Credits

Cover photo of loggerhead sea turtle is by Bill Curtsinger; common dolphin photo is by Amy Sierra Williams. Book design is based on Guide to Marine Mammals of Alaska by Kate Wynne, University of Alaska Sea Grant. Cover design, layout production, distribution maps, and upwelling diagram on page 5 are by Wendy Andrews-Bolster. All illustrations are by Garth Mix. Back cover photo courtesy of the Center for Environmental Education (CEE). Bathymetric profile map on the inside back cover and inset on page 5 are by Mark Brush. This book is the result of work sponsored by the Rhode Island Sea Grant College Program and the University of Alaska Sea Grant College Program, which are supported by the NOAA Office of Sea Grant, U.S. Department of Commerce, under Grant No. NA86RG0076. Additional funding support came from the NOAA National Marine Fisheries Service Office of Protected Resources. The views expressed herein are those of the authors and do not necessarily reflect the views of NOAA or any of its sub-agencies. All photographs and illustrations contained herein are protected by copyright. Sea Grant is a unique partnership with public and private sectors combining research, outreach, and education for public service. This national program meets changing environmental and economic needs of people in our coastal, ocean, and Great Lakes regions.
Kate Wynne

Since 1981, Kate Wynne has been involved in assessing marine mammal populations and their interactions with commercial fisheries. She has surveyed, captured, and necropsied more than a dozen species of marine mammals in the Atlantic and Pacific, including cetaceans, pinnipeds, and sea otters. She has been a marine mammal observer, designed and coordinated marine mammal observer programs, and continues to train fishery observers in marine mammal identification. She studied harbor seals and marine mammal interactions with fisheries in New England before moving to Alaska in 1987. She is currently an associate professor and marine mammal specialist for the University of Alaska Sea Grant Marine Advisory Program.

Because Wynne believes informed and enthusiastic resource users are vital to collecting reliable scientific data about marine resources, she wrote Guide to Marine Mammals of Alaska in 1993. The success and proven utility of that book inspired her to produce this companion guide for U.S. Atlantic waters, where identification of marine mammals and turtles is also problematic.

Malia Schwartz

Malia Schwartz has been studying the diving physiology of marine and freshwater turtles since 1989. Her interest is driven by the persistent problems of marine turtle injury and death caused by accidental entanglement. With support from the Rhode Island Sea Grant Marine Extension Fisheries Program, she is currently designing a recovery protocol for marine turtles found entangled in fishing gear. She has a master's degree in zoology from the University of Rhode Island (URI) and is currently a Ph.D. candidate in biological sciences at URI.

In addition to her research, Schwartz serves as communications director for Rhode Island Sea Grant, where she is responsible for translating the results of research and outreach programs into products that are understandable and useful for the public and decision-makers. This guide is an important part of that effort. Her hope is that those who use this guide will learn something new about these fascinating animals that inhabit our Atlantic waters.

Production of this guide was truly a collaborative effort, joining a multiregional Sea Grant outreach effort with broad and enthusiastic support of local, state, and federal marine resource experts. Such collaboration attests to the recognized need and mutual desire to improve our understanding and conservation of marine mammal and turtle resources in U.S. Atlantic waters.

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Marine mammals and turtles have adapted to life in a three-dimensional environment to which humans are only brief and superficial visitors. For the most part, their lives remain a captivating mystery to us, punctuated by our brief encounters with those that surface within sight at sea or come ashore to rest, nest, breed, or die. Our knowledge of many marine mammal and turtle species is frustratingly limited, hampered by infrequent viewing opportunities and difficulties identifying those seen.

For the interested public, the ability to identify individual species is often the first step to appreciating the lives and conservation needs of marine mammals and turtles. But species identification is also key to improving our knowledge about these species, their distribution, natural history, and the impact of their deaths. Increasingly, accurate species identification is expected of fishermen, stranding network volunteers, and fishery observers nationwide whose species-specific sightings, mortality, and bycatch data are used to manage the species and their interactions with humans.

This guide is designed to familiarize its users with distinguishing traits of the cetaceans, pinnipeds, manatee, and sea turtles commonly found in U.S. Atlantic waters, including the Gulf of Mexico, (see map on inside back cover) with references to U.S. Caribbean waters. Also included are less common species whose perceived rarity may be more a function of misidentification than actual scarcity. This guide's format is intended to encourage fast, accurate species identification using key physical and behavioral characteristics, distribution maps, and comparative surface profiles. It is designed to weather many seasons of sea duty by mariners, fishermen, and biologists. We hope it is equally informative for shore-based users of all ages and backgrounds.

Accurate identification of marine species at sea often requires rapid incorporation of many clues during brief and distant visual contact. The physical traits, location (geographic and local habitat), and behavior of the animal are all important clues to note when viewing marine mammals and turtles and differentiating among similar species.

Tips:

1. Know what characteristics to look for. Review guides prior to your trip and know what features are most helpful in species identification.

2. Be patient and persistent. Continue scanning the area—it may be several minutes before a marine mammal or turtle resurfaces.

3. Keep your eye on the animal. Make mental notes or brief sketches of key traits for later comparison with guides.

4. Don't jump to conclusions or base identification on behavior alone. Some marine mammal and turtle behavior is misleading (seals may porpoise, whales may sleep log-like at the surface, sea turtles occasionally breach). Use at least two physical characteristics to make a positive identification.

5. This guide is spiral-bound, water-resistant, and specifically designed to aid fast and accurate identification at sea.

- Silhouette surface profiles accentuate traits visible at sea under poor lighting.
- Detailed surface, head, or shell profiles are presented for easy comparison of species with similar traits and distribution.
- Range maps show approximate seasonal distribution of each species.

Colors: pink = summer, blue = winter, purple = year-round, yellow line = known nesting grounds (turtles).

Patterns: solid = known range, lines = assumed range or range extensions, arrows = migration routes, question marks = unknown seasonal location.

- Inside back cover shows entire area referenced in this guide.
- A glossary of terms and abbreviations used in the text and a list of further reading begin on page 110.
Because they are mammals, cetaceans, pinnipeds, and manatees are endothermic (warm-blooded), have hair (at some time during life), and give birth to live young, which are suckled. Sea turtles are reptiles: They are ectothermic (cold-blooded), have scaly skin, and, like many reptiles, lay eggs. Although taxonomically distant, both groups breathe air through lungs and have evolved similar traits to allow them to survive successfully while being primarily submerged in a saltwater environment.

Marine Adaptations

Swimming Adaptations
- Streamlined body forms reduce drag through water.
- Powerful appendages allow for maximal propulsion and minimal drag to improve swimming efficiency.

Deep Diving
Generally, marine mammal and turtle lungs are proportionately smaller than humans' but they:
- Use oxygen very efficiently. They fill their lungs and can exchange 80-90% of their air in each breath. Their blood chemistry allows greater oxygen retention: During long dives, they can use oxygen chemically stored in their blood and muscles.
- Have a high tolerance to lactic acid and carbon dioxide. Their muscles can work anaerobically (without oxygen) while they hold their breath.
- Can tolerate tremendous atmospheric pressure at great depths. Lungs are collapsible, air spaces are minimized, and nitrogen absorption is limited, avoiding the "bends."

Thermoregulation
- A large body with small surface-to-volume ratio reduces heat loss. Blubber or thick underfur is used as insulation.
- Complex circulatory system in the extremities is used to conserve and dissipate heat.
- Able to behaviorally regulate body temperature. Some sea turtles bask in the sun or swim vigorously, which elevates their metabolism, allowing them to remain warmer in cold water.

Water Conservation
Marine mammals and turtles are faced with the problem of conserving freshwater in a salty environment. As such, both groups:
- Utilize freshwater present in their food, inspired air, and blubber.
- Can remove excess salt from their bodies with specialized organs (kidneys in marine mammals, salt glands located above the eyes in sea turtles).

Sensory Adaptations
- Marine mammals communicate underwater with sound, and many species use sound (echolocation) to locate prey. Tactile senses are acute: Pinnipeds and manatees have well-developed facial whiskers.
- Sea turtles have poor hearing but good eyesight underwater.

Conservation Issues
In addition to sharing physiological challenges associated with their marine existence, marine mammals and turtles also share many human-related challenges. Entanglement in active and discarded fishing gear poses a serious threat to marine turtles and mammals, which all must regularly reach the surface to breathe. Fishing methods, gear modifications (TEDs and pingers), and disentangling techniques continue to be developed to reduce the likelihood of capture and to increase the survival of animals released from fishing gear. Resource managers may also restrict fishing activities in areas or at times when the potential for entanglement of mammals or turtles is high.

Where their coastal ranges overlap with human activities, marine mammals and turtles may also suffer from disturbance, boat collisions, exposure to contaminants, and loss of feeding or nesting/pupping habitat. For instance, sea turtle egg and hatching survival are threatened where nesting beaches are destroyed or disturbed by coastal development, erosion control, beach restructuring, or artificial lighting. Plastic bags and other debris drifting at sea are potentially lethal when they entangle or are consumed by marine mammals and turtles that mistake them for prey. Increased boat traffic in coastal waters is a growing threat to the endangered Florida manatee and other near-coastal species.

A major impediment to conservation of marine mammals and turtles is the lack of knowledge. A better understanding of the natural history and habitat requirements of these animals is needed to assure their future conservation.

Taxonomic Relationships of U.S. Atlantic Marine Mammal & Turtle Families*

* The taxonomic schemes used throughout this guide have been simplified for clarity, and are subject to change as our scientific understanding improves.
WHY ARE THEY WHERE THEY ARE?

Marine mammals and turtles are not randomly distributed in the oceans. Each species thrives in certain areas, or habitats, that support their specific energetic (food, thermoregulation) and reproductive needs.

Habitat

Food: The daily and seasonal distribution of marine predators is often dictated by the availability of their prey and is frequently associated with edges or areas of abrupt oceanographic change. Here, upwelling caused by changes in sea floor contour (or bathymetry) and currents and boundaries formed between discrete water masses promote plankton growth, concentration, and availability to marine consumers.

Reproduction: Adults of many species seasonally forgo the quest for food to accommodate special needs associated with producing and rearing offspring. Female turtles and seals leave their aquatic domain for protected, often traditional, land sites on which to nest or give birth. Many cetaceans migrate thousands of miles and fast for months in order to give birth in warm waters needed by their cold-sensitive newborn calves. These nesting, pupping, and calving habitats often double as important breeding habitat, where adult males find large aggregations of receptive females with which to mate.

Figure 1. Advanced Very High Resolution Radiometer (AVHRR) image taken from the NOAA-11 satellite over Georges Bank. Courtesy of NOAA Remote Sensing Group, NEFSC, Narragansett, R.I.

Continental Shelf and Gulf Stream

The distribution of marine mammals and turtles in the Atlantic is greatly influenced by two oceanographic features, the continental shelf and the Gulf Stream (Fig. 1).

Continental Shelf: The North American continent forms a shelf that extends varying distances from shore until it reaches a depth of approximately 200 m. There, at the continental shelf edge, the seafloor descends down a slope with varying steepness to great ocean depths (Fig. 2). The distribution of many marine mammals and turtles closely follows specific features of the shelf that support their prey. For instance, pilot whales and Rissos's dolphin (and other squid-eating species) inhabit waters near the shelf edge (see Fig. 1) where the abundance of their primary prey is supported in part by areas of great mixing and upwelling.

Gulf Stream: The Gulf Stream is a strong ocean current that carries warm tropical waters into the Gulf of Mexico and north along the U.S. Atlantic coast until it veers eastward off the mid-Atlantic. The warm, nutrient-poor Gulf Stream waters do not readily mix with the colder, productive polar waters they meet, so a distinct temperature edge is maintained between Gulf Stream and adjacent waters. As a result, the Gulf Stream forms a tongue of tropical water that extends north and provides habitat for warm-water species in otherwise cold latitudes. On a smaller scale, the Gulf Stream generates warm-core rings and cold-core rings. These temperature anomalies may remain intact for several months, enhancing local productivity, concentrating prey, and thus providing important habitat features for many species (Fig. 1).

Figure 2. Cross-sectional view of a sample transect (below) of increasing ocean depths.
Cetaceans are completely aquatic mammals. They feed, mate, calve, and suckle their young in the water. Because their bodies are constantly supported by water, animals in this order include some of Earth's largest species. Cetaceans are specialized swimmers: Some can sustain speeds up to 25 mph, may dive to 3,000 m (10,000 ft), or remain submerged up to two hours. Their bodies are smooth, streamlined, and hairless to reduce drag while swimming. Limbs are tapered or lacking and the tail is developed into horizontal flukes used for propulsion. All cetaceans have a subcutaneous layer of blubber that insulates them from cold water and acts as a fat reserve.

Cetaceans breathe through a single or divided blowhole on top of the head. As they surface after a dive, they forcefully exhale a moist, lungful of air (below) and inhale new air. The characteristics of the blow can aid in identification.

### Taxonomic Relationships of U.S. Atlantic Cetaceans

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| NAME            | Beaked Whale (Beaked Whales): Various degrees of beak, melon, and dorsal fin development. Narrow flippers, unnotched flukes, and v-shaped throat groove present. Limited number of teeth erupt only in lower jaw of adult males.
|                 | Blackfish (Blackfish): |
|                 | Odontoceti (Toothed Whales): All odontocetes have a single blowhole. Sexual dimorphism is common—males are larger than females and diagnostic secondary sex traits are present in some families (differences in dorsal fins, tooth pattern). Tooth count is variable. Echolocation for prey is common.
|                 | Mysticeti (Baleen Whales): All mysticetes have a baleen and a divided blowhole. Females are generally larger than males but no other sexual dimorphism exists. They are not known to echolocate. Two of the three extant families are represented in U.S. Atlantic waters.
|                 | Delphineti (Dolphins and Porpoises): Beak absent. Triangular dorsal fin present. Spade-shaped teeth in both jaws.
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**Mysticeti (Baleen Whales)**

All mysticetes have baleen and a divided blowhole. Females are generally larger than males but no other sexual dimorphism exists. They are not known to echolocate. Two of the three extant families are represented in U.S. Atlantic waters.

**Balaenopteridae (Rorquals):**

- Slender body with dorsal fin. Numerous ventral throat grooves expand for gulpig large volumes of water and prey. Single straight blow.

**Balaenidae (Right Whales):**

- Round body with massive head and broad flukes. Narrow, arched rostrum (upper jaw) supports long baleen plates. No dorsal fin or ventral throat grooves are present. They skim through large schools of zooplankton. Divergent blowhole creates a V-shaped blow.

** Physeteridae (Sperm Whales):**

- Squared head with underslung lower jaw. Blowhole located left of center. Functional teeth lacking in upper jaw.
Balaena glacialis
Family: Balaenidae

SIZE: Adults to 13–18 m (43–59 ft), 60 tons; females larger than males. At birth approx 4.5 m (15 ft).

BODY: Robust body with broad smooth back, large head (one-third body length); narrow arching rostrum. Wart-like callosities on rostrum, lower lip, and around eyes. Flippers broad and spatulate; large black flukes have smooth concave margin. No throat grooves.

COLOR: Predominantly black, often mottled, variable amount of white on belly.

BALEEN: Gray with fine bristles; 200–270 plates per side, to 2.2 m (7.2 ft) long.

DORSAL FIN: No dorsal fin.

BLOW: V-shaped, bushy to 5 m (16 ft) high.

BEHAVIOR: Docile, often approachable. Breaching, fliper slapping common. May be seen skimming near surface with mouth agape. Groups of 2–3, but larger on feeding grounds.

DIVE PATTERN: Blow 5–10 times at 15–30 sec intervals then dive for 5–15 min. Usually show flukes before deep dives.

DISTRIBUTION: N. Hemisphere.
In w. N. Atlantic, summer Gulf of Maine to Newfoundland with concentration areas near MA and Nova Scotia. Wintering area(s) of most of population unknown; known calving areas off GA, FL.

HABITAT: Temperate waters. Critical feeding areas in Great South Channel, Cape Cod Bay, Bay of Fundy, and Scotian Shelf. Critical calving/rearing area in warm coastal waters off GA and FL.

DIET: Zooplankton, primarily copepods. Feed by skimming through dense concentrations of prey with mouth open.

LIFE HISTORY: Females sexually mature at 7–10 yrs. Thought to breed mostly in winter at low latitudes. Single calf every 3–4 yrs born fall-winter after gestation of 12 mos. Lactation lasts 1 yr. May live 70 yrs.

STATUS AND HUMAN INTERACTIONS: Endangered, probably declining. Currently about 300 known in w. N. Atlantic waters. Harvested in U.S. Atlantic from 1650–1924, with a peak in early 1700s. Ship strikes and entanglement in fishing gear are current sources of human-caused mortality and may be hindering population growth and recovery.
BLUE WHALE

Balaenoptera musculus
Family: Balaenopteridae

SIZE: Adults to 23–27 m (75–89 ft), 125 tons; females slightly larger than males. At birth approx 7 m (23 ft), 5,500 lbs. Record N. Atlantic length 28 m (92 ft). Earth's largest animal ever.

BODY: Long, sleek body. Broad, flat, U-shaped rostrum with prominent "splash guard" and single ridge forward of blowhole. Flippers long and slender; flukes nearly triangular with straight margin. Ventral throat grooves, 35–68, extend to navel.

COLOR: Body blue-gray with light mottling. Belly white, gray, or yellowish.

BALEEN: Black with dark coarse bristles; 270–400 broad plates per side, to 1 m (3 ft) long.

DORSAL FIN: Small, three-quarters back on body, to 0.3 m (1 ft) high. Often not seen until diving.

BLOW: Tall, dense (not bushy), vertical blow to 9 m (30 ft).

BEHAVIOR: Occur alone or in pairs. Fast swimmers (bursts up to 20 mph). Dive to 150 m (490 ft) or more.


May raise flukes slightly

CAN BE CONFUSED WITH:

Fin Whale

Sei Whale

FIN: The diminutive dorsal fin is located far back on the blue mottled body of a blue whale.

DIVE PATTERN: Blow 8–15 times at 10–20 sec intervals, then dive for 3–20 min. May briefly raise flukes parallel to water before deep dives.

HABITAT: Generally pelagic. May concentrate in areas of dense krill concentrations on summer feeding grounds (e.g., Gulf of St. Lawrence).

DIET: Zooplankton, primarily krill (euphausiids). May consume an estimated 4 tons per day during peak summer feeding periods.

LIFE HISTORY: Sexually mature at 10 yrs. Breed and calve on winter range. Single calf every 2–3 yrs after gestation of 10–12 mos. Lactation lasts 7 mos. Calves gain ±91 kg (200 lbs) per day (3.6 kg per hr). May live 80 yrs.

STATUS AND HUMAN INTERACTIONS: Endangered. Estimated fewer than 1,500 in w. N. Atlantic; approx 300 individuals have been photo-catalogued in the Gulf of St. Lawrence. Estimated 350,000 were commercially harvested for their blubber (oil) from 1860s to 1960s, primarily in the S. Hemisphere.

Other names: sulfur bottom
FIN WHALE

**Balaenoptera physalus**
Family: Balaenopteridae

**SIZE:** Adults 17–24 m (56–79 ft), 70 tons. At birth approx 6.5 m (21 ft), 2 tons.

**BODY:** Long sleek body with flat, V-shaped rostrum. Distinct ridge on back from dorsal fin to broad triangular flukes. Ventral throat grooves, 55–100, extend to navel.

**COLOR:** Dark gray with light undersides, pale chevron on back behind head. Asymmetric jaw coloration: lower right jaw white, lower left jaw dark.

**BALEEN:** Right front plates white, rest gray to white; 260–480 plates per side, to 0.7 m (27 in) long.

**DORSAL FIN:** Up to 0.6 m (2 ft) tall, falcate with blunt tip, two-thirds back on body. Leading edge meets back smoothly at gentle angle. Appears shortly after blow on shallow dives.

**BLOW:** Tall, elliptical, 5.5–6 m (18–20 ft) high.

**BEHAVIOR:** Occur singly or in groups of 2–10. May feed in large aggregations. Often associate with dolphins, other large whales. Fast swimmers (bursts to 20 mph); may breach.

**DISTRIBUTION:** Worldwide. In U.S. Atlantic, from Cape Hatteras north. Known major summer feeding grounds in New England. Winter calving and breeding grounds are unknown for most of population.

**DIVE PATTERN:** Rarely show flukes. Blow 4–5 times at 10–20 sec intervals, then dive for 5–15 min. Top of head and blow break surface together; arch back and roll forward exposing dorsal fin in wheel-like profile.

**HABITAT:** Generally pelagic but also use deep coastal waters. Feed on continental shelf in waters to 200 m (650 ft) deep.

**DIET:** Variety of small schooling fish (herring, capelin, sand lance), squid, and planktonic crustaceans. Gulp large swarms, often while swimming on their right side.


**STATUS AND HUMAN INTERACTIONS:** Endangered but common and probably increasing. Population estimated at 35,000 in N. Atlantic, with 2,700–6,000 in U.S. Atlantic waters. Commercial harvest ended in N. Atlantic in 1971.

Other names: finback, finner, razorback.

Rarely show flukes.

Fin Whale

CAN BE CONFUSED WITH:

Sei Whale

Blue Whale

Bryde's Whale

The white right jaw and prominent dorsal fin are visible as these fin whales surface (R) and dive (L). Note angle at which dorsal fin meets back.
SEI WHALE

Balaenoptera borealis
Family: Balaenopteridae

SIZE: Adults to 18 m (59 ft), 30 tons; females slightly larger than males. At birth approx 4.5 m (15 ft).


COLOR: Dark gray to nearly black with pale belly. Frequent light mottling and patches. Both lower lips gray.

BALEEN: Dark gray with fine white bristles; 318–340 plates per side, to 0.8 m (31 in) long.

DORSAL FIN: Tall, erect, and strongly falcate. Leading edge meets back at steep angle two-thirds back on body.

BLOW: Elliptical, to 3 m (10 ft) high.

BEHAVIOR: Groups of 2–5. May associate with humpback and fin whales on feeding grounds. Fast swimmers that may change direction erratically.

DISTRIBUTION: Worldwide. In U.S. Atlantic, seen primarily on Georges Bank in spring. May migrate to lower-latitude wintering areas from Gulf of Mexico south.

CAN BE CONFUSED WITH:
- Bryde’s Whale
- Fin Whale

Baleen is visible in the straining action of Balaenoptera borealis, with the rostrum curving down to the tip and sides. The body is sleek, and the flippers are slender and pointed. The rostral ridge extends from the blowhole to the snout. The ventral throat grooves are short, stopping forward of the navel. The color is dark gray to nearly black, with a pale belly and light mottling. The lower lips are gray.

HABITAT: Generally pelagic but may follow prey inshore. Often found near shelf edge.

DIET: Primarily copepods and euphausiids. Skim through schools of crustaceans, often leaving trails of bubbles just prior to surfacing.


SEI WHALE (pronounced “say” or “sigh”)
**MINKE WHALE**

*Balaenoptera acutorostrata*

*Family: Balaenopteridae*

**SIZE:** Adults to 9–10 m (29–33 ft), 10 tons; females slightly larger than males. At birth approx 2.8 m (9 ft).

**BODY:** Small, sleek body. **Head is sharply pointed** with flat rostrum. Flippers pointed, flukes broad. Ventral throat grooves, 50–70, extend to navel. Smallest baleen whale in N. Atlantic.

**COLOR:** Black or dark steel-gray. Lighter undersides, often with a pale chevron on back behind head. **White band on both flippers.**

**BALEEN:** Gray to white with fine white fringes; 230–325 plates per side, to 0.3 m (1 ft) long.

**DORSAL FIN:** Prominent and flat-cove, two-thirds back on body. **Appears simultaneously with blow.**

**BLOW:** Low, bushy, and inconspicuous.

**BEHAVIOR:** Fast swimmers, often approach boats. Solitary or in groups of 2–3. May breach; body leaves water at ±45° angle.

**DISTRIBUTION:** Worldwide. In U.S. Atlantic, range from Gulf of Mexico north. Greatest abundance in New England Apr–Nov. Likely winter offshore and in Caribbean.

**DIVE PATTERN:** Rostrum breaks surface first. Blow 2–3 times at 30 sec intervals, then dive 3–20 min. Arch tail stock high but don’t show flukes.

**HABITUAT:** Pelagic, but also common in bays and shallow coastal waters. Widespread on shelf in summer, probably offshore in winter.

**DIET:** Variety of schooling fish (herring, capelin, sand lance, cod, mackerel, squid, and zooplankton (euphausiids and copepods).


**STATUS AND HUMAN INTERACTIONS:** Common. No estimate for w. N. Atlantic, but up to 13,000 may use U.S. Atlantic waters. Are exposed to coastal hazards including entanglement in a variety of fixed fishing gear. Harvested in Newfoundland until 1972, primarily for meat and oil.

*Other names: piked whale, little finner*
**HUMPBACK WHALE**

**Megaptera novaeangliae**  
**Family:** Balaenopteridae

**SIZE:** Adults to 11–16 m (36–52 ft), 40 tons; females slightly larger than males. At birth approx 5 m (16 ft), 2 tons.

**BODY:** Stout body with flat, broad head. Series of fleshy knobs on rostrum and lower lip. **Flippers long** (one-third body length) and **flukes broad with irregular trailing edge. Ventral throat grooves, 12–36, extend to navel.**

**COLOR:** Black with white on throat and belly. Variable amount of white on underside of flukes and both sides of flippers.

**BALEEN:** Black with dark gray bristles; 270–400 plates per side, to 0.7 m (2 ft) long.

**DORSAL FIN:** Small with a broad base, raised hump in front, and “knuckles” behind. Shape varies. Seen at same time as blow.

**BLOW:** Broad and bushy; to 3 m (10 ft) high.

**BEHAVIOR:** Groups of 2–12, may form larger aggregations. **Acrobatic:** often breach, flipper slap, spyhop, and lobtailing. Associate with minkes, fin whale, and Atlantic white-sided dolphin.

**DISTRIBUTION:** Worldwide. In w. N. Atlantic, most winter in Caribbean and migrate to summer feeding grounds from Gulf of Maine to Iceland. Increased sightings off U.S. mid-Atlantic and s.e. states since mid-1980s.

**DIVE PATTERN:** Blow 4–10 times at 20–30 sec intervals between dives lasting 3–7 min. Arch back, show flukes prior to deep dives.

**HABITAT:** Pelagic and coastal. Feed and breed over shallow banks, but may traverse open ocean during migration.

**DIET:** Small schooling fish (herring, sand lance, capelin) and krill. Lunge through and gulp concentrated prey, sometimes after generating a bubble net around the prey.

**LIFE HISTORY:** Sexually mature at 4–6 yrs. Single calf born every 2–3 yrs after gestation of 11–12 mos. Lactation lasts up to 1 yr. Breed and calve Jan–Mar in West Indies. May live 48 yrs.

**STATUS AND HUMAN INTERACTIONS:** Endangered. Approximately 8,000–10,000 in N. Atlantic, with approx 300–700 using U.S. Atlantic waters. Commercially overexploited from 1800s until protected from commercial harvest in 1966. Ship collisions and entanglement in fixed fishing gear may be significant sources of human-caused mortality.
**SPERM WHALE**

**Physeter macrocephalus**  
**Family: Physeteridae**

**SIZE:** Adult males to 18 m (59 ft), 68 tons. Adult females to 12 m (39 ft), 18 tons. At birth approx 4 m (13 ft), 1 ton.

**BODY:** Huge, squared head (one-third body length) with narrow underslung lower jaw. Body (except for head) appears wrinkled. Large triangular flukes with smooth edges and deep notch.

**COLOR:** Dark gray-brown, some lighter blotches on belly and scarring around head.

**TEETH:** Large, conical; 36-50 in lower jaw only.

**DORSAL FIN:** Single, smooth, low dorsal hump followed by series of “knuckles.”

**BLOW:** Off-center, single blowhole on front left corner of head. Blow 4 m (13 ft) tall, goes forward at 45° angle and to left.

**BEHAVIOR:** Females and young form “breeding schools” of 10-80 animals. Sexually inactive males form “bachelor schools”; oldest males are often solitary except for brief stays with breeding schools in mating season. Often encountered resting log-like at surface.

**DISTRIBUTION:** Worldwide, between 60°N and 60°S latitudes. In U.S. waters, present year-round in Gulf of Mexico and from NC to Georges Bank.

**CAN BE CONFUSED WITH:**  
N. Bottlenose Whale

**DIVE PATTERN:** Deepest and longest diving cetacean known (dive up to 2 hrs, possibly to 3,000 m (9,800 ft)). Swim slowly at surface for 15-60 min before surfacing. Usually show flukes when diving.

**HABITAT:** Pelagic, usually deep waters near shelf edge, slope, and mid-ocean. Also on shelf in waters less than 200 m deep (650 ft) in spring and fall. Associated with Gulf Stream features.

**DIET:** Squid specialist, also fish. May eat 1 ton of squid per day.

**LIFE HISTORY:** Females sexually mature at 7-11 yrs; sexually mature males (>19 yrs) join female schools during mating season. Single calf born every 3-6 yrs in Jul-Nov after 14-16 mos gestation. Lactation lasts 12-24 mos.

**STATUS AND HUMAN INTERACTIONS:** Endangered but fairly common offshore. Minimum 2,700 from NC n., and 530 in Gulf of Mexico. Mass strandings fairly common. Incidentally caught in U.S. pelagic drift gillnets.

**Other names:** cachalot, *P. catodon*
**PYGMY SPERM WHALE**

**Kogia breviceps**

Family: Physeteridae (or Kogiaidae)

**SIZE:** Adults 3–3.7 m (10–12 ft), 400 kg. At birth approx 1.2 m (4 ft), 55 kg.

**BODY:** Short, robust body with squared or conical shark-like head with tiny underslung lower jaw. Short flippers located far forward. Body may appear wrinkled. No throat creases. Blowhole left of center.

**COLOR:** Dark gray back, lighter down sides to white belly. Pale crescent-shaped “false gill” on each side between eye and flipper.

**TEETH:** Long, sharp, curve inward; 24–36 in lower jaw only.

**DORSAL FIN:** Tiny but falcate, located aft of mid-back.

**BLOW:** Low and inconspicuous.

**BEHAVIOR:** Solitary or in small groups. May be approached and startled while floating motionless at surface. May appear “lumpy” like a knotted branch. When startled, often excrete an ink-like substance, darkening the surrounding water.

**DISTRIBUTION:** Worldwide in tropical to temperate oceanic waters. In U.S., sightings from Gulf of Mexico to mid-Atlantic with strandings as far n. as Nova Scotia.

**CAN BE CONFUSED WITH:**

**Dwarf Sperm Whale**

The unique head shape, dorsal fin, and “false gill” are visible on this rehabilitated pygmy sperm whale.

**DIVES PATTERN:** Deep, long diver. After surfacing, sink inconspicuously without rolling. Seldom resighted.

**HABITAT:** Pelagic; continental shelf edge, slope, and deep oceanic waters.

**DIET:** Squid, fish, and crustaceans.

**LIFE HISTORY:** Females sexually mature when 2.6–2.8 m long, males at 2.7–3.0 m. Single calf per yr born from fall to spring after 11 mos gestation. Lactation probably lasts 12 mos.

**STATUS AND HUMAN INTERACTIONS:**

Abundance is uncertain but is second most common species stranding in the Southeast. Difficult to distinguish from dwarf sperm whale—combined Kogia spp. estimate of 420 in Atlantic (FL to Cape Hatteras) and approx 550 in Gulf of Mexico. Human-related mortality may result from consumption of plastic bags and ship strikes.

The number of long thin teeth in its tiny lower jaw help identify this stranded pygmy sperm whale.

**Other names:** Kogia, lesser sperm whale, short-headed sperm whale
DWARF SPERM WHALE

Kogia sima
Family: Physeteridae (or Kogidae)

SIZE: Adults 2.1–2.7 m (7–9 ft), 280 kg. At birth approx 1 m (3 ft), 45 kg.


COLOR: Dark gray back, lighter on sides to white belly. Pale crescent-shaped “false gill” behind each eye.

TEETH: Short, thin, curve inward; usually 16–22 in lower jaw only; may also have 2–6 smaller teeth in upper jaw.

DORSAL FIN: Dolphin-like, falcate, and erect. Located near mid-back.

BLOW: Low and inconspicuous.

BEHAVIOR: Solitary or in small groups. May be approached and startled while floating motionless at surface with head and back exposed. When startled, often excrete an inky-like substance, darkening the surrounding water. Commonly strand in the Southeast.

DISTRIBUTION: Worldwide in tropical to temperate oceanic waters. In U.S., sightings from Gulf of Mexico to VA. Strandings as far n. as Nova Scotia.

DIVE PATTERN: Deep, long divers. Surface slowly and drop back under surface without rolling.

HABITAT: Pelagic; generally use continental shelf edge, slope, and deep oceanic waters. May also use shelf waters.

DIET: Squid, fish, and crustaceans.

LIFE HISTORY: Sexually mature when 2.1–2.2 m long. Single calf born per yr from fall to spring after 9.5 mos gestation. Lactation probably lasts 12 mos.

STATUS AND HUMAN INTERACTIONS:
Abundance uncertain; difficult to distinguish from pygmy sperm whale. Combined Kogia spp. minimum estimate of 420 in Atlantic (FL to Cape Hatteras) and 550 in Gulf of Mexico. Human-related mortality may result from consumption of plastic bags, ship strikes, and bycatch in pelagic fisheries.

Both Kogia spp. have a squared head and short flippers set far forward on their body visible even by air. They are most easily distinguished by dorsal fin shape.

Dwarf Sperm Whale

CAN BE CONFUSED WITH:
Pygmy Sperm Whale
Pygmy Killer Whale

When startled, both Kogia spp. may excrete an inky substance that forms a dark, presumably defensive, cloud behind them.
Northern Bottlenose Whale

**SIZE:** Adult males to 9.8 m (32 ft), adult females to 8.7 m (29 ft). At birth approx 3.6 m (12 ft).

**BODY:** Robust body, wide back. Bulbous head with large melon and upturned dolphin-like beak. Short tapered flippers, flukes broad and unnotched with concave trailing edge.

**COLOR:** Body tan to gray with lighter scratches and scars. Head and neck white on large adults.

**TEETH:** One pair visible on adult males; conical, at tip of lower jaw.

**DORSAL FIN:** Darker than back. Prominent and falcate; located two-thirds back on body.

**BLOW:** Low, bushy, angled slightly forward; to 2 m (7 ft) high.

**BEHAVIOR:** Social; form tight pods of 5–15 animals, possibly segregated by sex.

**DIVE PATTERN:** Surface for 10+ min with regular breaths before diving for 1–2 hrs. Often show head and beak when surfacing and flukes when diving.

**DISTRIBUTION:** N. Atlantic only; well-defined migration n. in summer and s. in winter. In U.S., rare sightings off n.e. coast with strandings as far s. as R.I.

**CAN BE CONFUSED WITH:**

- Minke Whale
- Sperm Whale

**NOTE:** All beaked whale sightings are significant. Photos and careful descriptions are needed!

**HABITAT:** Pelagic in temperate to polar waters, often near ice edge. Prefer waters deeper than 1,000 m (3,280 ft). Many congregate in summer in "The Gully" off Nova Scotia.

**DIET:** Primarily squid, small deepwater fish.


**STATUS AND HUMAN INTERACTIONS:** Uncommon in U.S. Atlantic. Commercially harvested in e. Canada until late 1960s for blubber and spermaceti (oil in head).

Note pale bulbous melon and dark dorsal fins of two northern bottlenose whales.
**CUVIER’S BEAKED WHALE**

**Ziphius cavirostris**  
**Family: Ziphiidae**

**SIZE:**  
Adult males to 7 m (23 ft), adult females to 7.5 m (24.6 ft); 2–3 tons. At birth approx 2.7 m (8.8 ft).

**BODY:**  
Robust cigar-shaped body with small head. Sloping forehead and short beak with slightly curved gape. Short tapered flippers, flukes unnotched.

**COLOR:**  
Body mottled golden tan to reddish brown. Head and neck white in some adults. Scarring common. Dark eye patch.

**TEETH:**  
One pair visible on adult males; small, conical, at tip of lower jaw.

**DORSAL FIN:**  
Relatively small, falcate to triangular, located far aft.

**BLOW:**  
Low and inconspicuous.

**BEHAVIOR:**  

**DIVE PATTERN:**  
Several blows at 20 sec intervals before 20–40 min dives. Forehead breaks surface but beak not usually visible. Show flukes prior to deep dives.

**DISTRIBUTION:**  
Worldwide except polar waters. Strandings throughout U.S. Atlantic from Gulf of Mexico to Canada. Rare spring-summer sightings off n.e. U.S., year-round in Gulf of Mexico.

**HABITAT:**  
Pelagic; shelf edge and waters deeper than 1,000 m (3,280 ft). Tropical to temperate waters; closely associated with Gulf Stream features.

**DIET:**  
Deepwater fish and squid.

**LIFE HISTORY:**  

**STATUS AND HUMAN INTERACTIONS:**  
Abundance and status uncertain due to difficulty distinguishing beaked whale species. Have been incidentally caught in pelagic Atlantic fisheries. Most commonly stranded beaked whale in U.S. Atlantic.

**NOTE:**  
All beaked whale sightings are significant. Photos and careful descriptions are needed!

**Cuvier’s Beaked Whale**

**CAN BE CONFUSED WITH:**  
*Mesoplodon* spp. and Minke Whale

**Cuvier’s Beaked Whale**

Cuvier’s beaked whales have a single pair of small conical teeth at the tip of the lower jaw visible only on adult males.

**Other names:**  
Goonbeak whale

The unique head shape and color can often be seen as Cuvier’s beaked whales surface.
GERVAIS' BEAKED WHALE

Mesoplodon europaeus
Family: Ziphiidae

SIZE: Adult males to 4.6 m (15 ft), adult females to 5.2 m (17 ft). At birth approx 2.1 m (7 ft).

BODY: Slender body laterally compressed (taller than it is wide). Small head has indentation at blowhole, prominent forehead, and slender beak. Short tapered flippers set low on body; flukes unnotched.

COLOR: Dark gray back and sides. Belly lighter with irregular white blotches.

TEETH: One pair visible on adult males; small, triangular, located 10 cm (4 in) from tip of lower jaw.

DORSAL FIN: Small, falcate to triangular; located far aft.

BLOW: Low and inconspicuous.

BEHAVIOR: Little known. Few confirmed live Gervais' sightings.

DIVE PATTERN: Little known.

HABITAT: Pelagic; warm-temperate waters including Gulf Stream.

DIET: Squid and deepwater fish.

DISTRIBUTION: Atlantic only, in U.S. Atlantic, rare sightings from Gulf of Mexico. Standings from Gulf of Mexico to NY; most commonly stranded Mesoplodon spp. in U.S. Atlantic.

LIFE HISTORY: Poorly known. Females thought to be sexually mature at 4.5 m (15 ft). Known to live 27 yrs.

STATUS AND HUMAN INTERACTIONS: Abundance and status uncertain due to difficulty distinguishing beaked whale species. Have been incidentally caught in pelagic Atlantic fisheries.

Note location of the single pair of small triangular teeth visible on the lower jaw of this male Gervais' beaked whale.

CAN BE CONFUSED WITH:
Other Mesoplodon spp. and Minke Whale

Gervais' beaked whales have a small head with slightly sloping forehead.

NOTE: All beaked whale sightings are significant. Photos and careful descriptions are needed!

Other names: Antillean beaked whale, Gulf Stream beaked whale
**True’s Beaked Whale**

**Mesoplodon mirus**  
**Family: Ziphiidae**

**SIZE:** Adults to 5.3 m (17.4 ft), 1.4 tons. At birth approx. 2.1 m (7 ft).

**BODY:** Robust, spindle-shaped body narrows toward tail. Small head with dolphin-like beak and prominent melon delineated by slight indentation at blowhole. Sharp ridge from dorsal fin to flukes. Short, tapered flippers; flukes unnotched.

**COLOR:** From few seen alive; gray to brown back with paler sides and belly. Dark blaze along back from melon past dorsal fin. Contrasting black dorsal fin, oval eye patch, and flippers. Closely spaced parallel scars on some animals.

**TEETH:** One pair visible on adult males; small, conical teeth located at tip of straight lower jaw.

**DORSAL FIN:** Darker than back. Small, falcate to triangular; located far aft.

**BLOW:** Low and inconspicuous.

**BEHAVIOR:** Little known.

**DISTRIBUTION:** N. Atlantic only. In U.S. Atlantic, rare sightings and strandings n. of FL, particularly in the mid-Atlantic.

**CAN BE CONFUSED WITH:** Other *Mesoplodon* spp. and Minke Whale

**NOTE:** All beaked whale sightings are significant. Photos and careful descriptions are needed!

**DIVE PATTERN:** From few seen: several blows at 1–4 min intervals followed by longer dives. Rostrum and eyes visible as whale surfaces.

**HABITAT:** Pelagic; deep and temperate oceanic waters; may be associated with Gulf Stream.

**DIET:** Squid and deepwater fish.

**LIFE HISTORY:** Poorly known; no data.

**STATUS AND HUMAN INTERACTIONS:** Abundance and status uncertain due to difficulty distinguishing beaked whale species. Incidentally caught in pelagic Atlantic fisheries.

One pair of conical teeth is visible at the tip of the lower jaw of this True’s beaked whale.
**SOWERBY’S BEAKED WHALE**

*Mesoplodon bidens*

**Family:** Ziphiidae

**SIZE:** Adults to 5 m (16 ft), at birth approx 2.4 m (8 ft).

**BODY:** Slender spindle-shaped body with small head. Sloped forehead, pronounced bulge forward of indentation at blowhole, long slender beak. Short, tapered flippers; flukes unnotched.

**COLOR:** Gray to blue-gray to brown back with lighter sides, blotches, and scratches.

**TEETH:** One pair visible on adult males; flat, triangular, in middle of lower jaw.

**DORSAL FIN:** Small, falcate to triangular; located far aft.

**BLOW:** Low and inconspicuous.

**BEHAVIOR:** Travel in pods of 2–25. Apparently avoid vessels. May breach.

**DIVE PATTERN:** Surface for 1 min taking 5–8 quick breaths between dives of 15–20 min. Cow-and-calf pairs may surface more frequently, be in larger groups, and swim more randomly. Rostrum visible as whale surfaces at steep angle.

**DISTRIBUTION:** N. Atlantic and Indian oceans only. In U.S. Atlantic, from New England north. Rare spring-summer sightings off Georges Bank. Strandings as far s. as FL.

**HABITAT:** Pelagic; cold-temperate waters s. of pack ice.

**DIET:** Squid and deepwater fish.

**LIFE HISTORY:** Poorly known. Thought to breed and calve late winter/spring. Single calf born after 12 mos gestation. Lactation lasts 12+ mos.

**STATUS AND HUMAN INTERACTIONS:** Abundance uncertain due to difficulty distinguishing beaked whale species. Have been incidentally caught in pelagic Atlantic fisheries.

**NOTE:** All beaked whale sightings are significant. Photos and careful descriptions are needed!

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The prominent beak and head shape are visible as Sowerby's beaked whales break surface at steep angle.

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**SOWERBY’S BEAKED WHALE**

Other names: North Sea beaked whale
Blainville's Beaked Whale

**SIZE:** Adults to 4.7 m (15 ft), 1 ton. At birth approx 2.1 m (7 ft).

**BODY:** Spindle-shaped body, thick moderate beak. Forehead flattened forward of blowhole. High, prominent arch at corners of mouth. Short, tapered flippers; flukes unnotched.

**COLOR:** Dark gray to black on back, lighter sides. Some have large, pale oval blotches all over body. Extensive scarring and scratches common.

**TEETH:** One pair visible on adult males; massive, flat, and triangular; tilt forward from top of mouthline arches (may have barnacles attached).

**DORSAL FIN:** Small; triangular to falcate; located far aft.

**BLOW:** Low and inconspicuous.

**BEHAVIOR:** Little known. Small groups, unobtrusive but may breach. Avoid vessels.

**DISTRIBUTION:** Worldwide in tropical to warm-temperate waters. In U.S. Atlantic, strandings have been reported from Gulf of Mexico to Canada.

**DIVE PATTERN:** Several blows at 15–20 sec intervals before dives lasting 20–45 min or more. Rostrum breaks surface at steep angle after deep dive.

**HABITAT:** Pelagic. Deep, tropical to warm-temperate oceanic waters.

**DIET:** Fish and squid.

**LIFE HISTORY:** Poorly known. Thought to be sexually mature at 9–11 yrs.

**STATUS AND HUMAN INTERACTIONS:** Abundance and status uncertain due to difficulty distinguishing among beaked whale species. Have been incidentally caught in pelagic Atlantic fisheries.

**NOTE:** All beaked whale sightings are significant; Photos and careful descriptions are needed!

The arching lower jaw of Blainville's beaked whales is diagnostic even if teeth are not visible.

Other names: densebeak whale
**KILLER WHALE**

**Orcinus Orca**

**Family:** Delphinidae

**SIZE:** Adult males to 9.5 m (31 ft), 8 tons. Adult females to 7 m (23 ft), 4 tons. At birth approx 2.4 m (8 ft), 180 kg.

**BODY:** Robust body. Round head with slight beak. Large paddle-like flippers.

**COLOR:** Striking contrast, black body with white chin, belly, and oval patch behind eye. Gray "saddle" behind dorsal fin.

**TEETH:** Large, conical; 20–26 upper row, 20–26 lower row.

**DORSAL FIN:** Prominent, mid-back. Sexually dimorphic: straight and tall on males (to 2 m (6 ft)); shorter and falcate on females.

**BLOW:** Bushy, to 3 m (10 ft) high.

**BEHAVIOR:** Highly social, often travel in pods of 3–35. Active at surface and acrobatic: breaching, spyhopping, and lollabting are common. Fast swimmers (speeds to 25+ mph). Often cooperate in hunting and feeding efforts.

**DISTRIBUTION:** Worldwide. In U.S. Atlantic, rare sightings from Gulf of Mexico but more common n. of NJ.

**CAN BE CONFUSED WITH:**

- Risso's Dolphin
- False Killer Whale

**DIVE PATTERN:** Variable. Many blows at short intervals between dives of 4–10 min.

**HABITAT:** Tropical to polar. Coastal waters to oceanic.

**DIET:** Most diverse cetacean diet: includes fish, birds, squid, turtles, and other marine mammals. In N. Pacific, diets of two recognized stocks differ: "Residents" eat primarily fish, while "transients" eat primarily marine mammals.


**STATUS AND HUMAN INTERACTIONS:**

Uncommon. An estimated 277 occur in the Gulf of Mexico but abundance and status off East Coast is unknown.

Like most delphinids, killer whales have conical teeth in both upper and lower jaws.

For left: Killer whales have a prominent dorsal fin that is much taller and straighter on adult males than females.

Other names: Orca
**LONGFINNED PILOT WHALE**

**Globicephala melas**

**Family:** Delphinidae

**SIZE:** Adult males to 7.6 m (25 ft), 2 tons. Adult females to 5.7 m (19 ft), 1.2 tons. At birth approx. 1.7 m (5.5 ft), 80 kg.

**BODY:** Long robust body with thick tail stock (keel). Bulbous head with prominent melon and slight beak. Sickle-shaped flippers are sharply pointed and long (one-fifth of body length). Upturned mouthline.

**COLOR:** Black or dark gray except for light markings on throat, shoulder, and belly; may have faint saddle behind dorsal fin.

**TEETH:** Peg-like; 16–24 lower row, 16–24 upper row.

**DORSAL FIN:** Low but prominent, broad-based, falcate to flag-like; located far forward on back. May be rounded on adult males.

**BLOW:** Strong, to 1 m (3 ft) high.

**BEHAVIOR:** Curious, groups of 10s to 100s. Herds may rest together like logs at surface. Often associate with bottlenose and Atlantic white-sided dolphins.

**DISTRIBUTION:** All cold-temperate waters except N. Pacific. In W. N. Atlantic from Cape Hatteras to Greenland overlapping short-finned pilot range in mid-Atlantic.

**DIVE PATTERN:** Several quick breaths followed by dives of 1–10 min. May show flukes when diving. Lobtailing, spyhopping, and mass strandings are common; breaching and bowriding are rare.

**HABITAT:** “Anti-tropical,” pelagic; continental shelf edge and slope, submerged banks, or associated with Gulf Stream north wall and thermal fronts. May move inshore in summer, offshore in winter following squid.

**DIET:** Primarily squid, also fish.


**STATUS AND HUMAN INTERACTIONS:** An estimated 8,200 occur from VA to Gulf of St. Lawrence. Have been incidentally caught in a variety of pelagic U.S. fisheries. May follow fishing vessels and forage from catch. Blubber samples show moderate levels of contaminants. A Newfoundland drive fishery for this species operated from 1947 to 1972.

Other names: blackfish, pothead, Atlantic or northern pilot whale, *G. melas*
**SHORTFINNED PILOT WHALE**

* Globicephala macrocephalus  
  Family: Delphinidae  

**SIZE:** Adult males to 6 m (20 ft), 2 tons. Adult females to 5.2 m (17 ft), 1.2 tons. At birth approx 1.7 m (5.5 ft), 60 kg.

**BODY:** Long robust body with deep tail stock (keel). Bulbous head with prominent melon and slight beak. Flippers gently curved, pointed, and less than one-sixth of body length. Upturned mouthline.

**COLOR:** Brownish black or dark gray except for light markings on throat and belly; may have faint saddle behind dorsal fin.

**TEETH:** Peg-like; 14–18 upper row, 14–18 lower row.

**DORSAL FIN:** Low but prominent, broad-based; falcate to flag-like; located far forward on back. May be rounded on adult males.

**BLOW:** Strong, to 1 m (3 ft) high.

**BEHAVIOR:** Gregarious, groups of 10s to 100s. Herds may rest together like logs at surface. Lobtailing, spyhopping, and mass strandings are common; breaching and bowriding are rare. Often associate with bottlenose dolphins.

**DISTRIBUTION:** Worldwide in tropical and warm-temperate waters. In w. N. Atlantic from Gulf of Mexico to VA. Overlaps range of longfinned pilot in mid-Atlantic.

**CAN BE CONFUSED WITH:**  
False Killer Whale

**Longfinned Pilot Whale**

**DIVE PATTERN:** Several quick breaths followed by dives of 1–10 min. May show flukes when diving.

**HABITAT:** Tropical, pelagic to coastal; usually in Gulf Stream, along continental shelf and slope, or over submarine canyons. May move onshore in summer, offshore in winter to follow squid.

**DIET:** Primarily squid, also fish.


**STATUS AND HUMAN INTERACTIONS:**  
Minimum population estimate of 350 in Gulf of Mexico and 750 from FL to Cape Hatteras. Have been incidentally caught in a variety of pelagic U.S. fisheries. Harvested in Caribbean into 1980s for oil and meat. Trained for oceanarium display.

A pale shoulder blaze is often visible on the brownish black shortfinned pilot whale.

Other names: blackfish, pothead, Pacific pilot whale.
**FALSE KILLER WHALE**

**Pseudorca crassidens**

*Family: Delphinidae*

**SIZE:** Adult males to 5.5 m (18 ft), 1.4 tons. Adult females to 4.8 m (16 ft). At birth approx 1.8 m (6 ft), 175 lbs.

**BODY:** Slender body. Small, narrow, tapered head overhangs lower jaw; slight melon and no beak. Distinctive hump on front margin of flippers.

**COLOR:** All black except for faint patch on chest. Black lips. No cape.

**TEETH:** Large conical teeth; 16–22 upper row, 16–22 lower row.

**DORSAL FIN:** Tall, variably pointed, strongly falcate; located mid-back.

**BLOW:** Inconspicuous.

**BEHAVIOR:** Gregarious, groups of 10s to 100s. Often jump clear of water; may stop or change directions abruptly when feeding. Associate with bottlenose and other dolphins. Only "blackfish" that frequently approaches boats and bowriders. Mass strandings are common.

**DIVE PATTERN:** Whole head seen when surfacing.

**DISTRIBUTION:** Worldwide in tropical and warm-temperate waters. In U.S. Atlantic waters, rare summer sightings from Gulf of Mexico to MD.

**HABITAT:** Pelagic; deep waters seaward of continental shelf.

**DIET:** Squid and fish. Known to attack other dolphins.

**LIFE HISTORY:** Sexually mature at 8–14 yrs. Mating and calving may occur year-round. Single calf every 3–4 yrs after 16 mos gestation. Lactation lasts 18 mos.

**STATUS AND HUMAN INTERACTIONS:** Uncommon in U.S. Atlantic. Minimum population estimate of 381 in n. Gulf of Mexico.

When visible, the curved leading edge of the flippers helps distinguish false killer whales from other "blackfish.”

False killer whales have a narrow, tapered head and lack a dark cape on their back.

Other names: blackfish
**Grampus griseus**  
*Family: Delphinidae*

**SIZE:** Adults to 3–3.8 m (10–12.5 ft), 600 kg; males slightly larger than females. At birth approx 1.3 m (5 ft).

**BODY:** Robust torso with narrow tail stock.  
Blunt head with squared melon but no beak.  

**COLOR:** Adults: light gray back and sides with darker dorsal fin, flippers, and flukes. White anchor patch on chest. Born light gray, darken to brown as subadults, then pale with age.  
Head and most of body white on older animals. Extensive scarring common.

**TEETH:** Thick and peg-like; fewer than 14, in lower jaw only.

**DORSAL FIN:** Very tall, slender, falcate, and variably pointed; located mid-back. Darker than body.

**BEHAVIOR:** Single to groups of 100s. May breach, spyhop, lobtailing. Often found with other cetaceans, including pilot whales and bottlenose dolphins. Generally avoid vessels and rarely bowride.

**DISTRIBUTION:** Worldwide in tropical and warm-temperate waters. In U.S. Atlantic, n. Gulf of Mexico to mid-Atlantic year-round; range further n. from spring to fall.

**DIVE PATTERN:** Take 10–12 breaths at 15–20 sec intervals prior to dives of 1–2 min. Max dive for 30 min. May show flukes when diving.

**HABITAT:** Pelagic; continental shelf edge and steep upper sections of slope (>100 m depths). Tropical and warm-temperate waters, Gulf Stream warm-core rings.

**DIET:** Squid specialist.

**LIFE HISTORY:** Little known. Thought to be sexually mature when 2.6–3 m in length. Max known age estimated at 17 years.

**STATUS AND HUMAN INTERACTIONS:**  
Fairly common. Estimated at 2,750 in n. Gulf of Mexico and 16,800 off East Coast. Have been incidentally caught in several U.S. Atlantic pelagic fisheries.

Note white head, dark dorsal fin, and scratches.

The squared beakless head and contrasting tall, dark dorsal fin on a light, scratched body distinguish Risso's from other dolphins.
**BOTTLENOSE DOLPHIN**

**Tursiops truncatus**  
Family: Delphinidae

**SIZE:** Adult size varies considerably: 1.9–3.6 m (6–12 ft), 140–650 kg. At birth approx 1 m (3 ft), 25 kg.

**BODY:** Robust body and head. **Short, thick, well-defined beak.** Two “ecotypes” are recognized: “coastal form” is shorter and slimmer than larger “offshore form.” Flippers pointed, flukes deeply notched.

**COLOR:** Highly variable: blue-gray to brown with lighter sides and belly. **No distinctive color pattern.** Some have spots, pale shoulder blaze, or cape.

**TEETH:** Small, conical; 40–52 upper row, 36–48 lower row.

**DORSAL FIN:** Tall, falcate, with broad base; located mid-back.

**BEHAVIOR:** Coastal form: small groups <10; offshore form: groups of 10s to 100s. Acrobatic: breach, spyhop, lobtail. Often seen with pilot whales and right whales (in FL, CA).

**DIVE PATTERN:** Max dives of 3–4 min. Beak rarely visible when surfacing.

**DISTRIBUTION:** Worldwide, tropical to cold-temperate waters. U.S. Atlantic, offshore form: primarily n. of Cape Hatteras, also s. to Gulf of Mexico. Coastal form: primarily Gulf of Mexico, year-round s. of Cape Hatteras, further n. in summer.

**HABITAT:** Coastal form: shallow, warm, inshore waters of bays and rivers. Offshore form: deep, offshore waters of shelf edge and slope.

**DIET:** Coastal form: variety of fish and invertebrates. Offshore form: squid, small fish.


**STATUS AND HUMAN INTERACTIONS:** Generally common but some coastal stocks are depleted. Estimated minimum of 19,070 in offshore stocks and 102,760 in coastal stocks. Both forms are killed accidentally in boat collisions and a variety of commercial and recreational fisheries. Common oceanarium performer.

**CAN BE CONFUSED WITH:**
- Riso’s Dolphin
- Atlantic Spotted Dolphin
- Rough-toothed Dolphin

Bottlenose dolphins are robust with a short, thick beak and broad-based falcate dorsal fin. The coastal form (left) is shorter and slimmer than the offshore form (right).

Other names: Atlantic bottlenosed dolphin, Tursiops
**WHITE-BEAKE DOLPHIN**

Lagenorhynchus albirostris
Family: Delphinidae

**SIZE:** Adults 3–3.2 m (10–10.5 ft), 275 kg. At birth approx. 1.2 m (4 ft), 41 kg.

**BODY:** Robust body with thick tail stock (keel) and short, thick, pale beak. Moderately pointed flippers.

**COLOR:** Mostly black on back and sides, white from beak to belly. White patch on side in front of dorsal fin and forming saddle behind dorsal fin. Dorsal fin, flippers, and flukes black. Beak white to light brown.

**TEETH:** Sharp, conical; 44–56 upper row, 44–56 lower row.

**DORSAL FIN:** Tall, falcate, with broad base; located mid-back.

**BEHAVIOR:** Single or groups of 100s (in Canada). Fast swimmers; may breach, bowride. Have been seen with fin, killer, and other whales.

**DIVE PATTERN:** White beak and back visible when surfacing; may create rooster-tail spray.

**HABITAT:** Pelagic; cold-temperate to subarctic waters.

**DISTRIBUTION:** Northern N. Atlantic only, ranging n. to pack ice edge. In U.S. Atlantic, from New England north. Seen off Cape Cod and in Gulf of Maine Apr–Nov.

**CAN BE CONFUSED WITH:**
- Atlantic White-sided Dolphin
- Common Dolphin

**DIET:** Squid, octopus, and variety of fish (including cod, herring, sand lance, haddock).

**LIFE HISTORY:** Little known. Sexually mature when 2.5 m (8 ft) in length. Breeds in warm months. Single calf born Jun–Sep after gestation of ±12 mos.

**STATUS AND HUMAN INTERACTIONS:** Currently uncommon but no estimate for abundance in U.S. waters. Formerly common in Northeast but rarely seen there since 1970s, possibly in response to a change in prey availability.

Their white back distinguishes the white-beaked from other Atlantic dolphins.

The white beak, saddle, and flanks are diagnostic on white-beaked dolphins.

**Other names:** squid-bound
**Atlantic White-sided Dolphin**

*Lagenorhynchus acutus*

**Family:** Delphinidae

**SIZE:** Adults 2.4-2.8 m (7.9-9.2 ft), 240 kg. At birth approx 1.2 m (4 ft), 32 kg.

**BODY:** Robust body with gently sloping forehead and thick keel. Short, thick two-colored beak. Flippers sickle-shaped and pointed.

**COLOR:** Black back, top of beak, flippers, and flukes. Gray sides, white belly. White band below dorsal fin connects with yellow band on tail stock. Beak is black above and white below.

**TEETH:** Sharp, conical; 58-80 upper row, 58-86 lower row.

**DORSAL FIN:** Tall, falcate, sharply pointed with narrow base; located mid-back.

**BEHAVIOR:** Small groups inshore, groups to 500+ offshore. Fast and acrobatic: breach, lobtail. Infrequent bowrider. Associate with humpback, fin, and pilot whales. Stranding common.

**DIVE PATTERN:** Surface at 15-20 sec intervals. May leap clear of water or barely break surface.

**DISTRIBUTION:** Northern N. Atlantic only. In U.S. Atlantic, found n. of NC but concentrated in Gulf of Maine. May move inshore in summer and offshore in winter following prey.

**HABITAT:** Cold-temperate to subarctic waters over continental shelf and slope.

**DIET:** Variety of schooling fish and squid.


**STATUS AND HUMAN INTERACTIONS:** Common. Approx 38,000-42,000 in U.S. Atlantic and possibly increasing. Have been incidentally caught in Atlantic trawls and gillnets. Moderate contaminant levels have been found in tissues.

Female Atlantic white-sided dolphin and calf show their colors.

The white side stripe and tan band behind the dorsal fin are visible as Atlantic white-sided dolphins surface.

Other names: Lag, jumper
**PYGMY KILLER WHALE**

*Feresa attenuata*

**Family:** Delphinidae

**SIZE:** Adults 2.4–2.9 m (8–9.5 ft). At birth approx 0.8 m (32 in).

**BODY:** Slender body. Long, rounded head with slight melon and no beak. Flippers long with rounded tips.

**COLOR:** Dark body forms slender cape that dips slightly below dorsal fin; lighter sides. White lips, chin ("goatee"), and belly.

**TEETH:** Small, pointed. 16–22 upper row, 22–26 lower row.

**DORSAL FIN:** Tall and falcate; located midback.

**BEHAVIOR:** Gregarious; groups of 15–50. Fast swimmers but may be seen "logging" on sunny days. Generally aggressive but often wary of boats.

**DIVE PATTERN:** Lively swimmer. Head comes completely out of water when surfacing. Porpoise when swimming fast. Large groups may swim abreast in coordinated line ("chorus line") but bunch together when alarmed.

**DISTRIBUTION:** Worldwide in tropical and subtropical waters. In U.S. Atlantic waters, rare sightings from Gulf of Mexico n. to Cape Hatteras.

**HABITAT:** Pelagic; deep waters seaward of continental shelf.

**DIET:** Probably more fish than squid. Known to attack other dolphins.

**LIFE HISTORY:** Little known.

**STATUS AND HUMAN INTERACTIONS:** Status unknown, difficult to distinguish from melon-headed whale at sea. Minimum of 518 in n. Gulf of Mexico.

Pygmy killer whales have a narrow cape and long flippers with rounded tips.

**OTHER NAMES:** Slender blackfish
**Melonheaded Whale**

**Peponocephala electra**  
**Family: Delphinidae**

**SIZE:** Adults 2.6–2.7 m (8.5–9 ft). At birth approx 0.8 m (2.6 ft).

**BODY:** Long slender body with slender tail stock. Small head with somewhat pointed snout and no beak. Face narrows from eyes to snout—head looks beak-like or triangular from above. Flippers long, slender, and sharply pointed. Short, straight mouthline.

**COLOR:** Dark back and cape that dips far down sides below dorsal fin; lighter belly. Lips often white.

**TEETH:** Large number, small and pointed; 40–50 upper row, 40–50 lower row.

**DORSAL FIN:** Tall, falculate; located mid-back.

**BEHAVIOR:** Gregarious; groups to 1,500. Often associate with Fraser’s, spinner, or Pantropical spotted dolphins.

**DIVE PATTERN:** May form tight herds that surface or jump clear at shallow angle with lots of spray and make frequent course changes.

**DISTRIBUTION:** Worldwide in tropical and subtropical waters. In U.S. Atlantic, sightings in Gulf of Mexico only; one stranding reported from MD.

**HABITAT:** Pelagic; deep waters seaward of continental shelf.

**DIET:** Squid and variety of small fish. Known to attack small dolphins.

**LIFE HISTORY:** Little known. Thought to breed spring to summer and calf the following summer.

**STATUS AND HUMAN INTERACTIONS:** Status unknown. Population estimated at 4,000 in n. Gulf of Mexico.

Melonheaded whales form large, tight, fast-swimming herds, often with other dolphin species.

Other names: many-toothed blackfish, Electa dolphin, little killer whale

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**Can be confused with:**
- False Killer Whale
- Pygmy Killer Whale

Melonheaded whales have a dark cape, sharply pointed flippers, and head that appears triangular from above.
ROUGH-TOOTHED DOLPHIN

*Stenella bredanensis*
Family: Delphinidae

**SIZE:** Adults 2.4–2.7 m (8–9 ft), 160 kg. At birth approx 0.9 m (35 in).

**BODY:** Robust body with tapered tail stock. Cone-shaped head with large eyes and smooth sloping forehead. Long slender beak is not defined by crease. Large pointed flippers and wide flukes.

**COLOR:** Variable. Dark purplish gray back forms narrow cape along back to tail, lighter sides, and white belly. White lips, tip of snout and throat. Usually have white-yellow blotches on sides and belly, scratches and scars.

**TEETH:** Large, vertically ridged; 40–54 upper row, 40–54 lower row.

**DORSAL FIN:** Tall, falcate, leading edge usually at 45° angle to back.

**BEHAVIOR:** Groups of 10s to 100s. Often wary of vessels but may bowride. Associate with pilot whales, spinner, bottlenose, and Pantropical spotted dolphins, and floating sargassum mats (in Gulf of Mexico).

**DISTRIBUTION:** Worldwide in warm-temperate and tropical waters. In U.S. Atlantic, known only from deep waters of n. Gulf of Mexico, year-round.

**CAN BE CONFUSED WITH:** Bottlenose Dolphin

The narrow purplish cape and white lips are visible on these bowriding rough-toothed dolphins.

**DIVE PATTERN:** May skim just under surface with only dorsal fin and beak above water, max dives 15 min.

**HABITAT:** Pelagic; deep, tropical seaward of continental shelf.

**DIET:** Deepwater octopus, squid, and fish.

**LIFE HISTORY:** Little known. Thought to be sexually mature at 10–14 yrs (approx 2 m in length). May live 32 years.

**STATUS AND HUMAN INTERACTIONS:** Uncommon. Estimated minimum of 852 in n. Gulf of Mexico.

No crease separates a rough-toothed dolphin’s smooth sloping forehead from its long slender beak, making its head appear cone-shaped when viewed from the side (left) or above (far left).
**FRASER'S DOLPHIN**

*Lagenodelphis hosei*

**Family:** Delphinidae

**SIZE:** Adults 1.9–2.4 m (6.3–7.5 ft), 275 kg. At birth approx 1 m (3 ft).

**BODY:** Small, stocky body with narrow tail stock. Short beak is well defined. Small, thin, pointed flippers.

**COLOR:** Blue-gray back and sides, white belly. Most have a broad dark band from eye to anus beneath a smaller pale band that extends to tail stock. Flippers, dorsal fin, and flukes dark.

**TEETH:** Small, sharp, and conical; 40–80 upper row, 40–80 lower row.

**DORSAL FIN:** Small, triangular to falcate; located mid-back.

**BEHAVIOR:** Gregarious. Large groups of 10s to 1,000s. Associate with melon-headed whales and rough-toothed dolphins. Often shy and avoid ships.

**DIVE PATTERN:** Active swimmers that often surface with spray. Deep divers (250–500 m).

**HABITAT:** Pelagic, tropical. Avoid shallow, inshore waters.

**DIET:** Squid, deepwater fish, shrimp.

**LIFE HISTORY:** Little known. Thought to be sexually mature at 7–8 yrs.

**STATUS AND HUMAN INTERACTIONS:** Uncommon. First seen alive in early 1970s. Estimated minimum of 127 in Gulf of Mexico.

**DISTRIBUTION:** Worldwide in temperate and tropical waters. In U.S. Atlantic, known only from deep waters of Gulf of Mexico.

**CAN BE CONFUSED WITH:**
- Striped Dolphin
- Common Dolphin
- Bottlenose Dolphin

Fraser's dolphins travel in large herds that generate lots of spray.

Note the short beak, small triangular dorsal fin, and distinctive black band on side of this Fraser's dolphin.

Other names: Sarawak dolphin
**Common Dolphin**

**Delphinus delphis**

### SIZE:
Adults 2.3–2.6 m (7.5–8.5 ft), 135 kg. At birth approx 0.8 m (32 in).

### BODY:
Slender body with pale, slender tail stock. Long pointed beak. Flippers broad and slightly pointed.

### COLOR:
Distinctive black back and cape form V-shaped saddle that dips below dorsal fin. Hourglass pattern on sides: tan patch (forward) and gray patch (aft) cross below saddle. White chest and belly. Black beak, eye ring, and line from jaw to flipper.

### TEETH:
Small, sharp, and conical; 80–100 upper row, 80–100 lower row.

### DORSAL FIN:
Tall, calcate; located mid-back. Usually dark with lighter center.

### BEHAVIOR:
Gregarious; groups of 10s to 1,000s, often associate with other dolphins. Avid bowrider, seen riding in whale bow waves.

### DIVE PATTERN:
Fast and acrobatic: breach, porpoise, bowrider. Max dives to 8 min.

### DISTRIBUTION:
Worldwide, subtropical to temperate waters. In w. N. Atlantic, primarily n. of Cape Hatteras, rare sightings s. to FL. Common Jan–May from Cape Hatteras to Georges Bank; summer-fall on Georges Bank.

### HABITAT:
Pelagic; subtropical to temperate waters >100 fathoms. Longbeaked species more common inshore than shortbeaked species.

### DIET:
Variety of fish and squid.

### LIFE HISTORY:

### STATUS AND HUMAN INTERACTIONS:
Common but population trend unknown. Approx 22,000–45,000 from Cape Hatteras to Georges Bank, incidentally killed in some Atlantic fisheries.

Note the long black beak, prominent dorsal fin, and distinctive coloration of this breaching common dolphin.

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**Common Dolphin**

The distinctive V-shaped cape and hourglass color pattern are visible in these dorsal and lateral views of bowriding common dolphins.

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**Other names:** saddleback dolphin, criss-cross dolphin, hourglass dolphin

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**Image:**
- Common Dolphin
- Striped Dolphin
- Clymene Dolphin

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**Map:**
- Distribution map of Atlantic Ocean showing the range of common dolphins.
SIZE: Adults 2.2–2.6 m (7–8.5 ft), 130 kg. At birth approx 1 m (3 ft).


COLOR: Dark gray to brown cape (high near eye), bluish gray sides, and white to pink belly. Most have bold light blaze from shoulder toward dorsal fin. Black stripe ("bilge stripe") from eye to anus. One or more dark bands between eye and flipper.

TEETH: Small, sharp, and conical; 86–100 upper row, 86–100 lower row.

DORSAL FIN: Tall and thin, dark, falcate.

BEHAVIOR: Gregarious; groups of 100s to 1,000s, segregated by age and sex. Associate with common dolphins.

DIVE PATTER: Max dives 3–10 min. Active swimmers—somesault and jump to 7 m (23 ft)—and may bowride.

DISTRIBUTION: Worldwide in temperate to tropical oceans. In U.S. Atlantic, year-round from Cape Hatteras to Georges Bank; in Gulf of Mexico from fall to spring.

HABITAT: Pelagic; deep waters of continental shelf edge and slope. Associated with Gulf Stream n. wall and warm-core rings.

DIET: Deepwater squid, fish, shrimp.


STATUS AND HUMAN INTERACTIONS: Estimated 31,700 from VA n.; minimum of 4,860 in n. Gulf of Mexico. Have been incidentally caught in some pelagic trawl and trawl fisheries.

The diagnostic black "bilge stripe" and bold shoulder blaze are visible on these surfacing striped dolphins.
**Pantropical Spotted Dolphin**

**Family:** Delphinidae

**Size:** Adults 1.6–2.6 m (5.2–8.5 ft), 120 kg. At birth approx 0.8 m (2.8 ft).

**Body:** Slender body with long, narrow, white-tipped beak. Keel pronounced in mature males. Flippers small, curved, and pointed.

**Color:** Bicolored background: dark back with light gray sides and belly. Distinct cape is narrow at face, dips deeply forward of dorsal fin, then narrows. Small spots or flecks develop with age and may cover adults. White-tipped beak and lips. Dark band from beak to flipper; may have dark ring around eye. No shoulder blaze. Tail stock color is dark over light.

**Teeth:** Small, sharp, and conical; 70–96 upper row, 68–94 lower row.

**Dorsal Fin:** Tall and slender, variably falcate; located mid-back.

**Behavior:** Gregarious; groups of few to 1,000s of mixed age and sex. Acrobatic, high-jumping bowriders.

**Dive Pattern:** Strong, fast, active swimmers; known speeds of 21.4 knots in 2.0 sec.

**Distribution:** Worldwide in tropics and some warm-temperate waters. In w. N. Atlantic, year-round in n. Gulf of Mexico and offshore s.e. U.S. in winter.

**Habitat:** Pelagic; deep waters seaward of shelf edge and near oceanic islands. Tropical to warm-temperate waters.

**Diet:** Squid and variety of schooling fish.


**Status and Human Interactions:** Possibly most common offshore dolphin in the Southeast and Gulf of Mexico. Estimated minimum of 31,320 in Gulf of Mexico and 4,770 "undifferentiated spotted dolphins" (including both Atlantic and pantropical spotted dolphins) n. of VA. Have been incidentally caught in Atlantic pelagic driftnets and longlines.

**Can Be Confused With:**
- Atlantic Spotted Dolphin
- Spinner Dolphin

**Note:** Distinct cape, white beak tip, and dark-overlight tail stock of these "spotters."

**Other Names:** Spotter, spotted dolphin, bridled dolphin.
**Atlantic Spotted Dolphin**

**Stenella frontalis**  
**Family: Delphinidae**

**SIZE:** Adults 2.1–2.3 m (7–7.5 ft), 140 kg. At birth approx 1 m (3 ft).

**BODY:** Fairly robust body with moderate keel. Long, thick, white-tipped beak. Flippers curved and pointed. Coastal animals larger and more spotted than offshore animals.

**COLOR:** Tricolored background: dark purplish gray back and cape, light gray sides, white belly. Pale blaze often sweeps up from side toward dorsal fin. **Variable spotting:** born unsplotched, develop spots with age that may obliterate background color. **White-tipped beak.** Tail stock single color, pales with age.

**TEETH:** Small, sharp, and conical; 64–84 upper row, 60–68 lower row.

**DORSAL FIN:** Tall, dark, falcate; located midback.

**BEHAVIOR:** Gregarious; coastal groups of <20, offshore groups usually <100. Associate with other dolphins and small whales.

**DIVE PATTERN:** Tip of beak breaks surface first. Fast, acrobatic; avid bowrider.

**DISTRIBUTION:** Atlantic only. In w. N. Atlantic, s. New England to Gulf of Mexico.

**CAN BE CONFUSED WITH:**
- Bottlenose Dolphin
- Rough-toothed Dolphin

**HABITAT:** Coastal to pelagic. Tropical to warm-temperate waters over continental shelf, edge, and upper reaches of slope. Associated with Gulf Stream n. wall and warm core rings.

**DIET:** Squid and variety of fish.


**STATUS AND HUMAN INTERACTIONS:**  
Estimated minimum of 3,200 in Gulf of Mexico and 4,770 "undifferentiated spotted dolphins" (including both Atlantic and pantropical spotted dolphins) on East Coast n. of VA. Have been incidentally caught in pelagic driftnets, longlines, and tuna purse seines.

Left: Atlantic spotted dolphins have a long white-tipped beak, variable spotting over a tricolored background, and a solid colored tail stock.

A light shoulder blaze is often visible on Atlantic spotted dolphins.

**Other names:** spotted dolphin, Frontalis, Gulf Stream spotted dolphin, S. plagiodon
**SPINNER DOLPHIN**

**Stenella longirostris**

**Family: Delphinidae**

**SIZE:** Adults to 1.8-2.2 m (6-7.2 ft), 95 kg; males slightly larger than females. Length at birth approx 0.8 m (32 in).

**BODY:** Slender body with very long, slender beak. Adult males have prominent ventral keel. Long pointed flippers.

**COLOR:** Tricolor pattern (may be obscured); slender dark gray cape dips smoothly below dorsal fin, light tan-gray sides, white belly. Borders of colors are parallel. Dark stripe from eye to flipper. Black lips and beak tip.

**TEETH:** Small, sharp, and conical; 90-130 upper row, 90-130 lower row.

**DORSAL FIN:** Tall and erect. Variably falcate to triangular.

**BEHAVIOR:** Gregarious; groups of 10s to 1,000s, may segregate by age and sex. Associate with pilot whales and melon-headed whales. Avid bowriders.

**DIVE PATTERN:** Make frequent and high-spinning leaps (on longitudinal axis) and somersaults.

**DISTRIBUTION:** Worldwide in temperate and tropical waters. In U.S. Atlantic, have straddled from Gulf of Mexico to NC. Sightings in n. Gulf of Mexico in winter, spring, summer.

**HABITAT:** Usually pelagic in deep (>200 m) oceanic waters off continental shelf; tropical.

**DIET:** Deepwater fish, squid, shrimp.

**LIFE HISTORY:** Sexually mature at 7-12 yrs. Breed spring, fall, or winter (n.e. Pacific). Single calf every 2-3 yrs after gestation of 10.6 mos. Lactation varies, lasts >7 mos.

**STATUS AND HUMAN INTERACTIONS:** Estimated minimum of 6,300 in n. Gulf of Mexico; no estimate for number off East Coast. Have been incidentally caught in Atlantic pelagic driftnet fishery.

The exceptionally long black beak and three parallel color zones on the body are characteristic of spinners.
SIZE: Adults 1.8–2.0 m (6–6.6 ft), 75 kg. At birth approx 0.8 m (32 in).


DORSAL FIN: Tall, dark, falcate, less triangular than spinner.

BEHAVIOR: Gregarious; groups to 50. May bowride. Thought to feed nocturnally.

DIVE PATTERN: Acrobatic: Many make full spins when leaping.

HABITAT: Pelagic and deep waters around oceanic islands. Seaward of continental shelf edge.

DIET: Squid and deepwater fish.

DISTRIBUTION: Atlantic only. In w. N. Atlantic, seen in winter, spring, and summer in deep waters off n. Gulf of Mexico; strandings n. to Nt.

LIFE HISTORY: Unknown.

STATUS AND HUMAN INTERACTIONS: Population status and trend uncertain. Estimated minimum of 5,570 in Gulf of Mexico.

Clymene dolphins have a black ridge-line that runs down their short beak to black lips.

Clymene dolphins have a moderately short black-tipped beak and smooth-edged cape that dips above eye and below dorsal fin on their tricolored sides.
HARBOUR PORPOISE

SIZE: Adults 1.4–1.9 m (4.5–6 ft), 90 kg. At birth approx 0.8 m (32 in).


COLOR: Dark gray or black on back with lighter sides and white belly. Dark narrow band between mouth and flipper. No distinctive markings.

TEETH: Small, spade-like; 40–56 upper row, 40–56 lower row.

DORSAL FIN: Small, triangular; located slightly aft of mid-body.

BEHAVIOR: Travel alone or in groups of 2–10. May approach stationary vessels but generally avoid moving vessels and usually do not bowride. Not acrobatic.

DIVE PATTERN: Surface frequently when traveling but may take 3–4 breaths at 2–3 min intervals when feeding.


HABITAT: Coastal, cold waters usually less than 200 m (650 ft) deep but may winter off shelf.

DIET: Schooling fish and invertebrates, including herring, mackerel, and squid.


STATUS AND HUMAN INTERACTIONS: Estimated 54,000–74,000 in n. Gulf of Maine and Bay of Fundy in summer. Many are incidentally caught in gillnet fisheries throughout range. Known to carry high levels of contaminants, particularly PCBs and DDT.

Harbor porpoises have a small, triangular dorsal fin.
Seals and manatees are only distantly related mammals (see page 3) that have successfully adapted to a marine existence. Seals belong to one of three families of pinnipeds or "fin-footed" carnivores. Manatees, like their cousin the dugong, are marine herbivores called sirentians or sea cows. This section, therefore, is a convenient, rather than taxonomic, grouping of the few non-cetacean Atlantic marine mammal species.

Pinnipeds

Pinnipeds have adapted to an amphibious marine existence. They forage at sea but come ashore or onto ice at times to rest, give birth, and suckle their young. Many of their anatomical features reflect compromises needed to succeed both on land and in the water. Their large eyes and well-developed whiskers allow feeding in dimly lit water but also function above water. They have webbed flippers and hydrodynamic bodies and appendages for swimming efficiently, but their flippers allow mobility on land as well. They have fur that is molted (shed) annually and a blubber layer for added insulation.

Pinnipeds are carnivores that have retained canine teeth but whose molars are modified for consuming prey whole. Many pinnipeds are capable of long, deep, repetitive dives made possible by physiological traits such as high blood volume and hemoglobin content and a reducible heart rate.

Seals of U.S. Atlantic waters are phocids—members of the pinniped family Phocidae—and are referred to as earless seals because they have no visible external ear flaps (pinnae). Their bodies are spindle-shaped with short necks. On shore or ice, seals use their short, clawed front flippers for traction and extend their hind flippers behind them as they move in a caterpillar-like fashion. Despite their awkward motion on land, they are fast, agile swimmers that propel themselves with an egg beater-like motion of their hind flippers. Phocids breed on land, in the water, or on ice and give birth the following year. Their pups grow rapidly and are weaned abruptly after brief lactation during which their mothers often fast.

Manatees

Manatees are sirentians and are more closely related to elephants than to other marine mammals. They are completely aquatic and herbivorous, feeding on submerged vegetation along tropical coasts, rivers, and estuaries.

Manatees have many unique traits related to their vegetarian lifestyle: prehensile lips and dexterous forelimbs, bony plates inside the front of the mouth, a complex gastrointestinal tract, and molars that are replaced throughout life. Although completely aquatic, they are slow, shallow swimmers that are propelled by a broad, flattened, paddle-like tail (unlike cetacean flukes). They are insulated by blubber but are cold-intolerant and lack numerous marine adaptations found in cetaceans and pinnipeds. Unlike most marine mammals, manatees have a poorly developed adult brain that weighs less than 400 g (less than 1 lb). Many of the manatees' physical and behavioral traits enhance their exposure to a variety of man-made hazards. They are caught in flood-control gates while feeding in rivers, congregate in the warm outfall of power plants, and are particularly vulnerable to collision with motorboats. Interestingly, unlike other mammals, manatees have elongated lungs that run along an extended length of their backs with the muscular divider (diaphragm) between the lungs and abdominal cavity nearly horizontal. As an unfortunate consequence, much of the back is buoyed as the manatee surfaces to breathe, raising the entire back to within propeller depth.
**Phoca vitulina**  
*Family: Phocidae*

**SIZE:** Adults to 1.7–1.9 m (5.6–6.3 ft), 120 kg; males slightly larger than females. At birth approx 0.7 m (30 in), 10 kg.

**BODY:** Roudned head with short, concave, dog-like snout. Eyes equidistant between ears and nose. Nostrils form “V” when viewed head-on. Sexes similar.

**COLOR:** Variable: silver to reddish tan to nearly black; often blue-gray back with light and dark speckling, lighter belly. Pups usually born with adult-like coat (lanugo is molted in uterus).

**BEHAVIOR:** Gregarious; few to 100s haul out together. Often lie with head and rear flippers elevated in “banana-like” fashion. Associate with gray seals where ranges overlap.

**HABITAT:** Temperate, mostly coastal. Use sandy or rocky sites as haulouts and pupping sites. Current U.S. Atlantic pupping occurs only in ME, often on traditionally used protected sites in upper reaches of bays.

**DISTRIBUTION:** N. Hemisphere. In w. N. Atlantic, range from e. Canada to s. New England. Spring-summer concentration in ME and e. Canada waters; disperse fall-winter and found as far s. as Long Island.

**DIET:** Variety of schooling fish, groundfish, squid, octopus.


**STATUS AND HUMAN INTERACTIONS:** Most common seal in U.S. Atlantic; population increasing—estimated at 29,000–35,000. Perceived conflicts with commercial fisheries led to a bounty in New England until late 1960s. Incidentally caught in gillnets and other fixed-gear fisheries.

Their smaller size and dog-like profile help distinguish harbor seals from gray seals.
**GRAY SEAL**

*Halichoerus grypus*  
**Family:** Phocidae

**SIZE:** Adult males to 2.3 m (7.5 ft), 300 kg. Adult females to 2.0 m (6.6 ft), 180 kg. At birth approx 1 m (3 ft), 20 kg.

**BODY:** Distinctive horse-like head with broad arcing snout. Eyes set closer to ears than nose. Nostrils form “W.” Sexually dimorphic: adult males much larger than females, with thicker neck, broader head, and darker pelage.

**COLOR:** Adults darker on back than belly; colors range from black, tan, silver, white. Generally males are dark with irregular light patches and females are light with dark spots. Pups: born with lanugo (white or yellowish) and molt to spotted coat at 2–4 wks.

**BEHAVIOR:** Gregarious; form large rookeries during pupping, molting, breeding seasons. Polygynous breeders, but males do not defend territories or harems. Associate with harbor seals where ranges overlap.

**HABITAT:** Temperate to subarctic. Use sandy or rocky sites exposed to rough seas and orpines as haulouts and pupping rookeries. Mostly pelagic for first few yrs of life.

**DISTRIBUTION:** N. Atlantic only. W. N. Atlantic population centered in e. Canada but range to s. New England. Seasonal movements have no well-defined migration.

**DIET:** Variety of schooling fish, squid, octopus. Newly weaned pups eat shrimp and crabs. Adults fast during breeding season.


**STATUS AND HUMAN INTERACTIONS:** Population increasing with estimated 143,000 in e. Canada. A growing number (approx 3,000 in 1993) are pupping and molting on ME and MA sites. Perceived conflicts with commercial fisheries, including concerns about codworm infestation, led to Canadian bounty and culling of ±2,000 per yr from 1967–83. Incidentally caught in some fixed-gear fisheries.

Gray seal pups share their parents’ “horsehead” profile and are born with yellow or white lanugo.
**HOODED SEAL**

**Family:** Phocidae

**Cystophora cristata**

**SIZE:** Adult males 2.3–2.7 m (7.5–9 ft), 375 kg. Adult females 2.0–2.2 m (6.5–7 ft), 300 kg. At birth approx 1 m (3.3 ft), 15 kg.

**BODY:** Large body with relatively broad, flattened head. Adult males larger than females and have inflatable sac ("hood") on top of nose and forehead.

**COLOR:** Adults: blue-gray with irregular black blotches, black face, and light belly. Pups: blue-gray back and face and contrasting light belly (called "blue-backs").

**BEHAVIOR:** Males can inflate and shake their hood and extrude a red balloon-like membrane from left nostril, often in aggressive or defensive displays. Usually solitary but gather as triads (bull, cow, and pup) during breeding season. Highly migratory; common for adults and juveniles to wander beyond normal range.

**HABITAT:** Prefer deep offshore waters and thick drifting ice floes.

**DIET:** Variety of fish, squid, shrimp, octopus. Most adults fast during pupping and molting seasons.

**DISTRIBUTION:** N. Atlantic only: primarily n. of Gulf of St. Lawrence. May stray s. into U.S. waters (to FL) from Dec–Mar. Migrate n. from winter pupping-breeding areas to molt off Greenland dispersing n. and e. to feed in summer.

**CAN BE CONFUSED WITH:**
- Harp Seal
- Other names: crested seal, bladdernose seal


**STATUS AND HUMAN INTERACTIONS:** Population apparently increasing; approx 400,000 in e. Canada. No estimate for number using U.S. waters, but frequency of strandings has increased. Commercially harvested in e. Canada until 1980s, often secondary to harp seal harvests.

A young hooded seal, or "blue-back," has a broader and flatter head than a harbor or harp seal.

Hooded seals have blunt, star-shaped post-canines.

In addition to displaying their inflatable "hood," male hooded seals may extrude a red "balloon" from their left nostril.

A young hooded seal, or "blue-back," has a broader and flatter head than a harbor or harp seal.
**Pagophilus groenlandicus**

**Family: Phocidae**

**SIZE:** Adults to 1.7–1.9 m (5.6–6.3 ft), 180 kg; males slightly larger than females. At birth approx 0.9 m (2.5–3 ft), 10 kg.

**BODY:** Robust body with relatively small, sleek head. Well-developed claws on front flippers.

**COLOR:** Adults: silver-gray body with black face and wishbone-shaped "harp" on back (often muted or covered by large blotches on females). Pups: born with yellowish lanugo that becomes "white-coat" after 3 days; molt into black-spotted silvery coat at 4 wks (as "beaters"). Year-old "bedlamers" molt into an irregularly blotched coat that develops into adult harp pattern with each annual molt.

**BEHAVIOR:** Pagophilic (ice-associated) and highly migratory. Gregarious: 10,000s congregate on pupping and molting grounds, 100s migrate, rest, and feed together in summer.

**HABITAT:** Closely associated with shore-fast sea ice. Have pups, breed, and spend winter on pack ice; follow receding sea ice n. in spring to feed.

**DIET:** Crustaceans, groundfish, schooling fish. Juveniles eat shrimp-like crustaceans. Most fast while molting.

**LIFE HISTORY:** Sexually mature at 4–7 yrs. Breed in Mar after pups are weaned. Single pup per yr; born Feb–Mar after gestation of 11–12 mos. Lactation lasts 12 days. Non-pups molt early Apr. May live 30 yrs.

**STATUS AND HUMAN INTERACTIONS:**
Estimated 3–5 million in N. Atlantic and increasing. No estimate available for increasing number of juveniles seen in U.S. waters. Commercially hunted in e. Canada since mid-1800s; 53,000–95,000 per yr were taken from 1988–92 in government-set harvest. Incidentally caught in gillnets.

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**Harp Seal**

Can be Confused With:
- Hooded Seal
- Harbor Seal

Post-canines in lower jaw are tri-cusped, evenly spaced, and shark-like.

Right: Most harp seals seen in U.S. waters are juveniles that have large irregular blotches on their dark-over-lights coats.
Florida Manatee

**Size:** Adults 2.5–4.5 m (8.2–14.8 ft), to 1,600 kg. At birth approx 1 m (3.3 ft), 30 kg.

**Body:** Rotund body with relatively small head and no neck crease. Prominent bristly muzzle with prehensile lips. Tail large and spatulate. Long dextorous forelimbs (pectoral flippers) have nails on squared outer edges and a single nipple at their base. Eyes are small and deeply set.

**Color:** Uniformly gray or gray-brown. Births and scarring from boat propellers are common.

**Teeth:** Molars are continuously shed from front and replaced from rear; 6–12 lower row, 6–12 upper row.

**Behavior:** Docile but often curious, approachable, and playful. Group together at sources of warm water during cold weather. Make extensive (up to 1,700 km round-trip) seasonal inshore-offshore or n.-s. movements in response to temperature change. Generally slow swimmers but capable of short bursts of speed. Avg dives 4 min, max dives 24 min.

**Distribution:** Tropical w. Atlantic. In U.S. waters, primarily peninsular Fl. and s.e. GA, but range from TX on Gulf Coast n. as far as RI.

**Habitat:** Warm coastal and inland waters. Found in marine, estuarine, and riverine waters, but need access to freshwater. Often congregate in warm springs and near power-plant outfalls during cold weather. Low tolerance to water temps less than 20°C (68°F).

**Diet:** Herbivorous; submerged vegetation, sea grasses, floating or emergent plants. Captive manatees eat up to 75 kg of vegetation daily.

**Life History:** Sexually mature at 3–5 yrs. May breed year-round. Single calf (rarely twins) every 2–5 yrs after gestation of approx 12 mos, usually born in quiet waters and canals. Lactation lasts 1–2 yrs. May live to 60 yrs.

**Status and Human Interactions:** Endangered but stable; only 2,229 counted in FL in 1997. Boat collisions, crushing in flood-control structures, cold-stress, and toxic algal blooms are known to be significant sources of mortality. Vulnerable to coastal development and industrial catastrophes.
Unlike all the other animals in this book, sea turtles are reptiles—taxonomically distant and distinct from marine mammals. They have dry, scaly skin, which is relatively impermeable to water; are ectothermic; and like many reptiles, lay eggs. The most distinguishing characteristic of sea turtles is their shell, a defining trait they share with all turtles. From terrestrial ancestors, marine turtles evolved secondarily to a marine existence. This resulted in a strongly tapered, streamlined shell and powerful, rigid, paddle-like forelimbs that “fly” through the water with amazing speed, without compromising the ability to move on land—an inescapable confine for animals that must come ashore to lay their eggs.

Strong swimmers, sea turtles are capable of making deep, repetitive dives to search for food and can remain submerged for long periods of time, such as when resting on the ocean bottom. In fact, sea turtles spend little time at the water surface—often just long enough to take a breath of air—though some sea turtles, such as the leatherback and loggerhead, can be found basking at the water surface. Basking in the sun may aid in maintaining a body temperature higher than that of the surrounding water, allowing for survival in colder Atlantic waters.

Life History
Sea turtles migrate, sometimes long distances, from foraging grounds to shallow-water nesting grounds to mate, nest, and lay their eggs. The female emerges from the water and digs a flask-shaped nest in the sand with her hind flippers, then lays 50 to 170 (depending on the species) ping-pong ball-shaped eggs. After covering the nest with sand, she returns to the water. She will nest several times in one season. After the nesting season, she migrates back to the foraging grounds. In most species of sea turtles, mature females do not nest every year, remaining instead at the foraging grounds in off years.

Following an 8- to 10-week incubation, the eggs hatch, and the hatchlings dig their way out of the nest, usually emerging at night. They make their way to the water, orienting themselves to the brightest horizon (hatchlings disoriented by brightly lit beaches become more vulnerable to hazards such as predation and desiccation). Once in the water, they swim rapidly—“swimming frenzy”—until they reach the open ocean, where many species spend the “lost years” living and feeding in floating sargassum. They “reappear” as juveniles in feeding grounds shared with adults or, in some cases, migrate to developmental feeding grounds. But some species, such as the leatherback, spend their entire lives in a pelagic existence, coming inshore only to mate and nest.

Conservation
Probably the single greatest threat to sea turtle survival in U.S. Atlantic waters is entanglement in active and discarded fishing gear. Sea turtles that become entangled and cannot reach the surface to breathe become increasingly anoxic (oxygen depleted) and comatose. Not all turtles in this condition are dead. Although they are inactive and their heart rate is negligible, recent research shows that they may be able to recover. You can help sea turtles found in this condition: Place the turtle in the shade, carapace-up, and keep it moist with seawater until flipper activity resumes. Recovery may take more than 2 hours. Remember: Regulations require that you return the turtle to the water.

Dermochelyidae
Carapace and plastron lack horny shell scutes, being covered instead by leathery skin. Underlying bones of the shell are almost completely lost, their place taken by a mosaic of thousands of tiny bones imbedded below the leathery skin. Forelimbs are smooth, broad, and paddle-like and lack claws. This family is represented by a single living species, Dermochelys coriacea, the leatherback sea turtle.

Cheloniidae
Family composed of the “hard-shelled” sea turtles. Shell is covered with horny scutes, variable in number, but usually including 5 vertebral scutes, 4 or 5 pairs of costal scutes, and 3 or 4 pairs of inframarginal scutes. Carapace is oval to heart-shaped. Forelimbs are covered with scales, are paddle-like, with elongated digits and 1 to 2 claws on each forelimb.

Taxonomic Relationships of U.S. Atlantic Sea Turtles

Cryptodira

Dermochelyidae
Leatherback sea turtle

Cheloniidae
Green sea turtle
Hawksbill sea turtle
Loggerhead sea turtle
Kemp's ridley sea turtle
MORPHOLOGY OF SEA TURTLES

Note: Sex of sea turtles is difficult to determine through external morphology.
SIZE: Adult shell to 1.8 m SCL (6 ft), 727 kg to 1 ton.

BODY/SHELL: Largest living turtle. Lacks shell scutes, head and body scales. Covered by leathery skin. Carapace divided longitudinally by 7 ridges; hingeless plastron divided by 5 ridges; head short, blunt, with 2 cusps projecting from upper jaw. Limbs clawless.

COLOR: Only black marine turtle in Atlantic, but often spotted with white or pinkish blue on undersides of head, limbs, body.

BEHAVIOR: Solitary at sea, but adults may congregate off nesting beaches or while feeding on jellyfish. Relatively fast swimmers (>10 knots), breach occasionally. Spend majority of time feeding or basking near or at water surface. Most dives <200 m (660 ft), <20 min; but can dive to 1,300 m (4,290 ft).

HABITAT: Highly pelagic, migratory. Occasionally enter shallow waters of bays and estuaries.

DIET: Primarily jellyfish.

LIFE HISTORY: Courtship and mating thought to occur off nesting beaches. In w. Atlantic, nesting occurs Apr–Nov on e. coast of FL, Caribbean, and rarely in TX, GA, SC, NC. Mature females may oviposit >6 times per year, laying 50–170 eggs per clutch. Incubation lasts 53–74 days. Little is known about hatching, juvenile movements.

STATUS AND HUMAN INTERACTIONS: Endangered. Principal threats in U.S. Atlantic are entanglement in fixed fishing gear, boat collisions, debris' ingestion. Threats to eggs and hatchlings include nesting beach alteration and artificial lighting.

NOTE: Mortality of marine turtles found entangled/entrapped can be reduced: Place turtle carapace-up; keep moist and in shade until flipper activity resumes.
**GREEN SEA TURTLE**

**Chelonia mydas**  
Family: Cheloniidae

**SIZE:** Avg adult shell 1 m SCL (3.3 ft); avg weight 150 kg.

**BODY/ SHELL:** Largest, hard-shelled sea turtle.  
**Carapace smooth,** heart-shaped or oval, covered with horny scutes, with **4 pairs costals,** **nuchal scute** not touching first costal. Head relatively small, rounded, with **1 pair prefrontals.** One claw on each forelimb.

**COLOR:** Carapace and head olive to brown, some with mottled, radiating, or wavy pattern on scutes; plastron yellowish white. Hatchlings black above, white below.

**BEHAVIOR:** Can migrate great distances from nesting beaches to foraging grounds.

**HABITAT:** Pelagic as hatchlings (to 0.25 m SCL), then move to benthic feeding grounds; juveniles and adults congregate in relatively shallow, protected waters containing seagrass, macroalgae “pastures,” also coral reefs, worm reefs, rocky bottoms.

**DISTRIBUTION:** Worldwide. In w. Atlantic, range from MA to Argentina, including Gulf of Mexico and Caribbean. Rare n. of Cape Hatteras. Migrate seasonally great distances between feeding and nesting areas.

**DIET:** Pelagic-stage hatchlings and juveniles eat molluscs, jellyfish, crustaceans. Diet shifts to seagrasses, macroalgae as juveniles mature and move inshore.

**LIFE HISTORY:** Mating occurs off nesting beaches close to shore. Mature females nest Mar–Oct (peak May–Jun); U.S. nesting occurs on tropical beaches in FL, Puerto Rico, U.S. Virgin Islands. Females oviposit avg 2–3 times per season, laying 100–150 eggs per clutch. Incubation lasts 45–60 days.

**STATUS AND HUMAN INTERACTIONS:** Breeding population endangered in FL; threatened elsewhere. Historically exploited for eggs, meat. In U.S. Atlantic, degradation of nesting and feeding habitats, boat collisions, fishing gear entanglement, and disease are serious problems.

**NOTE:** Mortality of marine turtles found entangled/entrapped can be reduced: Place turtle carapace-up, keep moist and in shade until flipper activity resumes.
LOGGERHEAD SEA TURTLE

SIZE: Avg adult shell 0.92 m SCL (3 ft), can reach 1.2 m; avg adult weight 115 kg.

BODY/SHELL: Carapace covered with horn scutes, with 5 pairs costals, nuchal scute touches first costal; 3 pairs inframarginals present on bridge. Head large, broad, with 2 pairs prefrontals; jaws powerful for crushing prey. Two claws on each forelimb.

COLOR: Carapace and head yellow-orange to reddish brown, often covered by barnacles, fouling organisms; plastron yellowish to light brown. Hatchlings light brown to almost black.

BEHAVIOR: Hatchlings engage in "swimming frenzy" for about 20 hrs after hatching, carrying them offshore. May live in sargassum rafts until reach approx 0.45 m SCL. Juveniles, adults tend to congregate at same nearshore feeding grounds each year. Loggerheads may hibernate in winter.

HABITAT: Pelagic as hatchlings, then migrate to nearshore waters. Adults, juveniles inhabit subtropical continental shelf and coastal waters (bays, lagoons, river mouths).

DISTRIBUTION: Worldwide. In w. Atlantic, from Newfoundland to Argentina, including Gulf of Mexico and Caribbean. Migrate n. over continental shelf in summer; found n. of Cape Hatteras May - Oct. Retreat s. in winter.

DIET: Primarily benthic feeders on crustaceans, molluscs.

LIFE HISTORY: Sexes thought to migrate together from foraging sites to nesting beaches, where mating occurs in surface waters. Nest Apr-Sep (peak Jun-Jul) on temperate beaches from s. NJ to FL; major U.S. nesting area is e. FL. Mature females may oviposit 3-6 times per season, laying 95-150 eggs per clutch. Incubation lasts 49-71 days.

STATUS AND HUMAN INTERACTIONS: Threatened. In U.S. Atlantic, greatest known mortality is entanglement in towed or fixed fishing gear. Boat collisions are also a serious problem. Threats to eggs, hatchlings include nesting beach degradation (development, erosion control, etc.) and artificial lighting.

NOTE: Mortality of marine turtles found entangled/trapped can be reduced: Place turtle carapace up; keep moist and in shade until flipper activity resumes.
**Hawksbill Sea Turtle**

*Eretmochelys imbricata*

**Family:** Cheloniidae

**SIZE:** Avg adult shell 0.66–0.86 m SCL (2.2–2.8 ft); avg weight 42 kg.

**BODY/SHELL:** Carapace shield-shaped, covered with thick, horny, overlapping scutes, with 4 pairs costals, nuchal scute not touching first costal. Head narrow with 2 pairs prefrontals, beak-like snout. Two claws on each forelimb.

**COLOR:** Carapace pattern "tortoiseshell," with radiating brown, black, amber streaks; head scales dark brown with yellow margins; plastron yellow.

**BEHAVIOR:** Migrate between feeding and nesting grounds. Adults, large juveniles capable of making deep dives (>100 m) to forage on deep-water sponges.

**HABITAT:** Pelagic as hatchlings and juveniles (to 0.25 m SCL), then move to feeding grounds in rocky or coral reef waters in the tropics, sub-tropics. Pelagic and benthic habitats poorly understood. Juveniles favor shallow waters, adults may forage in deeper waters.

**DISTRIBUTION:** Worldwide, primarily tropics, in w. Atlantic, range from MA to Brazil, including Gulf of Mexico and Caribbean.

**CAN BE CONFUSED WITH:**

- Green Sea Turtle
- Loggerhead Sea Turtle
- Kemp's Ridley Sea Turtle

**DIET:** Primarily sponges and benthic invertebrates.

**LIFE HISTORY:** Nesting occurs year-round. In w. Atlantic, nest on beaches in Caribbean, C. and S. America. Rare nesting in FL. Mature females oviposit avg 4–6 times per season, laying 140–160 eggs per clutch. Incubation lasts 47–77 days.

**STATUS AND HUMAN INTERACTIONS:**


**NOTE:** Mortality of marine turtles found entangled/entrapped can be reduced: Place turtle carapace-up; keep moist and in shade until flipper activity resumes.

The bird-like "beak" of the hawksbill aids in feeding from crevices and hard surfaces, such as coral reefs.
**KEMP'S RIDLEY SEA TURTLE**

**Lepidochelys kempii**  
Family: Cheloniidae

**SIZE:** Smallest sea turtle; adult shell 0.58-0.80 m SCL (1.9–2.6 ft); weight 40-50 kg.

**BODY/ SHELL:** Carapace heart-shaped, covered with horny scutes, with 5 costals, nuchal scute touches first costal; 4 inframarginals with pores present on bridge. Head broad, but pointed, with 2 pairs of prefrontals; jaws powerful and strongly ridged. One claw on each forelimb.

**COLOR:** Carapace light olive to gray; head and limbs gray; plastron white. Hatchlings dark gray to black.

**BEHAVIOR:** Adults found at feeding grounds primarily in the Gulf of Mexico. Juveniles feed in nearshore waters along the East Coast and Gulf; migrate s. for winter. Some remain too long, are caught in cold water, become cold-stunned, and die.

**HABITAT:** Pelagic as hatchlings (to 0.20 m SCL), then enter nearshore waters, primarily those with seagrass beds or mud bottoms favored by crabs. Adults, juveniles utilize similar inshore coastal waters.

**DIET:** Primarily crabs but also shrimp, molluscs.

**LIFE HISTORY:** Both sexes migrate to waters off nesting beaches to mate. Ridleys are unique: Females may nest in mass aggregations called “ambadas” (Spanish for “arrival”); they nest during the day, and 99% of all nesting occurs on several beaches near Rancho Nuevo, Mexico. Some single nesting occurs on beaches in Mexico, TX, FL, SC, NC. Nest Apr–Aug (peak Apr–Jun) and oviposits avg 3 times per season, laying avg 103 eggs per clutch. Incubation lasts 48–65 days.

**STATUS AND HUMAN INTERACTIONS:**  
Endangered. Egg collection, taking of nesting females, and entanglement in towed fishing gear have decimated the species. Mexican and U.S. law now prohibits taking of eggs and turtles. Entanglement in trawls remains the primary source of mortality despite TED regulations.

**NOTE:** Mortality of marine turtles found entangled/entrapped can be reduced: Place turtle carapace-up; keep moist and in shade until flipper activity resumes.

**OTHER NAMES:** Atlantic ridley, Mexican ridley, ridder, bastard turtle, grey loggerhead.
The following terms are defined as used in this book (see also morphology diagrams that accompany each section).

**Baleen**: Bony material formed into comb-like plates, grows from upper jaw of mysticete whales.

**Benthic**: Associated with the ocean bottom.

**Blaze**: Pale streak of color, often extending into cape.

**Blow**: Moist air forcefully exhaled from lungs and through blowhole of a surfacing cetacean.

**Bowride**: To swim in the wave made by a moving boat, often at the bow or front of the boat.

**Breach**: To jump clear of the water surface.

**Bridge**: Series of scutes joining the two halves of a turtle's shell (p. 98).

**Callosites**: Fleshy wart-like growths from skin of some whales.

**Cape**: Darker region on back of some cetaceans, around dorsal fin.

**Carapace**: Bony shield composing the back (dorsal) shell of a turtle (p. 98).

**Carnivore**: Flesh eater, member of the taxonomic order Carnivora.

**Cetacean**: Whale, dolphin, or porpoise; member of the taxonomic order Cetacea.

**Chevron**: V-shaped stripes.

**Cloaca**: Common cavity into which genital, urinary, and intestinal tracts discharge.

**Clutch**: A nest of eggs.

**Coastal**: Adjacent to ocean shore.

**Copepod**: Small crustacean in the class Copepoda.

**Costal scutes**: Series of scutes lying along each side of the vertebral scutes on the turtle carapace (p. 98).

**Depleted Status**: Species whose numbers are below its optimal sustainable population level.

**Dimorphism**: Two different forms or traits. Sexual dimorphism: traits differ between sexes.

**Divet pattern**: Typical behavior and timing of a whale's blow and dives.

**Ecotemperature**: Body temperature not physiologically regulated (minimizes the environmental temperature).

**Endangered Status**: Species in danger of extinction in all or significant portion of its range, as defined by the Endangered Species Act.

**Endothermic**: Body temperature is physiologically regulated (usually maintained at a warm set-point).

**Euphausiid**: Small shrimp-like crustacean in the order Euphausiacea. Also called krill.

**Falcate**: Hooked or curved like a sickle.

**Flukes**: Horizontally flattened cetacean tail (p. 8).

**Gestation**: The carrying of young in the uterus until birth.

**Gregarious**: Social.

**Hatching**: A recently hatched turtle.

**Haulout (noun)**: A shore side resting site.

**Haul out (verb)**: To rest onshore.

**Herbivorous**: Feeding on plants.

**Infra-marginal scutes**: Scutes forming the bridge of a turtle's shell (p. 98).

**Keel**: Distinctive bulge on either or both sides of the tail stock (p. 8).

**Krill**: Small, shrimp-like crustaceans (see Euphausiidae).

**Lactation**: Production of milk by female; duration of suckling.

**Lanugo**: White fur coat that some seal pups are born with or shed just prior to birth.

**Lobtail**: To forcefully slap water surface with tail.

**Logging**: Resting motionless at or near water surface.

**Melon**: Bulbous furhead of toothed whales; believed to help focus sound while echolocating (p. 8).

**Molt (noun)**: Period of time when fur is replaced.

**Molt (verb)**: To shed and replace fur.

**Nuchal scute**: Scute lying at the anterior midline of the carapace at the base of the head (p. 98).

**Ovipositor**: To lay eggs.

**Pack ice**: Mass of broken ice pieces, at edge of permanent sea ice.

**Pectoral fin**: Flipper (p. 8).

**Pelagic**: Related to deep, open ocean water.

**Pinniped**: “Fin-footed” carnivores, including seals, sea lions, and walrus.

**Plastron**: Bony shield composing the lower half of a turtle's shell (p. 98).

**Polygamous**: One male mates with more than one female.

**Porpoising**: Leaping above water surface while swimming fast.

**Pupping**: Process of giving birth in pinnipeds.

**Rockery**: Land site used by pinnipeds for pupping and breeding.

**Rostrum**: Upper jaw (p. 8).

**Sargassum**: A mass of floating vegetation composed largely of a type of brown algae, Sargassum.

**Scute**: Bony scales (plates) that cover underlying bony plates of carapace and plastron (p. 98).

**Sexual maturity**: Age at which animal is first capable of breeding.

**Spyhop**: Poke head vertically out of water.

**Straight-line carapace length**: Horizontal length of a turtle’s upper shell from nuchal scute to last vertebral scute, using calipers.

**Taxonomy**: Classification of organisms according to how they are related to one another.

**TED**: Turtle excluder device; a grate-like “clover” inserted in a fishing net to deflect turtles out of the net.

**Threatened Status**: Species likely to become endangered within foreseeable future in all or significant part of its range.

**Vertebral scutes**: Series of scutes lying along the midline of the turtle carapace (p. 98).

**Warm-core ring**: Body of warm water isolated from Gulf Stream and surrounded by cooler northern water (p. 4).

**Zooplankton**: Minute animals that in water column, including early life stages of fish and invertebrates.

**Abbreviations**:

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**Gender**:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>m</td>
</tr>
<tr>
<td>female</td>
<td>f</td>
</tr>
</tbody>
</table>
Marine Mammals:

Sea Turtles:
Any live stranded cetacean is in distress. Contact nearest stranding network immediately. Do not attempt to force animals back into the water. Prevent additional stress to these animals from noise, crowds, and dogs.

Regional Stranding Networks

Northeast
617-973-2347
RI, CT: 860-572-5955
NY: 516-369-9829
NJ: 609-286-6538
DE: 302-739-4782
MD: 804-684-7313
VA: 737-664-2755
NC: 910-815-7725
SC: 800-922-5431
GA: 800-322-2246
FL: 800-DIALMP

Southeast
305-862-2850
OR
Contact the U.S. Coast Guard on VHF Channel 16
Puerto Rico/Virgin Islands
787-767-8069

Body length and characteristics of the throat grooves and flippers may aid species identification. Report the species, condition, and location of floating carcasses to the nearest stranding network office.

Report, but do not disturb, lone seals and turtles—it can endanger both you and them.