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Common seals and grey seals

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WADDEN SEA
WORLD HERITAGE

Nationalpark
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Common seals live near to coasts in the whole of the northern hemisphere, including the Atlantic Ocean, the North Sea and the Baltic Sea. In the Wadden Sea, common seals rest on sand banks at low tide.

Amazing facts about seals

Seals inhabit coastal waters and beaches. All seal species have evolved to be well adapted to life at sea, for instance through their streamlined bodies, shortened hind legs (for common seals these function as propelling fins), forelegs developed into flippers, and webbed toes.

Seals have a thick layer of fat known as blubber, just as whales do, which serves to keep them warm in cold water. Their nostrils and ear holes stay closed when underwater.



The common seal (*Phoca vitulina*), like the grey seal, is a species of the family of earless seals. While in water seals usually hunt on their own, on land they tend to gather in large groups.

The grey seal (*Halichoerus grypus*) is found in the North Atlantic and in the Baltic Sea. Males are considerably larger than females.



When they dive deep into the water, only their muscles, brain and heart are supplied with blood, so that their metabolic rate is significantly reduced. Seals can store more oxygen in their blood than land mammals can, and also store extra oxygen by using myoglobin – an oxygen-binding protein – in their muscles.

All seals have a well-developed sense of smell. They can perceive changes in pressure and water current through their whiskers. Their teeth are also specially adapted: Seals do not chew their food and their teeth are specialised for catching fish, which they usually swallow whole. Seals used to be hunted in large numbers off coasts all over the world, but hunting the common seal was banned in Germany in the 1970s.

Seals are divided into three families: eared seals, earless seals (or true seals), and walrus. The German coast of the North Sea is home to two of a total of 35 species of seals worldwide: the common seal (also known as the harbour seal) and the grey seal. Very occasionally, other seals from northern latitudes also appear in the Wadden Sea, such as the ringed seal, the harp seal, and the bearded seal. The common seal and the grey seal both belong to the earless seal family, which evolved from ancestors similar to otters.

Common seals: our oldest fishermen

Common seals are opportunistic feeders: they are not selective, but instead will catch and eat any fish that happens to swim by. In the Wadden Sea, their diet consists primarily of gobies, sand eels, whiting and various species of flatfish, and their preference is for smaller fish up to 20 cm in length. Young common seals mainly eat shrimp.

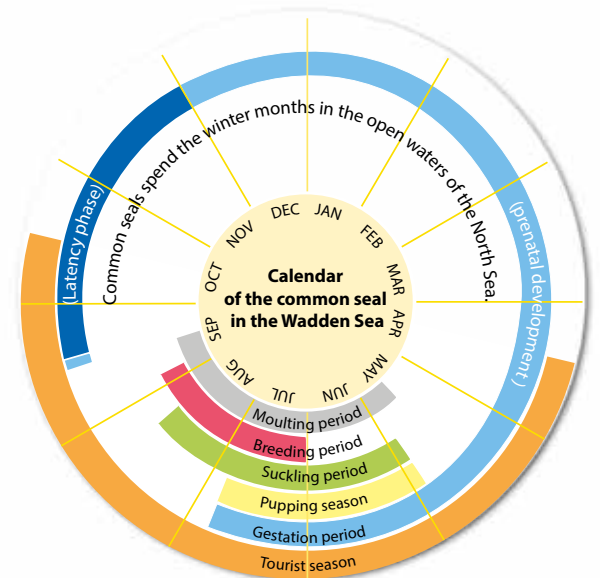
The common seal uses its whiskers to detect and follow the movements of fish in the water while hunting.



When they want to hunt extensively, common seals leave the Wadden Sea and swim 50 km or more out into the North Sea. They hunt for one to three days or more, before returning for a well-deserved rest in the Wadden Sea for a similar period.

The range of food that the common seal hunts and eats only partially overlaps with the species that the local fishermen catch. Common seals can therefore affect fish populations in smaller areas, but on the scale of the entire North Sea and the world as a whole, the fishing industry itself is the determining factor in the decreasing numbers of fish in the sea.





Common seals make use of the Wadden Sea mainly in the summer months, during the tourist season.

(Pocher, based on Behnke and van Haften)

During the pupping season ...

... common seals need peace and quiet. At the end of May, the pupping season begins and lasts approximately four weeks. Females give birth to their young on remote sand banks at low tide. Usually, the new-born pups weigh between 7 and 10 kg. Giving birth itself takes only a few minutes: this is called a precipitate delivery. When they are born, the pups have a short coat of water-repellent fur.

When the tide next comes in, they have to follow their mothers into the sea straightaway, though they may be carried “piggyback-style” early on. The pups are usually suckled on sand banks when the tide is out, or occasionally in shallow waters. Seal milk is very nutritious and has a high fat content (45%). After just four weeks, pups weigh about 25 kg and must now become self-sufficient. Their fat stores last until they have learned how to fish independently. Hunger is a very efficient teacher!



At the end of May, the pupping season begins and lasts approximately four weeks.

“Heuler” are common seal pups separated from their mothers due to weakness, illness or some other problem. They call out for their mothers with noises that sound like crying (ger. “heulen”).



Return of the grey seal

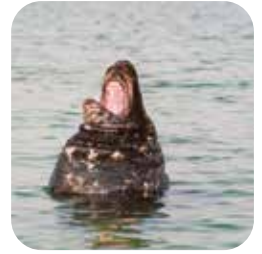
Until the Middle Ages, grey seals were the most common species of seal found in the Wadden Sea, but human activity almost drove them into extinction. Now they are back again – a major success story for the national park.

Male grey seals can be up to 2.3 m long and weigh about 330 kg. Females weigh only half as much and are lighter, with black speckles. Males have darker fur, some with light speckles, though many variations in colour are possible. Their long, cone-shaped snouts form their primary identifying characteristic. In the Wadden Sea, there are grey seal colonies in the area around the Knob sandbanks by Sylt and Amrum and on the Kachelotplate west of Juist, and there is a group near the Dutch island of Terschelling. A sizeable colony of more than 1.500 grey seals has also settled just beyond the Wadden Sea on the dune island adjacent to Helgoland.

The grey seal and the common seal are at the top of the food chain and have no natural predators in the Wadden Sea. The main threats to them are water pollution and habitat loss due to human activity.



Grey seals have elongated heads and cone-shaped teeth, giving them their German name: “Kegelrobben”, which means “cone seals”. Their diet mainly consists of fish.



Young grey seals come into the world at a rather chilly time of year: between late November and late January. They weigh between 10 and 15 kg at birth, and have a coat of white, fluffy fur called lanugo, which protects them from the wind but not from the icy temperatures of the water. Before they can enter the water, they have to build up a sufficiently insulating layer of fat. Their nursing sites are situated on sandbanks which stay dry at high tide.

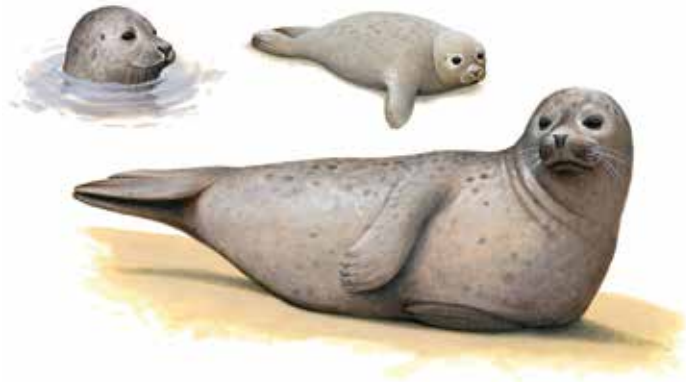
Thanks to the high fat content in their mothers’ milk (53 %), pups gain 1.5 to 2 kg in weight per day! They are weaned at 2–3 weeks, and are then left alone to live off their fat stores and grow new fur.



Young grey seals are often seen lying on sand banks, beaches or in the dunes: they may appear to have been abandoned, but are in fact waiting for their mothers to return. After 3–6 weeks, they lose their lanugo and grow an adult coat of fur. At this point they are self-sufficient and leave for deeper waters of the North Sea. Grey seals are sexually mature at the age of 4–7, but only reach their maximum size at 10 to 15 years.

Profile: common seal

| | |
|-------------------------------|---|
| Latin name: | <i>Phoca vitulina vitulina</i> |
| Distribution: | Northern hemisphere |
| Size and weight: | Females: 1.2 m – 1.5 m; up to 80 kg Males: 1.5 m – 1.8 m; up to 110 kg |
| Appearance: | rounded head, greyish silver fur with dark speckles |
| Diet: | fish pups also feed on shrimps |
| Pupping period: | Early summer (May / June) |
| Pups: | 7–10 kg at birth short, water-resistant fur suckled for approx. 4 weeks milk contains 45 % fat |
| Wadden Sea population: | approx. 23,800 (counted in 2024) |
| Threats: | disturbance of resting areas water pollution Phocine Distemper Virus |
| Conservation status: | protected all year (close season all year) |



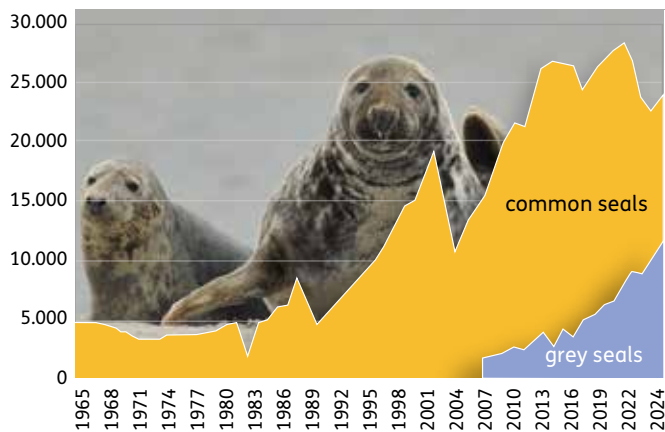
Profile: grey seal

| | |
|-------------------------------|---|
| Latin name: | <i>Halichoerus grypus</i> |
| Distribution: | North Atlantic, West Atlantic and Baltic Sea |
| Size and weight: | Females: up to 1.9 m; up to 150 kg Males: up to 2.3 m; up to 330 kg |
| Appearance: | elongated head cone-shaped teeth Females: light with dark speckles Males: dark with light speckles |
| Diet: | fish (e.g. cod, sand eel, herring) |
| Pupping period: | winter (November to January) |
| Pups: | 10–15 kg at birth fluffy white lanugo fur suckled for 2–3 weeks milk contains 53 % fat |
| Wadden Sea population: | approx. 11,500 (counted in 2024) |
| Threats: | loss of habitat flooding of pupping areas water pollution |
| Conservation status: | protected species under nature conservation laws (protected species under nature conservation laws and hunting ban) |



The art of counting seals

Although these animals are not exactly small, counting seals is not very easy. The number of common seals in the Wadden Sea is surveyed every year during the summer months. They are counted at several intervals from aeroplanes, always at low tide. This is when many of the common seals are at rest on sand banks, and it is therefore easier to count them than it is when they are in the water. It is very important that the entire Wadden Sea is surveyed from the air at the same time, within the space of one low tide phase, to avoid counting any seals twice. The dates for counting are therefore coordinated by the Trilateral Expert Group Marine Mammals and the the Common Wadden Sea Secretariat, and the surveys are carried out simultaneously in Schleswig-Holstein, Hamburg, Lower Saxony, Denmark and the Netherlands.



Development of the seal population in the Wadden Sea (Denmark, Germany and the Netherlands) over time. Significant declines caused by epidemics of canine distemper in 1988 and 2002 are clearly visible. The grey seal population has only been counted since 2007.



The common seals of the Wadden Sea face many threats and dangers for which we as humans are responsible. It is therefore important for all tidal flat walkers, yachters and other boat users not to disturb the resting areas of common seals!

In the summer of 2024, a total of 23,772 common seals were recorded in the entire Wadden Sea area and Heligoland: 6,438 were counted in Lower Saxony and Hamburg, 8,531 in Schleswig-Holstein, 2,143 in Denmark and 6,604 in the Netherlands. It is not always possible to count every single seal, as approximately a third of the seals is always in the water.

Grey seals give birth in winter, on sandbanks that are not flooded by the tide. In Lower Saxony, the number of births is recorded during several counts from the air, while in Schleswig-Holstein they are observed and recorded regularly from boats or from the land. During the moulting period in March/April, two aerial survey of grey seals are carried out covering all three countries. This is how the total number 11,515 of grey seals in the trilateral Wadden Sea area and Heligoland in 2024 is recorded. However - some of the animals are only visitors from other areas.

Threats

Pollution causes illness

Seals and whales are at the very end of the food chain in the sea. This means that many harmful substances end up accumulating in their bodies. Common seals are highly contaminated by polychlorinated biphenyls (PCBs) and other environmental toxins. These toxins damage the seals' reproductive systems and weaken their immune systems. The accumulation of pollutants in a common seal's layer of blubber can even indicate whether it lived near the estuary of the river Elbe or the Rhine! A further major problem for common seals are abandoned fishing nets, in which the seals can become trapped and seriously injure themselves or even drown. Other types of rubbish such as plastic and glass as well as oil spills (on a large or small scale) can cause further injuries to seals.

The mystery of Phocine Distemper

Coughing, blood-stained mucus and inflamed lungs: these are the symptoms of the Phocine Distemper Virus in seals, the cause of the painful deaths of thousands of common seals in the North Sea and the Baltic Sea in 1988 and 2002. In 1988, approximately 18,000 seals died; in 2002 it was around 21,700. The grey seal was hardly affected at all.

National park ranger and seal expert Karl-Heinz Hildebrandt recovering a dead common seal.



The epicentre of the epidemic in both years was the Danish island of Anholt in the Kattegat area. From there, the virus spread into the Wadden Sea. In 1988, the disease was most likely brought by harp seals, which are permanent carriers of the virus: they live in the Arctic Ocean and had moved further south due to a lack of food in their usual habitat. In 2002, the virus may have been transmitted by grey seals, as they live with common seals in a mixed colony on Anholt. The Phocine Distemper Virus is spread between animals through droplet infection. Up to 60% of the common seals in the Wadden sea died during the epidemic, but since then, numbers have recovered well.

In 2014, another epidemic among the seals took place. This time the cause was an influenza virus. A total of 2,500 dead seals were collected in the area of the German Wadden Sea. The epidemics are not, as it is sometimes suggested, an indication of common seal overpopulation in the Wadden Sea. Numbers are regulated through natural factors such as food availability and the animals' rate of reproduction.



A boat trip to the seal banks or a visit to a seal centre offer great opportunities for watching seals.

Where can I watch seals?

At low tide, common seals in the Wadden Sea can easily be observed from boats. On boat trips to the seal banks, the wellbeing of the seals themselves must of course be the primary concern. Approaching slowly and quietly, and maintaining a sufficient distance, makes sure that the animals are disturbed as little as possible; they often do not even raise their heads as the boats pass by. We recommend taking a discovery trip with certified national park partners.

On the dune island off Helgoland, it is possible to see both common seals and grey seals at very close range, as the two species live here together. Of course, it is still necessary to keep a safe distance here as well, as these are wild animals with sharp teeth. It is best to stay close to the foot of the sand dunes and please take care not to disturb the seals.

On the island of Neuwerk, you can take part in the “Seehund-Kiek” or seal-watching tour: this is a mud-flat walk during which common seals in the Elbe estuary are observed from a safe distance. Seals in the Lower Saxon Wadden Sea can be observed from land, for instance on Borkum, Norderney and Langeoog.

Common seals and grey seals can be seen up close in the seal centres (ger. “Seehundstationen”) in Friedrichskoog and Norden-Norddeich, where more detailed information of seals is also available.



Please do not touch the seal pups!

The pups of grey seals are often left on beaches by their mothers for periods of several hours. The mother goes to swim and hunt in deeper waters, while the pup waits, high and dry, until the milk bar returns for business. The pups of common seals mostly remain with their mothers. When they are found alone on the beach, it often means that they have lost their mothers or have been weaned already. **If you happen to come across a seal pup, please do not approach it, it will probably try and escape into the water, and do not try to touch it. Stay at least 300 m away from the pup and make sure that dogs do not approach the animal.**

Despite the fact that the hunting season for common seals is closed all year round, they are subject to the hunting law, which means that certified hunters are responsible for the wellbeing of the seal population and abandoned pups.

The three federal states of Germany that border on the North Sea handle the issue of abandoned seals in different ways: In Schleswig-Holstein,

please contact a seal hunter via the Robben.App, the seal centre in Friedrichskoog (tel. +49 (0)4854-1372), or the police. Only a certified seal hunter has the right to decide whether a pup that has been found will be capable of surviving or whether it will need to be put down to avoid unnecessary suffering. “Heulers” that really have been abandoned but are still capable of survival are brought to the seal centre in Friedrichskoog. There, they are brought up in conditions as close to their natural environment as possible, and are released back into the Wadden Sea after they have reached a sufficient weight.



Healthy seal pups found lying in exposed areas are protected from disturbance by employees of the national park as well as certified seal hunters and Wadden Sea rangers. This is to provide a chance for the mothers to come back for their young.

In Lower Saxony,

please contact a Wadden Sea gamekeeper or the seal centre in Norden-Norddeich (tel. +49 (0)4931-8919). Healthy pups will be protected from disturbance in the area in which they have been found. Only a certified gamekeeper has the right to decide whether a pup that has been found will be capable of surviving or whether it will need to be put down to avoid unnecessary suffering. “Heulers” that really have been abandoned but are still capable of survival are brought to the seal centre in Norden-Norddeich.

In the area of the Hamburg Wadden Sea,

please inform the National Park Authority (tel. +49 (0)4721-69271) or the Nationalpark-Haus Neuwerk visitor centre (tel. +49 (0)4721-395349) if you find a living adult seal or pup. The animals will be protected from disturbance in the area in which they have been found.

Care of seals in the seal centres is undertaken on the grounds of animal rights, and is not necessary for species conservation.