

# AQUATIC MAMMALS

**Common seals** are carnivorous hunters who are also opportunistic feeders with a large and varied diet. They



have the ability to dive for long periods into deep waters although in Ireland their hunting dives generally last under ten minutes and are usually conducted in shallow waters not more than seventy meters deep. The mating season for common seals in Ireland starts in July and runs until August. Males become more aggressive at this time with fights for dominance occurring underwater. Males may lose a lot of their body weight at this time due to strenuous competing with neck wounds from bites being a common injury. Courtship and mating occurs underwater

with females mating with only the strongest bulls. Males will use vocalizations to attract breeding females. The common seal has few natural predators in Irish waters. Man is still the main cause of seal deaths. They were for centuries hunted for their fur and meat which resulted in a huge decline in their numbers throughout their range by the 19th century. Seal hunting has been made illegal in most parts of the world but their increasing numbers can bring them into conflict with fishermen who can legally shoot seals which are found close to their nets. Disturbance of breeding and resting sites by the presence of humans can have a serious effect on a seal colony's lifecycle. The Irish common seal population should continue to grow since this species is now protected under international, European and Irish law.

**Grey seals** are opportunistic carnivorous hunters with a broad diet which will vary with the availability of prey both seasonally and locally. The grey seal usually rests by day at low tide and at sunset at a haul out site while hunting at night and at high tide in the coastal zone up to 80 meters deep although they can dive deeper than 200 meters. They have the ability to dive for long periods into deep waters although in Ireland their hunting dives generally last under ten minutes and are usually conducted in shallow waters not more than one hundred meters deep. The mating season for grey seals in Ireland starts in August and may run until November with large numbers of individuals gathering at rookery sites at this time. Females will give birth to pups during this period with mating occurring on land or while submerged soon after. During this time mature males will become more vocal and aggressive as they attempt to establish mating dominance at the rookery site. Violent fights will occur with the most successful males gaining access to up to ten females per season. During this period most males will not feed for the eight weeks of the breeding season so they will lose a lot of body size and conditioning. Females with pups will become intolerant of other cows and even defend their pups from male aggression. Grey seals have few natural predators in Irish waters, man is still the cause of most seal deaths. They were for centuries hunted for their fur and meat which resulted in a huge decline in their numbers throughout their range by the 19th century. Seal hunting has been made illegal in most parts of the world but their increasing numbers can bring them into conflict with fishermen who can legally shoot seals which are found close to their nets. The Irish grey seal population should continue to grow since this species has been protected since the 1970's under international, European and Irish law.



**Bottlenose Dolphin:** Bottlenose dolphins are long-lived animals, males are thought to live up to 25-30 years while females may live to over 40 years of age. Female bottlenose dolphins do not breed until they are about 10-12 years of age. The gestation period is 11 months and the new-born calf is totally dependent on the mother for food for the first year of life and remains with the maternal group for a few years afterwards. Even a fully mature female will only breed every 2-4 years, thus the reproductive rate of bottlenose dolphins is low. However, as they live a long time there is a good chance they will rear at least one calf to breeding age in their lifetime and thus the population will remain stable. Male dolphins have no role in rearing the calf. Mature males often form small groups and will compete to mate with receptive females. Maybe this is the source of the numerous tooth rakes and scars dolphins carry on many parts of their body. Bottlenose dolphins like all cetacean species are very vocal. Sound travels much better under water than light, therefore dolphins can hear a lot more than they can see. Bottlenose dolphins produce a wide range of clicks, whistle, creaks, groans and other noises. Clicks are used for echolocation, to navigate and find food, while whistles are used to communicate between dolphins. Each dolphin has its own distinct signature whistle and soon after birth, a mother and calf will learn each others whistle so they can keep in close contact. Bottlenose dolphins live in groups typically of 10-30 members, called pods, but group size varies from single individuals up to more than 1,000. Their diets consist mainly of forage fish. Dolphins often work as a team to harvest fish schools, but they also hunt individually. Dolphins search for prey primarily using echolocation, which is similar to sonar. They emit clicking sounds and listen for the return echos to determine the location and shape of nearby items, including potential prey. Bottlenose dolphins also use sound for communication, including squeaks and whistles emitted from the blowhole and sounds emitted through body language, such as leaping from the water and slapping their tails on the water surface.

Numerous investigations of bottlenose dolphin intelligence have been conducted, examining mimicry, use of artificial language, object categorization, and self-recognition. They can use tools (sponging) and transmit cultural knowledge across generations, and their considerable intelligence has driven interaction with humans. Some encounters with humans are harmful to the dolphins: people hunt them for food, and dolphins are killed inadvertently as a bycatch of tuna fishing.

Bottlenose Dolphins have the largest brain to body mass ratio of any mammal on Earth, sharing close ratios with those of Humans and Great Apes, which more than likely attributes to their incredibly high intelligence and emotional intelligence.



## Bottlenose Dolphins coastal habitat in Connemara

Predominantly coastal in nature, the site extends westwards into Atlantic continental shelf waters up to approximately 7-11 km from the mainland, although in its southern component it remains mostly inshore of the dominant islands: Clare Island, Inishturk, Inishbofin and Inishshark. Its area contains subtidal waters fringing these and other islands, as well as islets and rocky skerries off the County Mayo and County Galway coasts.

The site encompasses a diverse range of shallow marine habitats occurring in waters less than 100 m deep. These include a variety of seabed structures including reefs, islets and sedimentary basins. The site contains physical and hydrographic features believed to be important for Bottlenose Dolphins *Tursiops truncatus*, one of two cetacean species listed on Annex II of the E.U. Habitats Directive. These features include shallow coastal bays, areas of steep seafloor topography and complex areas of strong current flow adjacent to estuaries, coastal headlands and islands, sandbanks, shoals and reefs. Its area borders existing designated sites for protected species and habitats, and lies adjacent to a wide array of coastal features including sheltered bays, estuaries, coastal cliffs and sea caves, several of which are located within protected sites.

Bottlenose Dolphin occurs within the site in all seasons and the area comprises a key habitat for the species both regionally and within Irish waters as a whole. Survey data show that Bottlenose Dolphin occurrence within the site compares favourably with another designated site in Ireland: the Lower River Shannon. Local population estimates off southwest County Mayo and Connemara, County Galway describe a minimum of 123 dolphins with possibly up to 150-200 individuals or more occurring within the site as a whole, exceeding estimates for the Shannon Estuary population. Significant structural linkages have been established between groups of dolphins utilising various coastal habitats within the site while a high proportion of individuals within this Bottlenose Dolphin community have been shown to range freely within its coastal waters. Analyses of genetic structure also show a fine scale distinction between dolphins sampled within the site and animals sampled at the Shannon Estuary or nationally.

Sighting records of Bottlenose Dolphins via coastal and boat-based observations from the Mullet Peninsula and outlying islands, outer Clew Bay, Clare Island, Roonagh, outer Killary Harbour, Ballynakill Harbour and west Connemara are significant for the west coast of Ireland and indicate widespread use of the area by individual groups of dolphins. Groups are known to alter their composition or to aggregate together within the site and comparatively high group sizes of up to 50-65 individual dolphins or more have been recorded in the site's northern and southern components. Adults closely accompanying calves are commonly observed in summer and autumn months at a number of locations within the site, and group foraging, resting or social behaviour are also regularly recorded. Individual dolphins are also known to recur within and between years at key locations within the site (e.g., outer Killary Harbour, off the Mullet Peninsula), indicating a degree of site fidelity to its coastal waters.

The waters of the West Connacht Coast represent an exceptional area of key conservation importance for Bottlenose Dolphin in Ireland.

