

WHALES

& Whale Sharks



Introduction



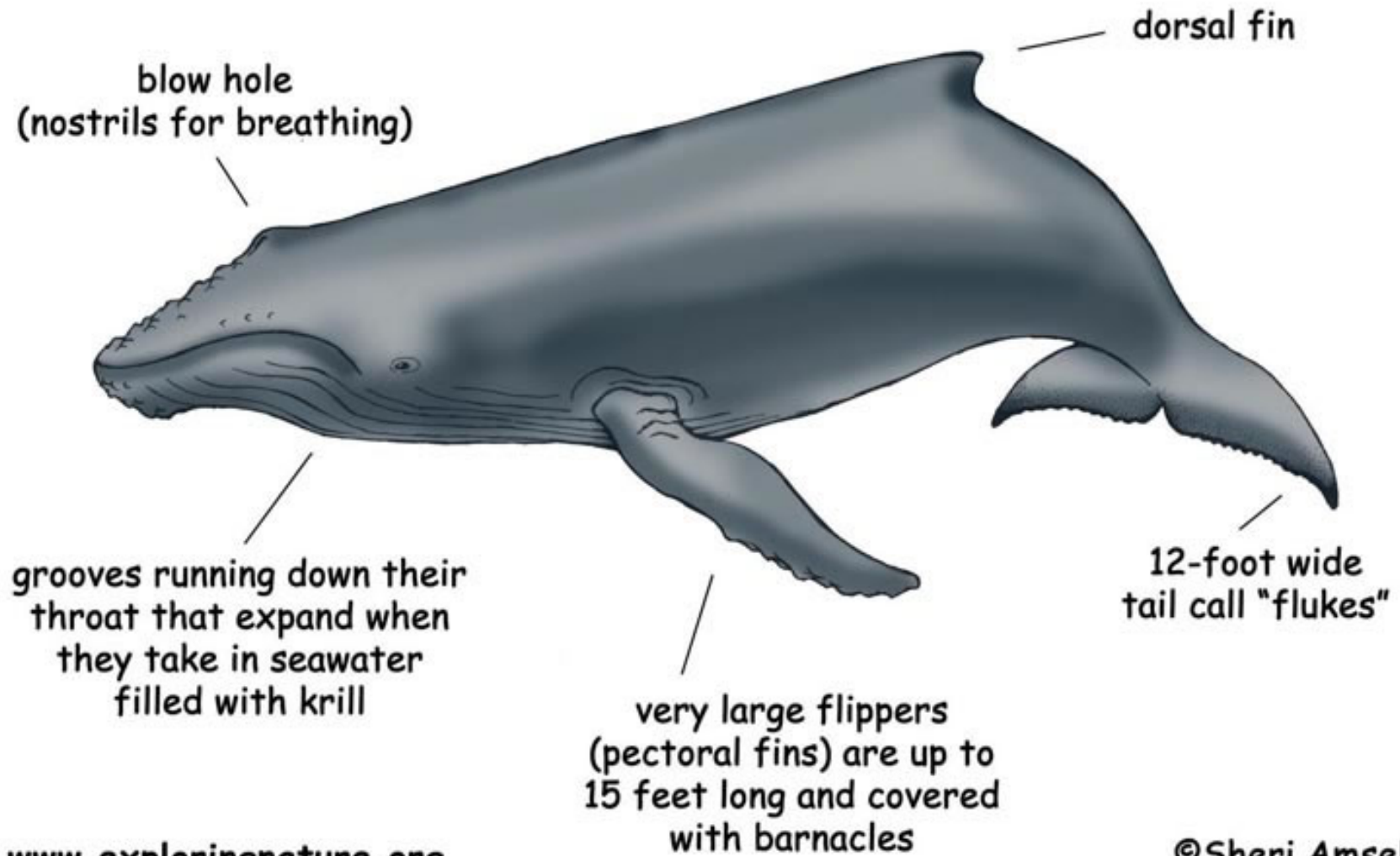
Today we are going to learn about the biggest mammals of the ocean and one animal that is commonly mistaken for a whale but is actually a fish.

‘Whale’ is the common name for various marine mammals from an order known as Cetaceans. This comes from the Latin word ‘*cetus*’ and is used in biological names to mean ‘*large sea animal*’. Dolphins and porpoises also fall under this category.

All Cetacea have forelimbs modified as fins/flippers, a tail with horizontal flukes and nasal openings (blowholes) on top of the head.

Humpback Whale

Megaptera novaeangliae



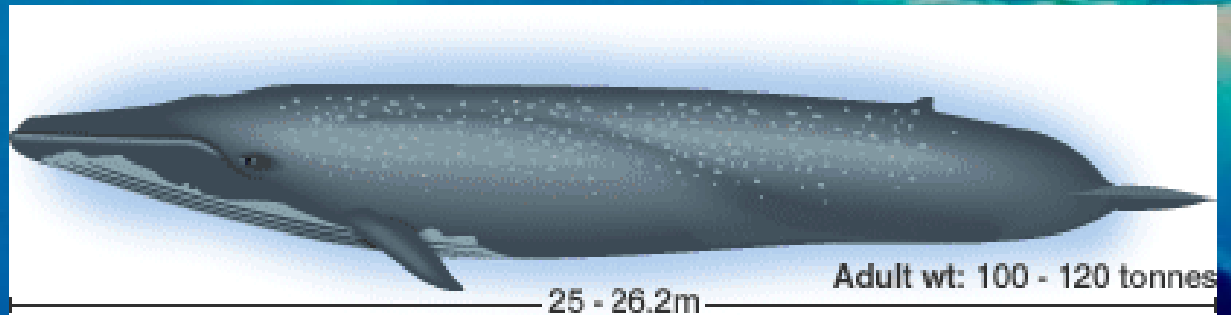
Evolution

Whales are descendants of land living mammals. Primitive whales probably first took to the sea about 50 million years ago and became fully aquatic about 5-10 million years later.

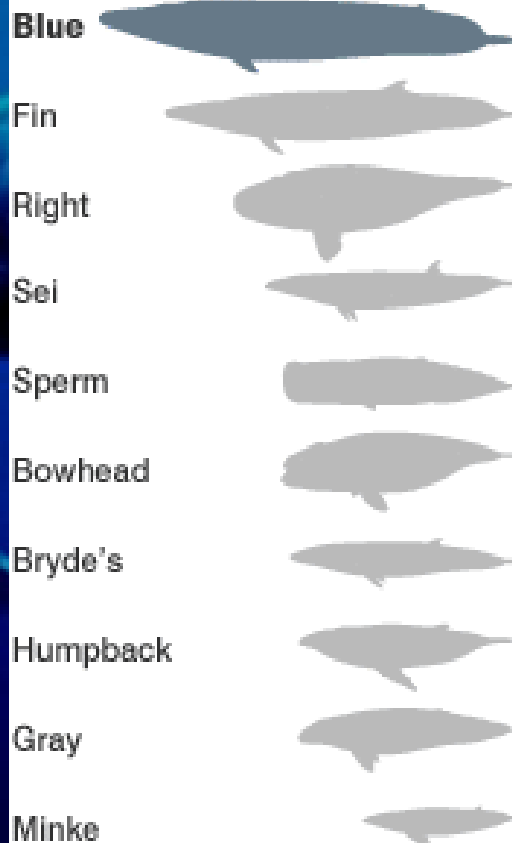


How big are they?

Whales range in size from the Blue Whale, the largest animal known to have ever existed, at 35m and 136 tonnes to various Minke Whale species that grow to around 3.5m.



Comparison



Classification

Order: *Cetacea* (Dolphins, porpoises & whales)

Suborder: *Mysticeti* (Baleen whales)

Family: *Balaenopteridae* (Rorquals)

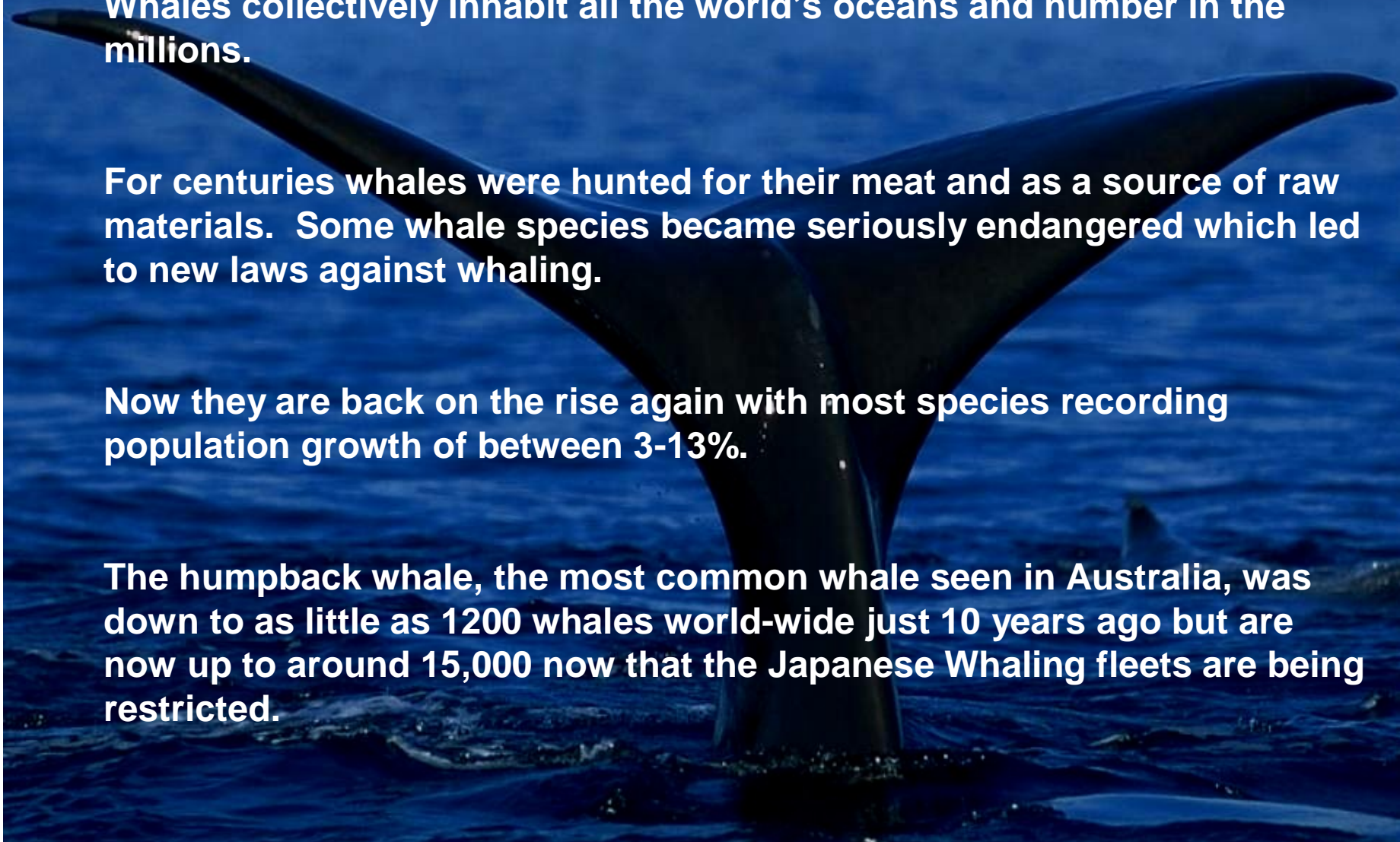
Where and how many?

Whales collectively inhabit all the world's oceans and number in the millions.

For centuries whales were hunted for their meat and as a source of raw materials. Some whale species became seriously endangered which led to new laws against whaling.

Now they are back on the rise again with most species recording population growth of between 3-13%.

The humpback whale, the most common whale seen in Australia, was down to as little as 1200 whales world-wide just 10 years ago but are now up to around 15,000 now that the Japanese Whaling fleets are being restricted.



Types of whales

Whales fall into two categories.

Toothed Whales

Toothed Whales literally have teeth and eat prey. These include the Sperm Whale, Killer Whale, Pilot Whale and Beluga Whale.



Toothed Whale

Baleen Whales

Baleen Whales are filter feeders that eat small organisms caught by straining seawater through a comblike structure found in the mouth called Baleen. This group includes the Blue Whale, Humpback Whale, Bowhead Whale and Minke Whale.



Baleen Whale

Reproduction

Males are called 'bulls', females, 'cows' and newborns, 'calves'. Most species do not maintain fixed partnerships and females have several mates each season.

The female delivers usually a single calf tail-first to minimize the risk of drowning. Whale cows nurse by actively squirting milk, so fatty that it has the consistency of toothpaste, into the mouths of their young.

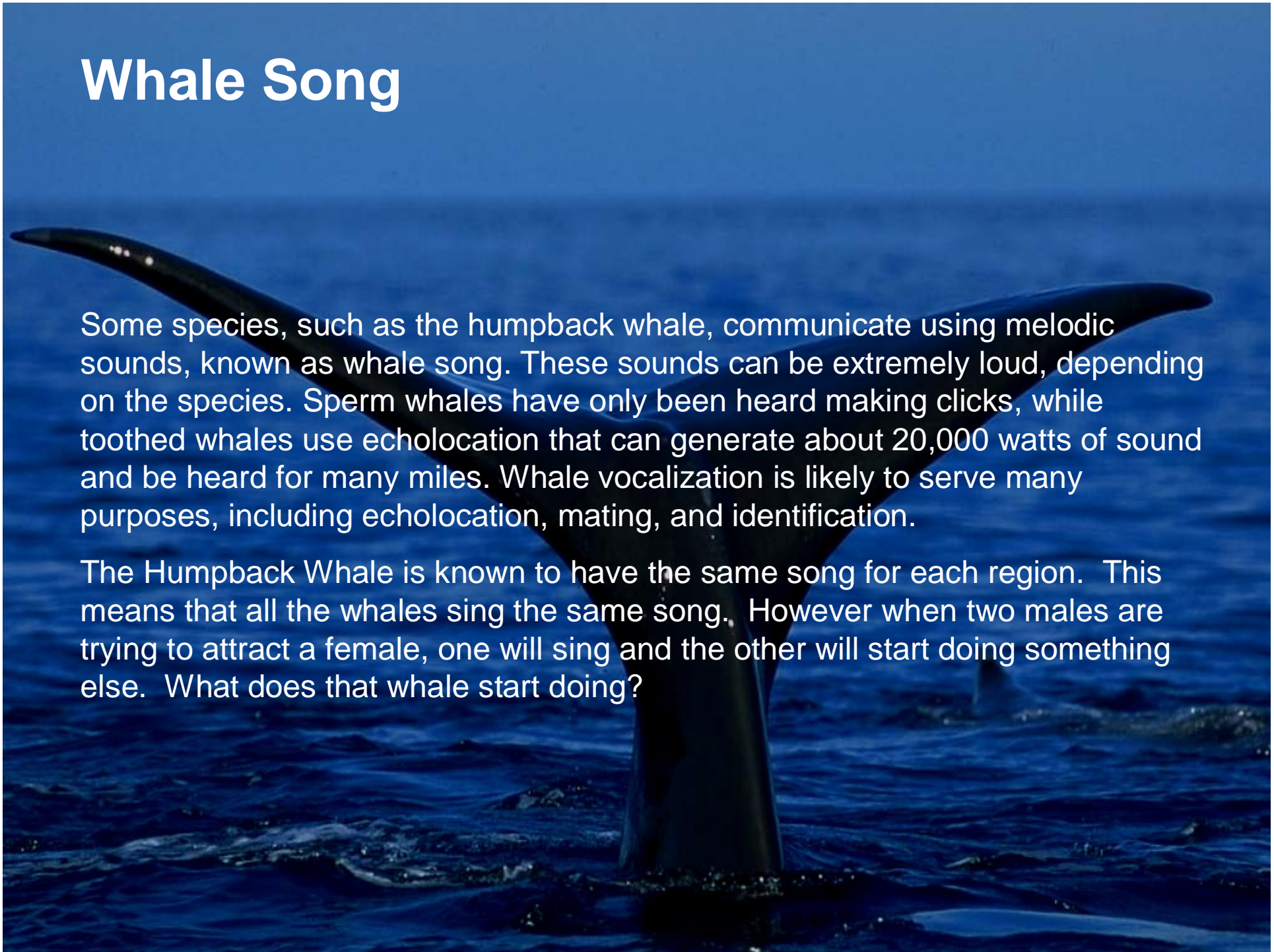
Nursing continues for more than a year in many species, and is associated with a strong bond between mother and calf. Reproductive maturity occurs typically at seven to ten years. This mode of reproduction produces few offspring, but increases survival probability.



Whale Song

Some species, such as the humpback whale, communicate using melodic sounds, known as whale song. These sounds can be extremely loud, depending on the species. Sperm whales have only been heard making clicks, while toothed whales use echolocation that can generate about 20,000 watts of sound and be heard for many miles. Whale vocalization is likely to serve many purposes, including echolocation, mating, and identification.

The Humpback Whale is known to have the same song for each region. This means that all the whales sing the same song. However when two males are trying to attract a female, one will sing and the other will start doing something else. What does that whale start doing?



Whale Surfacing Behaviour

No one knows exactly why a whale breaches the water but it is thought that it is a way of attracting female attention.

Females will do it commonly to teach their calves.

Maybe they do it for fun.

Either way it is spectacular to watch.



Other surfacing behaviour

Whales surface in many ways including

- Spyhopping – the whale rises out of the water and holds it's position partially out of the water.
- Lobtailing – The whale raises its tail out of the water and slaps the water
- Slapping – The whale lies on its side and uses its flippers to slap the water
- Logging – When resting the whale lies at the surface like a log, with its tail down.



Sleeping

Whales don't sleep. They are air breathers just like us so if they need to rest, they start logging.

Another way that some whales get rest is by only using half their brain and then switching to the other side when rested up.



Mistaken Identity

There is one animal in the ocean that is commonly mistaken for a whale. It's not hard when it is known as a Whale Shark.

The whale shark, *Rhincodon typus*, is a slow-moving filter feeding shark and the largest living fish in the ocean. The largest confirmed individual was over 12.5 meters and weighed over 36 tonnes, but unconfirmed claims report much larger sharks up to 18 meters. We think they can live for up to 100 years old and live in tropical and warm waters.

Whale sharks are bottom dwellers and live in the open ocean. They are 100% shark and don't have to come up to the surface to breathe. Whale sharks can dive to a depth of at least 1500 meters



How to recognize a Whale Sharks?

All whale sharks have a distinctive spotted pattern and big stripes aside the body and they have a flattened snout with a massive mouth with around 300 rows of tiny teeth and a massive tail fin.

Because the biggest fish in the ocean is feeding on the smallest thing, plankton and krill, they have to eat a lot. And that's what they do all day, just feed on lots and lots of plankton to grow as fast as possible.

They are filter feeders like Baleen Whales.



Threats

The biggest threat to whales is Whaling.

Whilst whaling has become illegal, the Japanese are allowed to kill a certain amount every year for what they deem as 'research'

Luckily they are being stopped by a group known as Sea Shepherd who go down to the southern ocean and get in the way of the people trying to kill the whales.



Another threat

It seems strange that something so small can kill something so big but the humble plastic bag is a major threat to whales.

The whale pictured below died because it had plastic in its stomach. The worst part is that this happened right here in Australia. This picture was taken in Cairns.

The whales stomach was tightly packed with 6 square meters of plastic, mainly plastic shopping bags. As a filter feeder, it had probably picked them up accidentally.



Boats

Whales are great to go and watch however if we get too close in our boats we can stop mating rituals so laws have been passed to stay far enough away from them so you don't disturb them. Most regions are 100m whilst some particular mating and calving grounds, like the Whitsundays, have a 300m exclusion zone.

If you get too close, sometimes whales strike back. This happened last year off the coast of South Africa when a yacht got too close.




You can play your part to help

It is very simple to look after whales. Keep plastics out of the ocean by not using them.

If you thought a plastic bag killing a turtle was bad, imagine how you would feel if you found a dead whale!!!



A blue whale is shown swimming in a deep blue ocean. The whale is oriented diagonally from the top left towards the bottom right. Its mouth is slightly open, and a light blue speech bubble with a tail pointing to the mouth contains text. The whale's skin is dark blue with lighter blue mottled patterns. The background is a gradient of blue, representing the water.

Plastic bags don't taste
very nice so if you can
help me and my friends
by not using them, that
would be fantastic.
Thanks for helping us.