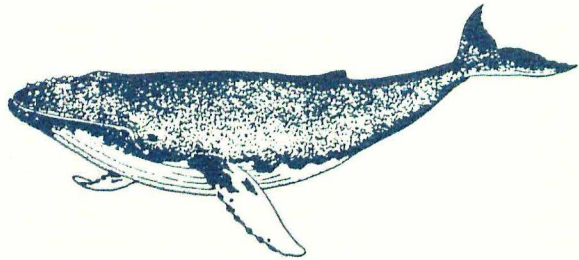
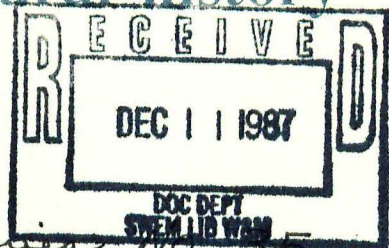


Robert A. Blaylock



# The Marine Mammals of Virginia

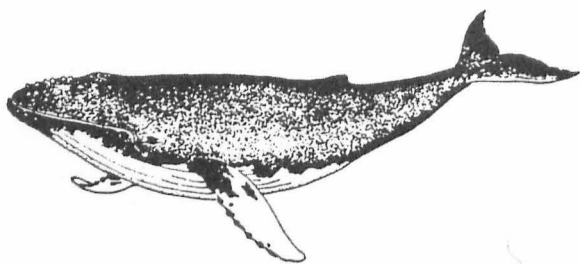
with notes on identification  
and natural history



*Education Series No. 35*

VIRGINIA SEA GRANT COLLEGE PROGRAM  
MARINE ADVISORY SERVICES  
Virginia Institute of Marine Science  
Gloucester Point, Virginia

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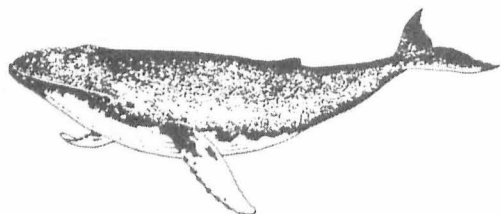
by  
Robert A. Blaylock  
Virginia Institute of Marine Science  
School of Marine Science  
The College of William and Mary

VIMS Education Series Number 35

VSG-85-05

July 1985





## Introduction

Representatives of all three orders of marine mammals—cetacea (whales, dolphins and porpoises), pinnipedia (seals and sea lions) and sirenia (manatees and dugongs)—have been found stranded on Virginia's shorelines. The primary indication of their presence in Virginia waters comes from strandings. In Virginia, the Virginia Institute of Marine Science (VIMS), in cooperation with the Smithsonian Institution and the National Marine Fisheries Service, coordinates the investigation and subsequent disposal of stranded marine mammals. Marine mammals found on Virginia's shores should immediately be reported to VIMS (804/642-7000).

All marine mammals, even if not listed as endangered, are protected by federal law, and penalties are severe for molesting them. Whether dead or alive, stranded marine mammals must be left in place until authorities arrive. Often, well-meaning attempts to save a beached marine mammal can increase trauma to the animal and destroy valuable scientific information.

To aid citizens in identification, this guide describes the natural history of marine mammals. This guide is organized by taxonomic orders and families; within a subfamily, species are listed by their frequency of appearance in Virginia waters. Space limits descriptions of the species' habitats and distributions to the western North Atlantic. For more

complete accounts, the reader should consult the publications listed in the bibliography, especially the excellent National Oceanographic and Atmospheric Administration (NOAA) Technical Reports, which may be purchased from: D822, User Services Information Branch, Environmental Science Service Center, NOAA, Rockville, MD 20852.

## Acknowledgements

The descriptions of cetacean species are adapted from the NOAA Technical Report, NMFS CIRC-396, *Whales, Dolphins, and Porpoises of the Western North Atlantic, A Guide to Their Identification*, and the author's observations. The descriptions of the seal and manatee found in Virginia are from various sources, including the author's observations. The bibliography cites publications used, as well as other excellent sources.

Dick Cook was the illustrator, and Susan Schmidt edited the text.

# Contents

Natural History and Status in Virginia.....	1
Atlantic Bottlenose Dolphin.....	3
Striped Dolphin.....	5
Saddleback (or Common) Dolphin.....	7
Atlantic Spotted Dolphin.....	9
Risso's Dolphin or Grampus.....	9
Atlantic White-sided Dolphin.....	10
Short-finned Pilot Whale/ Atlantic Pilot Whale.....	11
Rough-toothed Dolphin.....	11
Harbor Porpoise.....	13
Sperm Whale.....	15
Pygmy Sperm Whale.....	17
Dwarf Sperm Whale.....	19
Goosebeaked, Dense-beaked, Antillean Beaked and True's Beaked Whales.....	19
Minke Whale.....	21
Fin Whale.....	23
Humpback Whale.....	25
Blue, Sei, and Bryde's Whales .....	27
Northern Right Whale.....	27
Harbor Seal.....	29
West Indian Manatee.....	31
Bibliography.....	32

# Natural History and Status in Virginia

## I. Order Cetacea (Whales, Dolphins and Porpoises)

As cetaceans, whales, dolphins and porpoises resemble each other in anatomy (Figure 1), with physical traits like color, shape and size varying according to species. Comparative size is a useful characteristic by which to distinguish different species (Figure 2).

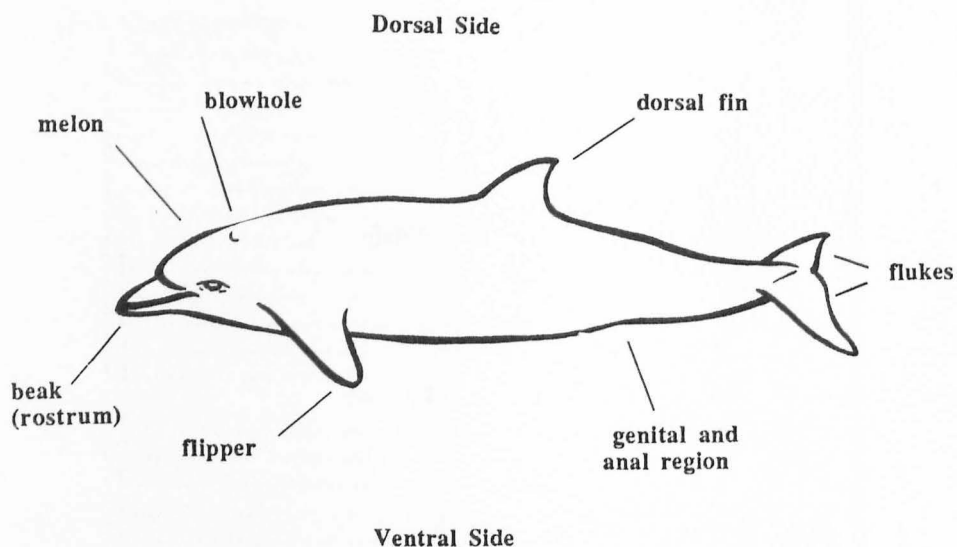
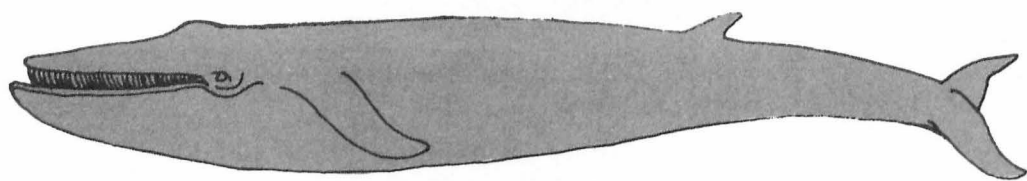
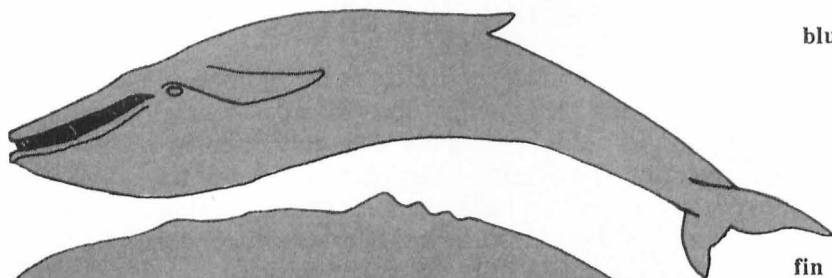


Figure 1. General Cetacean Anatomy

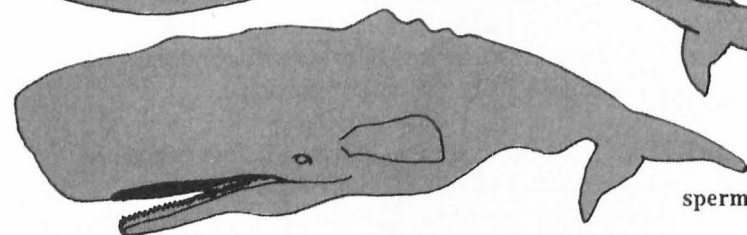




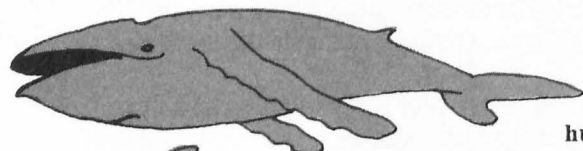
blue whale 80' - 100'



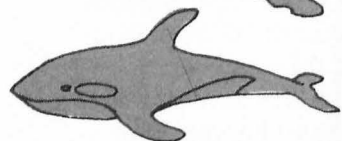
fin whale 60'- 75'



sperm whale 55'



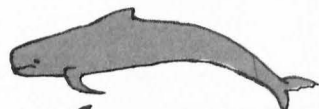
humpback whale 40'



killer whale 20'



Cuvier's beaked whale 20'



pilot whale 20'



bottlenose dolphin 6' - 7'



saddleback dolphin 7'

Figure 2. Comparative size (in feet) of whales and dolphins  
(by Enidsa Vazquez, courtesy of Puerto Rico Sea Grant)

## A. Suborder Odontoceti (Toothed whales)

### 1. Family Delphinidae (Dolphins, Pilot Whales, Killer Whales)

#### a. Subfamily Delphininae (True Dolphins)

#### ATLANTIC BOTTLENOSE DOLPHIN - *Tursiops truncatus*

**IDENTIFICATION:** Also known in Virginia as the "porpoise," the bottlenose dolphin may reach a length of 12 feet (3.7 m) and weigh over 1,400 pounds (650 kg). Its color is generally slate-gray dorsally, shading to white ventrally. The short, stubby snout and dorsal fin distinguish this species from most other delphinids encountered in Virginia waters. In addition, the broad-based, falcate (curved) dorsal fin readily distinguishes the bottlenose from the harbor porpoise.

**HABITS AND HABITAT:** There appear to be two distinct types of *Tursiops* in the U.S. Atlantic coastal waters. The offshore type encountered along the 100-fathom line of the continental shelf is larger. The inshore one, the most abundant marine mammal along the Virginia and North Carolina coasts, can often be seen just outside the surf line during the summer.

The leaping, back-flipping, and tail-slapping in "dolphin shows" at oceanaria are often extensions of natural behavior. A bottlenose dolphin starred on television as "Flipper." A patient observer can often see wild *Tursiops* performing along Virginia beaches during the summer.

Stomachs of stranded *Tursiops* in the northeastern U.S. coastal waters contain mostly croakers, sea trout and spot, although menhaden, hake and occasional squid remains have also been identified. The bottlenose is the most frequently stranded marine mammal in Virginia, probably due more to its abundance than to excessive mortality.

**DISTRIBUTION:** Bottlenose dolphins are found in temperate and tropical oceans worldwide. On occasion the inshore type will enter estuaries and rivers and has been observed herding fish onto shore in South Carolina marshes.

In Virginia, the inshore form ranges the entire ocean coast, within one mile of shore, and the Chesapeake Bay and its tributaries from late spring into the winter. Stranded bottlenose dolphins have been reported as far north as the Potomac River. A lone, apparently healthy, *Tursiops* was observed in 1980 by the author 15 miles up Cypress Creek, a James River tributary.

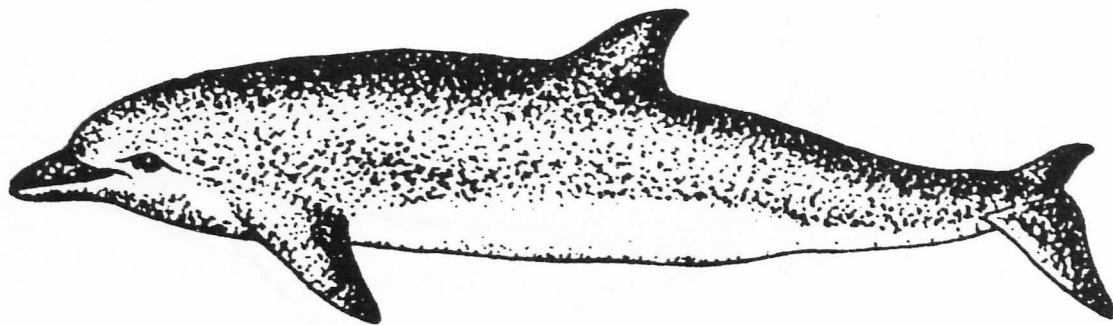


Figure 3. Bottlenose Dolphin  
*Tursiops truncatus*

## **STRIPED DOLPHIN - *Stenella coeruleoalba***

**IDENTIFICATION:** Dark gray to light gray dorsally, gray on the sides and white ventrally, the striped dolphin reaches a maximum length of 9 feet (2.7 m). Its common name derives from the distinctive dark stripes, one from the eye to the flipper, the other from the eye to the anus.

**HABITS AND HABITAT:** Little is known about the striped dolphin in Virginia waters. It is pelagic, usually found in and around the Gulf Stream. Squid beaks have been found in the stomachs of the few individuals stranded in Virginia. An extremely rare herd of striped dolphins was sighted near the mouth of the Chesapeake Bay in the 1960s.

**DISTRIBUTION:** The striped dolphin is widely distributed in temperate and tropical waters in the eastern North Atlantic, from Nova Scotia to Jamaica.

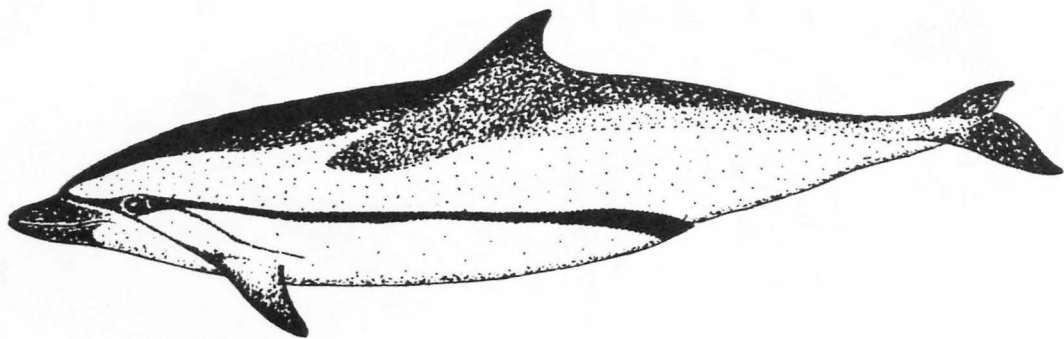


Figure 4. Striped Dolphin  
*Stenella coeruleoalba*

## **SADDLEBACK (OR COMMON) DOLPHIN - *Delphinus delphis***

**IDENTIFICATION:** The saddleback dolphin may reach a length of 8.5 feet (2.6 m), but is usually less than 7.5 feet (2.3 m) long. Its body shape is similar to the striped dolphin's. The dorsal fin may be nearly triangular or falcate and is usually all black, although it may have a grayish patch in the middle.

This species' common name comes from an hourglass pattern on the flanks which sharply delineates the black to dark gray dorsal region from the white belly. The yellowish-tan hourglass pattern is easily recognized at moderate distances.

**HABITS AND HABITAT:** The saddleback dolphin is fairly common off the Virginia coast where it feeds on squid and a variety of fish such as anchovies, hake and myctophids (deep-sea lanternfish). Often traveling in herds of several hundred individuals, these dolphins will ride for considerable distances the pressure wave pushed by the bow of large ships.

**DISTRIBUTION:** In the North Atlantic, saddleback dolphins may be found in temperate through tropical waters from Newfoundland to Venezuela.

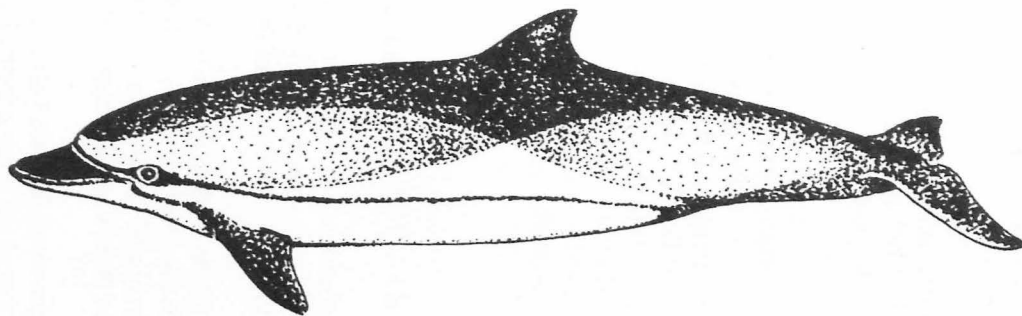


Figure 5. Saddleback Dolphin  
*Delphinus delphis*

## ATLANTIC SPOTTED DOLPHIN - *Stenella plagiodon*

**IDENTIFICATION:** Similar in body shape to the bottlenose, the spotted dolphin reaches a length of 8 feet (2.4 m). The snout is somewhat longer and narrower than that of the bottlenose dolphin. As its common name implies, this dolphin is covered with spots as an adult. The young of the species is similar enough in coloration and appearance to be mistaken for the bottlenose dolphin.

**HABITS AND HABITAT:** A pelagic species, the spotted dolphin is most frequently found inside the 100-fathom line offshore. This dolphin feeds primarily on squid, but may also take small herring, eels and carangids (jacks and pompanos).

**DISTRIBUTION:** The spotted dolphin is common in continental shelf waters of the eastern United States in temperate to tropical areas. Although seen as far north as New Jersey, it is much more common from Cape Hatteras south through the Gulf of Mexico and in the Caribbean to Venezuela.

## RISSE'S DOLPHIN OR GRAMPUS - *Grampus griseus*

**IDENTIFICATION:** This dolphin reaches a maximum length of 13 feet (4 m). Its head is bulbous and lacks a beak. A tall, distinctly falcate dorsal fin, up to 15 inches in height (38.1 cm), is set at the midpoint of the back.

Uniformly light gray at birth, adults darken to almost black with distinctive grayish-white areas on the chest and belly. Older adults lighten to cream white or silver gray and are often covered with numerous scars. The flippers and flukes usually remain dark.

**HABITS AND HABITAT:** Grampus feed on fish and squid and are found offshore in Virginia waters near the outer continental shelf.

**DISTRIBUTION:** Grampus are distributed in temperate and tropical areas from Newfoundland to the Lesser Antilles and the Gulf of Mexico. Strandings are rare in Virginia, but are not uncommon in North Carolina.



## ATLANTIC WHITE-SIDED DOLPHIN - *Lagenorhynchus acutus*

**IDENTIFICATION:** The Atlantic white-sided dolphin reaches a maximum length of about 9 feet (2.7 m). This is a moderately robust dolphin characterized by a tall, falcate dorsal fin and a small, but distinct beak.

Its coloration is black on the back and white on the underside, with elongated white and tan patches on the sides, facilitating easy identification.

**HABITS AND HABITAT:** Although smaller groups are more common, Atlantic white-sided dolphins may congregate in groups of several thousand animals. They do not normally ride bow waves, in fact they usually avoid ships. Fish remains and squid beaks were found in the stomach of a Virginia-stranded *L. acutus*.

**DISTRIBUTION:** Virginia is the southern limit of the Atlantic white-sided dolphin's range in the western North Atlantic. The species has been observed as far north as southern Greenland. In Virginia these dolphins normally occur well offshore between the Gulf Stream and the Labrador currents.

**b. Subfamily Orcininae (Pilot Whales, Killer Whales, Electra Dolphin)**

**SHORT-FINNED PILOT WHALE - *Globicephala macrorhynchus***

**ATLANTIC PILOT WHALE - *G. melaena***

**IDENTIFICATION:** Both species of pilot whales look very similar and can be positively identified only by dissection. These are large creatures; the short-finned may reach a length of 17.5 feet (5.3 m) and the Atlantic pilot whale, 20 feet (6.2 m). Both species are black except for a few gray markings on the ventral side. Lacking the "beak" usually associated with dolphins, the head is large and bulbous, and in older males, becomes squared-off and somewhat grotesque-looking. The distinctive dorsal fin is lower in profile than that of other delphinids, has a longer base, and is set farther back on the body.

**HABITS AND HABITAT:** Occasionally found near the edge of the continental shelf off Virginia, pilot whales feed primarily on squid, but also take cod and other fishes. They usually occur in herds of 60 or less, although herds of up to 200 animals have been reported for the Atlantic pilot whale. This species frequently strands in large numbers, but mass strandings are not common in Virginia.

**DISTRIBUTION:** North Carolina is the southern limit of the Atlantic pilot whale range, which extends north to Iceland and Greenland. The normal range of the short-finned pilot whale extends from about Virginia southward to the Venezuelan coast. Because of this overlap of their ranges, it is especially difficult to determine the species in Virginia waters. Most of the stranded pilot whales in Virginia in recent years have been *G. macrorhynchus*.

**2. Family Stenidae (Rough-toothed Dolphins)**

**ROUGH-TOOTHED DOLPHIN - *Steno bredanensis***

**IDENTIFICATION:** The rough-toothed dolphin grows to a length of about 8 feet (2.4 m) and is similar in body shape to the bottlenose and spotted dolphins. Its falcate dorsal fin is similar in size and shape to that of the bottlenose dolphin, but the beak is distinctively different. It is not clearly demarcated from the melon and is very long and narrow, giving the head a conical shape when seen from a distance. Its coloration is dark gray to dark purplish-gray dorsally, with pinkish-white blotches on the sides and belly. There may be white around one or both of the lips and on the tip of the snout.

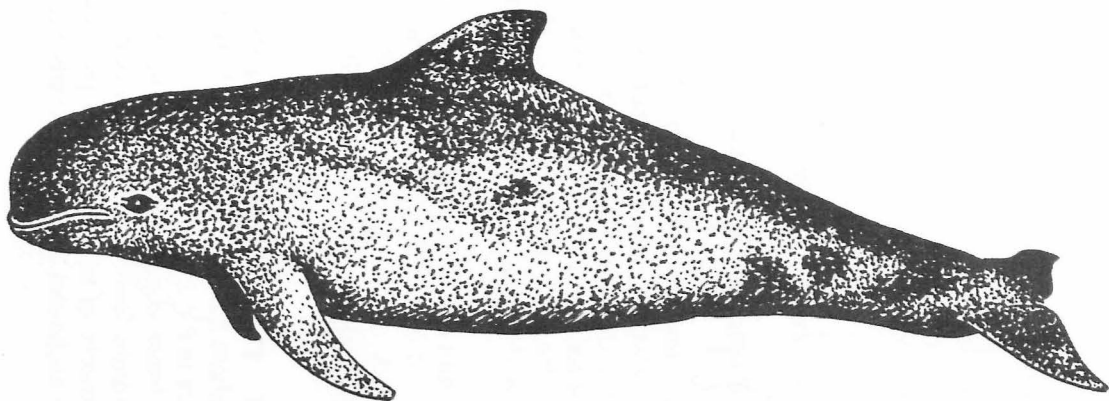


Figure 6. Short-finned Pilot Whale  
*Globicephala macrorhynchus*

**HABITS AND HABITAT:** This oceanic dolphin is rarely seen or reported in Virginia waters. However, there have been two strandings in Virginia: a single specimen from Norfolk in the 1800s and a mass stranding at Back Bay National Wildlife Refuge in 1976. Little is known of the natural history of the rough-toothed dolphin, especially in the eastern North Atlantic.

**DISTRIBUTION:** Records from the Atlantic are scarce, but it is assumed that the rough-toothed dolphin is widely distributed in deep, tropical to warm, temperate waters. Virginia appears to be the northern limit for this species in the Atlantic, and it has been reported as far south as the northeastern coast of South America.

### 3. Family Phocoenidae (Porpoises)

#### HARBOR PORPOISE - *Phocoena phocoena*

**IDENTIFICATION:** This is the only true porpoise found in the North Atlantic. The differences between dolphins and porpoises are sufficient to warrant placing them in separate taxonomic families. One of the major differences is the shape of the teeth. The porpoise has small spade-shaped teeth contrasting with the conical teeth of dolphins. In addition, a porpoise's dorsal fin is smaller than that of a dolphin and is triangular-shaped rather than falcate.

The harbor porpoise is a small cetacean (reaching a maximum length of only about 5 feet (1.5 m) and is somewhat stouter than a dolphin. Coloration is dark brown, black, or dark gray dorsally, shading to lighter gray on the sides (often with speckling) and white to light gray ventrally. The head is small and lacks a beak.

**HABITS AND HABITAT:** The harbor porpoise is a timid creature, and although it frequents inshore habitats, it is not easily sighted. In Virginia, this porpoise occurs in the spring, coincident with the spring shad run. Individuals often become entangled in fishing nets, and several of the stranded specimens found in Virginia have had net markings on them. The stomachs of stranded harbor porpoises in Virginia have contained bay anchovies and otoliths (earbones) of other small fishes.

**DISTRIBUTION:** Harbor porpoises are usually found in colder, northern waters and range from Greenland and the Davis Straits in the north to as far south as North Carolina. Their occurrence in Virginia and North Carolina is seasonal and in small numbers. They are most common in the Bay of Fundy and off southwest Greenland.

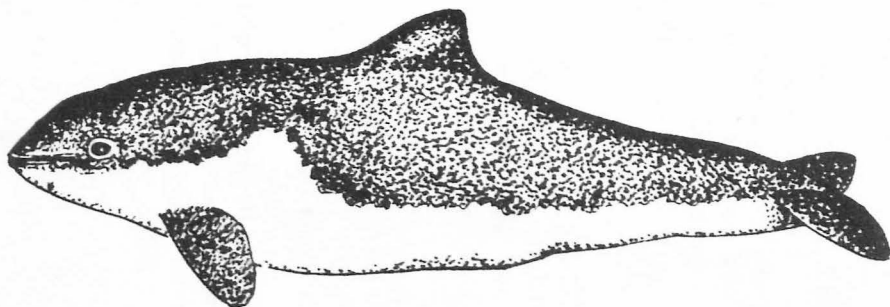


Figure 7. Harbor Porpoise  
*Phocoena phocoena*

#### 4. Family Physeteridae (Sperm whales)

##### SPERM WHALE - *Physeter catodon* (= *P. macrocephalus*)

**IDENTIFICATION:** The largest of the odontocete cetaceans, male sperm whales may grow to a length of 69 feet (20.9 m), females to about 38 feet (11.6 m). The head is large in relation to the body, from a fourth to a third of the animal's total body length. The snout is blunt and squarish and projects up to 5 feet (1.5 m) beyond the tip of the lower jaw. The blowhole is located left of the midline of the head and forward, so that the small bushy blow is directed at a forward angle (Figure 13).

The sperm whale has a dorsal hump followed by a series of bony knuckles, visible when the animal dives. The skin is dark brownish-gray in color and has a wrinkled appearance. This is the species of "Moby Dick" fame and is probably the whale most often depicted in drawings and paintings—so much so that one might think of it as the generic whale.

**HABITS AND HABITAT:** Deep divers, sperm whales can stay submerged for periods of an hour or longer and have been recovered entangled in overseas telephone lines in depths exceeding 2,000 feet. They often throw their flukes high into the air when initiating a deep dive.

In Virginia, sperm whales may be encountered near the 100-fathom line offshore (particularly near submerged canyons) either alone or in groups of up to 40 individuals. The sperm whale feeds primarily on squid, but may also take octopus and fish.

**DISTRIBUTION:** In the North Atlantic, sperm whales may be found from the Davis Straits in the north to as far south as Venezuela. Although males range farther north than do females, they apparently do not penetrate into the Arctic ice fields.

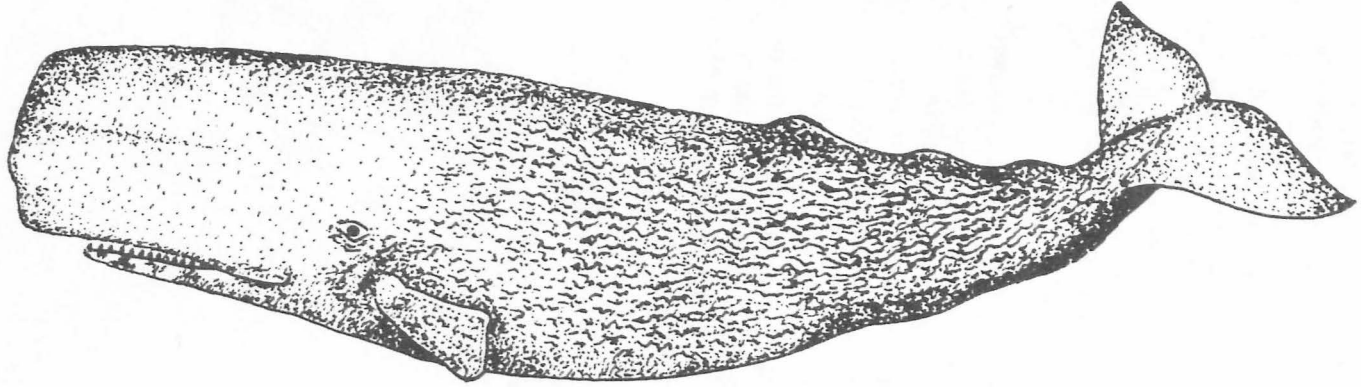


Figure 8. Sperm Whale  
*Physeter catodon* (= *P. macrocephalus*)

## **PYGMY SPERM WHALE - *Kogia breviceps***

**IDENTIFICATION:** Reaching a length of more than 11 feet (3.4 m), the pygmy sperm whale has a robust body which tapers near the tail. The head is squarish in profile and pointed when viewed from above. The lower jaw is underslung well behind the tip of the snout. Erupted teeth are confined to the lower jaw (a family characteristic). There are bracket-shaped markings, often called "false gills," on either side of the head in approximately the same location as gills on fish.

Its coloration is dark gray dorsally, shading to lighter gray on the sides and to a dull white ventrally. The small, falcate dorsal fin is located on the latter half of the back.

**HABITS AND HABITAT:** Little is known of the pygmy sperm whale in Virginia, as it has never been reported as sighted at sea in these waters. They appear to travel singly or in pairs. This species is the most frequently live-stranded cetacean in this area. Examination of the stomach contents of this species indicates that pygmy sperm whales feed on squid.

**DISTRIBUTION:** Our knowledge of the pygmy sperm whale comes almost exclusively from strandings. In the North Atlantic, pygmy sperm whale strandings have been reported from Nova Scotia to Cuba, and from the Gulf of Mexico.



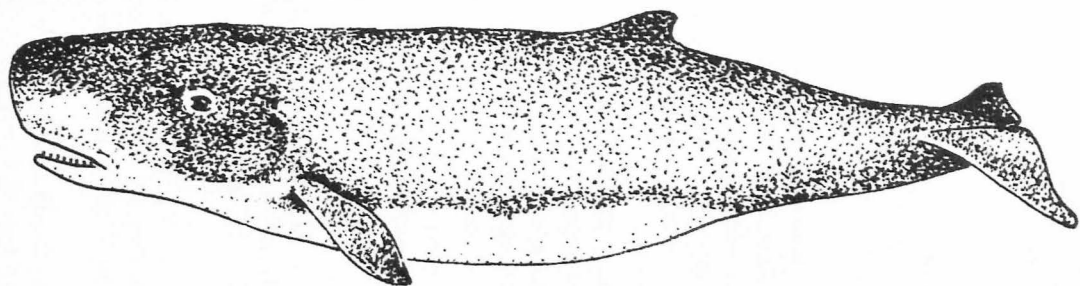


Figure 9. Pygmy Sperm Whale  
*Kogia breviceps*

## DWARF SPERM WHALE - *Kogia simus*

**IDENTIFICATION:** Dwarf sperm whales are very similar in appearance to pygmy sperm whales. The head, body shape and coloration are similar. However, the dorsal fin in the dwarf sperm whale is larger and placed farther forward on the body, near the middle of the back. Also, there may be a few small, irregular grooves on the throat in the dwarf sperm whale.

**HABITS AND HABITAT:** Because of the rarity of recorded strandings, little is known of this species. Its habits and habitat are probably similar in many respects to those of the pygmy sperm whale.

**DISTRIBUTION:** *Kogia simus* was recognized as a species separate from *K. breviceps* only recently; thus, records of this species are likely to be confused with those of its close relative, the pygmy sperm whale. Its distribution appears to be more temperate to tropical than that of the pygmy sperm whale. It has been found stranded at Wachapreague, Va., and as far south as the Lesser Antilles.

In September 1985 a dwarf sperm mother and calf stranded alive at Virginia Beach. The mother, who appeared diseased, died in transport to the laboratory. The calf, the first dwarf sperm whale kept alive in captivity, was bottle-fed at the Virginia Institute of Marine Science.

## 5. Family Ziphiidae (Beaked Whales)

GOOSEBEAKED WHALE - *Ziphius cavirostris*

DENSE-BEAKED WHALE - *Mesoplodon densirostris*

ANTILLEAN BEAKED WHALE - *M. europaeus*

TRUE'S BEAKED WHALE - *M. mirus*

**IDENTIFICATION:** In the following discussion the beaked whales will be treated as a group because they are very rarely stranded in Virginia, have not been reported in Virginia waters, and are quite similar in appearance and habits.

Beaked whales which might be found stranded on Virginia's beaches range in maximum length from 16 feet (4.9 m) (*M. mirus*) to 23 feet (7 m.) (*Z. cavirostris*). The head is small in relation to body size and tapers to a narrow beak, which may be indistinct in the goosebeaked whale. All have small dorsal fins located on the latter half of the back, the exact placement varying according to species. All are somewhat chunky at mid-body, narrowing towards the tail. However, this characteristic, too, is species-dependent in varying degrees.

Coloration varies a great deal, especially in *Z. cavirostris*, which may be dark rust-brown, slate-gray, or fawn-colored on the back and lighter on the belly. *Mesoplodon sp.* may be black to dark gray dorsally and lighter ventrally.

Only the adult males of these species have erupted teeth, and then only a single pair, located in the lower jaw. Females and sub-adult males also have these teeth, but they are totally buried in the gums. In the goosebeaked and the True's beaked whales, the teeth are located at the forward tip of the jaw. In the Antillean beaked whale, the teeth are located a few inches back from the tip of the jaw, and in the dense-beaked whale the pair of teeth is located at about mid-point on a bony protuberance of the lower jaw.

**HABITS AND HABITAT:** Very little is known of the natural history of these whales. Goosebeaked whales often occur in groups of 10 to 25 individuals, but little can be said of the other species, as there are few sightings at sea. From what little is known, it can be stated that squid makes up most, if not all, of the diet.

**DISTRIBUTION:** Goosebeaked whales have been found stranded from Rhode Island and Massachusetts south to Florida and the West Indies. They appear to be primarily tropical, but may occasionally enter temperate waters. The True's beaked whale is temperate in distribution and overlaps with the distribution of the Antillean beaked whale, which is more tropical. The dense-beaked whale appears to be distributed sparsely in temperate waters, with strandings reported from Nova Scotia to Florida.

## B. Suborder Mysticeti (Baleen Whales)

### 1. Family Balaenopteridae (Rorquals)

#### MINKE WHALE - *Balaenoptera acutorostrada*

**IDENTIFICATION:** The smallest rorqual in the northern hemisphere, the minke whale rarely exceeds 30 feet (9.1 m) in length. It has a very narrow, pointed rostrum with a single medial ridge. The dorsal fin is tall and falcate.

Coloration is black to dark gray on the back and white underneath, with a white stripe across the flippers. Sometimes a light, chevron-shaped patch is visible on the back behind the head, and another light patch, varying from indistinct to obvious, may be located above and below the flipper. The fine-bristled baleen are short and yellowish-white.

**HABITS AND HABITAT:** Minke whales are often found singly, in pairs or as trios, although they may congregate in larger numbers in northern feeding grounds during periods of high food concentration. They often come close to shore and may enter bays and estuaries.

The minke whale may be difficult to sight at sea because of its low, inconspicuous blow (Figure 13). However, they frequently approach boats at sea and often stay with them for some time. Minkes are acrobatic, often exhibiting breaching behavior and sometimes leaping clear of the water, reentering head-first, smoothly, or with a large splash.

**DISTRIBUTION:** In the northern Atlantic, minke whales are distributed in polar, temperate and tropical waters. They have been reported from the northern pack ice south to the Lesser Antilles and the Gulf of Mexico. They have occasionally stranded on Virginia beaches.

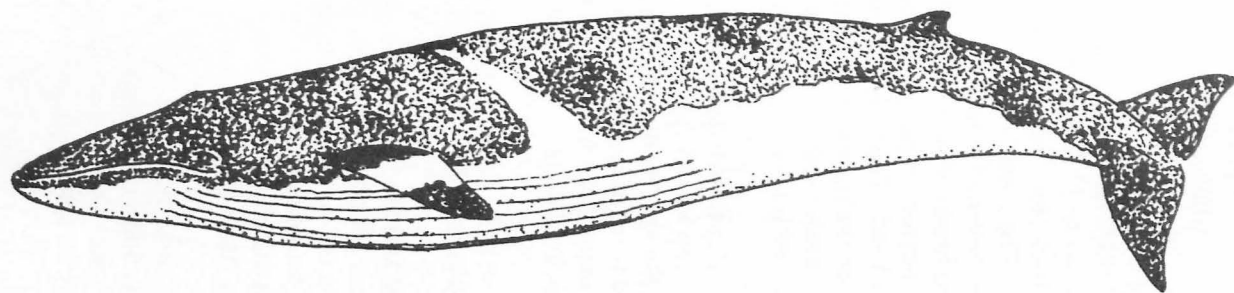


Figure 10. Minke Whale  
*Balaenoptera acutorostrada*

## FIN WHALE - *Balaenoptera physalus*

**IDENTIFICATION:** The fin whale grows to a length of 79 feet (24 m), and, as with all balaenopterid whales, females are larger than males of the same age. The fin whale has a V-shaped rostrum, similar in shape, but broader than that of the minke whale. Also like the minke, this whale has a single medial ridge on the rostrum.

The dorsal fin is prominent, up to 24 inches in height. It is located slightly more than two-thirds back from the rostrum and is visible at the surface shortly after the blow. The blow is from 15 to 20 feet (4.6 to 6.1 m) in height and shaped like an inverted cone.

Its coloration is dark gray to brownish-black dorsally and white ventrally. There is usually a chevron-shaped, white or light gray patch along the back, just behind the head. The head is asymmetrically colored below the mouth and is white on the right side and gray to dark gray on the left. The right front baleen are yellowish-white, and the remainder of the baleen are alternating bands of yellowish-white and gray.

**HABITS AND HABITAT:** The fin whale is a relatively deep diver for a baleen whale, diving as deep as 755 feet (230.1 m), and is one of the swiftest swimmers. Thus, the species did not become commercially available to whalers until the advent of motored catcher boats. The fin whale quickly assumed great importance to the whaling industry after the depletion of the blue whale stocks and is still taken commercially in Iceland.

Fin whales travel singly or in pairs and may gather in concentrations of 50 individuals. Its varied diet includes capelin, squid, lanternfish, herring and krill.

Fin whales have been found stranded in Virginia on many occasions; the species is probably the most abundant large whale in these waters. Fin whales apparently sleep on the surface at night, and thus are subject to collisions with ships. One fin whale was inadvertently brought into Norfolk Harbor draped across the bow of a freighter, and several have been found with broken jaws, suggesting collisions with ships.

**DISTRIBUTION:** North Atlantic fin whales are migratory, moving into the high latitudes in spring and summer and south to at least the Greater Antilles during the winter. During the winter, they appear to move farther offshore and may be spread out from Cape Cod to Florida.

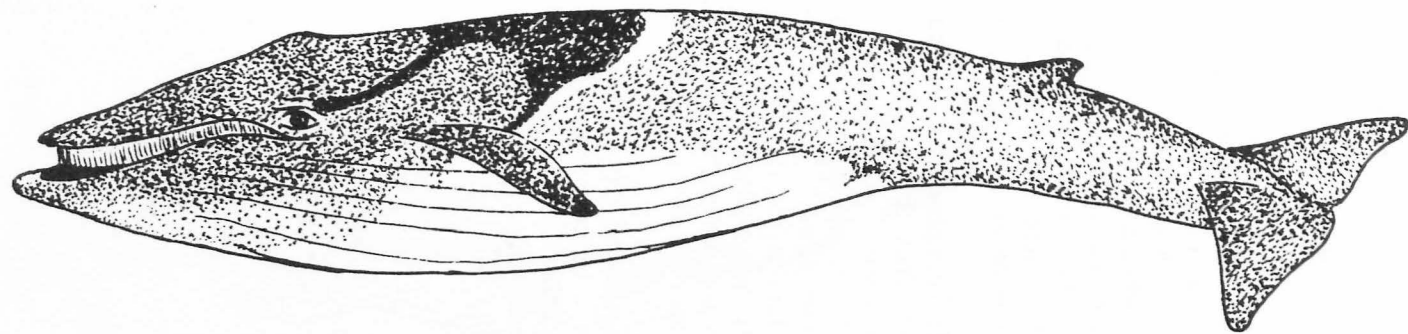


Figure 11. Fin Whale  
*Balaenoptera physalus*

## **HUMPBACK WHALE - *Megaptera novaeangliae***

**IDENTIFICATION:** The humpback is a robust whale which may grow to a length of 53 feet (16.2 m). It has a broad, rounded head without a ridge, but with a string of fleshy knobs in its place. More of these protuberances are scattered about the head and on the lower jaw. These knobs are often covered with whale lice (parasites). The baleen plates are all black with black or olive-black bristles.

Its coloration is black with white areas of varying shape and size on the belly and flippers. The undersides of the flukes are white. The dorsal fin may vary in shape and size from a small nub to a distinctly falcate fin. The nearly all-white flippers are very long and scalloped on the leading edge, and sometimes on the trailing edge as well.

**HABITS AND HABITAT:** Humpback whales feed on krill and schooling fish such as capelin. They often concentrate their prey into tightly packed balls for more efficient feeding by making rings of bubbles around them. As these bubble nets rise and expand, forcing the prey together, a whale lunges upward through the mass with its mouth open.

These whales are famous for their melodious sounds produced on breeding and calving grounds. Researchers have found that these "songs" consist of distinct stanzas which change only slightly from year to year and apparently vary between stocks or populations.

**DISTRIBUTION:** Humpback whales range from north of Iceland to the West Indies. They are found in the northern feeding grounds in the summer and migrate to the southern grounds in the winter for calving and breeding. During these migrations, humpbacks may be seen off Virginia, the Carolinas and Bermuda.



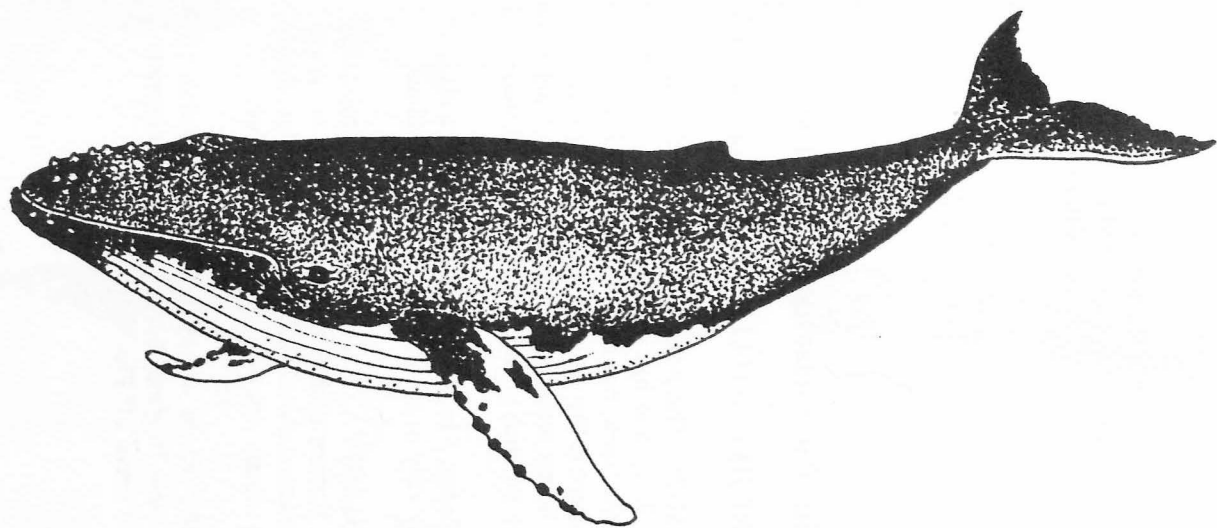


Figure 12. Humpback Whale  
*Megaptera novaeangliae*

## Other Rorquals

**BLUE WHALE** - *Balaenoptera musculus*

**SEI WHALE** - *B. borealis*

**BRYDE'S WHALE** - *B. edeni*

Other members of the Family Balaenopteridae are rare in Virginia waters. These other rorquals have stranded in the Chesapeake Bay in the past and may again in the future, so the reader should at least be aware of them.

## 2. Family Balaenidae (Right Whales)

**NORTHERN RIGHT WHALE** - *Eubalaena glacialis*

**IDENTIFICATION:** The right whale is rotund, reaches a length of about 53 feet (16.2 m), and has no dorsal fin or ridge. It is dark dorsally, sometimes black, but more often dark brown or mottled. A distinguishing feature is the presence of "callosities" or patches of a yellowish-white, horny material on the rostrum in front of the blow holes. Often covered with whale lice, they vary in shape and size on each individual.

The right whale has a high, arching upper jaw, with long, slender baleen which may vary in color from dark gray to black.

**HABITS AND HABITAT:** Right whales feed primarily on copepods by skimming the surface with open mouths. They are not wary of boats and may be approached closely. Like sperm whales, they often throw their flukes up in the air when beginning a long dive.

**DISTRIBUTION:** Right whales are found in waters off Iceland, Nova Scotia and New England in the spring and summer. They migrate south to breed and calve off Florida in the winter.

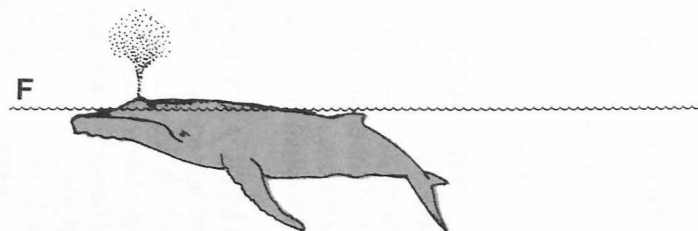
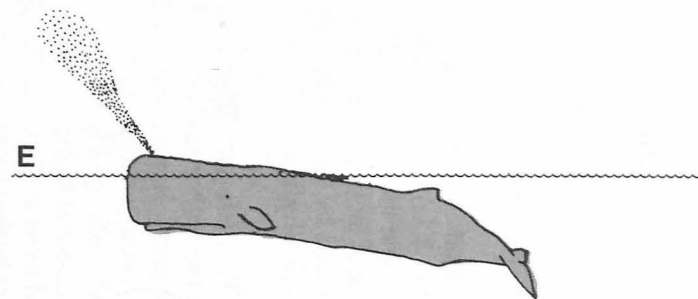
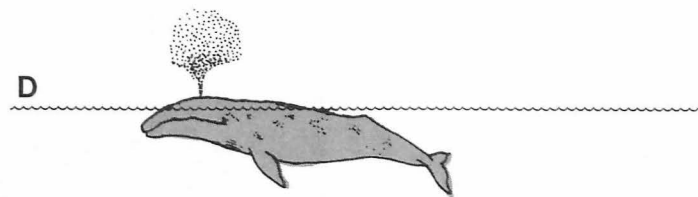
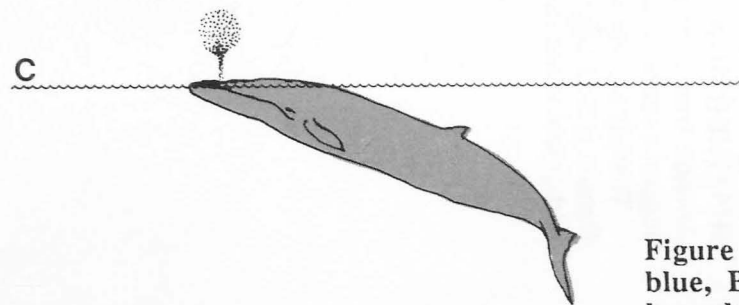
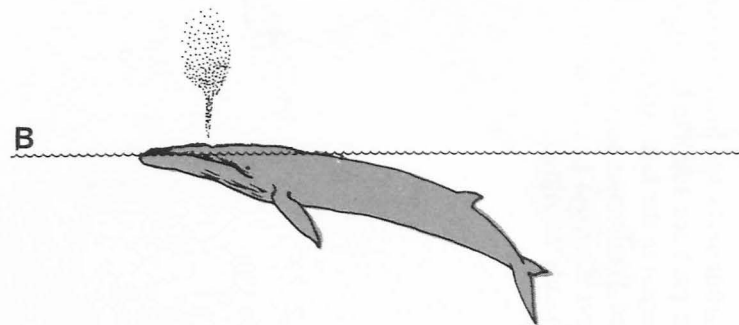
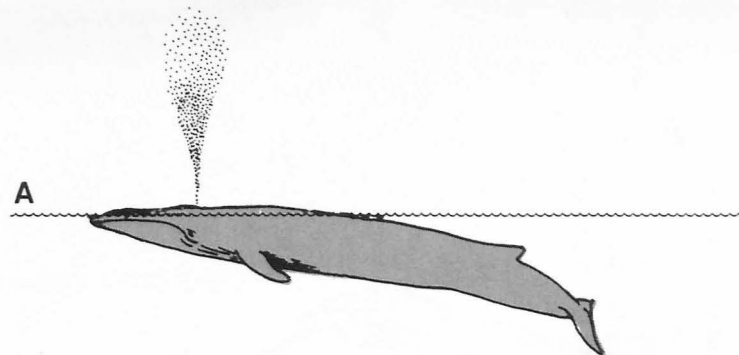


Figure 13. Shape of the blow of these whale species: A) blue, B) fin, C) minke, D) gray, E) sperm, and F) humpback (by Enidsa Vazquez, courtesy of Puerto Rico Sea Grant)

## II. Order Pinnipedia (Seals, Walruses and Sea Lions)

### A. Family Phocidae (True or Earless Seals)

#### HARBOR SEAL - *Phoca vitulina*

**IDENTIFICATION:** The Harbor seal is medium-sized growing to a maximum length of 5.9 feet (1.8 m). Its coat is brown with varying patterns of small dark spots. The face resembles that of a dog; but, as with all phocids, the harbor seal lacks pinnae, or externally visible ears. Its ears are merely holes covered by hair. This is the only seal species which might be encountered in Virginia.

**HABITS AND HABITAT:** Fish, including cod, herring, whiting, flounder, and salmon, form the harbor seal's diet. Sea birds and shellfish are also occasional prey. Harbor seals, in turn, are preyed upon by the killer whale (*Orcinus orca*), sharks and man.

The harbor seal appears to prefer gently sloping beaches on which to haul out. In Virginia, an occasional harbor seal hauls out at Virginia Beach, in Linkhorn Bay and even at Hopewell, up the James River. Infrequently, small groups of harbor seals may be found near the islands of the Chesapeake Bay Bridge-Tunnel in spring and summer.

**DISTRIBUTION:** Harbor seals are found in the western North Atlantic from the Arctic pack ice south to Georgia. Occasional sightings suggest a sparse distribution in the mid-Atlantic bight.

There is a land-locked, freshwater population of harbor seals in Canada at Seal Lakes and Harrison Lake in northern Quebec, so the harbor seal is not exclusively marine.

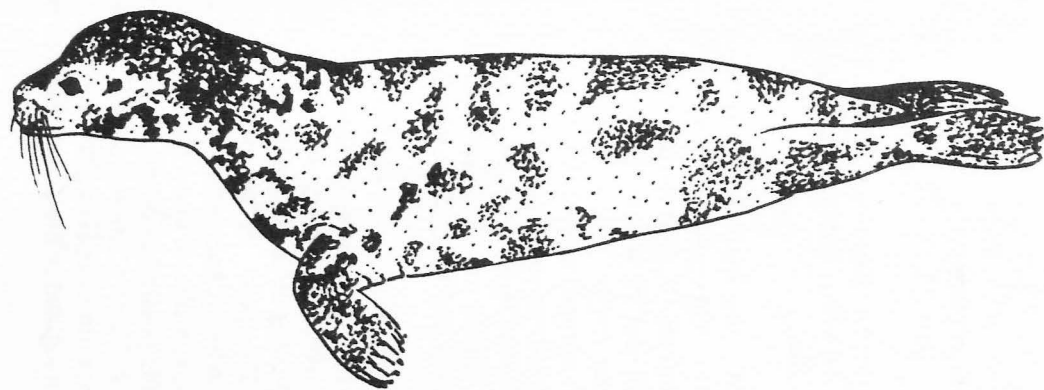


Figure 14. Harbor Seal  
*Phoca vitulina*

### III. Order Sirenia (Manatees and Dugongs)

#### A. Family Trichechidae (Manatees)

##### WEST INDIAN MANATEE - *Trichechus manatus*

**IDENTIFICATION:** The West Indian, or Florida, manatee reaches a length of over 13.1 feet (4 m). It has thick, elephant-like skin and paddle-like flippers with rudimentary nails. It is gray in coloration and almost hairless. The broad, rounded, paddle-like tail has no medial notch.

The head is small in relation to body size with small and beady-looking eyes. The underslung jaw is hidden by two large fleshy lips which overhang it on each side.

**HABITS AND HABITAT:** The manatee is a slow swimmer, inhabiting coastal areas, rivers and creeks. Strictly herbivorous, it feeds on submerged aquatic vegetation. In their normal range, manatees often congregate in large numbers near the warm, electrical-power-plant, cooling-water outflows in the winter.

Because they are slow swimmers and inhabit waters near large human population centers, manatees are susceptible to injury and death due to collisions with power boat propellers. Also, they often become caught in flood gates and can drown. These mammals are listed as endangered and are protected by the U. S. Fish and Wildlife Service.

**DISTRIBUTION:** West Indian manatees are found in Georgia, Florida and the Gulf of Mexico in the United States, and as far south as Cuba and the West Indies. We have two recent, verified records of manatees in Virginia. In October 1980, a manatee was found on the beach at Buckroe Beach in Hampton. An autopsy showed that it had died of starvation and, secondarily, pneumonia. We can only speculate how it got to Virginia, but it is probable that it swam up the intercoastal waterway from Florida. This possibility is reinforced by the sighting of a manatee in the waterway in North Carolina in 1983. In August 1985 a manatee was observed several times in Hampton River. Earlier in the summer a manatee had been sighted in the ocean off Cape Hatteras in North Carolina.

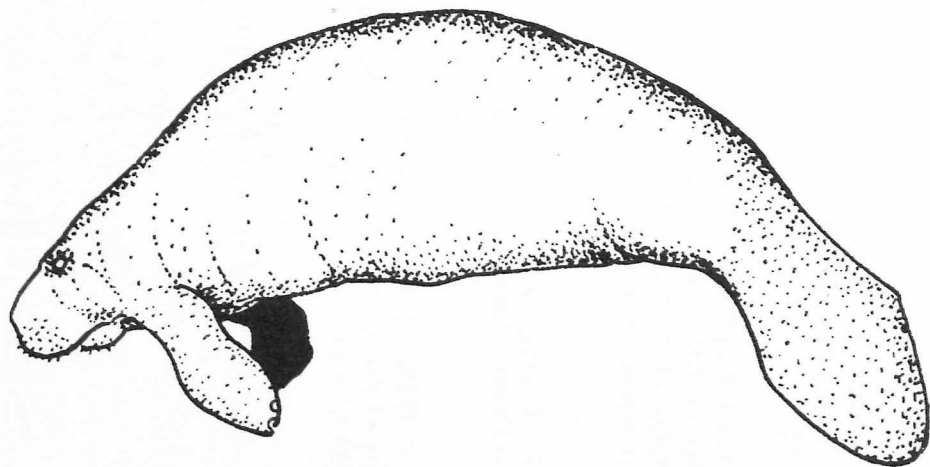


Figure 15. West Indian Manatee  
*Trichechus manatus*

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## About the Author

Robert A. Blaylock received the Master of Arts in Marine Science from the Virginia Institute of Marine Science, School of Marine Science, The College of William and Mary. His master's thesis described the distribution and abundance of the bottlenose dolphin in Virginia. Since 1978 he has been the VIMS Marine Mammal Stranding Co-ordinator associated with the Smithsonian Institution's Marine Mammal Stranding Network. Blaylock is a charter member of the Society for Marine Mammalogy.

# Field notes and sightings

