

Dall's Porpoise



Phocoenoides dalli

Physical Description:

Dall's porpoises are fast swimming members of the porpoise family. They can reach a maximum length of just under 8 feet (2.4 m) and weigh up to 480 pounds (220 kg). Males are slightly larger and thicker than females, which reach lengths of just under 7 feet (2.1 m) long. Dall's porpoises in the eastern Pacific are smaller in size compared to those in the western Pacific. These porpoises have relatively small triangular heads with little or no beaks and thick, dark gray or black bodies with a contrasting white belly patch. Adults have more distinct coloration than juveniles. Because of their coloration and size, they are often mistaken for baby killer whales. However, Dall's porpoises have a white "frosting" on their dorsal fins which killer whales do not have. They also lack white eye patches which killer whales have. Dall's porpoises have small, rounded flippers and a short, triangular shaped dorsal fin positioned in the middle of their bodies which often angles forward. Their tail stock and keel (caudal peduncle) are exaggerated which creates a pronounced hump. Like all porpoises, they have spade-shaped teeth (38-56 teeth on each jaw).

Photo Identification Methods:

Individual Dall's porpoises can be identified by their dorsal fins: pigmentation, color pattern anomalies, and deformities.

Natural History:

Species Subtypes:

Dall's porpoises are separated into two major types or subspecies: the *truei*-type (*P.d. truei*) which is common in the Western Pacific Ocean (between 35°N and 54°N) and the *dalli*-type (*P.d. dalli*) found throughout the North Pacific Ocean. For management purposes, Dall's porpoises inhabiting U.S. waters have been divided into two stocks: the Alaska Stock and the California/Oregon/Washington Stock. In U.S. waters, it is estimated that there are 76,000-99,500 off of the U.S. West Coast (California, Oregon, and Washington) and 77,000-83,500 in the Alaska Stock. In the western North Pacific, there are an estimated 100,000 off of Japan and several hundreds of thousands in the Okhotsk Sea.

Reproduction:

A male Dall's porpoise will exhibit "mate-guarding" of breeding-age females, protecting his paternity by being the only male to mate with a particular female. This behavior possibly may be one reason why hybridization between Dall's porpoise and harbor porpoise occurs occasionally in Salish Sea waters with harbor porpoise as the paternal parent and Dall's porpoise as the maternal parent. While male Dall's porpoises are busy mate-guarding, male harbor porpoises are quite promiscuous and

ensure their reproductive success by mating with as many female porpoises as possible (no matter what species they are). Offspring from these unions tend to appear more similar to Dall's porpoise in body shape, diving characteristics and behavior, but they lack the white side patches and their coloring is more similar to the harbor porpoise. While mating and calving can occur year-round in Dall's porpoises, calving appears to peak between June and September (at least in U.S. waters).

Life Cycle:

These porpoises are usually found in groups averaging between 2-20 individuals, but have been observed in larger, loosely associated groups in the hundreds or even thousands. Dall's porpoises typically live less than 20 years. Dall's porpoises become sexually mature at 3.5-8 years of age and females give birth to a single calf after 10-12 months. At birth, calves are on average about 3.5 ft. in length and weigh about 55 pounds. Calves are typically born in the summer months (although they can be born year-round) and nursed by their mothers for less than one year. Calves and their mothers live separate from the main porpoise herds for a period of time. Calving intervals for females are around 3 years.

Range:

Dall's Porpoises are found only in the North Pacific, ranging from Baja California north to Alaska and the Bering Sea and across into Japanese waters (Sea of Japan, Okhotsk Sea), seemingly confined to colder waters. Many are year round residents within their range. In the Bering Sea, they occur in higher abundance near the shelf break although Dall's porpoises can be found in offshore, inshore, and nearshore oceanic waters. There are some migration patterns, inshore/offshore and north/south, based on morph/type, geography, and seasonality. They prefer temperate to boreal waters that are more than 600 ft. deep and with temperatures ranging between 36°F and 63°F.

Diet:

Dall's porpoises eat a wide variety of prey sources including squid, small schooling fishes (such as capelin, sardines, and herring), and deep-water fish species (such as hake, deep-sea smelt, and lantern fish). A Dall's porpoise can consume about 28 to 30 pounds of food a day.

Status:

Although there is currently insufficient data available on population estimates, they are considered reasonably abundant. In the North Pacific, there are possibly 1.2 million animals and in U.S. waters, it is estimated that there are 130,000 individuals. Although still numerous, Dall's porpoises are in need of monitoring due to the large numbers caught in Japanese gillnet fisheries and by Japanese whaling operations. Efforts are now being made to regulate the annual losses of Dall's porpoises.

Threats:

Current threats to Dall's porpoises include:

- Being incidentally caught in fishing gear, such as those targeting groundfish, salmon, and squid in Canadian, Russian, Japanese, Alaskan, and other U.S. waters. These fishing gear include drift nets, gillnets, and trawls
- Large numbers taken annually (about 18,000 each year) by Japanese hunting as a source of meat for human consumption – impact on sustainability of population

- Pollutants and various contaminants in the marine environment resulting in high toxicity levels within the animals

Fun Facts:

- Capable of reaching speeds up to 30 knots (34 miles per hour), Dall's porpoises are considered the fastest swimmers among small cetaceans!
- When swimming fast, they often generate a "rooster tail" spray that can be visible at long distances.
- They often "bow ride." The bow of a moving ship creates a pressure wave in the water. By sidling up to a boat and swimming just below the surface, they ride in the pressure wave in such a manner as to be propelled along entirely by the pressure wave without having to spend any energy on tail or fluke beats.
- They can be found with other cetacean species, including white-sided dolphins, pilot whales and baleen whales.
- Dall's porpoises do most of their feeding at night.
- On May 21, 2011, a dead porpoise stranded on the south end of San Juan Island. It had markings unlike those of a harbor porpoise or a Dall's porpoise and it was quickly determined that this animal was a naturally-occurring hybrid between a harbor porpoise and a Dall's porpoise. What was especially exciting about this hybrid was that she was pregnant, with a full-term fetus! This was the first concrete evidence that adult female hybrids are fertile. Whether male hybrid porpoise are fertile or sterile is unknown. Hybrids seem to exhibit coloration similar to that of a harbor porpoise. It appears as if mating occurs between female Dall's porpoises and male harbor porpoises. Hybrid calves are always observed with their Dall's mothers and display behaviors characteristic of Dall's porpoise.

Sources:

Information compiled by Tracie Merrill – October 2017.

www.nmfs.noaa.gov

www.acsonline.org/fact-sheets/dalls-porpoise/

www.wildwhales.org/2011/06/pregnant-female-hybrid-porpoise-strands-off-san-juan-island-wa/

