

Definitions: **Endangered** Species under threat of extinction, population nearing a level at which it will no longer be able to sustain itself.
Vulnerable Species nearing or may reach endangered levels without intervention.

Giants of the sea

For us it is the whale-watching season, but for the whales it is their migration time. It is the annual period when thousands of these majestic seagoing mammals move from Antarctic waters north to feeding and spawning grounds where they remain until spring when they begin their migration back down south. Whales were once a source of food, fuel and raw materials for humans, but now they are mostly a source of pleasure. While many species have increased in number since the decline of the whaling industry there are still species that are vulnerable or endangered. Attempts to set up another whale sanctuary were recently rejected by nations who continue to hunt despite opposition from environmentalists.



Whale watching in the Whitsundays

Stranded whales

There is no one single reason why whales beach themselves, each beaching event is different. It is known that they are not largely caused by human interference and have been occurring for hundreds of years. Sometimes individuals become stranded, but often an entire pod can find itself stuck on a beach. Whales that become stranded are usually the social animals like pilot whales. These creatures are used to open waters, not coastal waters. The strandings take place at the same locations, where whales will have difficulty navigating. As one animal comes in close to land, for example by making a mistake in navigation, it becomes unfamiliar with the territory, beaches itself and sends out a distress signal which brings the rest of the pod.

If you find a stranded whale or dolphin

First call the 24-hour ORRCA Hotline (02) 9415 3333 or the National Parks and Wildlife Service on 1300 361 967 (within NSW) or (02) 9253 4600

- Do not push the animal back to sea
- Keep the animal upright
- Do not use the fins as handles
- Keep the tail and fins wet
- Do not obstruct the blowhole
- Shade the animal
- Keep onlookers quiet and well back
- For safety, keep clear of the tail
- Wait for trained rescuers to arrive



A beached whale on Stradbroke Island

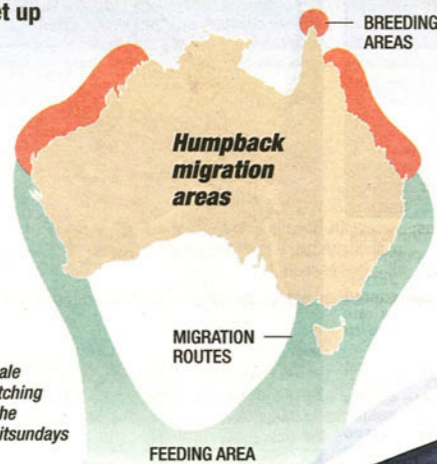
Source ORRCA. For more information call ORRCA or see their website at www.orrca.org.au

There are two distinct existing types of whale – the Mysticeti (or baleen whales) and Odontoceti (or toothed whales). Mysticeti do not have teeth, they feed on plankton and krill by drawing in water and straining it between two rows of horny plates in their mouths.



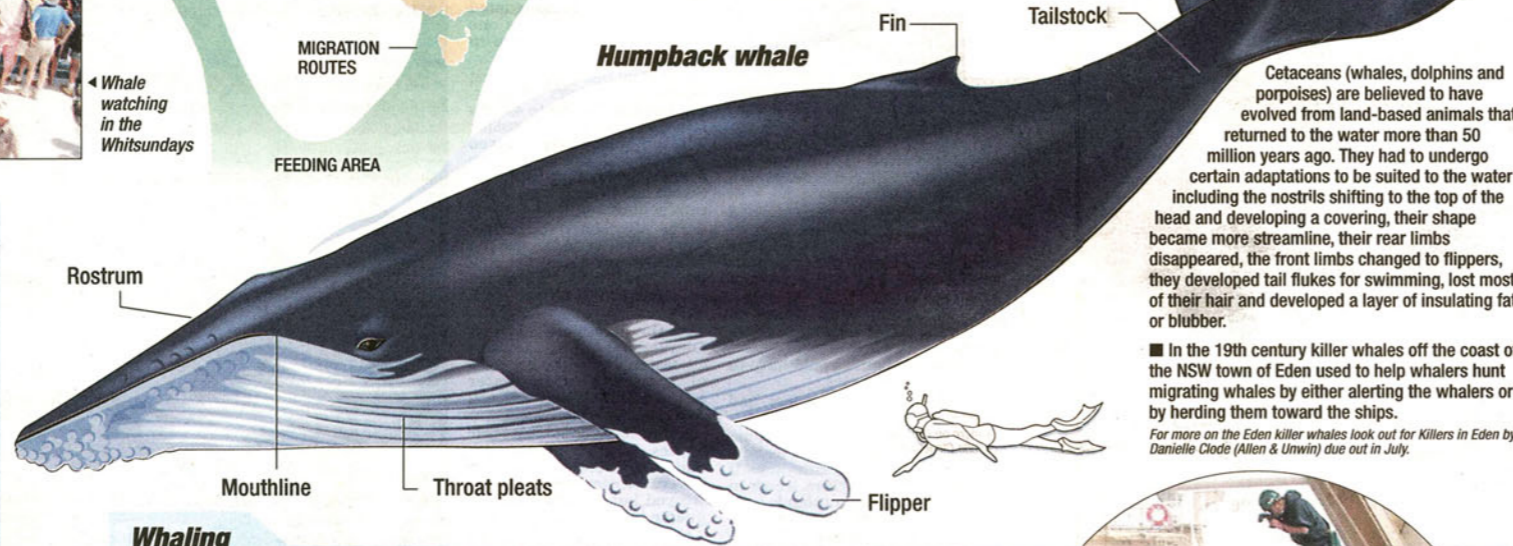
Killer whale

Whales are not fish; they are mammals. Whales breathe air through blowholes; fish breathe water through gills. Whales swim by moving tail up and down; fish move tail left and right. A whale skin contains hair; a fish skin contains scales. A whales' young are born live; fish lay eggs.



■ Sperm whales can dive to depths greater than three kilometres in search of food and can stay submerged for over 90 minutes.

■ Whales can only breathe through their blowholes, which is like a nostril on the whale's head, it allows them to only stick a minimum of their body out of the water for air. They can only breathe while conscious, which means they do not go into a deep sleep.



Humpback whale

Cetaceans (whales, dolphins and porpoises) are believed to have evolved from land-based animals that returned to the water more than 50 million years ago. They had to undergo certain adaptations to be suited to the water including the nostrils shifting to the top of the head and developing a covering, their shape became more streamline, their rear limbs disappeared, the front limbs changed to flippers, they developed tail flukes for swimming, lost most of their hair and developed a layer of insulating fat or blubber.

■ In the 19th century killer whales off the coast of the NSW town of Eden used to help whalers hunt migrating whales by either alerting the whalers or by herding them toward the ships.

For more on the Eden killer whales look out for Killers in Eden by Danielle Clode (Allen & Unwin) due out in July.

Whaling

People have been hunting whales for thousands of years for food, for the bone which could be made into tools and ornaments, and for the oils which have been used to make candles and as fuel for lamps (up to the late 19th century streetlamps were lit with whale oil). The Japanese hunted whales as early as 3000 BC, and the eskimos at a similar time. But the first whaling industry sprang up in the Bay of Biscay in medieval times. These whalers would venture out on small boats and harpoon whales by hand. The harpoons were attached to long ropes or

floats which would keep the whale near the surface and eventually tire them out, then kill them with a lance.

The valuable materials derived from whales meant the high-risk ventures were also high yield.

In the 18th century brick ovens installed on ships allowed whalers to boil down, or "try out", the fats and oils and store them in hogheads or barrels on the ship. This enabled them to stay at sea for longer periods, the record was 11 years (1858-1869) on a ship called the Nile.

This led to bigger and bigger expeditions but also a more rapid depletion of the whale population, particularly the slower moving species. Whalers then had to move further north and into the south seas.

While the petroleum industry captured the market for lubricants and lighting fuels, whale hunting continued as other uses were found for whale products.

The method of hunting changed with the invention of the explosive harpoon gun in the mid 19th century. Stronger than a human harpoonist, the gun could fire a harpoon at a whale from much further away, taking some of the risk out of whaling and making it easier to go after the faster varieties of whales.

As modern whaling methods drove many species close to extinction, restrictions were placed on whale catches. In 1946 the International Whaling Commission (IWC) was set up under the International Convention for the Regulation of Whaling signed by most whaling nations in Washington DC. Increasing restrictions (and finally a moratorium on commercial whaling in 1986) as well as changing world opinion toward conservation drove many operators out of business. However some nations defy restrictions and continue to hunt whales for "research purposes".



A Japanese research ship with a sperm whale

The uses for whale products

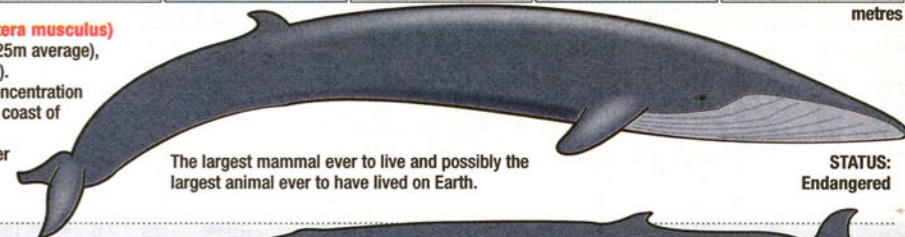
- Whale oil for sun tanning.
- Objects made out of whale bone included toothbrushes, checkers game pieces, glove stretchers, doctor's spatula.
- Carved whalebones, known as scrimshaw, were also used for things such as cigar holders, lace tools, parasol handles and walking sticks.
- At the Australian National Maritime Museum there is even an example of a chair made from a section of a whale's vertebra.
- The spermaceti oil from the whale's brain was used for its waxy residue for candles.
- NASA also used whale oil as an anti-freeze lubricant.

Comparisons



BLUE WHALE (*Balaenoptera musculus*)

Size: males up to 30m (25m average), females 33m (26m).
Lives: worldwide, high concentration found off southern coast of Victoria and South Australia in summer and autumn.
Diet: krill, plankton



The largest mammal ever to live and possibly the largest animal ever to have lived on Earth.

STATUS: Endangered

FIN WHALE (*Balaenoptera physalus*)

Size: males up to 25m (21m average), females 27m (22m).
Lives: worldwide. Seen in low concentrations in all Australian waters except NT
Diet: filter feeds on krill

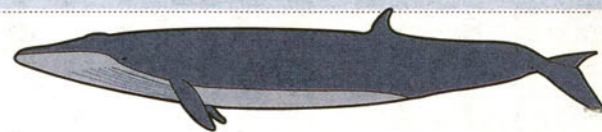


Migrates between cold water where it feeds in summer to warm waters where it breeds in winter.

STATUS: Vulnerable

SEI WHALE (*Balaenoptera borealis*)

Size: males up to 17m (15m average) females 20m, (av 16m).
Lives: worldwide but an infrequent visitor to Australian waters, avoids higher latitudes
Diet: small crustaceans, small shoal fish

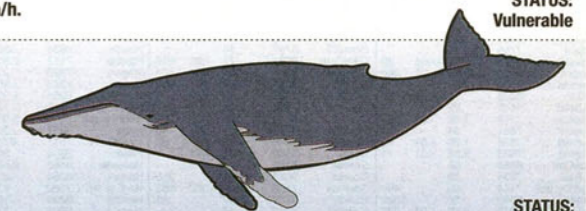


Sei whales are among the fastest whales reaching speeds of 50 km/h.

STATUS: Vulnerable

HUMPBACK WHALE (*Megaptera novaeangliae*)

Size: up to 18m, average 13.5m.
Lives: in Antarctic waters during the summer, large numbers migrate past east and west coast of Australia to warmer waters in winter.
Diet: small fish, krill and plankton

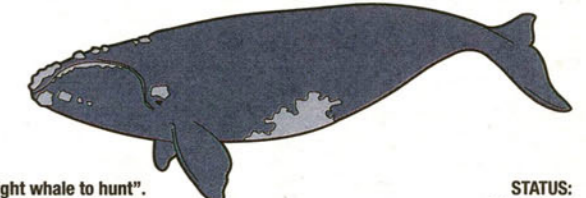


Called a humpback because dorsal fin looks like a hump. Renowned for singing. They are curious and like to approach boats.

STATUS: Vulnerable

SOUTHERN RIGHT (*Eubalaena australis*)

Size: 13m to 18m, average 15m.
Lives: found mainly in southern waters around Australia. Migratory but does not reach same latitudes as humpback. Higher concentrations found off southern coast of Victoria over to Western Australia
Diet: filter feeds on tiny crustaceans and plankton.

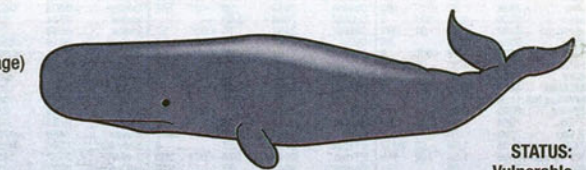


Right whales got their name from whalers who dubbed them the "right whale to hunt". Although it sticks to southern waters the occasional southern right has made its way as far as Sydney.

STATUS: Vulnerable

SPERM WHALE (*Physeter macrocephalus*)

Size: males up to 18m (15m average) females up to 12m (10m average)
Lives: worldwide in deep water away from continental shelves.
Diet: deep sea squid, fish, shrimps

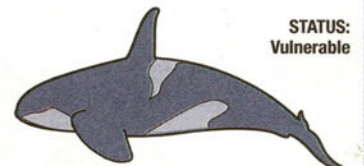


This is the largest variety of toothed whale.

STATUS: Vulnerable

KILLER WHALE (*Orcinus orca*)

Size: 8m to 9.5m
Lives: in all oceans around the world. Found mostly in cold waters, found in waters of most states but not Northern Territory.
Diet: opportunistic feeder will eat fish, birds, squid, seals, and other cetaceans (whales and dolphins)



More closely related to dolphins than whales.

STATUS: Vulnerable

DWARF MINKE WHALE (*Balaenoptera acutostrata*)

Size: males to 7m (6m average) females 8m (7m average)
Lives: spends summer in sub-Antarctic waters, migrates to north Qld and northern WA waters in winter.
Diet: krill and small shoaling fish



The smallest species of rorqual (baleen whale with pleats underneath). They have been known to enter estuaries.

STATUS: Vulnerable

SIZE COMPARISON TO HUMAN

