



0. FACTS and MYTHS about SPERM WHALES - Story
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Sperm whales have very large heads, as depicted in this photo by Gabriel Barathieu. This mother and her calf, a male, are swimming off the coast of Mauritius (an Indian Ocean island east of Madagascar). Click on the image for a better view. License: [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/)

Nantucket whalers left the harbor of their island—located about twenty miles offshore America’s mainland—to hunt, capture and butcher whales. They especially wanted sperm whales (also known, today, by the alternative name “cachalot”).

Sperm whales are positively huge mammals. Like human beings, who are also mammals, sperm whales:

- Are warm-blooded;
- Give birth to live young (called calves);
- Nurse their young;
- Breathe air through lungs (which is why they must surface); and
- Have traces of fur or hair.

The size of a sperm whale’s head is reflected in the animal’s scientific name. *Macrocephalus* means “large head.” In fact ... the head of a *Physeter macrocephalus*—sperm whale—is so huge it comprises about a third of its total body length.



Toothed whales (*odontocetes*), like sperm whales, have a single blow-hole. Blow-holes, in whales, are like nostrils in humans. It is the part of a whale's body which allows it to breathe.

However ... unlike humans ... whales are voluntary breathers.

Voluntary breathers have to consciously breathe (unlike humans who breathe without thinking about it). Whales, including sperm whales, have to consciously open and close their blowholes to breathe.

How does that work? When a whale surfaces, it quickly opens its blowhole and exhales (breathes out). Then it inhales (or, breathes in).

When a whale forcefully exhales air, that exhaled air is warm (since it is leaving a warm-blooded animal). That warm air will vaporize any residual water located on the top of a whale's head. It is the vaporizing of such water which creates a visible spout coming from a whale's blowhole.

To prevent water from entering its blowhole—which would be like water entering a human's nostrils—whales have to inhale really fast. Quick inhalation keeps surrounding waves from becoming a major problem for whales.

If a small bit of water entered a whale's blowhole, however, the animal could handle it because of its large lung capacity. It would just cause the whale to have some discomfort.

How large is the volume of a whale's lungs? Because they are efficient breathers, whales can exchange up to 90% of the air in their lungs every time they surface. Often they will surface, breathe several times in a row, then go on a deep dive.

Unusual, among cetaceans—a group of animals comprising all whales, dolphins and porpoises—a sperm whale's blowhole is on the left side of its head (not at the top). That makes it easier for whalers to spot a sperm whale, even at a distance, because its "blow" appears low and bushy on the horizon.

How does this differ from other whales? Instead of being high and straight, a sperm whale's blow—or spout—projects forward and slightly left.

Sperm whales also have very large brains—the largest of all living animals—and their babies are big. Really big. When a sperm-whale calf is born, it is typically 4 meters (13.1234 feet) long and weighs around 500 kilograms (1,102.31 pounds).

In the 18th century, whalers who hunted sperm whales were sometimes able to calculate how long it would take before the whale surfaced again. This helped the men in the small whaleboats to assess how far away from their main boat they'd have to go before they could capture their prey.

Hunting whales, for men like the crew of the *Essex*, was not the only excitement—or trauma—they would face on their seafaring journeys. Like whales, bad weather—sometimes extremely bad weather—would seemingly come out of nowhere.

When that happened, the crew had to reset their sails to avoid what was known as a “knockdown.”

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Media Stream



Sperm Whale with Her Male Calf

Photo, by Gabriel Barathieu, of a sperm whale swimming with her male calf, online via Wikimedia Commons. License: [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/)

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