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AMERICAN CETACEAN SOCIETY



GRAY WHALE (*Eschrichtius robustus*)

Class: Mammalia

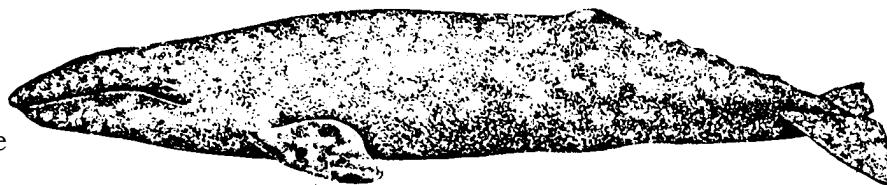
Order: Cetacea

Suborder: Mysticeti

Family: Eschrichtiidae

Genus: *Eschrichtius*

Species: *E. robustus*



The only member of the family Eschrichtiidae, the gray whale is a mysticete, or baleen whale. It is a "coastal" whale; in its annual migration between arctic seas and the lagoons of Baja California, Mexico, it closely follows the North American Pacific coastline. Frequently visible from shore, the grays provide a unique opportunity for land and boat observation, and commercial whalewatching has become a major industry along the migration route. Visitors to the calving and breeding lagoons sometimes encounter the phenomenon of the "friendlies"; gray whales that closely approach small boats and allow themselves to be touched by humans.

PHYSICAL DESCRIPTION Gray whales have a streamlined body, with a narrow, tapered head. The upper jaw is arched in profile, and slightly overlaps the lower jaw. The rostrum (upper jaw) is dimpled and each of the little depressions contains one stiff hair. There are 2-5 deep ventral (bottom) grooves on the throat 1.5 meters (5 ft.) in length.

COLOR The gray whale received its name from the gray patches and white mottling on its dark skin. On the skin are many scratches, scattered patches of white barnacles, and orange whale lice. Newborn calves are jet black, although some may have distinctive white markings.

FINS AND FLUKES The gray whale has no dorsal (top) fin. About 2/3 of the way back on its body is a prominent dorsal hump followed by a series of 6-12 knuckles along the dorsal ridge that extend to the fluke (tail). Its flippers are paddle shaped and pointed at the tips. Its flukes are about 3 meters (10-12 ft.) across, pointed at the tips, and deeply notched in the center.

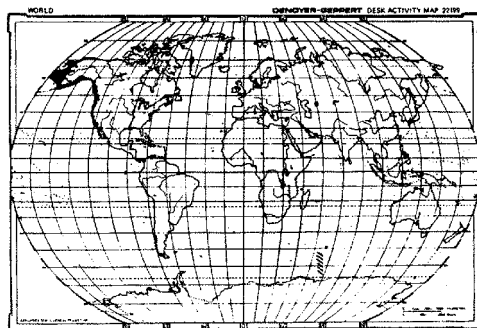
LENGTH AND WEIGHT Adult males measure 14 meters (45-46 ft.) and adult females measure slightly more. Both sexes weigh 30-40 tons.

FEEDING Gray whales are baleen whales; they have a series of fringed, overlapping plates (about 130-180 per side) that hang from the upper jaw where upper teeth would be. The plates are composed of a finger- nail-like material called keratin that frays out into fine hairs on the ends and inside the mouth next to the tongue. The plates are off-white and about 5-25 cm. in length. Gray whales are bottom feeders, using suction to scoop their food from the bottom of the sea. They feed on small crustaceans such as amphipods, and tube worms. Diving to the bottom, they roll on their sides and draw the mud and water into their mouths. As they close their mouth, they force the water and mud out through the baleen plates---leaving the food on the inside of the baleen---and swallow. Gray whales feed primarily during the summer months of long daylight hours in the cold Arctic waters of the Bering and Chukchi seas.

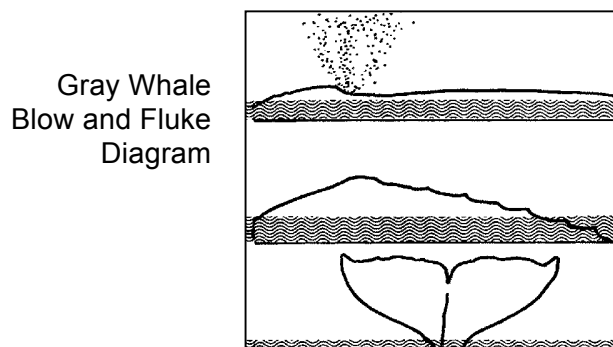
MATING AND BREEDING Gray whales reach sexual maturity at 5-11 years of age, or when they reach 11-12 meters (36-39 ft.) in length. Gestation is 12-13 months. The calf weighs 1100-1500 pounds and is about 4.5 meters (15 ft.) at birth. Calves nurse 7-8 months on milk that is 53% fat (human milk is 2% fat.) Females bear a single calf, at intervals of 2 or more years. Courtship and mating behavior are complex, and frequently involve 3 or more whales. The third whale may function as a "helper" during the mating. Mating and calving both occur primarily in the lagoons of Baja California, Mexico, although both have been observed during the migration.

DISTRIBUTION AND MIGRATION The gray whale makes one of the longest of all the mammal migrations, averaging 10,000-14,000 miles round trip. In October, the whales begin to leave their feeding grounds in the Bering and Chukchi Seas and head south for their mating and calving lagoons in Baja California, Mexico. The southward journey takes 2-3 months. The whales remain in the lagoons for 2-3 months, allowing the calves to build up a thick layer of blubber to sustain them during the northward migration and keep them warm in the colder waters. The return trip north takes another 2-3 months. Mothers and calves travel very near shore on the northbound migration. There are some year- round populations at the Straits of Juan de Fuca (the bay between Washington State and Vancouver Island) and possibly off the central California coast. Gray whales inhabit shallow coastal waters, and are found in the eastern (and possibly western) north Pacific.

Gray Whale
Distribution Map



NATURAL HISTORY Migrating gray whales have a predictable breathing pattern, generally blowing 3-5 times in 15-30 second intervals before raising their flukes and submerging for 3-5 minutes. They can stay submerged up to 15 minutes, and travel at 3-5 knots. Mothers are very protective of their calves, and earned the name "Devilfish" from early whalers in the lagoons because of their violent defensive behaviors. Orcas (killer whales) are a cause of gray whale deaths, and many gray whales have orca teeth scars on their flukes.



STATUS At one time there were three gray whale populations: a north Atlantic population, now extinct, possibly the victims of over-hunting; a Korean or western north Pacific stock now extinct or very close to extinction, also from over-hunting; and the eastern north Pacific population, the only survivors. Hunted to the edge of extinction in the 1850's after the discovery of the calving lagoons, and again in the early 1900's with the introduction of floating factories, the grays were given partial protection in 1937 and full protection in 1947 by the International Whaling Commission. Since that time the grays have made a remarkable recovery and now number between 19,000 and 21,000, probably close to the original population size.

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