GUIDE TO THE WHALES, PORPOISES AND DOLPHINS OF THE NORTH-EAST PACIFIC AND ARCTIC WATERS OF CANADA AND ALASKA

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INTRODUCTION

Whales, porpoises and dolphins are collectively grouped in the order Cetacea. They are mammals which have, during the course of evolution, become entirely aquatic although the typical mammalian characteristics have been retained.

The aquatic environment has imposed on this group of animals a fish-like form whereby structures tending to impede progress through the water have been eliminated or reduced. External accoutrements such as the pinna of the ear and external genitalia have been withdrawn inside the body. The neck construction and shoulder prominence found in most mammals have been reduced. The anterior limbs or flippers retain the basic bony elements of the mammalian fore-limb but these elements are modified and enclosed in skin and fibrous tissue to form paddles which articulate only at the shoulder joint. The hind-limbs have disappeared, although vestiges still remain, buried in the muscles.

Propulsion is provided for by means of a set of broad "flukes" terminating the streamlined body. Unlike the tail fins of fishes, these are disposed horizontally and lack internal bony supporting structures. Similarly, the dorsal fin, present in most species, is composed merely of skin and fibrous tissue, and lacks bony support.

The body covering is composed of a smooth leathery skin beneath which lies a thick insulating layer of oil-impregnated fibrous tissue, the blubber, which maintains a body temperature similar to man's. The hairy body covering typical of mammals is either entirely absent in the adults or is reduced to a few isolated hairs in the head region. The skin is lacking in sebaceous or sweat glands.

Teeth are present, but in whalebone whales they disappear before the end of foetal life and are replaced by parallel horny plates of whalebone suspended from the roof of the mouth. The inner edge of these plates are frayed to form a seive used to strain small animals from the water.

Cetaceans breathe air and must come to the surface periodically in order to refresh the body tissues following submergence. The nostrils or "blowholes", which may be single or double, open on the top of the head, usually at some distance from the tip of the snout. Immediately upon surfacing, following a dive which may last from 5 to 15 minutes or less (whalebone whales) to about an hour (sperm whales), the warm, moisture-charged breath is violently discharged. The visible "blow" of the whale is not a fountain of water. There is a continuous passage between the blowholes and the lungs so that no air or water can enter the lungs through the mouth.

The young are developed in the uterus of the female, as in other mammals, and after birth are nursed from a pair of nipples located one on either side of the genital opening. The contraction of muscles covering the mammary glands force the milk into the mouth of the young. For most species of whales the gestation period is about one year. One offspring is usual but twins or multiple births occur occasionally. The interval between successive pregnancies is usually two years in most species.

The body form and the movements of cetaceans are related to their feeding habits. Fin, blue, sei and humpback whales feed mostly on small, shrimp-like, planktonic crustaceans called euphausiids which are abundant in high latitudes during the summer months. These large baleen whales return to warm waters to breed and to give birth to their young during the fall and winter months. The dolphins with their long narrow jaws equipped with numerous sharp teeth feed mostly on small surface-swimming fish in the open oceans. They are extremely active, but lack the prolonged deep-diving ability of some of the other toothed whales, such as the beaked whales and the sperm whale, which feed primarily on squid. The only whale which habitually preys upon other warm-blooded animals is the killer whale. This whale is equipped with exceptionally strong teeth and jaws and a powerful body build.

Basic scientific information is needed on all species of whales, porpoises and dolphins occurring in the waters of the north-east Pacific and Arctic waters to the north of Canada and Alaska. Some of the species described in this circular are known by only one or two specimens. The systematic position of many has not been definitely established because of the lack of basic information. The large commercial species of whales: blue, fin, sei, hump and sperm whales, have been studied at whaling stations but information is urgently needed on their distribution and habits at sea.

This guide is intended merely as an introduction to the cetaceans from this locality. It is brief, incomplete and in some places inaccurate because of its brevity and the lack of information available on some of the species. The sincere hope is expressed that those whose privilege it is to observe whales at sea will record their observations in order that corrections and additions can be included in a later, more comprehensive guide. It is urged that even the most seemingly trivial observation be recorded and that the information be forwarded to:

Whale Investigation,
FISHERIES RESEARCH BOARD OF CANADA,
Biological Station,
Nanaimo, B. C.

CORRECTION

PLEASE NOTE THE ERRO-

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TRATIONS ON PAGE SIX.

FAMILIES OF THE ORDER CETACEA

(Whales, porpoises and dolphins)

A. Suborder Mysticeti (Whalebone whales)

Whalebone in mouth. No teeth in adult. Lower jaw wide with jawbones arched outwards. Double blowholes.

1. Family Balaenopteridae. Whalebone relatively short. Numerous parallel grooves on throat. Distinct dorsal fin.

2. Family Balaenidae. Right whales. Whalebone long and narrow with fine bristles. No throat grooves. No dorsal fin.

3. Family Eschrichtidae. Gray whale. Whalebone short and coarse. Only 2-4 short grooves on throat. Dorsal hump but no distinct fin.

B. Suborder Odontoceti (Toothed whales)

Teeth present in adults; sometimes buried in gum. Whalebone absent. Single blowhole.

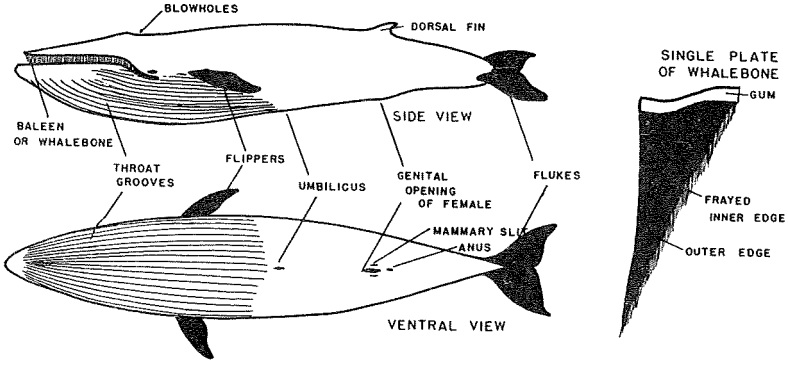
4. Family Physeteridae. Sperm whales. Blowhole on left side of head. Upper jaw extends beyond lowerjaw. Numerous teeth, very prominent in lower jaw.

5. Family Ziphiidae. Beaked whales Teeth reduced to one or two pairs. Fin placed far back on body. Pair of grooves on throat forming a "V". No notch in tail.

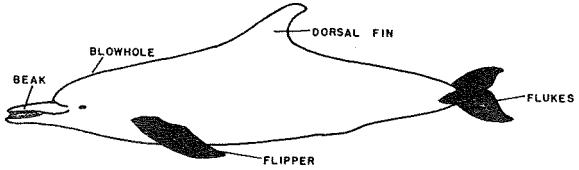
6. Family Delphinidae. Typical dolphins. Teeth usually in upper and lower jaws. No grooves on throat. Tail notched.

7. Family Delphinapteridae. Arctic dolphins. No dorsal fin. No beak. Blunt head.

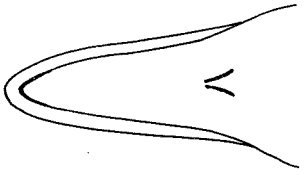
WHALEBONE WHALE



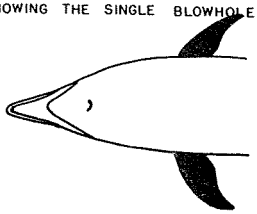
TOOTHED WHALE



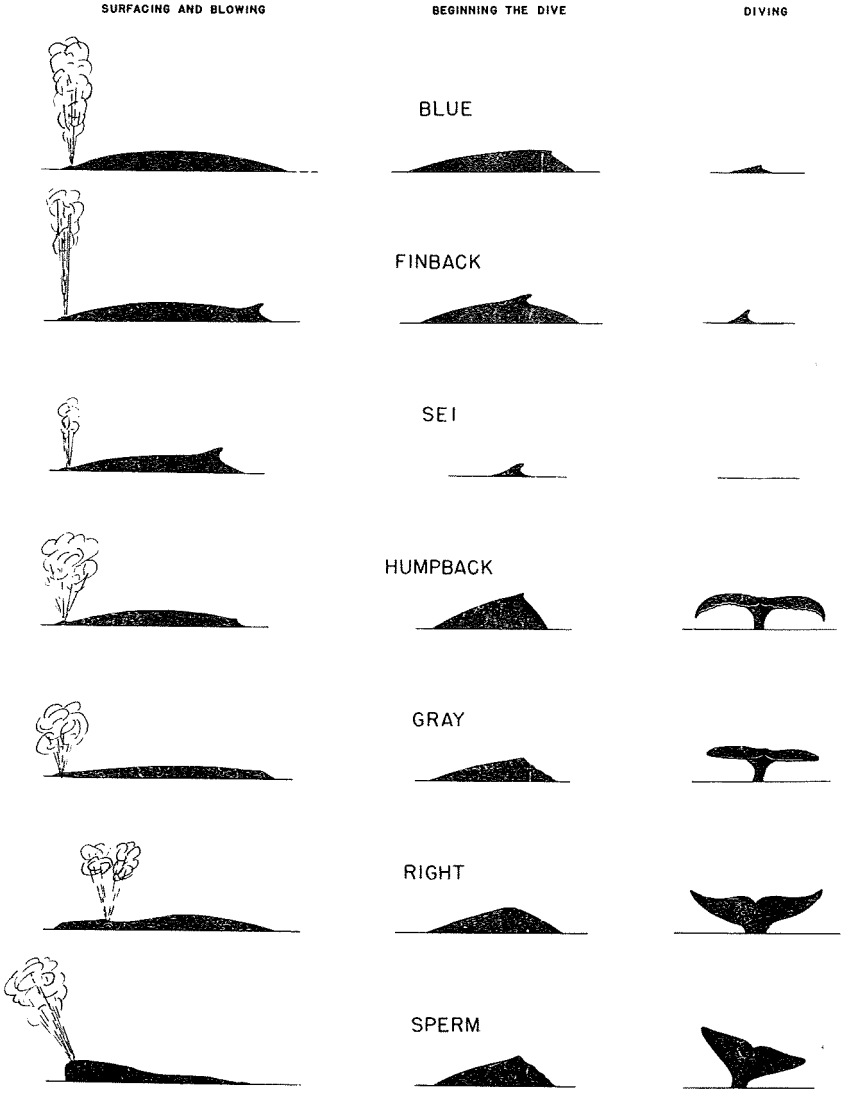
TOP OF HEAD OF WHALEBONE WHALE
SHOWING THE DOUBLE BLOWHOLES

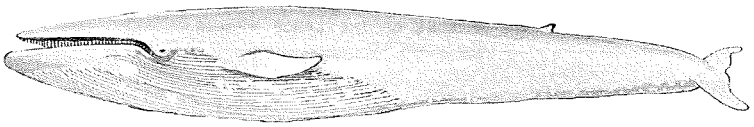


TOP OF HEAD OF TOOTHED WHALE
SHOWING THE SINGLE BLOWHOLE



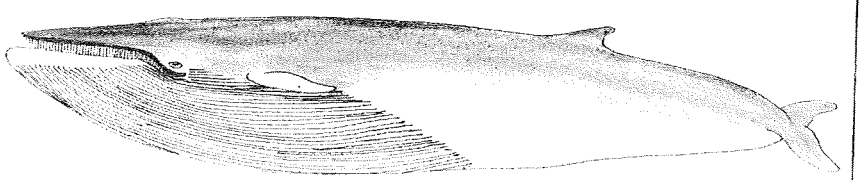
BLOWING AND DIVING CHARACTERISTICS
OF SOME OF THE LARGE WHALES.





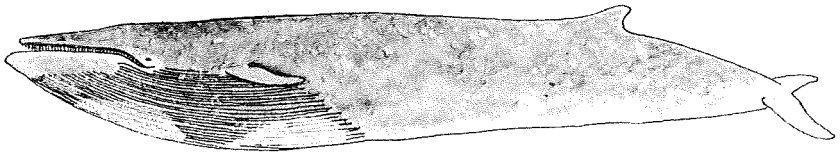
BLUE WHALE — Balaenoptera musculus

The blue whale is the largest of all whales, attaining to lengths of about 100 feet with corresponding weights of about 100 tons. In the Northern Hemisphere it is seldom found larger than 85 feet. The snout is broad, low and flat as compared to its close relative the fin whale. The colour is bluish-gray with light blue mottling. The underside of the flipper is white. The dorsal fin is very small and located far back on the body. Throat grooves extend back more than half the length of the body. The blow is high and vertical and the flukes are not raised in diving. The species is distributed widely in the eastern Pacific from waters off Central America to the Aleutian Islands. It is seldom seen in large schools. Synonyms are: Sibbald's rorqual and sulphur-bottom.



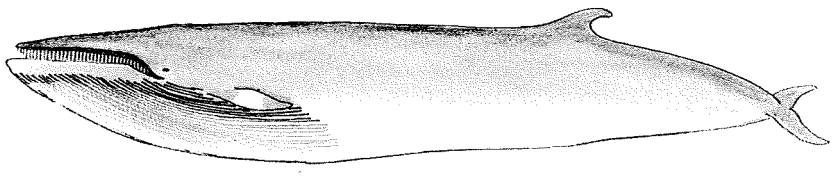
FIN WHALE — Balaenoptera physalus

The fin whale grows to a length of 70 feet in the Northern Hemisphere and 85 feet in the Southern Hemisphere. The colour is black above and white below. The underside of the flukes and flippers are white. Throat grooves extend back about half the length of the body. Whalebone is striped in bands of bluish-grey and slate; the bristles are yellowish-white. Plates on the right side are white along the anterior third of the jaw. By comparison with the blue whale the form is more slender and the dorsal fin is larger and is concave along the hind margin. The flukes are not raised in diving. This species is the most numerous of all the whalebone whales and is taken in greater numbers than any other species in commercial whaling operations. It ranges in the Eastern North Pacific from waters off Central America to the Bering Sea and Arctic Ocean. Synonyms are: common rorqual, finner and finback.



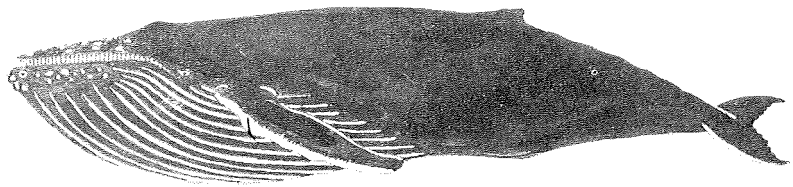
SEI WHALE Balaenoptera borealis

The sei whale seldom exceeds 55 feet in length and its body form is less robust than in its larger cousins, the blue and fin whale. The colour is black above, shading to bluish-gray with some white areas below. The skin on the sides has a "galvanized" appearance. The flippers and flukes are never white on the under side. Throat grooves are numerous and end anterior to the umbilicus (navel). The dorsal fin is relatively larger than in other whalebone whales. The whalebone is black with fine white bristles. The blow is small; the flukes are not raised and the back is not noticeably arched in diving. Although abundant and widely distributed it has not until recently constituted an important part of the catch at whaling stations because of its relatively poor yield of oil. It ranges from tropical waters to the Aleutian Islands but the main herds, like the blue whale, do not penetrate into the Bering Sea. Synonyms are: Rudolph's rorqual, pollack whale and coalfish whale. A close relative, not yet recorded from the Eastern North Pacific, is Bryde's whale.



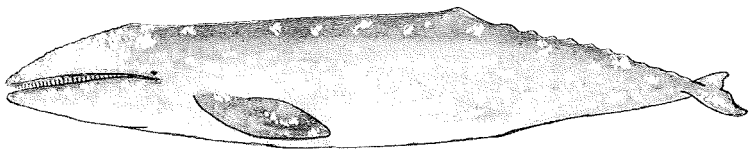
MINKE WHALE Balaenoptera acutorostrata

The minke whale grows to a length of 30 feet. The colour is black on the back and white on the belly and beneath the flukes and flippers. There is a distinctive white band across the outer surface of the flipper. Throat grooves end anterior to the umbilicus as in the sei whale. The baleen plates are course in texture and yellowish-white in colour. The blow is barely visible and the flukes are not raised in diving. It ranges from the waters off Baja California to the Arctic Ocean and is seen most commonly in high latitudes where it concentrates to feed during the summer months. The species is taken commercially for animal and human food in Japan and Norway. It is ignored by the large commercial whalers because of its small size. Synonyms are: lesser rorqual, pike whale, little piked whale, sharp-headed finner and Davidson's whale.



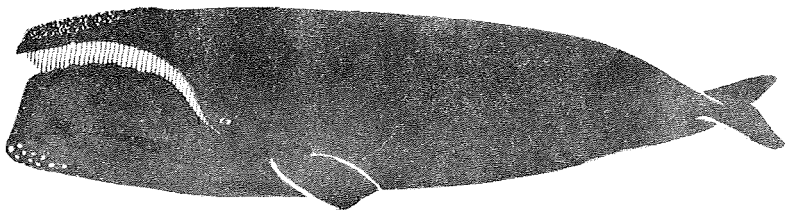
HUMPBACK WHALE — Megaptera nodosa

The humpback whale attains to lengths of 50 feet. The body is thickest and bulky as compared to the streamlined form of the rorquals. Flippers are long and narrow with numerous irregular knobs along the leading edge. Tubercles, usually topped by barnacles, cover the snout, chin and lower jaw. The colour is black above with varying amounts of white below. The undersurface of the flukes and flippers are usually white. Whalebone is course and black. The spout is low and bushy and the flukes, showing an irregular hind margin, are thrown in the air when the animal dives. Throat grooves are few in number and widely spaced. The species ranges from the waters off Central America to Bering Sea and Arctic Ocean. It is often encountered in coastal waters, even in sheltered bays and inlets. Synonyms are: bunch, hump or hunchbacked whale.



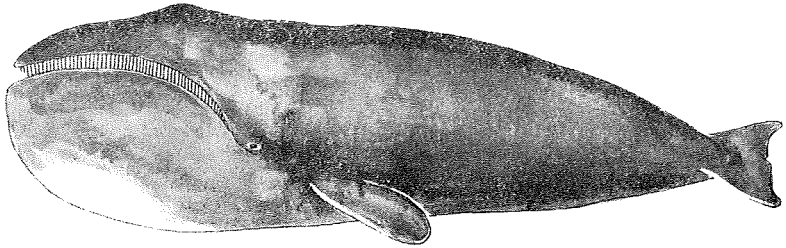
GRAY WHALE — Eschrichtius glaucus

The gray whale attains to lengths of 45 feet. The colour is gray with pale mottling on the underside and in the head region. Light gray or white patches, especially in the head region, are produced by concentrations of barnacles. Throat grooves are short and only 2-4 in number. Whalebone is short and coarse and yellowish in colour. The outline of the top of the rostrum is prominently bowed. The dorsal fin is low and is followed by a series of small humps. The spout is low and bushy. The tail is thrown in the air during diving. The species is found only in the North Pacific. Along the west coast of North America it migrates to the lagoons of Lower California and Mexico where breeding and calving occur in winter. In the spring it returns to the Bering Sea and Arctic Ocean to feed. Thought to be extinct for many years, the gray whale has recently reappeared on its annual migrations between feeding and breeding grounds. Synonyms are: California gray, devil fish, mussel-digger and rip-sac.



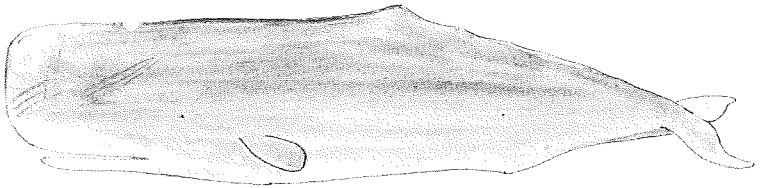
NORTH PACIFIC RIGHT WHALE Eubalaena sieboldi

The right whale of the North Pacific attains to lengths of 45-50 feet. The heavy body is usually black in colour but may show irregular white patches, especially on the belly. There is no dorsal fin and no throat grooves. The flippers are box-shaped and heavy. The upper jaw is arched and narrow. Along the top of the snout is a horny-projection called the "bonnet". A pair of large fleshy lips form a scoop-shaped mouth opening. The blades of whalebone suspended from the roof of the mouth are long and narrow with fine hairy fringes along their inner margins. They are black in colour and may grow to a length of 6 or 7 feet. For several hundred years before the advent of the modern whale catcher this whale was hunted to a point near to extinction. It is now rare and is protected from further killing by international agreement. Its former habitat included the Bering Sea and waters adjacent to Alaska, British Columbia and Oregon and occasionally California. The blow is high and "V" shaped and the flukes are frequently raised when diving or feeding. Synonyms are: Biscayan, Arctic, black and North Cape right whale or Nordcaper.



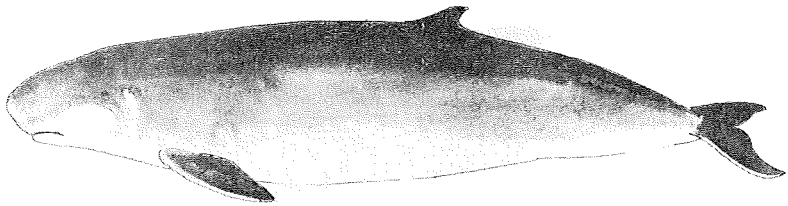
BOWHEAD Balaena mysticetus

The bowhead, like the right whale, grows to a length of about 50 feet. Its body is even more robust than the right whale and the slate-gray to black whalebone plates may reach lengths of 10-14 feet. The body colour is black except for a cream-coloured area at the tip of the lower jaws. This whale is also protected by international law after being hunted almost to extinction from 1612 until the end of the 19th century. Those few remaining appear in Bering Strait in June, moving eastward towards Banks and Victoria Islands. They return in late summer to spend the winter in the ice fields about the Aleutian and Kurile Islands. Right whales were highly prized in earlier days because of their relative ease of capture, because they floated when killed and because of their great yield of oil and whalebone. Synonyms are: Greenland right whale, great polar whale.



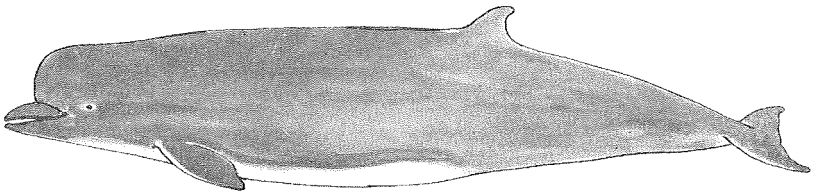
SPERM WHALE — Physeter catodon

The sperm whale is the largest of the toothed whales, the males attaining a length of 60 feet and the females 38 feet. It is distinguished by the large head which is square in front and rectangular in side view. The blow-hole, a single crescentic-shaped opening located on the left side at the front of the head, produces a bushy blow which is directed obliquely forward. The colour is dark bluish-gray to black, usually with some white around the jaw. The narrow, underslung jaw is armed with 20-30 pairs of strong teeth. During the dive the flukes are raised and the sperm descends almost vertically. It can remain submerged for as long as 1 hour. The species is polygamous and one bull commands a harem of 20-30 females. Males migrate as far north as the Bering Sea, but females remain usually in tropical and subtropical waters. Synonyms are: cachelot, pot-head or spermacet whale.



PYGMY SPERM — Kogia breviceps

The pygmy sperm or lesser cachelot grows to 9-13 feet in length. A small jaw armed with 14-15 pairs of sharp, curved teeth terminates 4-6 inches behind the tip of the bluntly conical snout, giving the whale a superficial resemblance to a shark. The colour is black above and grayish-white below. It resembles the sperm whale in having a single crescentic blow-hole located to the left of the mid-line of the head. Only four authentic specimens have yet been recorded from the west coast of North America; one from Mexico, one from Washington and two from California. In other parts of the world the species is widely distributed in temperate and in tropical waters.

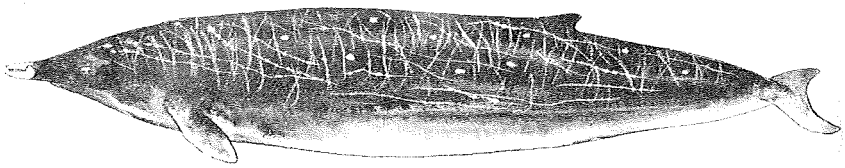


ATLANTIC BOTTLENOSE WHALE — Hyperoodon rostrata

Baird's beaked whale is the largest of the beaked whales. Males attain to lengths of 39 feet and females to 42 feet. The build is powerful and robust. A prominent forehead rises abruptly from the beak. This forehead bulge is most apparent in fully grown males. The colour is gray to black, usually with some white markings on the underside. Numerous scratch marks, mostly on the upper surface, are believed to be produced by the teeth of the large males. These occur mostly on the males but are also found to some extent on the females. The lower jaw contains two pairs of, triangular shaped teeth. These are exposed only in mature males. The species travels in schools of 10-20 individuals. It occurs only in the North Pacific. On the eastern side it has been recorded from California to the Bering Sea and a few are taken by commercial whalers off the coast of British Columbia. It is frequently taken in commercial whaling operations in Japan. A close relative, Berardius arnuxi is found in the Southern Hemisphere.

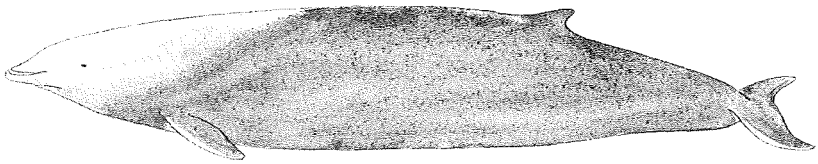
BAIRD'S BEAKED WHALE — Berardius bairdi

Hyperoodon has never been certainly recorded from the North Pacific. "Bottlenose" whales appearing in whale catch statistics from British Columbia, Kamchatka and the Kurile Islands probably all refer to Berardius. The Atlantic bottlenose whale grows to a length of 30 feet or more, the female being slightly smaller than the male. The colour varies with age, but is usually dark gray to black with some gray or white on the undersurface in old males. A prominent forehead rises from a well-developed 6-7 inch beak in large males. One or two pairs of oval-shaped teeth occur at the tip of the lower jaw. These are not exposed in young animals or females. Scratch marks, mostly on the back, are produced by the teeth of rival males. A close relative of the Atlantic bottlenose is found in the Antarctic and in Australian waters. As in other beaked whales, there is no notch in the hind margin of the flukes and a "V"-shaped groove appears beneath the chin and throat.



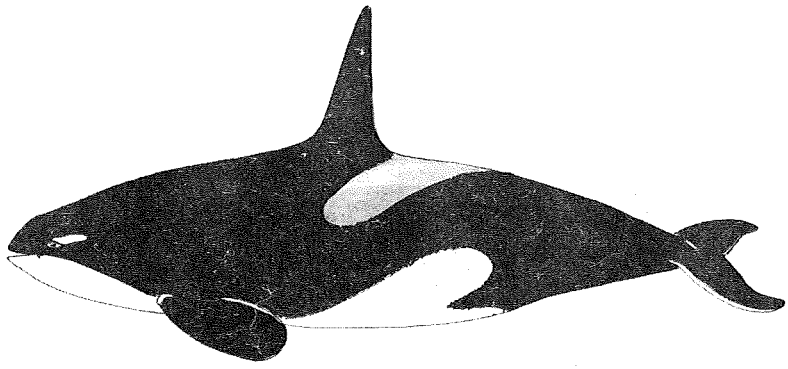
STEJNEGER'S BEAKED WHALE — Mesoplodon stenjegeri

The genus Mesoplodon includes several species found in both hemispheres, but very little is known of them. They all show the converging grooves on the chin and throat, and the heavy flukes lacking a median notch, characteristics of the beaked whales. Not more than one tooth is visible on each of the lower jaws. When this is visible in Stejneger's whale, it is large and laterally compressed and is located just forward of the middle of the lower jaw. When the jaws are closed the teeth are exposed outside the upper jaws. There are less than 6 authentic records of this species from the west coast of North America and most of these are based upon fragmentary skeletal remains. The range, as indicated by these few records, is from California to Alaska.



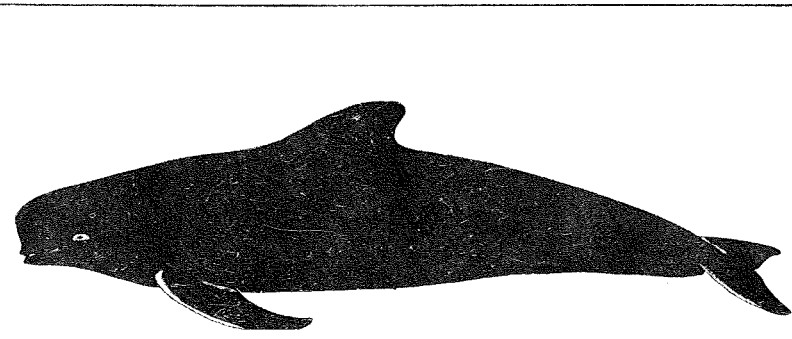
CUVIER'S BEAKED WHALE — Ziphius cavirostris

Cuvier's whale, or the "goose-beaked" whale, is the only representative of the genus Ziphius. It ranges in length to 26 feet and females are slightly larger than males. The beak is much shorter than in other beaked whales. The head slopes gently backwards. Colour varies greatly and is a poor identification feature. A single pair of teeth are visible at the tip of the lower jaw in grown males but these are buried in the gum in females. Long streaks and scars, probably inflicted by the teeth of other males of the species, cover much of the back and flanks. About 10 records, most of them based upon frangmentary evidence, show that Cuvier's whale occurs along the west coast of North America from California to Alaska. A few are taken by commercial whalers in Japan.



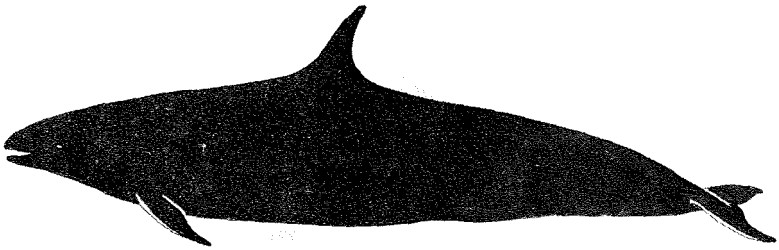
PACIFIC KILLER WHALE Grampus rectipinna

The killer whale, which can be immediately identified by the conspicuous white markings on a black background and the high, triangular-shaped dorsal fin, is found in all oceans of the world. The animal illustrated is an adult male. The female is smaller and has a shorter fin which is slightly concave along the hind margin. There is much individual variation in the saddle-shaped patch behind the dorsal fin. Each jaw carries 10-14 pairs of strong interlocking teeth which become worn and flattened with age. Body lengths range to 30 feet in some parts of the world. On the west coast of North America the largest male measured was 22 feet and the largest female, 19 feet. These lengths are probably near to the maximum in this locality. The species is the only whale which habitually preys upon other warm-blooded animals. Its diet includes seals, walrus, other whales and porpoises, fish, squid and sea-birds. The range is from Bering Straits to Baja California. The killer whale is frequently referred to as "blackfish" in this locality. The name blackfish should be reserved for the pilot whale.



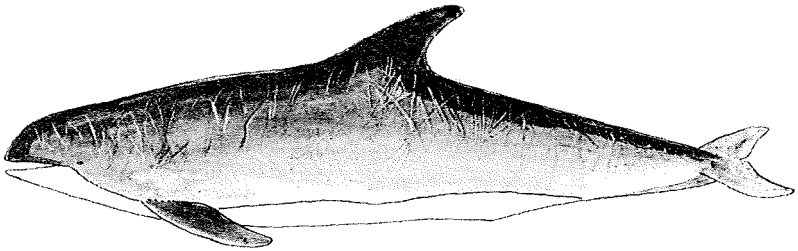
PILOT WHALE Globicephala scammoni

The length of the pilot whale or blackfish seldom exceeds 20 feet for the males and 16 feet for the females. The colour is usually entirely black. A bulbous forehead overhangs a short beak. The fin, unlike that of the killer whale, is long at the base and short in height. The flippers are long and narrow. Each jaw carries 8-10 pairs of teeth. Records of the occurrence of this species along the west coast of North America are few although it may be common. It has been recorded from the Gulf of California to Alaska. The pilot whale of the North Atlantic moves about in schools numbering hundreds, following schools of small fish or squid upon which it feeds. They frequently strand in large numbers. In Newfoundland and the Faroe Islands they are driven into shallow bays where they are slaughtered for their oil and meat. Other names are: caáing whale or pot-head whale.



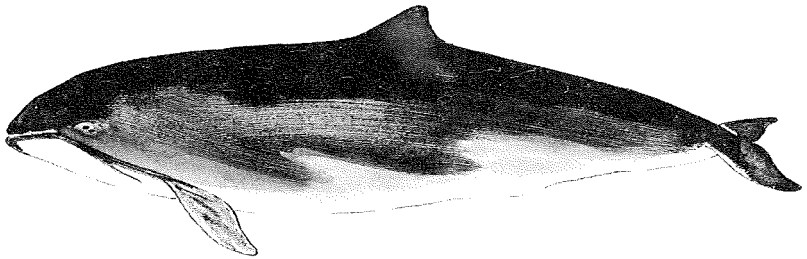
FALSE KILLER WHALE *Pseudorca crassidens*

The false killer whale is the only member of the genus Pseidorca. It differs greatly in body form and colour from the true killer whale. The body is more slender, the flippers are narrow and tapered, the fin is smaller and the colour is black overall. The fin is narrow, tapered and concave on its hind margin and is placed well forward on the body. Each jaw carries 11 pairs of strong powerful teeth. The length when fully grown is about 18 feet. The species is oceanic in habit, travelling in large schools. It is not taken commercially. On several occasions large numbers of these whales have stranded and been trapped by falling tides. Formerly thought to be rare, recent strandings suggest that the species is common in all but polar seas. The few records from the west coast of North America show the known range to be from the Gulf of California to Washington. A specimen was stranded in Puget Sound in 1937.



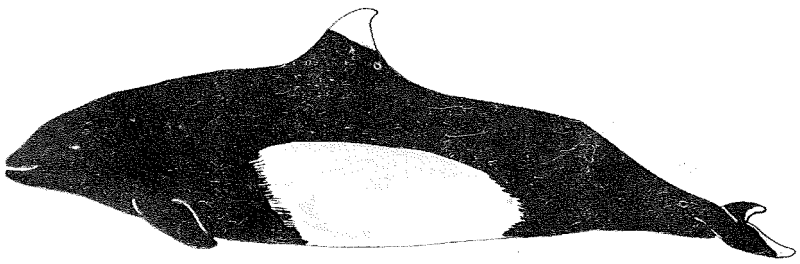
RISSO'S DOLPHIN *Grampus griseus*

Risso's dolphin grows to a length of 12 or 13 feet. It has the typical streamlined dolphin form but lacks the well-defined beak found in most dolphins. The dorsal fin is high, pointed and directed backwards with a concave hind margin. The colour is gray over the back and white or almost white on the underside. The back is marked by conspicuous white streaks apparently the result of teeth abrasions from other dolphins of the same species. Despite the name "grampus", this dolphin bears no close relationship to the killer whale. The teeth numbering 3 to 7 pairs near the tip of the lower jaw are usually absent from the upper jaw. Although widely distributed in the Northern and Southern Hemispheres, it has only been recorded from the coast of California in the North Pacific.



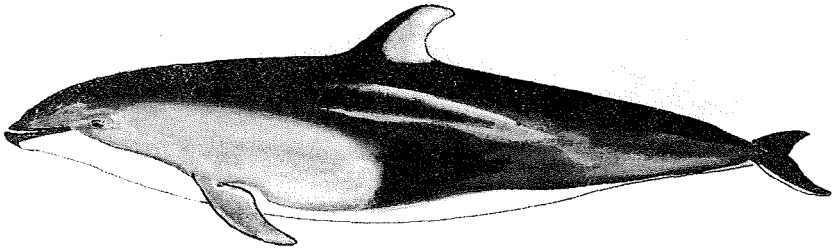
HARBOUR PORPOISE *Phocaena vomerina*

The harbour porpoise attains a length of 6 feet and a weight of about 160 pounds. The snout is blunt and rounded with no distinct beak. Teeth, which number 22-27 on each side of upper and lower jaws, are spade-shaped with flattened crowns, unless worn. Colour ranges from dark gray or nearly black on the back to light gray or nearly white on the underside, with a black strip from the corner of the mouth to the flipper. It is commonly seen near the coast, even in sheltered bays and inlets. The range is from Point Barrow, Alaska to Mexico. Breeding occurs in late summer and the gestation period is about a year.



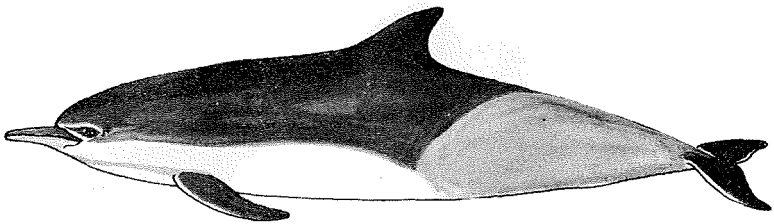
DALL PORPOISE *Phocoenoides dalli*

The dall porpoise attains a length of 6 feet and a weight of about 250 pounds. It is easily identified by the sharp contrast of the white lateral patches against a slate grey to black background and by the prominent hump in the dorsal outline of the tail. The range extends from the Aleutian Islands to California, but known occurrences south of Canadian waters are rare. Unlike the harbor porpoise, it delights in playing in the bow wave of ships but does not enter sheltered bays and inlets. A similar porpoise of the same genus, True's porpoise, occurs in Japanese waters. The genus occurs only in the North Pacific.



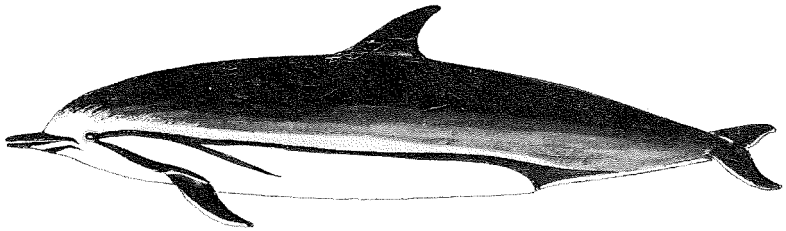
PACIFIC STRIPED DOLPHIN — Lagenorhynchus obliquidens

The genus Lagenorhynchus comprises several known species of dolphins, some of which occur in abundance. The body form is stream-lined, the fin is high and recurved, and the beak is short and poorly defined. The colour is dark on the back with shades of gray, white or black on the sides. Teeth are slender and sharp and number about 20 pairs in each jaw. More than 30 records of its occurrence from Mexico to Alaska have recently been assembled so it is probably common along the west coast of North America. Most of the records are from temperate waters. The behavior resembles that of the Dall porpoise in many respects. It travels in schools of 30 to 40 or more and, on occasion, will be tempted to play at the bow of a ship.



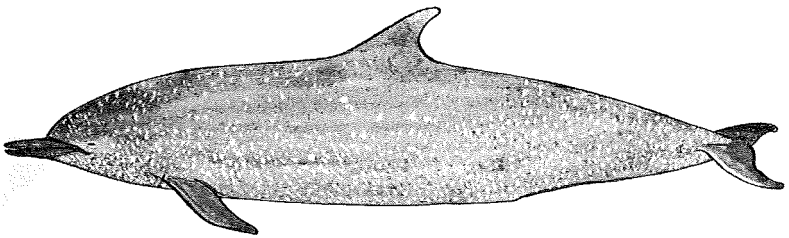
BAIRD'S DOLPHIN — Delphinus bairdi

Baird's dolphin is a close relative of the common dolphin, Delphinus delphis, which is widely distributed throughout temperate and subtropical waters. Although few records of its occurrence along the west coast of North America have been recorded, it is probably quite common in all but Arctic and subarctic waters. It grows in length to about 8 feet. The body is sleek and streamlined. The beak is relatively long and is clearly separated from the low reclining forehead by a V-shaped depression. The colour is black on the back and white on the underside. The black extends down the sides in a wedge-shape patch with its apex below the dorsal fin. Posterior to this patch the colour is grey. A ring of black encircles the eye and a narrow streak of black or grey extends from the flipper to below the beak. The common dolphin of the Atlantic is usually seen in large schools and often accompanies vessels under way.



LONG-SNOUTED DOLPHIN Stenella styx

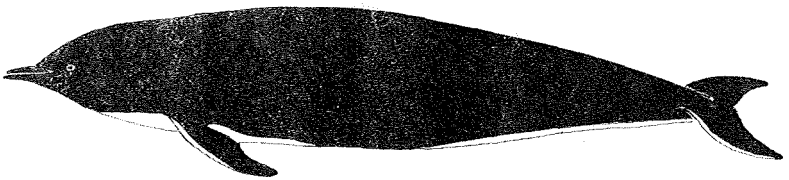
The genus Stenella consists of several species none of which are well known. Stenella styx is known from the west coast of North America by just five specimens. These are recorded from Washington, Oregon and British Columbia. The body has the typical sleek dolphin form. The beak is long and narrow, and the jaws are each equipped with 47-50 pairs of strong, conical, inwardly curved teeth. The back and the tips of the jaws are black; the belly is white. A black band connects the eye and the flipper. Another band runs along the side from the eye to the anus, giving off a short spur above the flipper. The species ranges in length to nearly 10 feet. Synonym: euphrosyne dolphin.



SPOTTED DOLPHIN Stenella graffmani

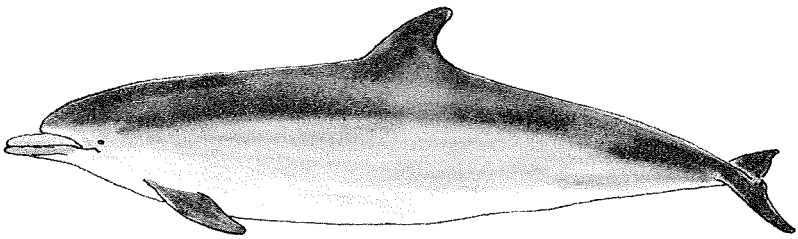
Among the several species of the genus Stenella (long-snouted dolphins) is the spotted dolphin which occurs in large schools in coastal waters from Columbia northward at least to Mexico. The body form is similar to Stenella styx but the colour is quite different. White or light gray spots are superimposed on a black background. These spots are most numerous on the throat and tail regions. Two other species of long-snouted dolphins have been recorded from the coasts of Mexico and Panama and one other from Hawaii.

Another species about which very little is known is the "rough-toothed porpoise", Steno bradanensis. The crowns of the teeth in this species are roughened and furrowed. It has been recorded from the coasts of California and Hawaii.



RIGHT WHALE DOLPHIN — Lissodelphis borealis

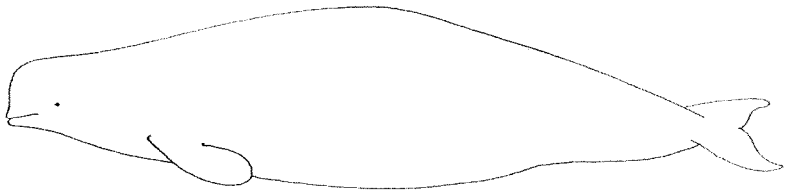
The right whale dolphin differs from typical dolphins in the complete absence of a dorsal fin. The body form is slender, the beak is short but distinct and the forehead rises in a low curve. The tip of the lower jaw protrudes beyond the upper jaw. Teeth are small, pointed and numerous in both jaws. Body length ranges to 8 feet or more. The colour is black over most of the body. An area of white lies between the flippers and is extended posteriorly as a thin white line which widens slightly in the anal region. The flukes are mostly white beneath. The original description of the species is based upon observations on a large school observed 500 miles off the Columbia River more than a century ago. Few specimens have been recorded since. It ranges from the Bering Sea to California. A close relative occurs in southern seas chiefly within the parallels of 40° to 60° latitudes.



ATLANTIC BOTTLENOSE DOLPHIN — Tursiops truncatus

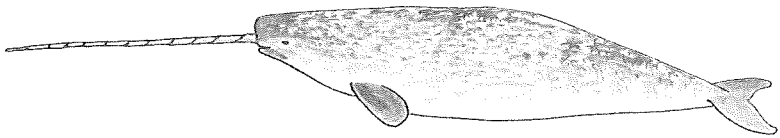
Two species of "bottlenose dolphins", Tursiops gilli and Tursiops nunana, have been recorded from the Eastern North Pacific. Their descriptions rely almost entirely upon a half a dozen skulls of each species. T. gilli is recorded from the coasts of Mexico, Lower California and Monteray. Its colour is described as "uniform brownish-gray". Recorded lengths are 8 and 10 feet. T. nunanu is recorded from the central Pacific Ocean near the equator, from the Gulf of California and from 70 miles South of Panama. Its colour is described as "slaty black, grayer from throat to vent". The only recorded length is 7-1/4 feet.

The dolphin illustrated above is Tursiops truncatus, the common bottlenose dolphin of the North Atlantic. The robust form, the well-defined snout, and the moderately high dorsal fin of this species is probably similar to that of the two Pacific forms. The colour is apparently different, however, being white on the throat and belly of the Atlantic dolphin. Members of this species have received rather wide publicity by reason of their performances in marine acquaria.



WHITE WHALE Delphinapterus leucas

The white whale, or beluga, seldom exceeds 14 feet in length. It is distinguished from all other cetaceans by its pure white colour when adult and by the presence of ill-defined constriction resembling a neck behind the head. During the first year of life the colour is slate blue. It subsequently changes to grey, then to light blue, and finally to white at 3, 4 or 5 years. Each jaw is equipped with 8-10 pairs of teeth. There is no dorsal fin. The beluga is an Arctic species, circumpolar in its distribution. On the east coast of North America it is distributed from the Gulf of St. Lawrence to Davis Strait and Hudson's Bay. It occurs westward to Point Barrow. Along the west coast it is found most often in Bristol Bay. Small fisheries for beluga occur in the Gulf of St. Lawrence, Hudson's Bay, the mouth of the Mackenzie River and Bristol Bay.



NARWHAL Monodon monoceros

The narwhal is another Arctic dolphin belonging to the same family as the beluga. The adult length, exclusive of the tusk, is 13-16 feet. The most distinctive feature is a spirally-twisted tooth which extends out from the head of the male to a length of 8 or 9 feet. The dorsal fin is replaced by a low ridge extending 2 or 3 feet along the back. Young narwhals are bluish-grey in colour and darker than the adults. The colour becomes mottled in later life and old animals are grey-white with dark grey spots. The species was formerly of some economic importance because of its ivory, contained in the tusk, and its oil. Its abundance has been greatly reduced and it is no longer hunted commercially. It occurs most commonly in the Western Arctic and is seldom seen west of the Boothia Peninsula.

NOTES

Observations of Whales, Porpoises and Dolphins at Sea

Observer _____

Position _____

Time and Date _____

Species _____

Identification features _____

Colour _____

_____

Size, shape and position of fin _____

_____

_____

Approximate size _____

Number in school _____

Direction of travel _____

Swimming peculiarities _____

_____

_____

Nature of blow _____

_____

_____

Additional remarks:

Measurem
and

Species _____

Circumstances of obtaining specimen _____

Measurements in a straight line, parallel to long axis.

1. Snout to tail notch _____
2. Length of beak _____
3. Snout to gape _____
4. Snout to eye _____
5. Snout to blowhole _____
6. Snout to insertion of flipper _____
7. Tail notch to tip of fin _____
8. Tail notch to anus _____
9. Tail notch to genital opening _____
10. Tail notch to umbilicus _____

Other Measurements.

11. Height of fin _____
12. Length of base of fin _____
13. Length of flipper _____
14. Width of flipper _____
15. Weight _____
16. Girth immediately behind flippers _____

Foetus: orientation, size and sex _____
Colour _____
Stomach contents _____
Parasites _____
Shape of head _____
Size, colour and texture of whalebone _____

or Size, number and arrangement of teeth _____