportion of its former range in the North Atlantic, the remaining North Atlantic right whales are found along the eastern shores of North America, spending the summer months feeding and nursing their young in temperate latitudes.

The Gulf of Maine, the Bay of Fundy and Cape Cod bay are all important areas for this species. In winter, pregnant females, and some other individuals move south to the warmer waters off Georgia and Florida where they are known to give birth.

The most recent census counted only 291 animals and in 1999, only one calf was observed. Like all whales, the North Atlantic right whale is very slow breeding. Juveniles do not reach sexual maturity until they are between five and seven years of age. While females are capable of giving birth every three years, the average time between calves is now up to about five years. The reasons for this drop in reproductive success are not clear. It may be due to the effects of a reduced gene pool, or as a result of a number of human-induced environmental changes – such as the effects of pollution, disruption on the breeding grounds or reduced or altered food supply.

This extremely worrying situation is exacerbated by the fact that every year these slow moving whales are the victims of ship collisions and entanglement in fishing gear. When a population is this small, the death of even a single individual is of enormous significance.

At its last meeting, the IWC Scientific Committee concluded that 'the evidence that this population… is in serious danger is compelling, and the need for further research…should not be seen as a reason for delaying immediate and highest priority action'.

Southern Right Whale
Eubalaena australis

Length: 11 – 18 m (36 – 59 ft)
Weight: 30 – 80 tonnes
Distribution: Cold and temperate waters of the Southern Hemisphere
Status: Lower risk (conservation dependent)
Population: c. 3,000 – 5,000

Southern right whales are found all around the Southern Hemisphere, travelling from colder Antarctic and sub-Antarctic waters to warmer coastal and shelf waters where they mate and calve.

Populations are found off South Africa, South America, Australia and New Zealand and the various mid-oceanic islands such as Kerguelen and Tristan da Cuhna. As yet there is little evidence to suggest that there is much mixing of individuals between these different continental populations.

Heavily exploited by whalers from the late 18th century onwards, this species was on the verge of extinction by the onset of the 20th century. Despite this, some 8,000 right whale catches are recorded from the 20th century, including 3,200 animals illegally killed by Soviet whalers despite a ban on hunting this species. Unlike their northern relatives, southern right whales appear to be making a steady recovery, though they still only number in the thousands.

Bowhead Whale
Balaena mysticetus

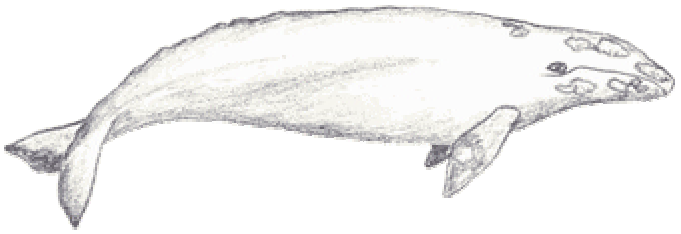
Length: 14 – 18 m (46 – 59 ft)
Weight: 60 - 100 tonnes
Distribution: Cold Arctic and sub-Arctic waters.
Status: Lower risk (conservation dependent)
Population: 6,000 – 9,000

The bowhead whale derives its name from its huge, more than 5 metre long, bow-shaped skull and the resulting bow shape where the flesh of the upper and lower jaw meets when viewed laterally. Found only in the Arctic, it is the one baleen whale species that has evolved to successfully occupy seasonally ice-covered seas throughout the year.

Bowheads live at the southern edges of the Arctic ice during winters and move north as the ice breaks and melts in spring and summer. Bowheads lack a dorsal fin, which may be an adaptation to facilitate swimming underneath the ice. Bowheads can remain underwater rather longer than other baleen whales (sometimes for close to an hour) and may travel underwater for a couple of miles before surfacing even in ice-free waters.

Bowheads may be especially long-lived. In 1993, a large male killed by the Alaskan Inuit was found to have been carrying in its flesh a stone harpoon point. Since this kind of harpoon is not known to have been in use after 1900, it suggested that some individuals may live up to 100 years of age.

Gray Whale
Eschrichtius robustus



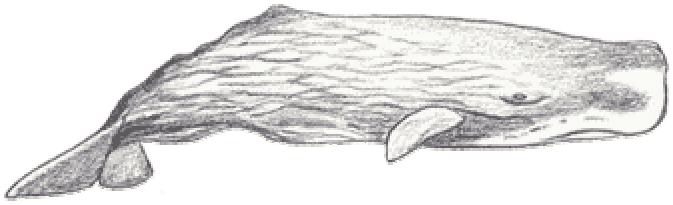
Length: 12 – 14 m (39 ½ – 46 ft)
Weight: 15 – 35 tonnes
Distribution: Shallow coastal waters of the North Pacific & Arctic oceans
Status: Lower risk (conservation dependent)
Population: c. 15,000 – 25,000

Gray whales are unusual in that they feed at the bottom of shallow seas, raking up the bottom with their heads and filtering up small organisms through their baleen. An adult gray whale can eat as much as 1 tonne of food in a day.

Gray whales are now confined to the North Pacific, having become extinct in the North Atlantic. Biologists recognise two distinct populations: the eastern stock which migrates along the eastern edge of the Pacific from Alaska down to Mexico and the western stock which migrates from the Okhotsk Sea in Siberia to Korea.

Past whaling nearly wiped this species out, but internationally protected since 1947, the eastern population has made a remarkable recovery. However, the western population is still highly endangered numbering approximately 100 individuals.

Sperm Whale
Physeter macrocephalus



Length: 11 – 18 m (36 – 59 ft)
Weight: 20 – 50 tonnes
Distribution: Widely distributed in deep waters Worldwide
Status: Vulnerable
Population: Up to 2 million, maybe far fewer

With its huge, square shaped head, which takes up from 25% to 35% of the animal's total length and narrow underslung lower jaw and wrinkly skin it differs greatly from other cetaceans. Within the head is an organ filled with spermaceti, an oil-like substance the purpose of which is still not known. It may either be used for regulating buoyancy during the sperm whale's exceptionally deep dives (possibly down to 3000 meters), or serve as an acoustic lens to focus sound during echolocation. Spermaceti sets into a solid wax when it is cooled and was much in demand in the 19th century for making candles.

Sperm whales can spend up to 2 hours under water, although the average is more in the order of 45 minutes. In order to recover from the long dives, sperm whales sometimes blow up to 30 to 40 times before going under water again. The long time spent underwater and the patchy distribution of sperm whales make it even harder for scientists to analyse survey data and produce reliable population estimates for this species.

Male sperm whales are significantly bigger than females, reaching a maximum of 19 meters, whereas the maximum length for a female is only 13 meters. In the past the whalers selectively targeted the larger males, which has resulted in a skewing of the sex ratio for this species.

Male sperm whales migrate towards the poles in summer, while females and juveniles remain in warmer waters all the year round.