Harbor seal (P. vitulina)

**SPECIES:** Phoca vitulina

The harbour seal, *Phoca vitulina*, was named and described by Linneaus in 1758. It is also known as the common seal. Its near presence to humans in many Northern European and North American areas makes the harbour seal an important species that has been exploited for fur, blubber and meat for thousands of years.

Since the description by Linneaus it was later realised there are several subspecies of harbour seals (see below) P. v. concolor was described by DeKay in 1842, P. v. richardii by Gray in 1864, P. v. stejnegeri by Allen in 1902 and P. v. mellonae by Doutt in 1942. P.v. richardii is found on the North American Pacific coast; Allen further distinguished the southern Californian population of harbour seals from the northern one and called it in 1902 P. v. geronimensis.

**DISCOVERY:**

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**TAXONOMY:**

- Order: Carnivora
- Sub-order: Pinnipedia
- Family: Phocidae
- Genus: Phoca
Size, shape and distinctive characteristics

The harbour seal is a small seal with a mottled, black-grey fur. The dorsal side of the fur is darker than the ventral side. The fur turns much lighter when the seals are drying up on land than when they are swimming in the water. The face has a rather dog-like appearance with the large eyes are relatively close-set. The profile shows a clear bent line from the upper side of the nose to the frontal part of the skull, whereas the in many areas sympatric grey seal has a much more straight line from the nose towards the top of the head.

There is a slight sexual dimorphism in harbour seals. Males grow to 70-150 kg and up to 1.9 m length, whereas females are smaller (60-110 kg and 1.7 m).

In the field, harbour seals can be seen swimming at the surface while ventilating between foraging dives, or hauling out on small rocky islands or sandy beaches. When on land, the seals are always very vigilant, and if a colony is approached by boat the seals will usually make a rapid dash into the water. While relaxing at the surface between foraging dives, there is a better chance to carefully get closer to a seal from a boat without disturbing them. Also, during the mating season it is quite common to observe male harbour seals dropping their vigilance and coming quite close to boats while performing their sexual displays.

Geographical distribution

The harbour seal is one of the most common seals in Northern European waters. In Scandinavia, it is found in large numbers the waters between Sweden and Denmark, and on the Danish and Norwegian west coast. There is a small and genetically separated colony in the southern Baltic Sea, in the Strait of Kalmar.

Throughout western and northern coasts of Europe as well as on the U.K. coasts there are many colonies of harbour seals. There is a small population on the southern coast of Greenland. There are several larger colonies on the US. East coast, and...
they are also found in the Pacific: Baja California in Mexico and northwards to Alaska on the American West coast, and further on down to Japan on the Asian side of the Pacific.

There are five subspecies that are currently recognized: *P. v. vitulina* in the eastern Atlantic, *P. v. concolor* in the western Atlantic, *P. v. mellonae* in fresh water lakes in the Ungava Peninsula, Canada, *P. v. richardii* in the eastern Pacific, and *P. v. stejnegeri* in the western Pacific.

**Ecology and Behaviour**

Harbour seals are colonial and haul out in numbers usually ranging from a few individuals up to several hundred or even thousands of seals. The haul-out site is usually on remote islands or sand spits where the animals vigilantly keep track of any approaching dangers. Many traditional harbour seal haul out sites are protected, so that it is forbidden to approach them both on land and with a boat. In some areas, such as Sweden and Scotland, harbour seals haul out on smooth rocks, whereas in other areas, such as in Denmark, the haul-out sites are on sandy beaches in remote locations. Genetic data indicates that the seals have a preference to return to the same general haul-out area they come from after each foraging trip.

The seals are hauling out to relax and stay away from aquatic predators. Also, the pups are born and nursed on land (see below). Molt occurs in August and during this period the seals are mainly staying on land. Therefore the population assessments made at regular intervals in several countries are made during this time by photographing the colonies from the air.

The seals hunt for fish and squid of various sizes. Satellite taggings have shown that harbour seals can make extensive several-day long foraging trips from their haul-out sites. The harbour seal can dive for more than ten minutes and to beyond 500 meters of depth to catch their prey. Usually however dives are much shorter and much more shallow (some tens of meters). It has been shown that the seals can make use of their vibrissae to track the hydrodynamic trails of a passing fish.

**Life History**

Females give birth to a single pup in May or June. The pup is nursed for 3–4 weeks. After weaning the pups are soon left by themselves, perhaps after what probably is a very short introduction in how to hunt for fish.

Towards the end of the females' nursing period, the male seals seem to establish underwater territories, where they try to get access to the females and keeping other males away by using underwater vocalizations and various types of surface displays, such as slapping with the fore- and hindlimbs, and jumping out of the water.

After mating, the implantation of the fertilized egg is delayed some 1.5–3 months. The total period of pregnancy is 10–5 to 11 months. The peak of births varies widely by area, ranging from February in Baja California to June–July in Europe. The females usually give birth to a single pup every or every second year. Females become sexually mature at and age of 3–5 years, and males at about 6 years. The harbour seal may become 30–35 years old.

**Diet**

Harbour seals feed on smaller fish, both demersal and pelagic. In some areas, there are conflicts between harbour seals and fishermen. These conflicts are mainly because the fact that harbour seals may destroy catch and gear in stationary fish traps and gill nets. As harbour seals seem to prefer smaller fish, it is not likely that harbour seals and fishermen actually compete about the fish they catch.

**Population Status:**

**Global Abundance**

The world-wide population of harbour seals is 300-500,000 individuals. The population has previously been regulated by hunting, but nowadays it seems that the European populations are mainly regulated by mass die-offs caused by a phocine
distemper virus at regular intervals. The Pacific populations are also relatively healthy, but in the outer areas of its distributional range such as in California and Mexico the present populations may be more vulnerable to human impact from disturbance and interactions with fishing gear.

**IUCN status**

For one subspecies data is deficient (the *mellonae* subspecies), and for the other subspecies there are Least Concern. The Baltic Sea population should probably be regarded as its own population, and it is vulnerable or threatened.

**CONSERVATION ISSUES:**

Harbour seal haulout sites need protection, so that in many areas seal reserves have been established to protect the harbour seal.

In areas where harbour seals are causing damages on fishing gear, small hunting quotas are allowed by some governments.

**AUTHORS**

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**KEY REFERENCES:**


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