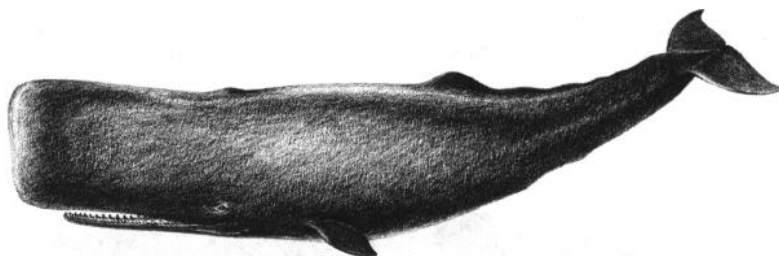


SPERM WHALE

Physeter catodon



The largest of the toothed whales, male sperm whales reach 59 feet, and females, 39 feet. A 59-foot male weighed 52 tons. The sperm whale's color is dark bluish-gray to black, sometimes with whitish on the lower jaw and belly. The massive squared-off head, with comparatively small lower jaw, distinguishes it from any other cetacean. The dorsal fin is fairly low and rounded or bluntly obtuse, and is followed by a series of projecting bumps along the posterior midline of the back. The spout differs from that of other whales in being directed forward. The teeth are large and conical, and are only in the lower jaw, with rudimentary teeth almost invariably found in the upper jaw.

The sperm whale was one of the kinds greatly sought after in the heyday of whaling, the spermaceti or head oil being of particular value. In 1975, 7,859 sperm whales were taken in the North Pacific from an estimated population of 300,000 animals. These are pugnacious animals, and constituted a real danger to whalers in the days when killing was done from small boats. The fictional Moby Dick (based on a real whale) was of this species.

These whales are found in the Atlantic, Pacific, and Indian Oceans, ranging in the Pacific from Alaska (Pribilof Islands) south into South American waters. They feed mainly on squids and octopi, but also eat fishes. Ragfish were reported as occurring commonly in their stomachs, off the Pacific coast of Canada, and there is a California record of 20-some skates being taken from the stomach of one individual. They are known to descend to great depths in their search for food—one became entangled in a cable at a depth of 3,240 feet—and can stay under for more than an hour. Their heads may bear numerous scars 1 to 4 inches in diameter from the tentacle discs or suckers of giant squid.

Newborn calves may be 11-1/2 to 16 - 1/2 feet long and weigh about 2,200 pounds. Gestation is 14 to 15 months, and lactation lasts 1 to 2 years. Longevity is estimated at 60 years.

Ambergris, a waxy substance produced by the sperm whale's intestine, has long been valued as a fixative for fine perfumes. It is still in some demand, though not as valuable as it once was, due to its replacement by synthetic substitutes. Whereas it once brought as much as \$40 an ounce, in recent years it has brought only \$0.75 to \$13 an ounce. People pick up many substances on beaches hoping they are ambergris, but only a very small percentage turns out to be. It is difficult to identify with assurance, but the following characteristics will help you to recognize it.

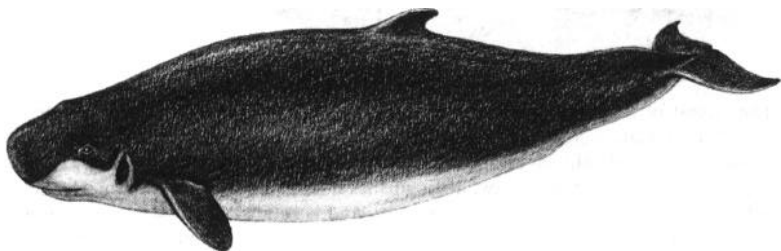
Ambergris is waxy and moist when fresh, dry and brittle when old. The color varies from dull gray through brown to almost black, or may be mottled throughout in alternate layers of light and dark color. There is a characteristic somewhat pleasant earthy odor, intensified by warming in the hand; it has been compared by some to the odor of damp, decomposing grass or to sweet hay. It floats, even in fresh water. When slowly heated, it commences to soften at about 140°F, and melts between 145° and 150°F to a dark, oily liquid. Test it by inserting a heated wire into it; it will melt around the wire forming a dark opaque liquid. Touched with the finger when partially melted, it is tacky; it adheres and

strings. If the wire to which it adheres is reheated over a flame, it soon emits a white fume with the characteristic odor, and then burns with a luminous flame. It is soluble in absolute alcohol, in ether, in fat, or in volatile oils. It may contain squid beaks.

One of the by-products of the sperm whale, in particular, is "scrimshaw" work, carvings done by the seamen in their spare time on whale bones and teeth. Many examples of these have been saved, and can be seen in museums and private collections.

PYGMY SPERM WHALE

Kogia breviceps



A small species, reaching only 9 to 13 feet, this is a true whale. It is black above and grayish-white below. There is a falcate dorsal fin. The mouth is small and is inferior, like that of a shark; the teeth are small and sharp-pointed, and are found only in the lower jaw. Among foods eaten are squids, fishes and crustaceans.

The pygmy sperm whale is found in the Atlantic, Pacific, and Indian Oceans, in temperate and tropical waters. It is a rather rare animal; and population estimates are unavailable. Most records from the eastern North Pacific are based upon strandings, including its northernmost occurrence on the Washington coast. Gestation is thought to last about 9 months, and the calves appear to accompany their mothers for up to a year. Food items found in their stomachs have been mostly squids and shrimp-like crustaceans.

DWARF SPERM WHALE

Kogia simus

This species, named in 1866, was recognized only recently by current workers as distinct from *K. breviceps*. It is smaller (adults are 7 to 9 feet long) and has a high dorsal fin near the center of the back; there are also tooth and skull differences. There are very few eastern Pacific records. A mature male stranded at Oceano, San Luis Obispo County, was 5 feet 8 inches long. In other areas of the world oceans, they are known to be solitary or to travel in small pods. They are said to feed mostly upon squids and shrimp-like crustaceans, but stomachs of several individuals from off Japan contained a wide assortment of deep-sea fishes.

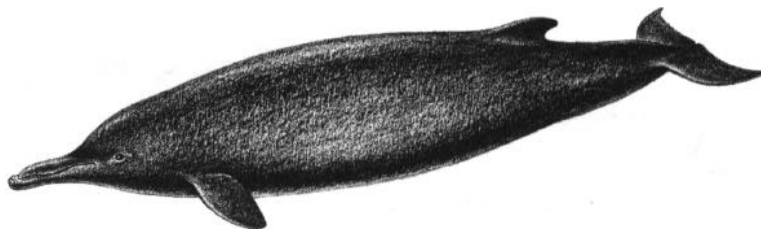
ZIPHIIDAE

Beaked or Bottlenose Whales

The whales of this family are of moderate size and have dolphin-like shapes. They are rather rare in California waters, or at least are seldom collected or recorded. The dorsal fin is very small and is set far back on the body. Functional teeth are found in the lower jaws of adult males only; in young males and in females (except rarely), they remain embedded in the gums. In addition, there may be numerous small vestigial teeth in both jaws.

BAIRD'S BEAKED WHALE

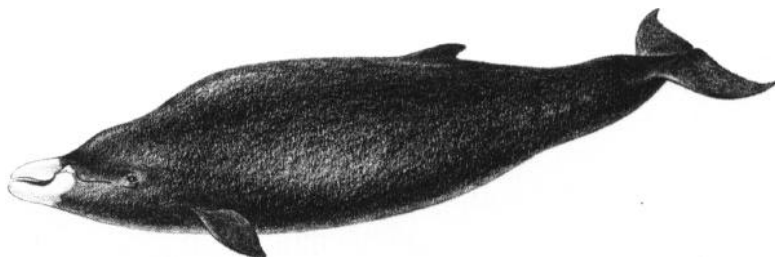
Berardius bairdii



This whale is uniformly slate-gray or brownish-gray, with irregular white blotches sometimes present ventrally. Its body shape and beak are those of a typical long-beaked dolphin, with a prominent bulging forehead in the adult male. It is the largest of the family, reaching 42 feet. There are two pairs of teeth in the lower jaw. It feeds on cephalopods and fishes. It is confined to the Pacific ocean, where it has been recorded from Alaska (Bering Sea) to California, and also off Japan. In California, the southernmost record is off Monterey. While fairly abundant off central California from at least June to October, it is infrequently taken by whalers because of its small size. In 1951, a group of about 20 was seen in the vicinity of Eureka, Humboldt Co., and one of these was taken by a whaler. From 1956-1966, 16 individuals were taken by the two whaling stations at Richmond, being recorded as "bottlenose whales."

HUBB'S BEAKED WHALE

Mesoplodon carlhubbsi

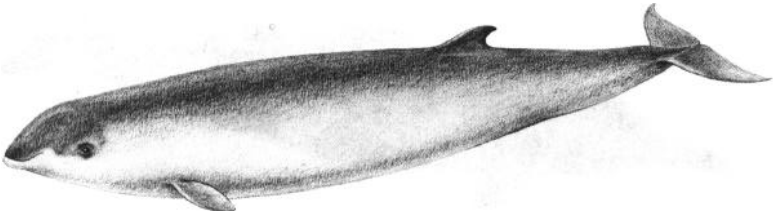


This is probably a rare animal throughout its range. It reaches at least 17 feet. Until 1965 there were only three published California records: one from a stranding at La Jolla, San Diego Co., in 1945; one at Drake's Bay, Marin Co., in 1950; and one at San Simeon, San Luis Obispo Co., in 1962. This is a recently described species. Formerly the local ones were considered to be *stejnegeri*, with *bowdoini* considered by some to be a synonym. The describer regards *carlhubbsi* as a north temperate form, with records from Japan, Washington, and California; *stejnegeri* as boreal or subarctic, extending from Japan up through the Bering Sea and south to Oregon; and *bowdoini* as south temperate, from New Zealand.

This whale is black all over, except for the whitish beak; in addition, the Drake's Bay specimen had a white hump on top of the head. Both the La Jolla and Drake's Bay animals were crisscrossed with many light-colored scratches, and also had round or oval marks which may have been scars from barnacles or lampreys. Origin of the scratches, found also on other kinds of beaked whales, is uncertain, though some believe they were caused by the teeth of other individuals. The skin is thin and easily broken. There is one set of teeth in the lower jaw.

CUVIER'S BEAKED WHALE

Ziphius cavirostris



This whale is usually grayish or fawn colored throughout, lighter on the anterior back and the face in adult males. It has a shorter beak than the other two members of the family recorded from California, and lacks contrast between the beak and the rest of the head. It reaches 32 feet in length. There is one pair of teeth-at rare times two-in the lower jaw.

Cuvier's beaked whale occurs in both the Atlantic and Pacific Oceans. In the Pacific it has been recorded from Alaska to Baja California, off Japan, and New Zealand. It is probably the most common beaked whale in the North Pacific, but most records are of stranded animals. The species travels in tight schools of as many as 10 individuals, but older males often are solitary. Food items consist primarily of squids and fishes, including many deep-dwelling forms.