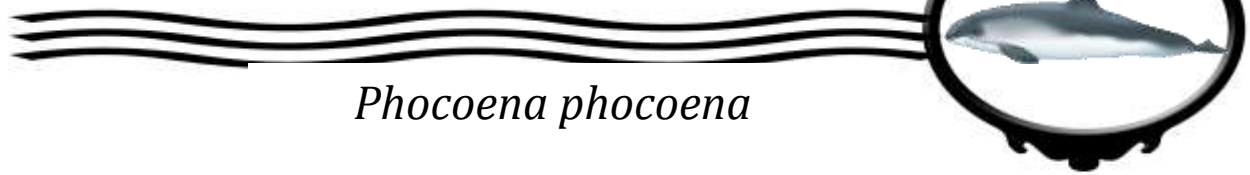


Harbor Porpoise



Phocoena phocoena

Physical Description:

Harbor porpoises are one of the smallest of the cetaceans, reaching a maximum size of 6 feet and 200 pounds while average size is around 5 feet and 130 pounds. Females are slightly larger than males. They have small, robust bodies with blunt, rounded snouts and no prominent beaks. While the back of a harbor porpoise is dark gray or dark brown, their belly and throat are white. They have a dark gray chin patch and intermediate shades of gray along their sides. The flipper of a harbor porpoise is dark in color, small, rounded at the tips, and oval in shape. A dark stripe extends from the flipper to the eye. These porpoises have a medium-sized dorsal fin. The dorsal fin is broad based, low, and triangular and is located slightly aft of the center of the body. A series of small nodules can sometimes be found on the leading edge of the dorsal fin. They have 22 to 28 small, spade shaped teeth on each side of the upper jaw and 22 to 26 on each side of the lower jaw.

Photo Identification Methods:

Harbor porpoises can be identified by their dorsal fins in combination with their flanks: pigmentation, color pattern anomalies, and deformities.

Natural History:

Species Subtypes:

Four subspecies of harbor porpoise are recognized: *P. p. phocoena* in the North Atlantic; *P. p. vomerina* in the eastern North Pacific; *P. p. relict* in the Black Sea; and an unnamed subspecies in the western North Pacific. In the North Atlantic Ocean, fourteen population stocks have been proposed and in the North Pacific, several population stocks have been identified based on genetic studies. There are no synoptic surveys covering the entire range within ocean basins, but abundance has been estimated for selected portions of the range.

About 73,000 animals have been estimated to occur along the west coast of the USA (including California, Oregon, and Washington). Harbor porpoise are known to occur year-round in the inland trans-boundary waters of British Columbia, Canada, and Washington State, USA, and along the Oregon/Washington coast. Two stocks were historically recognized in the waters of Oregon and Washington, with a boundary at Cape Flattery, Washington. However, based on recent genetic evidence, which suggests that the population of eastern North Pacific harbor porpoise is more finely structured, stock boundaries on the Oregon/Washington coast have been revised, resulting now in three stocks in Oregon/Washington waters: a Northern California/Southern Oregon stock (Point Arena, CA, to Lincoln City, OR), a Northern Oregon/Washington Coast stock (Lincoln City, OR, to Cape Flattery, WA), and the

Washington Inland Waters stock (in waters east of Cape Flattery). Through aerial surveys, an average of 2002 and 2003 estimates of abundance in U.S. waters resulted in an uncorrected abundance of 3,123 harbor porpoise in Washington Inland waters. When corrected for availability and perception bias, the estimated abundance for the Washington Inland Waters stock of harbor porpoise in 2002/2003 was 10,682. In southern Puget Sound, harbor porpoise were common in the 1940s, but marine mammal surveys, stranding records since the early 1970s, and harbor porpoise surveys in 1991 indicated that harbor porpoise abundance had declined in southern Puget Sound. Reasons for the apparent decline are unknown, but it may have been related to fishery interactions, pollutants, vessel traffic, or other factors. In 2009 and 2010, however, increased numbers of harbor porpoise have been sighted during vessel surveys throughout Puget Sound and increased numbers of strandings have also been documented, suggesting a return of animals to this region. In Alaska, abundance is estimated at about 89,000. In the western Atlantic, there are an estimated 75,438 in the Gulf of Maine/Upper Bay of Fundy to the entrance of the Gulf of St. Lawrence and 27,000 for the Gulf of St. Lawrence. Abundance has been estimated at 27,000 in Iceland and 11,000 off North Norway - Barents Sea. In the waters of the European Atlantic, abundance in 2005 was estimated at 385,600 of which about 335,000 were estimated in the North Sea and adjacent waters. The abundance in the Baltic Sea is estimated at 599. Line transect surveys have been conducted recently (since 2001) to estimate harbor porpoise abundance in different portions of the Black Sea. These suggest that total population size in the region may be at least several thousand and perhaps as many as 10,000-12,000.

Reproduction:

Harbor porpoises may be seen singly or in pairs, or in small groups of 6 to 10 animals. Sightings have been reported, though, of 50 to 100 in groups that were actively feeding. In the Salish Sea waters of Washington State and southern British Columbia, the range of estimated conception dates for harbor porpoises ranged from August to December, with gestation lasting approximately 10.8 months. Most calving appears to occur between August and October. Males will often compete for the right to mate with a given female. After mating the pair will go back to their separate ways of living. Mothers bring newborn calves to secluded coves to nurse. Some populations are known to migrate, but when they return to their regular waters, they are territorial, patrolling certain areas. While this has only recently been documented, mating is known to sometimes occur between female Dall's porpoises and male harbor porpoises resulting in hybrids. However, hybrid calves have been observed with their Dall's mothers and display behaviors characteristic of Dall's porpoise.

Life Cycle:

The life span of a harbor porpoise is up to about 24 years. Females are believed to reach sexual maturity at 3 to 5 years. Gestation is about 10-11 months and calves are 27 to 35 inches at birth (70 to 90 cm) and weigh 14 to 22 pounds (6.4 to 10 kg). Although, based on local stranding data, calves in the Salish Sea waters of Washington State and southern British Columbia tend to be smaller with an average length of 31.5 inches (80 cm) and weight of about 11-13 pounds (5.0 to 5.9 kg). Calves nurse for about 8 months although it can be up to 12 months. The calving interval for females is usually every 2 years.

Range:

Harbor porpoises have a discontinuous distribution. They are an inshore species inhabiting shallow, coastal waters although they occasionally travel over deeper offshore waters. They

are commonly found in bays, estuaries, harbors, and fjords less than 650 ft (200 m) deep. They inhabit temperate and subarctic waters of less than 60 degrees F (15 degrees C) in the North Atlantic, North Pacific, and Black Sea.

In the North Atlantic, they range from the west coast of Greenland to Cape Hatteras, NC, USA (but do not enter Hudson Bay), and from the Barents Sea (located off the northern coasts of Norway and Russia) to the west coast of Africa. In regards to European bodies of waters, this is the only cetacean species that currently regularly occupies the Baltic Sea. The species occurs in the Black Sea, Marmara Sea, and Sea of Azov, but with the exception of the adjacent northern Aegean Sea, they do not regularly occur in the Mediterranean Sea. In the North Pacific, they are found from Japan (34°N) north to the Chukchi Sea (a marginal sea of the Arctic Ocean) and from Monterey Bay (CA, USA) to the Beaufort Sea (another marginal sea of the Arctic Ocean). A map of their distribution can be found at <https://www.iucnredlist.org/species/17027/6734992>.

Diet:

Harbor porpoises eat non-spiny fishes (such as herring, cod, whiting, pollock, and sardines), cephalopods (squid, octopus), as well as crustaceans (shrimp). When diving for food, harbor porpoises stay down for an average of 4 minutes and are believed to be able to dive as deep as 200 m or 656 ft.

Status:

Overall abundance is not well known due to fragmented population studies/surveys, but the estimated global abundance of the harbor porpoise is at least 700,000 individuals. Though still abundant, they are not as numerous as they once were. There is evidence of decline in abundance in some areas, e.g. in the Black Sea, in the Baltic Sea, and in inland waterways of Washington State, USA

Threats:

Current threats include:

- Substantial numbers taken off the coast of Greenland for food and oil
- Entanglement in salmon and cod nets; trawl and gill net fisheries
- Drive fisheries and netting (dolphins and other small cetaceans are driven toward the shore and rounded up/killed) in the Black and Baltic Seas
- Pesticides
- Destruction of habitat by coastal development
- Boat traffic (strikes, disturbance by presence and noise resulting in changes in behavior and decreases in surface foraging)

Fun Facts:

- Their name is derived from the Latin word for pig (*porcus*). They are sometimes called "puffing pigs" because of the sneeze-like puffing sound they sometimes make when breathing.
- Each day, they consume an amount of food approximately equal to 10% of their body weight.
- When surfacing for air, they typically do not splash; they roll from beak to fluke and arch the back.
- Harbor porpoises are generally “shy” and elusive, not inclined to approach boats and bow ride, unlike many other dolphin and porpoise species.

- The testes of a male harbor porpoise are exceptionally large during the reproductive season and may account for 4-6% of his body weight.
- Although very rare, twin births have occurred in several cetacean species (both baleen and toothed whales), including harbor porpoises. In 2014, the first known instance of normal harbor porpoise twins was reported. In 2017, scientists in the Netherlands documented the first known instance of conjoined twin harbor porpoises

Sources:

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