



## Whales



Eight species of whales spend part of their year in the Southern Oceans surrounding Antarctica. Whales can be divided into two distinct groups, baleen whales and toothed whales. Baleen whales lack teeth, but instead have interlinking plates of baleen. Baleen is a stiff plate of keratin (the same protein in our hair and fingernails) that extends from the jaw. The inner edge of the baleen is frayed which mats together with multiple other baleen plates to form a filter that allows the whales to strain water and “catch” krill (plankton), and small fish which are their main sources of food. The Blue, Fin, Humpback, Minke, Sei, and Southern Right Whales are the baleen whales found in the Antarctic. Toothed whales have narrow jaws lined with teeth, which they use to catch fish, squid, and other marine mammals, often swallowing them whole. The Orca and Sperm whales are the only toothed whales found in the Antarctic region.

Antarctic whales breed and give birth to their young in warmer northern waters and then migrate south during the austral summer to take advantage of the rich southern ocean waters.

### **Baleen Whales**

#### **Blue Whale**

The skin of the Blue whales is actually light gray and white but it appears blue when the whales are just below the surface of the water. Blue whales are the largest animals on Earth and are found in all of the world’s oceans. Blue whales in the Southern Hemisphere reach lengths of 75-100 feet and can weigh between 80 and 150 tons. Their hearts are the size of a small car and they eat up to 4-4.5 tons of krill a day. Blue whales give birth every two to three years and their gestation period lasts about 11 months.

While exact populations numbers are unknown it is estimated that there used to be approximately 200,000-400,000 Blue whales before heavy whaling reduced their numbers by up to 99% in the early- and mid-1900’s. By 1960’s when Blue Whale hunting was banned by the IWC it is estimated that over 330,000 Blue Whales had been killed. Current population estimates range from 5-10,000 Blue whales in the Southern Hemisphere, and only around 3-4,000 in the Northern Hemisphere.

## Fin Whales



Fin whales are found worldwide, typically migrating from the poles in summer, where they breed, to temperate waters for the winter. A distinguishing feature of Fin whales is the asymmetrical coloring of their left and right jaws. The left is a light blue color while the right is mostly white. This asymmetrical color is reversed on their tongue.

Adults measure up to 78-88 feet and can weight between 50-70 tons.

Despite being the second largest whale in the ocean, Fin whales are the fastest of all the baleen whales and they can reach 30 miles per hour. Fin whales also dive deeper than many other whale species (up to depths of 1800 feet) when hunting for fish and squid. They can consume up to two tons of food per day and spend half an hour underwater.

Similar to the Blue whales fate, Fin whales were heavily hunted beginning in the mid-1900's. It is estimated that during this time as many as 25,000 Fin whales were killed each year until the IWC granted them protection in 1966, with full protection awarded in 1976. Since that time their numbers have begun to recover. Exact population numbers are unavailable but current estimates average around 40,000 in the northern hemisphere and 15,000-20,000 in the southern hemisphere.

## Humpback Whales

Humpback whales are found in all of the world's oceans and most follow a regular migration route, summering in temperate and polar waters for feeding, and wintering in tropical waters for mating and calving. Annual migrations of up to 16,000 miles are typical. Being social animals pods can number up to 200 or more individuals for hunting or traveling, however, their numbers might be smaller during migration.

Humpbacks bodies are typically black in color, with distinctive white markings covering their throats and the undersides of flukes and flippers. They are anywhere from 40-50 feet long and weigh between 25 and 40 tons. Humpback whales feed on krill, and various kinds of small fish, eating up to 1 and 1/2 tons of food a day.



Humpbacks have garnered popularity for both their acrobatic agility and mysterious singing. Humpback whales often breach, which is when they lift the majority, if not all, of their body out of the water and re-enter the water with a huge splash. Humpbacks also smack their tails and flippers against the water. One of the most intriguing aspects of Humpbacks are their songs. Only male whales sing and they typically sing a song that

lasts from 10-20 minutes. The song can be repeated continuously for hours at a time, and changes gradually from year to year. Whales in the North American Atlantic and the North American Pacific each sing the same song. However, the songs of each of these populations and of those in other areas of the world are uniquely different.

Similar to other baleen whales Humpbacks came under extreme whaling pressure in the mid-20<sup>th</sup> century with estimates of at least 200,000 Humpbacks being killed. The IWC imposed a general moratorium on killing Humpbacks to hopefully prevent the extinction of the species. Current population estimates are around 30-40,000 individuals. Starting in 2007 Japan is planning to kill 50 Humpback Whales per year under its JARPA-II research program.

### **Minke Whales**

Small heads and pointed snouts characterize these runts of the baleen whales found in the Southern Oceans. The coloration of Minke whales switches from a bluish-grey tone on their backs to a off-white color on their underbelly. Minke whales can reach lengths of up to 30 feet and weights of up to 10 tons. As with all baleen whales, the females are always bigger than the males. Minkes feed on fish, krill, and squid and are often found near the edge of the icepack or in bays and estuaries. As with other whales, Minkes migrate to warmer waters to birth their calves.

The Minke population is estimated at 500,000 individuals. Due to their small size Minke whales had long escaped the population devastation suffered by other baleen whales that was caused by commercial whaling. Currently Minkes are the only baleen whales that are hunted commercially, primarily by Japan and Norway.

### **Sei Whale**

The endangered relative of the Fin whale, the Sei whale is a bluish-grey whale that is characterized by its slender body and pointed head. Sei whales typically stay in deep water, avoiding coasts. Sei whales rarely dive to great depths and prefer to skim along the surface for food. Feeding on up to a ton of krill and small fish each day Sei whales can reach up to 50 feet and 40 tons.

Sei whale meat is a highly valued commodity in Japan. This has led the Sei whale to be considered commercially extinct and endangered. Since 1979 the IWC has placed them under protection raising their numbers up to an estimated 70,000 individuals worldwide.

### **Southern Right Whale**

Originally named the Right Whale because they were considered the “right” whale to hunt, the Southern Right whale have gray bodies and are easily identified by the callosities found on their head and body and lack of a dorsal fin. Southern Right whales can reach lengths of 50 ft and weight up to 80 tons. They feed primarily on krill, and other tiny crustaceans.

Southern Right whales are slow swimmers, moving at 3-4 miles per hour. Because of their slow speed and high oil content blubber (allowing harpooned whales to float after being killed) these whales were obvious targets for early whalers. It is estimated that in the 18<sup>th</sup> century 12,000 whales were killed in a 30 year period. This slaughter continued in the 19<sup>th</sup> century with estimations of up to 100,000 right whales killed. Current population estimates are around 4,000 individuals.

## **Toothed Whales**

### **Sperm Whale**

Their large square head and lack of a dorsal fin best identify Sperm whales. Typically only males migrate to Antarctica for feeding in the summer. Consuming up to a ton of food a day, Sperm whales feed on squid, giant squid, fish, and sharks. Sperm whales tend to remain in deep water. These animals dive to incredible depths (up to 1 mile) and normally hold their breath for 30-90 minutes (the record is 138 minutes). Sperm whales can reach lengths of 50 feet and weight of 40 tons.

Despite being hunted intensely in the 19<sup>th</sup> and 20<sup>th</sup> centuries (as immortalized in “Moby Dick”) Sperm whales maintain a healthy population of approximately 2 million individuals.

### **Orca Whales**



Perhaps the easiest recognized whale in the oceans, orca whales are the largest members of the dolphin family. Orca whales have dramatic black and white patterning and the males have a distinctively tall dorsal fin. In the Southern Ocean diatoms cover their skin making the white patches a light yellow or even light brown.

Orcas are social animals and are often found in packs. They are also creative and ferocious hunters. In the Southern Oceans Orcas feed on fish, birds (including penguins), seals, squid, dolphins, and on rare occasion juvenile whales. Orcas have been known to take fish off of long lines and have been observed tipping small icebergs to dump seals into the water where other pod members await. Orca whales are also well known for their acrobatic performances that include: breaching, flipper slapping, lobtailing, and skyhopping.

Orca whales range between 25 and 30 feet and weigh up to 7 tons. Population estimates range up to 80,000 in the Southern Ocean with larger numbers worldwide.

## The IWC

The [International Whaling Commission](#) was founded in 1946 in Washington, D.C. to “provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.” The IWC “provide for the complete protection of certain species; designate specified areas as whale sanctuaries; set limits on the numbers and size of whales which may be taken; prescribe open and closed seasons and areas for whaling; and prohibit the capture of suckling calves and female whales accompanied by calves.” 73 nations are members of the IWC, but each country has the ability to object to a policy if it “affects its national interests”.



Due to the uncertainty in scientific knowledge a general moratorium was established on commercial whaling (subsistence hunting is allowed in certain cases) in 1982 and came into effect in 1986. In 1990 the IWC agreed to a Revised Management Procedure, but it has yet to be implemented. Despite this moratorium Japan, Iceland, and Norway have decided to not participate in the moratorium and refuse to cease their

whaling practices. These practices have been under the guise of “scientific whaling” but specific hunting by Japan in the Southern Ocean Sanctuary has caused the IWC to pass a yearly resolution “urging Japan not to issue permits for these catches.” In 2005 Japan announced its plans to escalate its “scientific research”, JARPA II envisions killing 850 +-10% minke, 50 humpback and 50 fin whales each year in the Southern Ocean Whale Sanctuary, after an initial two years in which 850 +-10% minke and 10 fin whales will be killed. For ASOC’s position on this and other issues affecting Southern Ocean whales please visit our website at [http://www.asoc.org/meetings\\_other.htm](http://www.asoc.org/meetings_other.htm)

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