

GEORGIA AQUARIUM ANIMAL FACT SHEET

Beluga whale

Delphinapterus leucas

Range/Habitat

- The beluga whale is found in the arctic and sub-arctic regions of the world including Russia, Alaska, Canada, Norway, Greenland and other northern European countries.
- The beluga whale is typically found in shallow waters, but can dive as deep as 3,000 feet.
- The beluga whale travels in small pods of a dozen or so animals. It has been observed that several pods may occasionally come together and form a large herd of several hundred animals at a time.

Physical Characteristics

- The beluga whale is born dark grey or brown and turns white as it ages. Adult coloration varies between light grey and white.
- The beluga whale is a medium-sized whale. The female usually weighs between 1600-1800 pounds (726-816 kilograms), and the male will weigh between 2500- 3000 pounds (1,134- 1,361 kilograms).
- The beluga whale lives between 25-35 years.
- The beluga whale has 8-10 peg-shaped teeth on each side of both the upper and lower jaws, which form a distinctive beak. It has an average of 34 teeth that are adapted for grasping and tearing rather than chewing.
- It has a melon or rounded structure on the top of its head, just in front of the blowhole. This melon is prominent and composed of lipids (fats). It can change shape when the whale is producing sounds; therefore the bulb is assumed to facilitate sound production.
- Its ears are located just behind the eyes and are inconspicuous openings with no external flaps.
- Some scientists believe that a beluga whale receives sound through these openings. Other scientists believe that a beluga whale's external ear opening is nonfunctional.
- The beluga whale has acute vision both in and out of the water. Its eye is particularly adapted for seeing in water. In air, certain features of the lens and cornea correct for nearsightedness. They may have the ability to see in both dim and bright light. The presence of cone cells suggests that it may be able to see color, although this ability has not been documented.
- Glands at the inner corners of the eye sockets secrete oily, jelly-like mucus that lubricates the eyes and washes away debris. This tearlike film may also protect the eyes from infective organisms.
- Olfactory lobes of the brain and olfactory nerves are absent in all toothed whales, suggesting that they have no sense of smell.
- The beluga whale is a warm-blooded mammal. They breathe air through the blowhole on the top of their head. The blowhole is covered by a muscular flap which provides a water tight seal.
- The beluga whale cannot breathe through their mouth. They typically breathe 2-3 times per minute but can hold their breath for 20-25 minutes.
- Breeding season for the beluga whale occurs from the late winter to the early spring. Gestation is 14-16 months.
- A female beluga whale gives birth to one calf in the late spring or early summer. The female beluga whale will nurse her calf for 2-3 years.

- The male beluga becomes sexually mature at about 8-9 years of age, and the female at about 4-7 years of age.
- The beluga whale is the most vocal of the toothed whales. Arctic fishermen say they can hear the beluga whale sounds coming from miles away and that they can feel the vibration of their sounds coming through the hulls of their fishing boats. This behavior has earned them the nickname "sea canary."
- The beluga whale has excellent echolocation or biological sonar. They project broad band pulses with high peak frequencies from the forehead, or melon, and listen for returning echoes. This enables them to form an acoustical picture of their environment to aid in hunting and navigation.
- The beluga whale is a slow-swimming animal with a normal cruising speed around 2-3 miles (3-5 kilometers) per hour. They can hit bursts of speed in excess of five miles (eight kilometers) per hour.
- The beluga whale does not have a dorsal fin. Instead it has a thickened area of tissue called the dorsal ridge. The lack of a dorsal fin makes traveling under close ice easier, and they use the dorsal ridge to break through thin ice to create a breathing hole.
- The beluga whale is the only whale with a flexible neck which allows it to catch its prey easier. It has seven vertebrae in its neck that are not fused. The beluga whale also swims upside down then bends its neck to look toward the surface perhaps to find a pocket of air or a breathing hole.
- A beluga whale's forelimbs are called pectoral flippers. Pectoral flippers have the major skeletal elements of the forelimbs of land mammals, but they are foreshortened and modified in the beluga whale with connective tissue between the digits.
- The pectoral flippers are small in proportion to the body. They are rounded, paddlelike and slightly upcurled at the tips in some adult males.
- A beluga whale uses its pectoral flippers mainly to steer and to stop.
- Blood circulation in the flippers helps to maintain body temperature. The arteries in the flippers are surrounded by veins, therefore, when heat from the blood travels through the arteries it is transferred to the venous blood flowing back inside the body rather than the environment. This countercurrent heat exchange aids the beluga whale in conserving body heat.
- When a beluga whale needs to shed excess body heat, circulation increases in veins near the surface of the flippers and decreases in more insulated veins that lie deeper in the body core.
- Each lobe of the tail is called a fluke. Like the arteries of the flippers, the arteries of the flukes are surrounded by veins to help maintain body temperature.
- Blubber accounts for more than 40 percent of a beluga whale's weight.

Diet/Feeding

- The beluga whale eats a wide variety of fishes. It will also suction feed animals off the bottom such as crabs, clams and worms.
- The beluga whale is an opportunistic feeder. It is known to prey on about 100 different kinds of primarily bottom-dwelling animals.
- The beluga whale eats octopus, squid, crabs, shrimp, clams, snails, sandworms and various fish such as capelin, cod, herring, smelt and flounder.

Conservation Status

- There is an estimated worldwide population of 150,000-200,000 belugas. They are not considered endangered overall.
- However, there are some populations in certain areas which are threatened.

- **Additional Information**

- The beluga whale is also called the white whale. The word beluga comes from the Russian word for white, “belukha.”
- There is a population of around 800 belugas that live in the St Lawrence Seaway about 1.5 hours by car east of Quebec City. This population has been geographically separated from other belugas for nearly 10,000 years.
- Natural predators of the beluga whale include polar bears, killer whales and walruses.
- Beluga caviar comes from the beluga sturgeon not the beluga whale. The beluga sturgeon is found in the Caspian Sea and is harvested for its eggs to sell as beluga caviar.
- The beluga whale has the ability to swim backwards. This allows them greater maneuverability to avoid becoming trapped in ice or running aground during arctic tidal fluctuations that can be as much as 24-30 feet in a six-hour period.
- The beluga whale is extremely social in that it lives, hunts and migrates in groups called pods.
- The beluga whale does not exhibit as many aerial behaviors such as jumping, breaching etc as do dolphins, humpback whales and killer whales.
- During the winter, the top layer of a beluga whale’s skin may turn yellow, especially on its back and flippers. It appears to undergo a seasonal molt of the outer layer of skin and will rub against gravel river bottoms or rocks to help shed this layer of skin.
- At least 11 different vocals have been documented, including resonant high-pitched whistles, squeals, clucks, mews, chirps, trills and bell-like tones. During sound production, the beluga whale’s melon changes shape.
- Besides vocalizations, the beluga whale may communicate through facial expressions and physical contact.

Sources

www.sheddaquarium.org

<http://www.marinemammalcenter.org/learning/education/whales/beluga.asp>

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