

# MARINE BIODIVERSITY IN IRELAND

## Species Directory



 An Taisce



# Marine & Coastal Species



Image by Brian Tormey

Ireland's coastline and marine environment is teeming with life, playing host to 24 species of whales and dolphins, 35 species of sharks, 2 species of seal, 24 species of seabirds, over 250 species of marine plants and hundreds of species of fish and invertebrates. Losing just one species from an ecosystem can have a detrimental impact on the whole community.

This document breaks down marine and coastal life into the following categories:



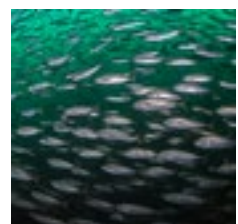
Anemones



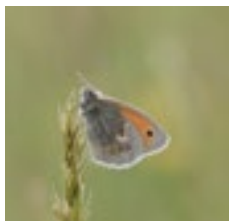
Birds



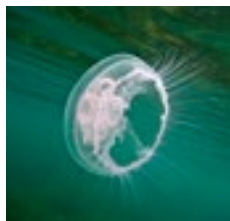
Crustaceans



Fish



Insects



Jellyfish and Relatives



Marine Mammals



Molluscs



Plants



Reptiles














Seaweed



Worms

# SPECIES DIRECTORY

Species	Habitat	Zone
 <b><u>ANEMONE</u></b>		
<u>Beadlet anemone</u>	Rocky shore	Intertidal Zone
 <b><u>BIRDS</u></b>		
<u>Atlantic Puffin</u>	Sea Cliffs, Open Water	Coastal & Pelagic Zone
<u>Chough</u>	Sea Cliffs, Sand Dunes, Machair	Coastal Zone
<u>Cormorant</u>	Rocky Shore, Estuaries	Coastal Zone
<u>Fulmar</u>	Sea Cliffs, Open Water	Coastal & Pelagic Zone
<u>Grey Heron</u>	Rocky Shore, Estuaries	Coastal Zone
<u>Northern Gannet</u>	Sea Cliffs	Coastal Zone
<u>Northern Lapwing (Vanellus Vanellus)</u>	Machair	Coastal Zone
<u>Oystercatcher</u>	Rocky Shore, Estuaries, Dunes, Salt Marsh	Coastal Zone
<u>Peregrine Falcon</u>	Sea Cliffs, Estuaries	Coastal Zone
<u>Razor Bill</u>	Sea Cliffs, Open Water	Coastal & Pelagic Zone
<u>Ringed Plover</u>	Sand Dunes	Coastal Zone
<u>Sandwich Tern</u>	Sand Dunes	Coastal Zone
 <b><u>CRUSTACEANS</u></b>		
<u>Acorn Barnacle</u>	Rocky Shore	Intertidal Zone
 <b><u>FISH</u></b>		
<u>Basking Shark</u>	Open Water	Pelagic zone
<u>Butterfish</u>	Open Water	Pelagic zone
<u>Common blenny</u>	Rocky shore	Intertidal Zone
<u>Lesser-spotted dogfish</u>	Open Water	Pelagic zone
<u>Porbeagle</u>	Open Water	Pelagic zone
<u>Sunfish</u>	Open Water	Pelagic zone
<u>Thornback Ray</u>	Open Water	Pelagic zone
 <b><u>INSECTS</u></b>		
<u>Grayling butterfly</u>	Dunes	Coastal Zone
<u>Small Heath Butterfly</u>	Dunes	Coastal Zone

Species	Habitat	Zone
 <b><u>INVERTEBRATES</u></b>		
<u>Vellea (by the wind sailor)</u>	Open Water	Pelagic zone
<u>Sea hare</u>	Rocky Shore	Intertidal Zone
 <b><u>JELLYFISH</u></b>		
<u>Compass jellyfish</u>	Open Water	Pelagic zone
<u>Lions mane jellyfish</u>	Open Water	Pelagic zone
 <b><u>MAMMALS</u></b>		
<u>Bottlenose dolpin</u>	Open Water	Pelagic zone
<u>Common dolphin</u>	Open Water	Pelagic zone
<u>European otter</u>	Rocky Shore, Sand Shores, Estuaries	Intertidal Zone
<u>Grey seal</u>	Rocky shore	Intertidal Zone
 <b><u>PLANTS</u></b>		
<u>Daisy</u>	Macahir, Sand Dunes	Coastal Zone
<u>Marram grass</u>	Dunes	Coastal Zone
<u>Pyramidal orchids</u>	Dunes	Coastal Zone
<u>Sea Astor</u>	Coastal cliffs, estuaries and salt marshes	Coastal Zone & Intertidal Zone
<u>Sea holly</u>	Sand Dunes	Coastal Zone
<u>Trift</u>	Rocky Shore	Intertidal Zone
 <b><u>REPTILES</u></b>		
<u>Common lizard</u>	Dunes	Coastal Zone
 <b><u>SEAWEED</u></b>		
<u>Bladder wrack</u>	Rocky Shore	Intertidal Zone
<u>Channeled wrack</u>	Rocky Shore	Intertidal Zone
<u>Dulse (Dilisk)</u>	Rocky Shore	Intertidal Zone
<u>Egg wrack (Knotted Wrack)</u>	Rocky Shore	Intertidal Zone
<u>Gut weed</u>	Rocky Shore	Intertidal Zone
<u>Horned wrack</u>	Estuaries	Intertidal Zone
<u>Nori( Purple laver)</u>	Rocky Shore	Intertidal Zone
<u>Serrated Wrack</u>	Rocky Shore	Intertidal Zone
<u>Sugar Kelp</u>	Rocky Shore	Intertidal Zone

Species	Habitat	Zone
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**MOLLUSCS**

<u>Dog whelk</u>	Rocky Shore	Intertidal Zone
<u>Edible Periwinkle</u>	Rocky Shore	Intertidal Zone
<u>Limpet</u>	Rocky Shore	Intertidal Zone



**WORMS**

<u>Lug worms</u>	Sand shore, Mud Shores	Intertidal Zone
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# Sea anemones



Image by Ivan Donoghue

Sea anemones borrow their name from the terrestrial anemone plant due to the many colours they display. There are over 1000 species found worldwide, living in both shallow coastal waters and the deep ocean. Ireland's most common species live along our rocky shorelines, in the low intertidal and subtidal zones, where the risk of them drying out is minimal.

The bodies of anemones are cylindrical, with stinging tentacles that surround a central mouth. They use these tentacles to stun and catch their prey, pulling them into its mouth. They usually attach themselves to rocks and other hard substrates and can be found along all parts of the Irish coastline.



Dahlia anemone  
Image Krzysztof Czasnojc



Beadlet anemone  
Image Olivia Jones



# Species: Beadlet anemone

Scientific name: *Actinia equina*

Habitat: rocky shore

Size: up to 5cm in diameter

Colour: usually dark red, can be orange or green

Distribution: widespread around Ireland's coast

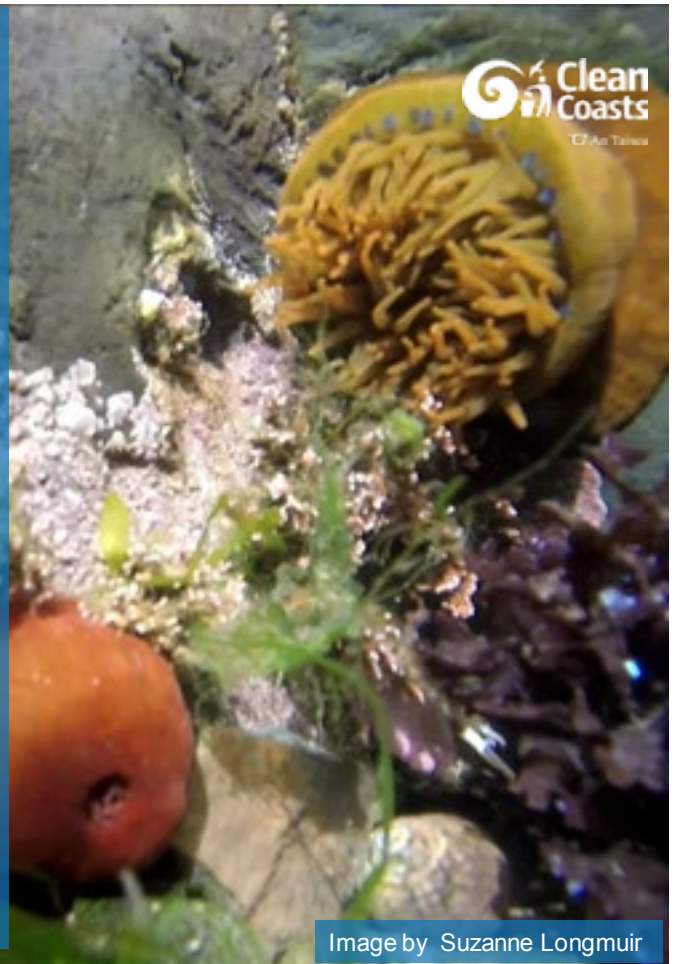
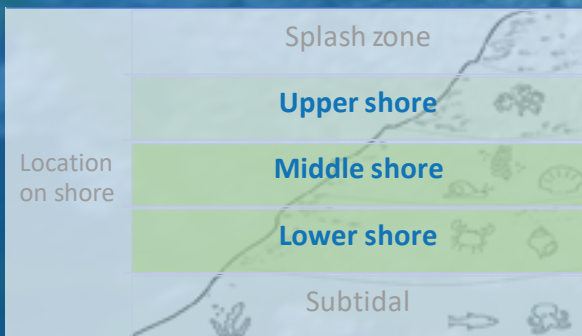


Image by Suzanne Longmuir

Beadlet Anemones can be seen as dark red blobs on the sides of rockpools and on the rocky shore. The base of their bodies sticks them to the rocks and prevent them from being washed away by the tide. The Beadlet Anemone opens up once the tide comes in and the anemone is fully submerged. Once they are under water and don't feel threatened, the Beadlet Anemone will release their thick short tentacles which makes them look like flowers. They use these tentacles to sting and catch passing prey like small fish, crabs and shrimp. Their tentacles are then retracted at low tide or if the anemone is disturbed.

Despite being stuck to rocks, Beadlet anemones are highly territorial, and they can move (albeit very slowly!) to fight off other anemones in the vicinity. Beadlet Anemones have a ring of beautiful bright blue beads beneath their tentacles that are packed full of stinging cells. They use these beads defend their preferred patch but don't worry these cells aren't potent enough to give us much of a sting!



# Birds



Image by Micheline Murphy

Ireland coastline and waters are bustling with birdlife, along the intertidal zone you will see waders zipping in and out of the tide, flocks of birds such as Gannets flying around remote cliff faces and seabirds like Guillemots bobbing on the open water.

Winter is often the best time to go birdwatching along the coast, as our shoreline plays host to millions of shorebirds visiting each year.

The following pages contain some of the more commonly sighted birds along our coastline and in our marine waters.



Image by Emmett Rees



# Species: Atlantic Puffins

**Scientific name:** *Fratercula arctica*

**Irish Name:** Puifín

**Habitat:** During breeding season they nest in colonies on sea cliffs and rocky off-shore islands. They winter far out at sea.

**Size:** 20cm in height with a wingspan of roughly 47cm-63cm

**Colour:** Black above and white below with white cheeks and a bright coloured bill during mating season

**Distribution:** Mainly on the west coast of Ireland with a few east coast sites



The puffin is recognisable and much-loved for its bill which is bright and colourful during breeding season, making it stand out from other sea birds. The outer of the beak is shed after mating season leaving the puffin with a less glamorous brown beak. The puffin lives much of its life out on the ocean but returns to the coast of Ireland in the summer for breeding season, where it makes little burrows to lay its eggs and hatch its pufflings. These pufflings are rarely seen as they stay hidden in their burrows and fledge at night. After fledging, the chicks spend the first few years of their lives at sea, returning to breed about five years later.

Puffins start breeding at about five years old and have been known to live up to 30 years old. They are a hardy bird, surviving life out on the high seas with a wingspan of roughly 47cm-63cm and reaching about 20cm in height. In Ireland, most Puffins nest in colonies at remote locations on the West coast, although there are some colonies on the East coast also.

Puffins eat crustaceans and small fish, especially sand eels but their species is under pressure due to a reduction of fish stocks due to overfishing and pollution.



Image by Rob Hackett



Image by Odeta Burokaite

## Species: Chough

**Scientific name:** *Pyrrhocorax pyrrhocorax*

**Irish Name:** *Cág cosdearg*

**Habitat:** Coastal Cliffs, Machair

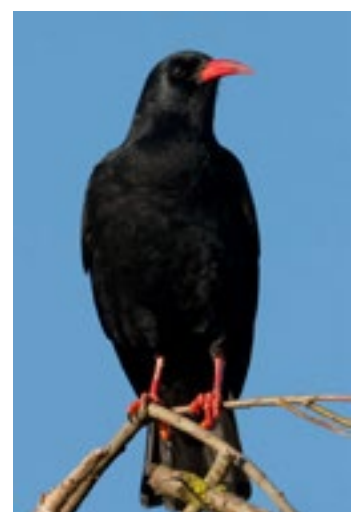
**Size:** 40cm in length

**Colour:** All black, with bright red legs and beak

**Distribution:** Found along the rocky coasts of the north, south and west of Ireland



The Chough is part of the crow family and is roughly the same size as a Jackdaw. They are easily distinguished by their bright red curved down beak, red legs and their wingspan which forms finger outlines in flight. They are incredibly spirited in flight and can often be seen performing sky acrobatics near sea cliffs, tumbling, and even flying upside down. Their main diet comprises insects and worms, using their curved beak to dig them up. However, they will also prey on small mammals and birds. They have a unique call which sounds like “key-aww”.



Images by MJ O' Mahony



## Species: Cormorant

**Scientific name:** *Phalacrocorax carbo*

**Irish Name:** Broigheall

**Habitat:** rocky shores and estuaries

**Size:** 130-160cm wingspan

**Colour:** Mainly black with white patch on chest or thigh. They also have beautiful emerald green eyes.

**Distribution:** Widespread around Ireland's coast

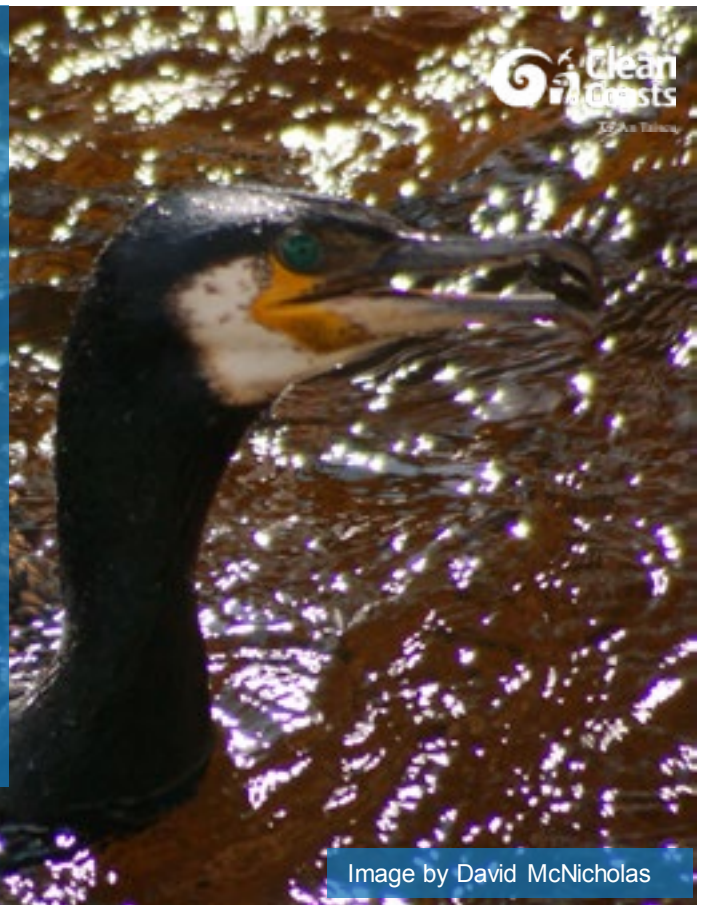


Image by David McNicholas

Most people will have seen cormorants around the coast either standing on rocks drying their wings or diving under the waves to hunt for their prey. Cormorants can also be seen inland around large waterbodies, where they breed in trees. The Cormorant is a large, mainly all dark seabird with a long body and neck and a long, hooked bill.

Cormorants may be confused with Shags, however, Cormorants will not have crests and they usually have a white patch on their thigh or neck unlike the all-black Shag.

Breeds in colonies mainly around the coast of Ireland, with some birds breeding inland. Most of the larger coastal colonies in Ireland are on the south and northwest coasts, with big colonies also in Co. Dublin. Birds on the coast breed on cliffs whilst those inland, in trees.



Image by MJ O Mahony

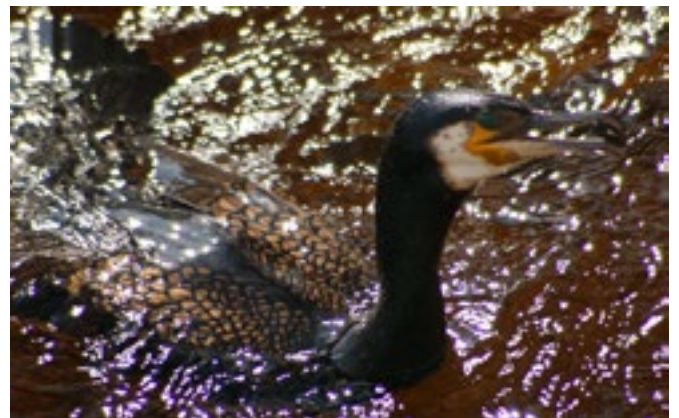


Image by David McNicholas



## Species: Fulmar

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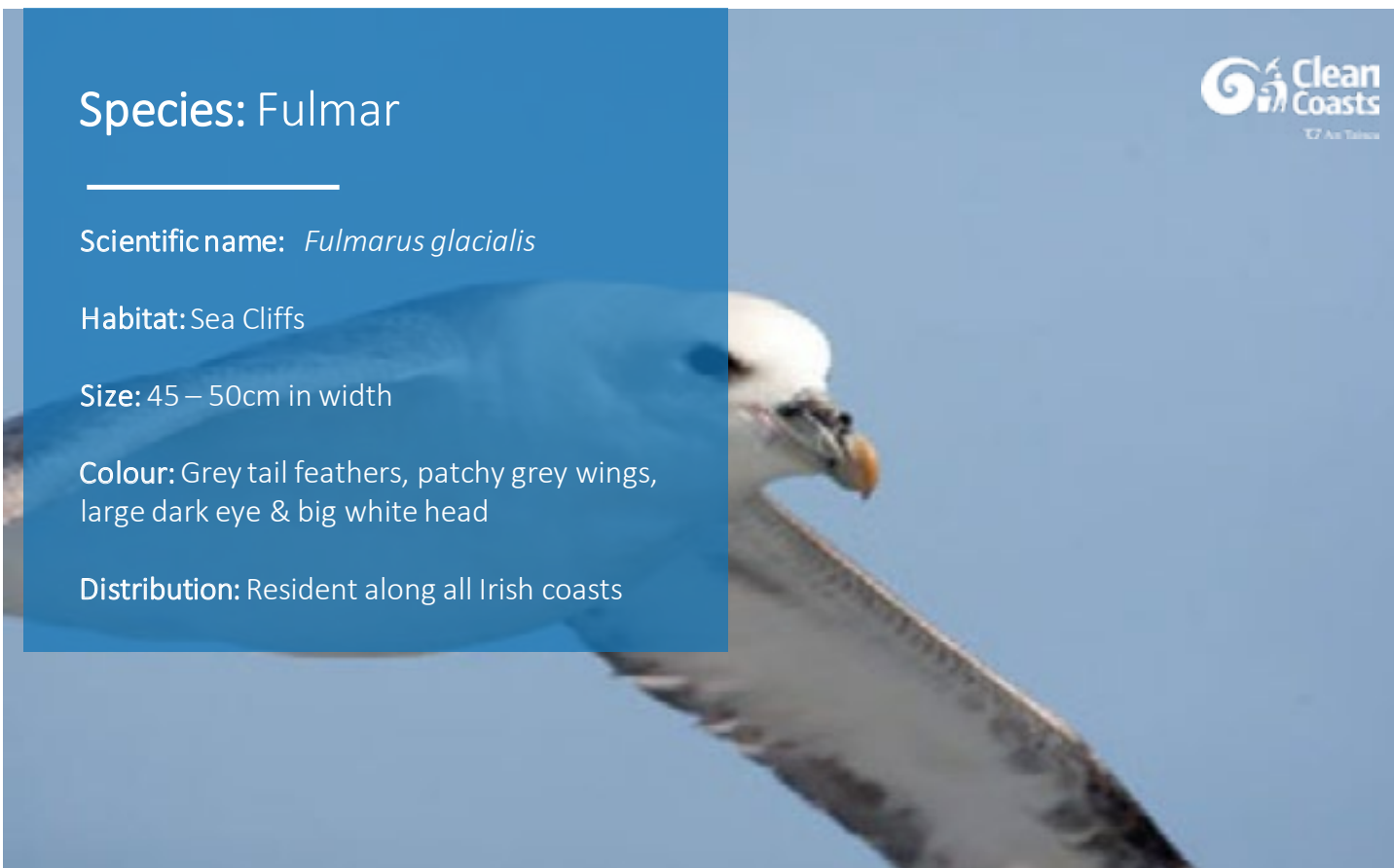
**Scientific name:** *Fulmarus glacialis*

**Habitat:** Sea Cliffs

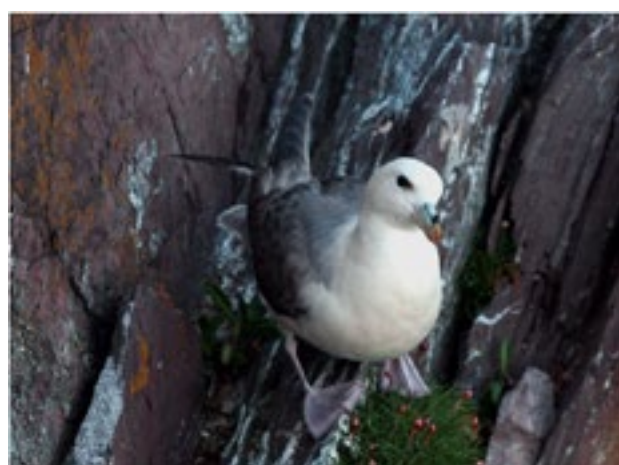
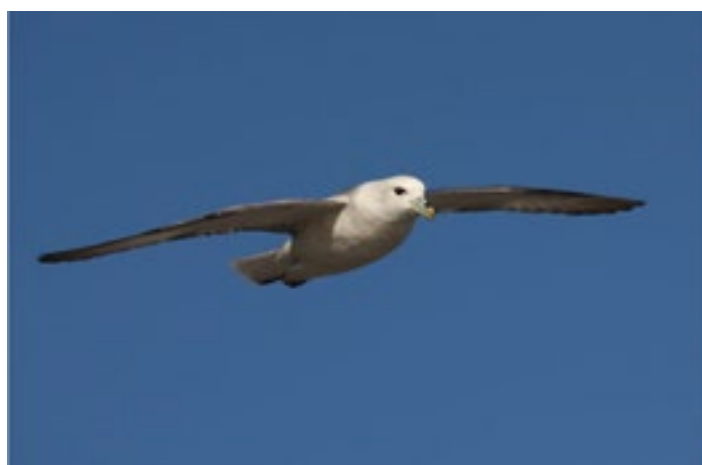
**Size:** 45 – 50cm in width

**Colour:** Grey tail feathers, patchy grey wings, large dark eye & big white head

**Distribution:** Resident along all Irish coasts



Gull-like seabird of cliffs and open seas, but not related to gulls. Cannot stand or walk upright due to weak legs, so must launch itself from a high ledge or patters along surface of sea to become airborne. It is a very strong flier with stiff wings and uses long glides at sea, with series of stiff, shallow wing beats. Stubby hooked, grey and yellow beak.



Images by MJ O' Mahony

## Species: Grey heron

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**Scientific name:** *Ardea cinerea*

**Irish Name:** Corr réisc

**Habitat:** rocky shores and estuaries

**Size:** Up to 1.8m wingspan

**Colour:** White neck and underside with dark-grey back and wings

**Distribution:** Widespread on canals, ponds, lakes, rivers and coasts around Ireland



Image by MJ O Mahony

Hérons can be recognised by their statue-like outline on the edges of lakes, ponds and coastal waters. They are tall, large wading birds with a grey back, white long neck, long legs, bright yellow bill and a black eye stripe that continues as feathers drooping down their neck.

The heron is also easily spotted when it is in flight due to their slow-flapping wings and distinct posture with their legs stretched out and neck tucked in.

Hérons are often seen stood on their long thin legs in shallow waters of ponds, lakes and coastal waters patiently waiting for their next meal to swim by. They spend most of their time alone feeding mainly on fish but can be tempted by the occasional small animal such as moles and mice.

Hérons nest in colonies called 'Heronries', where they build large nests at the top of trees and lay 3-4 eggs. The young will fledge from the nest after about one and half months.

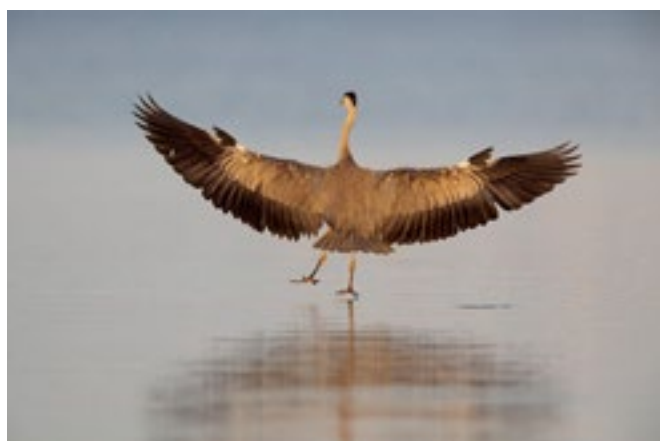


Image by Micheal Linehan



Image by Peter FitzPatrick

## Species: Lapwing

Scientific name: *Vanellus vanellus*

Irish name: Pilibín

**Habitat:** Machair, wetlands, pasture and land adjacent to bogs.

**Size:** 78-84cm wingspan

**Colour:** black and white with iridescent sheen

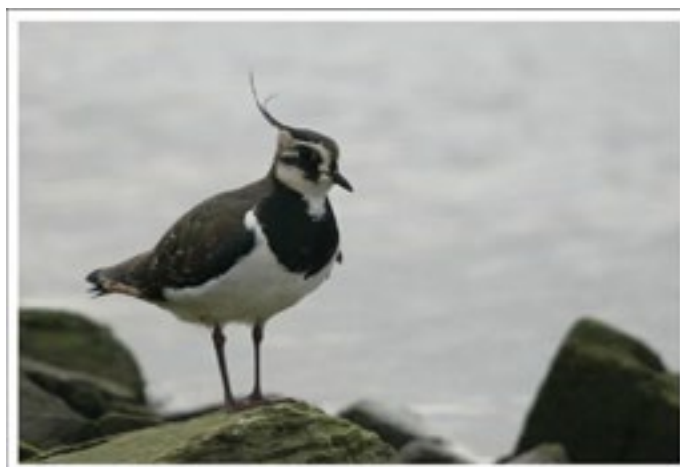
**Distribution:** widespread around Ireland's coast



Lapwings have long crests, black and white feather patterns, and very broad, round wingtips. Up close, their black feathers have an iridescent green sheen. In winter, their distinctive round wings can be seen when they are in flight in a massive flock.

In spring, you may hear their 'peewit' call in grasslands or at the coast where they breed. Their call gives them their other common name: Peewit. Females will nest in simple scrapes in the mud or sand and the chicks hatch during the springtime. By late spring, the lapwing chicks will venture out of their nest to forage. If the nest is threatened, the parents will attack the potential predators.

The lapwing's Latin name is *Vanellus vanellus* which means 'little fan'. This refers to their flapping wings in flight. The name lapwing is thought to come from an Old English term which means 'leap with a flicker in it' because their flocks seem to flicker between white and black as they flap their wings.



Images by MJ O' Mahony



## Species: Northern Gannet

**Scientific name:** *Morus bassanus*

**Irish name:** Gainead

**Habitat:** Breeds in colonies on islands off the coast and winters at sea

**Size:** up to 2m wingspan

**Colour:** white with black wingtips and yellow head

**Distribution:** widespread around Ireland's coast



Image By Linda O' Brien

The gannet is one of our largest seabirds which is well-known for its super-fast dives into the sea. Gannet can dive from heights of 30m to catch fish from below. They can hit the water at speeds of up to 90kmh! They have specialised air-sacs between their muscles and skin to reduce the impact of their dives.

Gannets can be easily distinguished by their large beaks and white feathers with a yellow head and black wingtips.

Gannets breed in large, noisy colonies on islands off the coast and nest in cliffs. The main Gannet colonies are located on Great Saltee, Co. Wexford, The Bull Rock, Co. Cork and on Little Skellig in Co. Kerry. A small colony is also found on Ireland's Eye, Co. Dublin. Little Skelligs is by far the largest colony with over 26,000 nests.



Image By Paul Edmondson

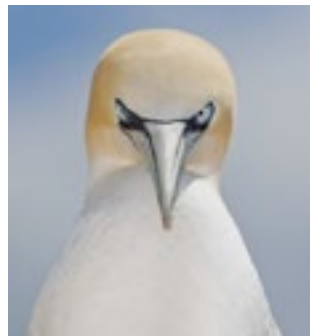


Image By Declan Roche



Image By Mark Molly

## Species: Oystercatcher

**Scientific name:** *Haematopus ostralegus*

**Irish Name:** Roilleach

**Habitat:** all coastal habitats

**Size:** Up to 83cm wingspan

**Colour:** Black feathers, with white underside and bright red beak and pink legs

**Distribution:** Widespread around Ireland's coast, less populated on the South coast



Image by Billy Horan

The Oystercatcher is a very distinct bird with its black and white feathers and striking pointy red beak. Their loud 'peeping' call can also be easily distinguished around the coastline. Oystercatchers have a long-flattened beak which they use to catch their prey and prise open shells. Oystercatchers mainly feed on shellfish, including mussels and periwinkles.

Whilst mainly known as being a coastal bird, the Oystercatcher can also be seen in some inland areas where they breed on inland waterways such as rivers and lakes. Most will still spend their winters on the coastline.

There are twelve species of Oystercatcher in the world. Each species looks very similar with either black and white colouration or plain black, with a red bill and pink legs. A further species of oystercatcher became extinct in the 20th century.



Images by MJ O Mahony

# Species: Peregrine Falcon

**Scientific name:** *Falco peregrinus*

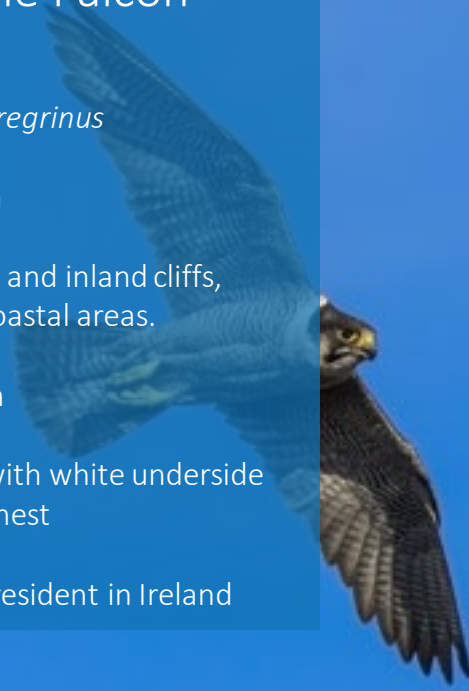
**Irish name:** Fabhcún gorm

**Habitat:** Breeds on coastal and inland cliffs, winters in estuaries and coastal areas.

**Size:** Up to 1.2m wingspan

**Colour:** dark grey upside with white underside and black bars across its chest

**Distribution:** Widespread resident in Ireland



The peregrine falcon is a bird of prey that is usually recognised when it is flying due to its spectacular hunting technique! The peregrine falcon will circle in the air and can spot its prey from above. Once the prey has been found, the falcon will 'stoop' down with its wings held close into the body, reaching great speeds. Estimates of speeds vary, but it seems likely that birds reach speeds more than 300km/hour, making it the fastest animal on the planet. The peregrine falcon kills its prey using the force of the impact of its legs at the last moment to inflict the killer blow. Prey includes pigeons, feral birds, thrushes, waders, wildfowl, gulls and seabirds.

The peregrine falcon has a heavy powerfully built body, medium length tail and wings which are broad close to the body and pointed at the tip. They have a short, hooked bill and females are larger in size than males. Adult birds are grey above, with a barred tail; the underparts are white. The throat and upper breast are plain white and in contrast to their black hood and thick head stripe. Juvenile birds are similar to adults but have brownish upperparts and streaked, not barred, feathers on the body.

Breeds on coastal and inland cliffs. Most birds on the coast breed on the south, west and north coasts. Most inland birds breed on mountain cliffs but will also breed at lower levels. The species is still recovering from a dramatic and well documented decline in the 1950s and 60s due to the effects of pesticide poisoning. The responsible pesticides have been banned and the species has been recovering slowly.

Resident in Ireland, however, shows some movement away from its breeding areas in the winter. Can be found on the coast, especially on estuaries where they hunt on concentrations of water birds.



Image by David Mc Nicholas



Image by MJ O Mahony



## Species: Ringed Plover

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**Scientific name:** *Charadrius hiaticula*

**Habitat:** Coastal Dunes

**Size:** 35-41cm wingspan

**Colour:** Grey-brown with white and black markings around the breast and head. Bright orange bill and legs.

**Distribution:** Widespread around Ireland's coast



Image by MJ O Mahony

The ringed plover is a small wading bird with a wingspan of 52cm. It has a bright orange bill with a black tip, orange legs and black markings on the neck and head. The Ringed plover can be spotted nesting in sand dunes during spring and summer months. The plant life and marram grass in the dunes provide shelter for their chicks and hide the nest from approaching predators.

The Ringed plover mainly feeds on worms, crustaceans, and small insects. You may see the ringed plover 'dancing' at the coastline as it taps its feet to mimic rain to tempt its underground prey to the surface! Ringed plovers that nest as far away as Greenland and Canada fly through Ireland on migration.



Images by MJ O Mahony

# Species: Razorbill

**Scientific name:** *Alca torda*

**Irish name:** Crosán

**Habitat:** Usually found in open water, only comes inland to breed.

**Size:** Length up to about 45cm; wingspan 60-69 cm wingspan

**Colour:** Black and white

**Distribution:** Widespread along Ireland's coast



Image Jackie Campbell

The razorbill is a medium sized auk. It is black on top and white below with a short, thick bill that has a vertical white line. There is also a white line running from the eye to the base of the top of the beak. During the winter months, the white from the throat wraps up behind the eye. While in flight, it moves fast and direct with rapid wing beats.

The species is highly marine and can only be found on land during the breeding months (March/April – August/September). In the summer months, it nests on sea cliffs in seabird colonies. They lay their eggs on the bare rock or ground and each partner take turns to forage and care for the egg. The razorbills diet is made up of fish and some invertebrates. It catches its prey by surface diving. Although it usually searches for food in the upper 20m of the water column, it has been seen hunting hundreds of meters down.

The closest relation to the razorbill is in fact the Great Auk which went extinct in the mid 19th century. It was hunted for meat, feathers, fat and oil and was finally driven into extinction by collectors.



Image by Catherine Bushe



Image by Tom Ormond



Image by Miriam Power

## Species: Sandwich tern

**Scientific name:** *Sterna sandvicensis*

**Habitat:** Coastal Dunes

**Size:** 36-41cm wingspan

**Colour:** white-grey with black cap and black crest.

**Distribution:** summer visitor around the coast of Ireland



Image by Emmett Rees

As part of the tern family, the sandwich tern shares a similar colouration consisting of a white-grey back with a white underside and a black cap on the head. The sandwich tern also has a black crest, black legs and a black bill with a yellow tip. They have short tail feathers.

The sandwich tern is a summer visitor to the coast of Ireland from March to September. Small numbers of sandwich tern winter in Galway Bay and Strangford Lough.

The sandwich tern is one of the largest tern species. They feed on fish such as whiting and sand eel, which they prey upon by diving into the water.

Similar to other tern species, the sandwich tern breeds in colonies and then nests on islands, shingle beaches and sand dunes. One of the largest colonies in Ireland, consisting of several hundred breeding pairs, can be found in County Wexford on Lady's Island.

The sandwich tern is named after Sandwich Bay in Kent, England.



Images by MJ O' Mahony



# Crustaceans



Image by Brian Wilson

Crustaceans are a group of invertebrates with over 45,000 species worldwide. They are usually found in aquatic environments and the most common types found in Irish waters are crabs, lobsters, shrimps, and barnacles.

A crustacean's skeleton is on the outside and is called an exoskeleton. As crustaceans grow, they shed their exoskeleton and grow a new one, during this time they are very vulnerable to prey and must hide away until a new shell is formed. Most crustaceans are quite active, like the Brown crab which can cover over a 100km along the coast, other are parasitic, like fish lice which attach themselves to other living creatures and some attach themselves to non-living objects such as acorn barnacles and goose barnacles. Crustaceans all have the following anatomy parts in common, two sets of antennae, two eyes on stalks, gills and segmented bodies.



Image by Brian Tormey



# Species: Acorn Barnacle

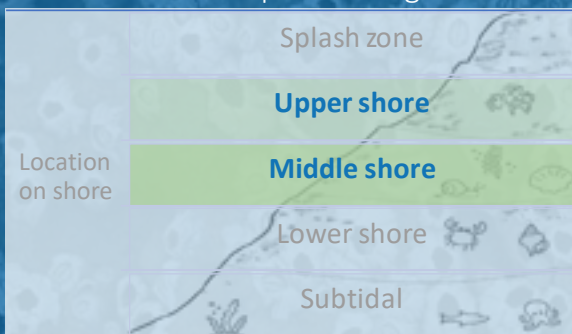
Scientific name: *Semibalanus balanoides*

Habitat: rocky shore

Size: 1-2cm length of shell

Colour: grey-white

Distribution: widespread along Ireland's coast



The most common barnacle found on our shores, the acorn barnacle lives attached to any hard substrate, including rocks, pier legs, old boats and even other animals! Their body is contained within the shell you see on the rocks, positioned upside down with their legs at the top. When the tide comes in, they open the plates of the shell and stick their legs out, using them to catch plankton and other detritus out of the water.

One of several very similar species of barnacle, which can be hard to tell apart. The acorn barnacle is generally grey-white in colour, with a kite-shaped opening and 6 shell plates.

After fertilisation, the larvae develop within the barnacle's body and are released into the water to feed on plankton and undergo moults until they are at the right stage to 'settle down'!





# Fish



Image by Mark N Thomas

Marine fish are found in all shapes, sizes and colours. In Irish waters they range from small fish such as the rockpool Goby, to larger species like sharks, skates and rays. The two things all these fish and others have in common is, they have a backbone and live in the water. Most also have a swim bladder which fills with gas, helping them control their buoyancy in the water. They breathe by taking oxygen in from the water through their gills and from there it enters their circulatory system. They are an important part of the marine food web as they are not only predators for smaller marine species, they are also prey for many marine mammals, jellyfish and birds.

Unfortunately, at this time fish species are facing environmental pressures like never seen before, increased ocean pollution from contamination spills and marine plastics are impacting their health and habitats, overfishing is devastating stocks, and climate change is causing fluctuations in ocean temperature, salinity and acidity levels. Here we have put together a list of some of the common and not so common species that are found in our coastal waters.

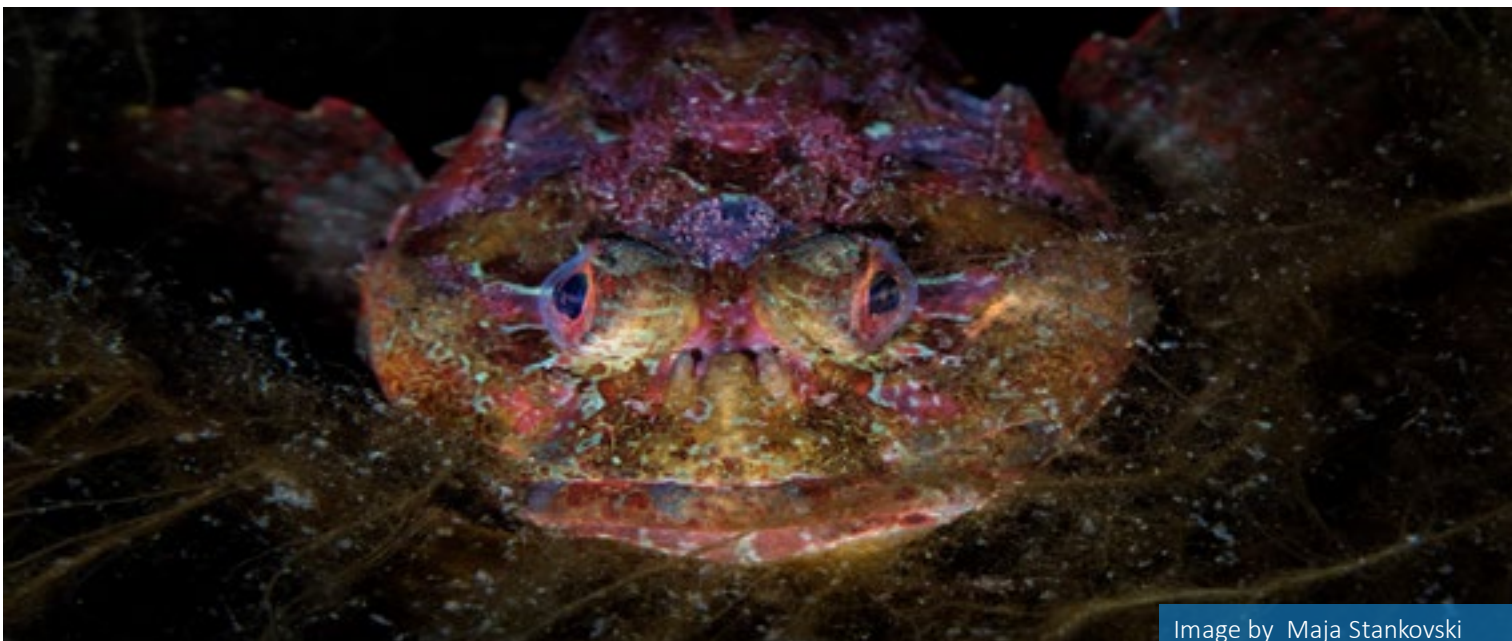


Image by Maja Stankovski



## Species: Basking Shark

**Scientific name:** *Cetorhinus maximus*

**Irish Name:** Ainmhí Sheoil

**Habitat:** both coastal and open water from 200 to 2000m deep

**Size:** 7m – 11m

**Colour:** Mottled grey-brown

**Distribution:** Migratory species – primarily sighted on Ireland's west coast during the summer months



Image by Nick Pfeiffer

The Basking Shark is the world's second largest fish, but don't let the name scare you because this shark is a filter feeder. That means that it uses its huge mouth to sieve plankton, small fish and invertebrates from the water for its diet. Basking sharks grow to on average seven meters long, although specimens have been recorded at 11 meters. They are a mottled grey-brown colour. They have a large fin which you may see moving above the water surface.

You are most likely to spot them in Irish waters between April and September, often in shallow coastal habitats. The sharks are thought to move to deeper waters in the colder months. They are a migratory species with the longest recorded distance being journey of 10,000km. However not all individuals travel such long distances and migration habitats have been found to vary widely with many 'groups' recorded as returning to the same feeding 'hotspots' year on year.

The liver, for which it was hunted as a source of oil in the past, is estimated to make up approximately 25% of its body weight. This organ acts as a "hydrostatic float" to keep the shark at buoyant.

The Irish Basking Shark Group tracks and monitors the populations of this beautiful and impressive species.



Image by Dave Wall



Image by Nick Pfeiffer

# Species: Butterfish

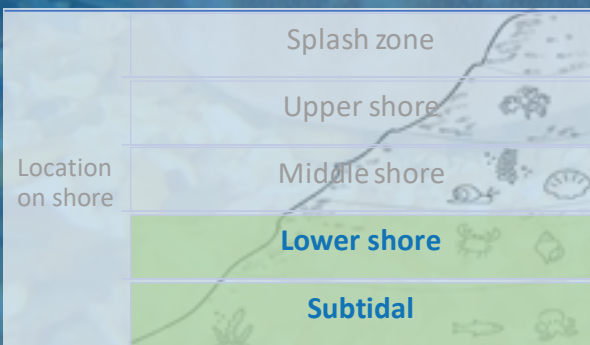
Scientific name: *Pholis gunnellus*

Habitat: rocky shore

Size: up to 25cm in length

Colour: yellow-brown or reds

Distribution: widespread around Ireland's coast



The butterfish has a long, slender, eel-like body which is flattened from side to side. It has a very slippery skin and is difficult to pick up, hence its common name. The coloration is usually yellowish-brown with darker brown mottling. There is a dark bar which runs from beneath the eye to the outer edge of the mouth. The most characteristic feature of the butterfish is a row of 9-15 black spots, each surrounded by a white ring, along the base of the dorsal fin. Adult fish are between 17-25cm in length.

The butterfish is usually found beneath boulders and seaweeds on the low shore and in the subtidal zone in a wide range of habitats. It frequently hides amongst seaweed or in crevices in rock. It feeds mainly on small crustaceans and worms.





## Species: Porbeagle shark

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**Scientific name:** *Lamna nasus*

**Habitat:** sandy bottom; 10-100m

**Size:** Up to 365cm in length

**Colour:** 'mackerel' blue with a white belly

**Distribution:** deep waters around the coast of Ireland



The porbeagle shark is 'mackerel' blue with a white belly and characteristic white mark at the rear base of the dorsal fin. It is a streamlined shark with a pointed snout and large black eyes.

Porbeagle are found on all coasts around Ireland but are most common north of Lough Swilly in Donegal and also coasts of Galway, Clare and Cork. Because of their preference for deep water, you have to be very lucky to see one of them! They hunt for a variety of smaller fish including mackerel, whiting and herring, and molluscs such as octopus and squid.

Porbeagle sharks are strong swimmers and tagging studies have shown that they can travel huge distances. One porbeagle shark tagged in Irish waters was later found as far away as Newfoundland in Canada!





## Species: Lesser-spotted dogfish

**Scientific name:** *Scyliorhinus canicular*

**Habitat:** sandy bottom; 10-100m

**Size:** 100cm in length

**Colour:** greyish brown with dark brown spots

**Distribution:** widespread around Ireland



Image by Brian Tormey

The lesser spotted dogfish is a small shark, so named due to the dark spots and blotches covering its skin. All sharks have very rough skin, covered in hard teeth-like abrasions. If rubbed the wrong way, they are very coarse like sandpaper but it provides the shark with effective protection.

Dogfish are predators and feed on crabs, molluscs and other small fish. When threatened, they curl up into a donut shape - probably to look bigger and harder to eat! They are highly common around Ireland and live close to the seabed in shallow waters down to 100m deep. They sometimes wash up dead on our beaches after storms. You may also come across their egg cases; known as mermaid's purses! Shark (and ray and skate) egg cases are a good indicator of what species are breeding nearby. The lesser spotted dogfish has a small eggcase (5-7cm) with curly tendrils at each corner.



## Species: Sunfish

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**Scientific name:** *Mola mola*

**Habitat:** open water

**Size:** up to 3.5m in length

**Colour:** silver-grey

**Distribution:** spotted on occasion around Ireland

Sunfish are found in temperate and tropical oceans around the world. They are frequently seen basking in the sun near the surface and are often mistaken for sharks when their huge dorsal fins emerge above the water. Their teeth are fused into a beak-like structure, and they are unable to fully close their relatively small mouths.

Rising ocean temperatures have caused this ocean giant to venture north into Irish waters and beyond. There have been sightings of the sunfish in Cork for over 50 years!

Ocean sunfish can become so infested with skin parasites, they will often invite small fish or even birds to feast on the pesky critters. They will even breach the surface up to 10 feet in the air and land with a splash in an attempt to shake the parasites!





## Species: Thornback ray

Scientific name: *Raja clavate*

Habitat: sandy bottom

Size: Up to 139cm in length

Colour: greyish brown with dark brown spots

Distribution: widespread around Ireland



Richard Shucksmith  
www.ecological-photography.co.uk

Closely related to sharks, rays also have a soft cartilage skeleton. Their grossly oversized pectoral fins give them their distinct diamond shape and act a bit like underwater wings.

Thornback rays are found around all Irish coasts and feed mainly on crustaceans though they are not above taking any fish that swims a little too close!

The thornback ray likes to bury itself in the sediment during the day and come out at dusk to hunt.

The thornback ray can be recognised by its blotchy brown or grey back and collection of 'thorns' on its back and tail. Some other ray species also have thorns, but the thornback ray has the biggest.





# Species: Common blenny

Scientific name: *Lipophrys pholis*

Habitat: rocky shore

Size: up to 16cm

Colour: dark brown/greenish to blackish

Distribution: widespread along Ireland's coast

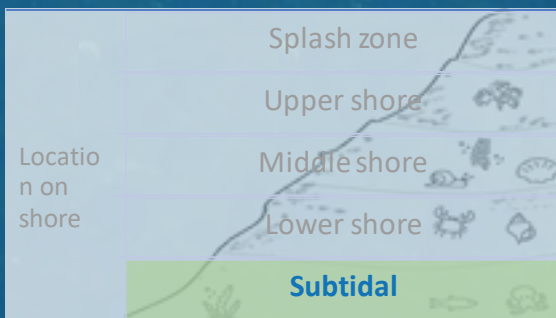


Image by Shazia Waheed

The common blenny is a small, shallow water fish. It is identifiable by large, protruding eyes, wide lips, slimy skin with no scales and a long dorsal fin separated by a notch into two unequal sections. The pectoral fins are fan shaped and transparent with visible green spines. The colour of each individual varies from dark brown/greenish or blotched to blackish according to their habitat. Males can be almost completely black during mating season.

This fish is most commonly found in rockpools during low tides. If a common blenny cannot locate a rockpool, it will often take refuge hiding in damp patches under stones or exposed seaweed. In these conditions, the common blenny can survive for many hours out of water. It can also breathe air during this exposure. Once the tide returns, the fish will emerge to feed on barnacles and other crustaceans.

It has been reported that some common blennies display homing behaviour when it comes to rockpools. These individuals have been seen to return to the same rockpool during each low tide.



Image by Suzanne Longmuir



Image by Dave Wall

# Insects



Image by MJ O Mahony

Insects are found in both coastal and marine environments, however, even though they are one of the most diverse groups on earth, relatively few inhabit marine zones. Most marine insect species are found living in coastal and upper intertidal zones.

The type of vegetation growing and decaying on beach can dictate the types of insects you will find, for example you will find more pollinators in the dune and machair areas along the coast, whereas, along the high tide area known as the wrack line you will encounter important decomposer species such as flies and beetles breaking down decaying seaweed and organic debris.





## Species: Grayling butterfly

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**Scientific name:** *Hippachia Semele*

**Habitat:** Coastal Dunes

**Size:** 50-60mm wingspan

**Colour:** Mottled brown and grey with pale bands and orange-yellow eyespots

**Distribution:** Mottled brown and grey with pale bands and orange-yellow eyespots

The diverse plant life and wildflowers within sand dunes attract many insects, including pollinators. The Grayling butterfly can be seen in dune habitats camouflaged amongst woody plants, rocks and sand. Its wings are closed when not in flight but will open to reveal pale bands on the upper wings and orange eyespots.

The Grayling butterfly will lay its eggs on various plants within the dune habitat and occasionally can be found on marram grass. The caterpillars will then feed on the marram grass until they pupate.



## Species: Small Heath Butterfly

**Scientific name:** *Coenonympha pamphilus*

**Irish name:** Fraochán Beag

**Habitat:** Machair, grasslands, coastal dunes

**Size:** Small size, wingspan: 33 – 37 mm

**Colour:** Light brown with a show of orange when in flight, noticeable black eye-spot at the top of its forewing

**Distribution:** Nationwide, more frequent in Coastal areas and the Burren



This is the smallest of the brown butterflies and is found in many habitats including Machair, dry grasslands and fixed dunes. Adults usually roost on flower heads and when at rest their wings remain shut. Each wing has single eye spot.

They lay their eggs on blades of grass, which is a suitable food for their hatching larvae. They are a near threatened species in Ireland.



Images by MJ O' Mahony



# Jellyfish & relatives



Image by Marco Salino

Jellyfish belong to a family called cnidarians, pronounced 'nidarians'. We mostly encounter them during summer washed up on our beaches or floating in bathing areas around the coastline.

They have round jelly-like bodies with tentacles that hang down below the water's surface. Their mouth is positioned centrally surrounded by tentacles which ejects a poisonous sting to catch prey. They also use their sting to fend off predators. Their main diet includes phytoplankton and small sea creatures.

Unfortunately, jellyfish get a lot of bad press due to the nasty sting some can give, and it appears that we are witnessing greater amounts in our coastal waters due to factors such as overfishing and climate change. Therefore, it is important to be aware of the various types of severe stinging species and what to do in the event of being stung.



Image by Graham Pimlott



Image by Maja Stankovski

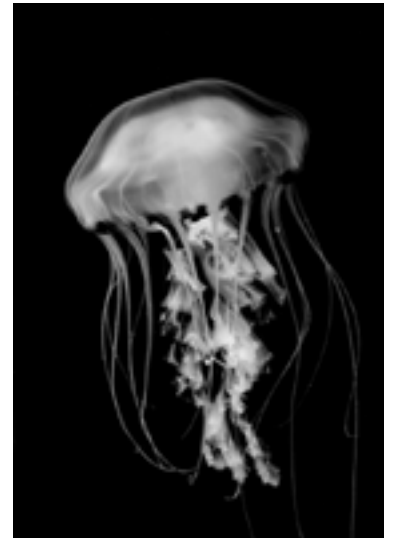


Image by Damien McGuirk

## Species: By-the-wind-sailor

**Scientific name:** *Velella velella*

**Habitat:** Open water

**Size:** < 10cm

**Colour:** Deep blue-purple

**Distribution:** Ocean dwelling occasionally found washed up on Irish coastline



Although by-the-wind-sailors live out at sea you will sometimes find them washed up on the Irish coast. They are made up of an oval disc or 'float' a few centimetres long with a sail sticking up from it, which allows them to catch the wind and drift on ocean currents. They also have tiny stinging tentacles coming from the base of the float which catch their prey, mainly plankton, however the tentacles are not dangerous to humans.

By-the-wind-sailors look like they could be related to a jellyfish. This creature is, however, thought to be more like an upside-down and floating variation of hydroid, a class of organisms that is usually found attached to the sea floor. To make things more complicated, they are in fact considered a hydroid colony which is not just one creature but is made up of many tiny individual organisms.

They are a blue/purple colour but if washed out and dried up they will often have lost their colour and can look a bit like clear plastic. Sometimes they can be washed up in large numbers after storms out at sea. In 1992 millions of By-the-wind-sailors were washed up along the West coast of Ireland in one episode.

On some by-the-wind-sailors, the sail is set NW-SE; on others, NE-SW. This means that in the same wind, one animal will sail leftwards, the other to the right. This means that the species gets scattered in all directions across the oceans.





## Species: Compass Jellyfish

**Scientific name:** *Chrysaora hysoscella*

**Habitat:** Coastal waters in temperate regions of the northeastern Atlantic Ocean, the North Sea and Mediterranean Sea.

**Size:** Diameter Up to 30cm

**Colour:** Translucent yellowy white; reddish brown markings

**Distribution:** Widespread along Ireland's coast

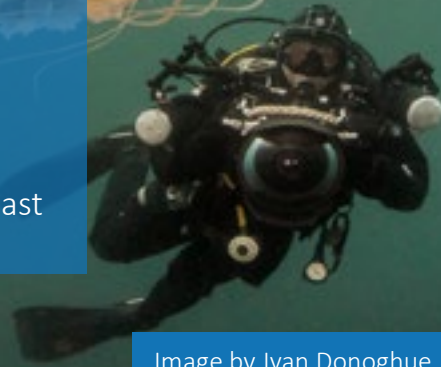


Image by Ivan Donoghue, Wexford Sub Aqua Club

The compass jellyfish is an easy one to spot with its 16 reddish-brown V shaped marks around the bell. The V shapes develop from a central point and resemble a compass. The edges of the bell develop into 32 lobes and have 24 marginal tentacles. They have four frilly oral arms which are longer than the marginal tentacles.

The marginal tentacles are covered in nematocysts (stinging cells) which they use for stunning their prey. Some young fish have been observed swimming around the compass jellyfish tentacles which they seem to be using for protection. This species feeds on small fish, crabs as well as other jellyfish. The compass jellyfish is a summer visitor to the Irish coastline but don't get too close if you see one! They can give a nasty sting.



Image by Lucinda Keogh



Image by Marco Salino

## Species: Lion's Mane Jellyfish

**Scientific name:** *Cyanea capillata*

**Habitat:** cold waters of the Arctic, northern Atlantic and northern Pacific

**Size:** Diameter >30cm

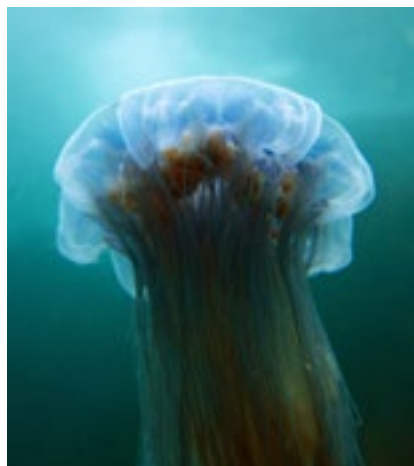
**Colour:** Yellow brown or red

**Distribution:** Common in the Irish Sea

The Lion's Mane is one of the largest species of jellyfish characterised by its distinguishable mass of long, hair-like tentacles. The Lion's Mane jellyfish has a large bell which is usually between 30-50cm (diameter) but can grow up to 200cm. At the margin of the bell, you can find hollow tentacles arranged in 8 groups with approximately 70 – 150 tentacles per group. The largest individuals, which are commonly found in the arctic ocean, can have tentacles extending to over 30m in length. This pelagic species prefers the colder waters of the northern hemisphere and can be generally found within the first 20 meters of the water column.

The tentacles have nematocysts (stinging cells) which the species use to stun its prey. It feeds on zooplankton, small fish and even other jellyfish. Once the prey is immobilised, the oral arms transport it to the mouth which is located on the underside of the bell. Sea turtles, some birds, larger fish as well as other jellyfish prey on Lion's Mane jellyfish.

If you ever spot a Lion's Mane along the Irish coast you can record it [here](#). Be wary though and do not get too close. The sting from a Lion's Mane can be very dangerous!



Images by Graham Pimlott



# Marine Mammals



Image by Suzanne Behan

Ireland's coastline and surrounding waters are home to 3 out of the 5 groups of marine mammals: Pinnipeds which are a group of flipper-footed species that include our 2 seal species.

Otters, which are our smallest marine mammals, living both on the coast and along inland waterways.

Cetaceans, which are mammals that cannot survive outside the ocean, there are currently 24 cetacean's species found in Irish waters, these include species of whales, dolphins and porpoises.



Image by Nick Massett

## Species: Bottlenose dolphin

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**Scientific name:** *Tursiops truncatus*

**Irish name:** *An Deilf bholgshrónach*

**Habitat:** open water

**Size:** up to 4m in length

**Colour:** grey – darker above, lighter underneath

**Distribution:** mainly spotted on the west coast



Image by Conor Ryan

Bottlenose dolphins are the largest dolphins found around the coast of Ireland – their size helps them cope with our chilly waters. In Ireland, Special Areas of Conservation for bottlenose dolphin have been designated in the Shannon estuary (Lower River Shannon SAC) and in Connemara and western County Mayo (West Connacht Coast SAC).

A fairly plain grey dolphin, darker above and paler below. Their beak is short and stubby and their dorsal fin is large and often marked with notches and scratches. Bottlenose dolphins are often sighted close to shore alone or in small groups. Look out for boisterous splashing and breaching - and don't be surprised if they approach your boat to check you out!

They are very social animals and can often be seen in small groups of up to 15 dolphins. They love to jump out of the water and will happily approach boats to surf in the waves created by the boat. They feed on fish, often working as a team to hunt.



Image by Jacqui Mair



## Species: Common Dolphin

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**Scientific name:** *Delphinus delphis*

**Irish Name:** An Deilf Choiteann

**Habitat:** aquatic habitats, including streams and rivers, lakes, estuaries and sandy beaches

**Size:** 1.5m – 2.7m

**Colour:** Black back and a white belly flanked with lighter streaks which are yellow near the head and grey towards the tail

**Distribution:** Widespread along Ireland's coast



The Common Dolphin generally prefers surface temperatures of 10°C or warmer and are found in oceans and seas all around the globe. This is the dolphin that you are most likely to spot in Irish waters and they are one of the most common dolphins world-wide.

Common dolphins can grow up to 2.7m in length. You will see them 'breaching' or jumping out of the water, often in pods of ten or more dolphin. They are dark coloured on their head and back but have lighter streaks down their sides which are yellow near the head and grey towards the tail.

Common dolphins are a very social animal and often work together to catch food, forcing large bait balls of fish up to the surface where they are easier for the dolphin to catch, as well as attracting the attention of sea birds who will attack from above. They feed on fish such as horse mackerel, herring and sprats as well as eating squid. They are a fun-loving and curious creature and will often 'bow ride' along beside boats and large whales.



Image by Catherine Bushe



Image by Catherine Jordan



## Species: European otter

**Scientific name:** *Lutra lutra*

**Irish Name:** Dobharchú / Madra uisce

**Habitat:** aquatic habitats, including streams and rivers, lakes, estuaries and sandy beaches

**Size:** 60-80cm in length

**Colour:** grey-brown fur

**Distribution:** widespread throughout Ireland's coasts, rivers and waterbodies



Image by Clodagh Blake

The otter is one of Ireland's top predators, feeding on fish such as eels and salmonids, waterbirds, amphibians, and crustaceans.

The otter is a large mammal with grey-brown fur and a paler chest and throat. Otters are well suited to a life on the water as they have dense fur to keep them warm, webbed feet and they can close their eyes and nostrils when under water. Otters can be distinguished from stout and mink by their much larger size, broader face and broad snout.

Otters are very elusive, however you can spot them at rivers, inland waterbodies and the coast. They require clean waters, an abundant source of food and plenty of vegetation. They dig underground burrows, known as 'holts', where they have their cubs. In Ireland, breeding can occur in any season and females will have a single litter annually with 2-3 cubs per litter. Cubs are usually in the water by 10 weeks old and are fully independent at 12 months.

As mentioned, otters can be difficult to spot but there are some signs you can look out for to ascertain if otters are inhabiting an area. Along waterways, keep an eye out for five-toed footprints and droppings! Otters leave droppings in prominent places to help them find mates and defend their territory, the droppings contain visible fish bones and are meant to smell like jasmine tea!



Image by Kya de Longchamps



Image by John Holden





## Species: Grey Seal

Scientific name: *Halichoerus grypus*

Irish Name: Ron Mor

**Habitat:** rocky shoreline, inlets and islands

**Size:** Up to 2.6m in length

**Colour:** Grey with dark spots/blotches

**Distribution:** Widespread around Ireland's coast



Image by Nigel Motyer

In Ireland, we have two species of seal that live around our coastline – Grey and Common Seals. The Grey Seal is the larger of the two species, and you notice distinct differences between them both, including the hooked nose of the Grey Seal and their parallel nostrils which differ from the Common Seals v-shaped nostrils.

Grey Seals feed on fish which they hunt out at sea. They usually return to land to rest and can often be seen 'hauled out', on rocky shores and beaches. Grey seals give birth to fluffy white pups in the autumn. Their pups stay on land until they have lost their white coats and increased their body weight.

Grey seals like to roam around the North Atlantic during the year, travelling from one country to another, but returning to the same place each year to breed and give birth. Grey Seals have a longer pupping season in Ireland, with pups being born in August, despite normally having pups in the winter months between October and February.

Grey seals are a Protected Species in Ireland Under the Irish Wildlife Act, 1976 and The EU's Marine Mammal Protection Act, 1972. They almost went extinct in Ireland in the early 1900's due to hunting, but these protections have allowed their numbers to start to recover.



Image by Ray Yeates

# Plants



Image by Olivia Jones

The coastal environment is an inhospitable place for plants to grow, winds are damaging and contains salt, which causes them to dry out and submerging from the incoming tide also adds pressure. Therefore, plants have adapted to retain moisture and withstand wind-damage and submersion.

This adaptation has resulted in a wide variety of plant life along the Irish coastline, growing in shoreline habitats such as saltmarsh, above the hightide line in dune systems, clinging to the rocky shore and sea cliffs and creating beautiful wildflower mosaics in machair.

We have compiled a list of some of the more common species you might encounter along the Irish coastline.



Image by Olivia Jones



## Species: Daisy

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Scientific name: *Bellis perennis*

Irish name: Nóinín

**Habitat:** Machair, coastal dunes, and grasslands

**Size:** The flower head is 2-3 cm in diameter and the stem ranges from 2-10cm in height

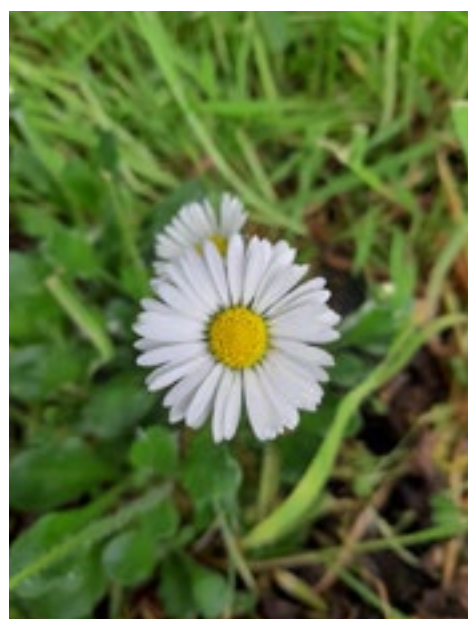
**Colour:** A central yellow disk surrounded by white-pink tinged petals

**Distribution:** Widespread and nationwide

Although each Daisy looks like one single flower, they are in fact a composite of many small florets that make up the yellow central disc and white spear-shaped floret petals.

They have a dark green stem and dark green spoon shaped leaves. Every day, they follow the sun's direction in the sky, in a phenomenon known as heliotropism. When night comes, they close their petals and reopen again at first light. They flower from early spring right into autumn and have been known to flower throughout a mild winter.

The Latin name comes from the word "bella", meaning beautiful and "perennis" meaning perennial.



## Species: Marram Grass

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**Scientific name:** *Ammophila arenaria*

**Habitat:** Marram Dunes

**Size:** 1m in height

**Colour:** Glossy green leaves with golden flower spikes

**Distribution:** Widespread along Ireland's coast

The dense, green clusters of Marram grass are what many of us picture when we think of coastal sand dunes. Marram grass is well-adapted to the severe conditions of the coastal environment as its rolled-up leaves prevent it from drying out. The leaves can grow up to one metre in height and its green appearance is altered in July and August as it produces tufts of golden flower spikes.

As well as being a recognised feature of sand dunes, marram grass plays a vital role in dune habitats as it helps to reinforce the structural integrity of the dune. The fibrous roots of marram grass bind sand together allowing for more sand to build up and thus creating the dune systems we see at beaches. The binding of the sand ultimately increases the biodiversity of the habitat as it encourages the establishment of other plants in the dune habitat which attracts various insects and animals.

Marram grass was once used to create fishing nets, roofing and even shoes. The importance of Marram grass in the formation of sand dunes has prevented the grass from being harvested in modern times. Environmental groups, including Clean Coasts, carry out marram grass planting in sand dune habitats to help prevent coastal erosion.





## Species: Pyramidal Orchid

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**Scientific name:** *Anacamptis pyramidalis*

**Habitat:** Coastal Dunes

**Size:** 60cm in height

**Colour:** Magenta flowers with green stems

**Distribution:** Throughout Ireland, mainly found at coastal or woodland sites



As the dunes become more sheltered away from the shore, the plant life changes. Here the plant life is made up of grasses, wildflowers and bracken. Wildflowers include wild orchids such as the Pyramidal orchid which flowers between June and August. The Pyramidal orchid is varied in shape as it can have single or several stems which grow to 30cm in height. The flowers are pink in colour and fade as the orchid ages. Their name is denoted through the pyramid-shaped head which can contain 50-100 small flowers.

The Pyramidal orchid has a distinct smell that attracts many pollinators including burnet moths and butterflies.

Orchids form a symbiotic relationship with fungus in the soil which involves the fungus producing more food for the orchid seeds and in turn, the fungus gaining protection from the orchid's roots



Images by MJ O' Mahony

## Species: Sea Aster

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Scientific name: *Aster tripolium*

Irish name: Luibh bhléine

**Habitat:** Coastal cliffs, estuaries and salt marshes

**Size:** 10-20mm flower diameter

**Colour:** pale purple-blue flowers with bright yellow middle

**Distribution:** Widespread around Ireland's coast

The sea aster is an unusual plant in that it spends a good part of its life with its roots in sea water and can in fact be fully submerged at high tide. You will most likely find them around the coastline, at saltmarshes or estuaries, or on cliff faces in very little soil.

The plant has purple-blue, daisy-like flowers with bright yellow centres. The stems and leaves are long and slender with a light green colouration and the plant can grow up to 1m in height. Sea aster flowers in Ireland from July to October and they bloom in small clusters which can be spotted along the coast.

The leaves of sea aster can be eaten, and you will find many recipes online that involve raw or cooked leaves. The flavour is meant to be a complex sweet flavour with hints of iron and nut!





## Species: Sea-holly

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**Scientific name:** *Eryngium maritimum*

**Habitat:** Coastal Dunes

**Size:** 60cm in length

**Colour:** Grey-green leaves with blue-green flower heads

**Distribution:** Widespread along Ireland's coast

Sea-holly lives up to the expectations of its name as it produces grey-green leaves with many spikes along their edges. The plant can grow to 60cm in height and flowers between July and September, where it produces teasel-like heads of flowers which look similar to that of a thistle. Sand dune habitats will usually be dominated by marram grass nearest to the seashore as this area has the harshest conditions. The hardy nature of sea-holly means that it can also grow close to the shore. The sea-holly's leaves have a waxy coating which prevents water loss in the dry, salty conditions.

Despite its spiky appearance, sea-holly is attractive for many pollinators who seek out the plant for its nectar.

The flowers of Sea-holly have been accredited for having aphrodisiac properties and were even mentioned by Shakespeare for this reason! The tubular roots were once sugared and sold as sweets





# Species: Thrift

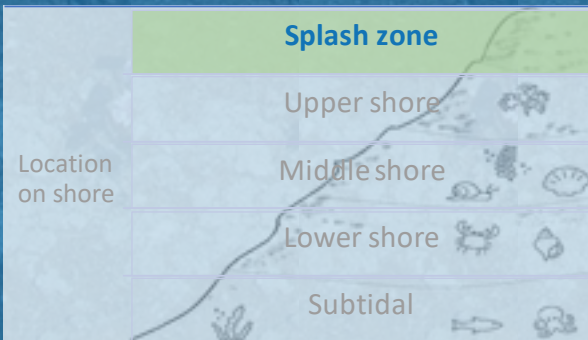
Scientific name: *Armeria maritima*

Habitat: rocky sea cliffs

Size: up to 20cm in length

Colour: pink flowers

Distribution: widespread around Ireland's coast



Thrift, also known as 'Cliff Clover' or 'Sea-pink', is a clover-like plant that produces cushions of pink flowers that are familiar sight on cliffs, shingle beaches, inland marshes and sand dunes around Ireland.

Thrift produces flowers from April to July which appear on long stems above cushions of foliage. Thrift grows in well-drained, sandy soils, and is an important source of nectar for a range of insects and pollinators.

The flowers of Thrift were featured on one side of the old 'thrupenny bit' – the three pence coin used until the 1970s.





## Species: Common Lizard

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**Scientific name:** *Zootoca vivipara*

**Habitat:** Coastal Dunes

**Size:** 10-16cm in length

**Colour:** Grey, brown, bronze, or green scales with orange-yellow underside

**Distribution:** Widespread in Ireland, particularly in bogs, coastal sites, grasslands and uplands



The common lizard, which is the only reptile native to Ireland, can sometimes be found living in sand dunes where they enjoy basking on rocks or open sand. Common lizards are usually 10-16cm in length and have small scales on their backs. The male lizards are usually darker than the females with bright orange colouration on their underside. Common lizards emerge from hibernation in the spring as breeding takes place in April, so this is a good time to spot them!

Common lizards hunt for insects such as spiders, snails and worms. They will stun their prey by pouncing on them and shaking them, before swallowing them whole!

Unlike most other reptiles, the Common lizard gives birth to live young which is thought to be an adaptation to the colder climate. Pregnant females can be spotted in September as they tend to give birth to their young during this time.

Through this citizen scientist-led survey, the Irish Wildlife Trust hopes to determine the distribution of both species. This knowledge will allow experts to monitor any changes in the population to ensure any decline does not go unnoticed before it is too late.





# Seaweeds



Image by Olivia Jones

Seaweeds are a type of marine algae that are found growing in all the world's oceans. They are categorized into three colour groups, red, green and brown. In Ireland there are over 600 species and worldwide there are over 10,000 species.

Seaweeds are of high ecological importance, especially species such as kelp which are a keystone species and are an important source of food and shelter for marine life. Even when seaweed is washed up and decaying on the shore, it is a source of nutrition for coastal organisms and serves as a foundation for the formation of sand dunes.

Seaweed is also of great economic value, it is an important food source for many, processed to create food additives, added to beauty products and agri-products and is the focus of many research studies to determine further uses. With this increase in production uses, it is important that we are mindful of the important role seaweed plays in the marine environment and harvest it in a sustainable way.



Image by Olivia Jones



# Species: Bladder wrack

Scientific name: *Fucus vesiculosus*

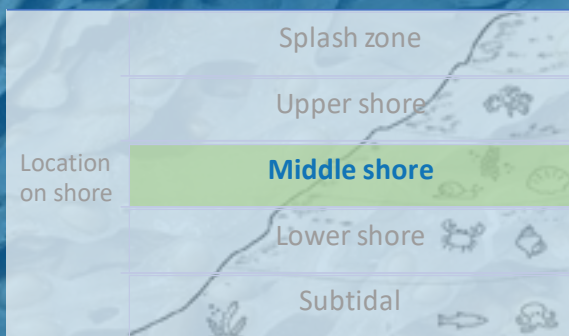
Irish name: Feamainn bhoilgíneach

Habitat: rocky shore

Size: 15-100cm in length

Colour: olive-brown, darker when submerged

Distribution: widespread around Ireland's coast



Bladder wrack is the most recognised seaweed on the shore as it is very common and grows between the low and high-water marks on the rock shore. The identifiable features of bladder wrack are the paired air bladders which allow the seaweed to float when it is submerged in water. It is important to note that bladder wrack doesn't have serrated edges unlike the similar species of Serrated Wrack.

Bladder wrack forms dense beds on the shore with other wrack species. These beds provide cover and moisture for other rocky shore animals and some species feed on the wrack including the flat periwinkle.

Bladder wrack was once used as a source of iodine to treat goitres. Nowadays, you're more likely to find it in your anti-ageing cream as research has found that it has anti-ageing properties!



Images by Olivia Jones



# Species: Channelled wrack

**Scientific name:** *Pelvetia canaliculata*

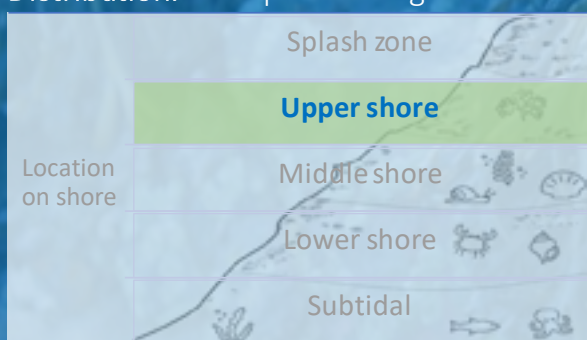
**Irish name:** Caisíneach

**Habitat:** rocky shore

**Size:** 5-15cm in length

**Colour:** brown-yellow in colour with green tinge

**Distribution:** widespread along Ireland's coast



Channelled wrack can be found on most rocky shores around Ireland. It is mainly found at the upper shore, at the high tide mark. Channelled wrack is very hardy and can survive for over a week without being submerged in water. Channelled wrack is aptly named due to the obvious 'channels' that can be seen at the end of its fronds. The lighter-coloured, v-shaped swellings at the ends of the fronds could be mistaken for air bladders, similar to those of bladder wrack or egg wrack, however channelled wrack does not have air bladders and these swellings are actually its reproductive structures.

Channelled wrack is a hermaphrodite, so it has both male and female structures. Their sex cells are released from the ends of the fronds and are fertilised externally in the water. They settle as tiny sporelings, which develop through the winter.





# Species: Dulse (dillisk)

Scientific name: *Palmaria palmata*

Irish name: Duileasc

Habitat: rocky shore

Size: between 20 – 30cm tall, sometimes up to 1m

Colour: dark purplish red, opaque

Distribution: widespread along Ireland’s coast



Dulse is a common red algae that can be found in the subtidal zone of many rocky shores throughout Ireland. It can reach a depth of 20m on both moderately exposed and sheltered shores. The plant has a disc-shaped holdfast and a very small stem (stipe). It is both epilithic (grows on rocks) and epiphytic (grows on the surface of another plant). The fronds are broad, flat and have a smooth, leathery texture. They can grow up to 50cm long.

Dulse is a popular edible algae that has long been a part of the Irish coastal diet. The earliest historical reference to dulse describes St. Columba’s monks harvesting the plant in Ireland approximately 1400 years ago. Both St. Brendan and the Vikings were also believed to bring dulse on long journeys. It is packed full of vitamins and minerals which was needed to stave off scurvy. The dried fronds are often eaten as a snack food, flakes, in breads, in salads or as a condiment.



Images by Olivia Jones



## Species: Egg wrack

Scientific name: *Ascophyllum nodosum*

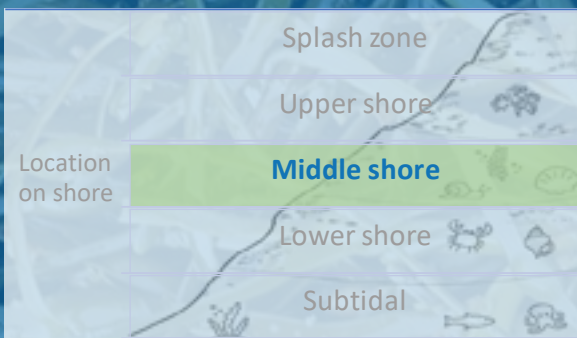
Irish name: Feamainn bhúí

Habitat: rocky shore

Size: up to 2m in length

Colour: olive-green to brown

Distribution: widespread around Ireland's coast



Egg wrack is one of the most common seaweeds on Ireland's coastline. It is an olive-green seaweed which grows in dense masses on the mid-shore of rocky shores. You will notice large egg-shaped air bladders along its leathery fronds which give the seaweed its name.

Whilst egg wrack thrives on sheltered shores, it does not cope well on exposed shores with strong wave action. On sheltered shores, egg wrack creates dense masses that provide shelter and protection for small invertebrates and fish. You will most likely see the bright yellow or brown shells of flat periwinkles dotted amongst the egg wrack fronds. Small molluscs, and other invertebrates, such as periwinkles feed on the egg wrack.

Some fronds of egg wrack may have small tufts of red hair-like algae along their fronds. This red seaweed lives on egg wrack and produces pom-pom-like structures that look similar to small flowers.



Images by Olivia Jones



# Species: Gutweed

Scientific name: *Ulva intestinalis*

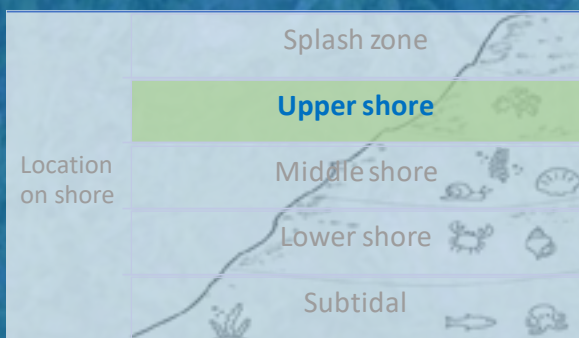
Irish name: Líneáil ghorm

Habitat: rocky shore

Size: up to 40cm in length

Colour: bright green

Distribution: widespread around Ireland's coast



Gutweed gets its name from its intestine-like appearance! It has long fronds which are filled with bubbles of trapped air along its length giving it a wiggly appearance! The fronds are usually unbranched and bright green in colour. Gutweed is a common seaweed in Ireland and can be found on most coastlines in various habitats such as rockpools, sand and even on other seaweeds and shells.

Gutweed can form large masses on the rocky shore or, if detached, floating in the sea. Its ability to form these masses is an important feature for other smaller creatures on the shoreline as the gutweed provides shelter and protection. Many invertebrates and small fish also feed on gutweed.

Gutweed reproduces quickly and can be responsible for water bodies having a green tinge as it releases lots of green reproductive cells!





## Species: Horned Wrack

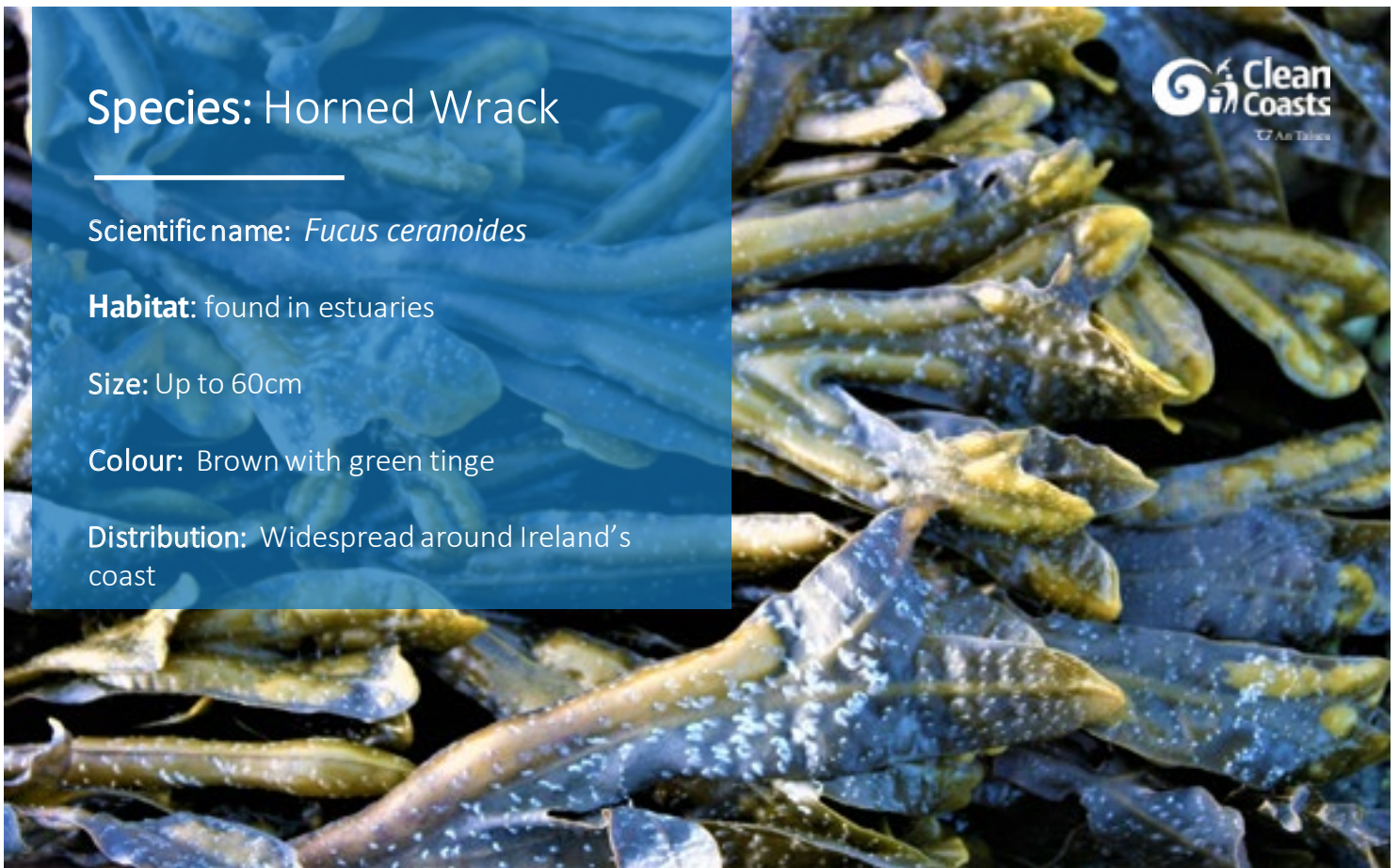
**Scientific name:** *Fucus ceranoides*

**Habitat:** found in estuaries

**Size:** Up to 60cm

**Colour:** Brown with green tinge

**Distribution:** Widespread around Ireland's coast



Horned wrack is closely related to other large brown intertidal seaweeds including bladder wrack and serrated wrack. However, Horned Wrack is restricted to growing in estuaries or near freshwater streams on the shore as it prefers a lower salt concentration. Horned Wrack does not have airbladders, but the side of the fronds are often inflated and branch out at the ends.

Horned Wrack can be found in the upper parts of estuaries and similar habitats (e.g., coastal outflows) that are subjected to the influx of freshwater for part of the tidal cycle.



Images by Olivia Jones



## Species: Purple laver (nori)

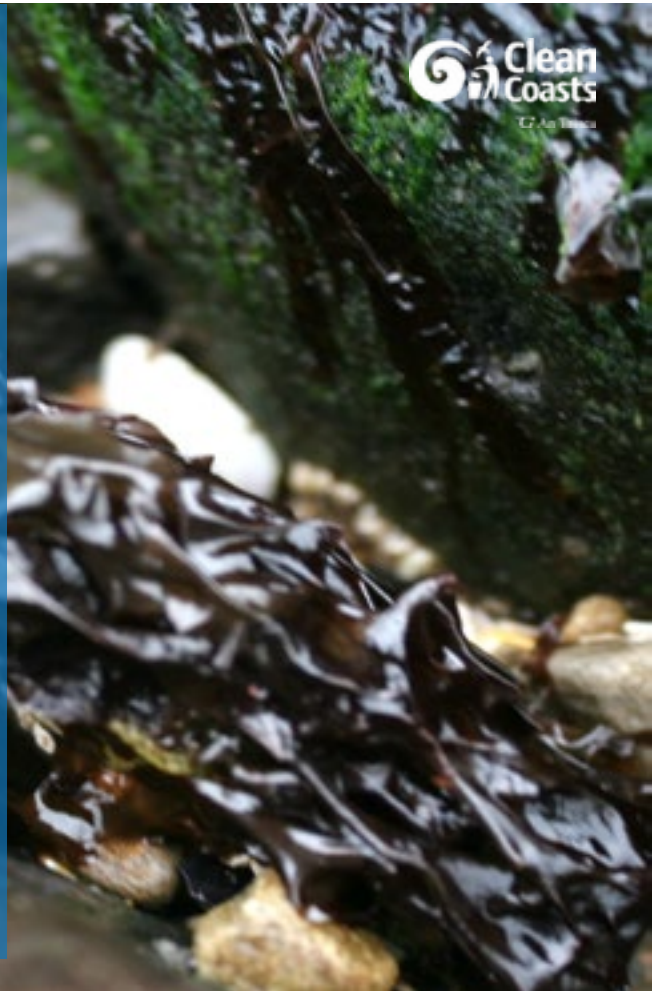
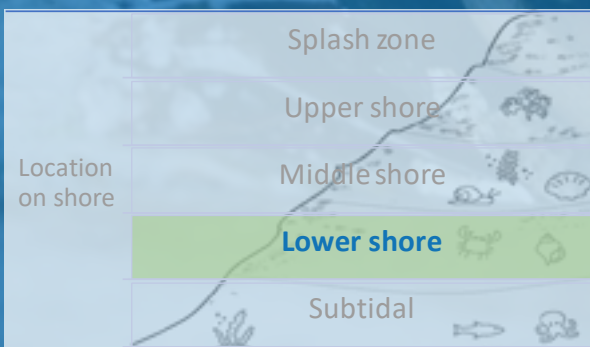
Scientific name: *Porphyra umbilicalis*

Habitat: rocky shore

Size: up to 20cm

Colour: purple-brown

Distribution: common on rocky shores around Ireland



Purple laver is a common seaweed that can be found on all areas of a rocky shore. It can tolerate drying out and being exposed to the air for long periods between tides. Purple laver is purple-brown in colour and forms very thin, membranous fronds that vary in shape.

Similar to most seaweeds on the rocky shore, purple laver attaches to rocks with a disc-shaped holdfast. The seaweed occurs in colonies or as individuals along the coast.

If you find purple laver in a rockpool, it is likely that you will find small animals such as grazing molluscs and small species of fish using the seaweed for food and shelter.

Purple laver is used to make laver bread which is a famous food in parts of Wales.





# Species: Serrated wrack

Scientific name: *Fucus serratus*

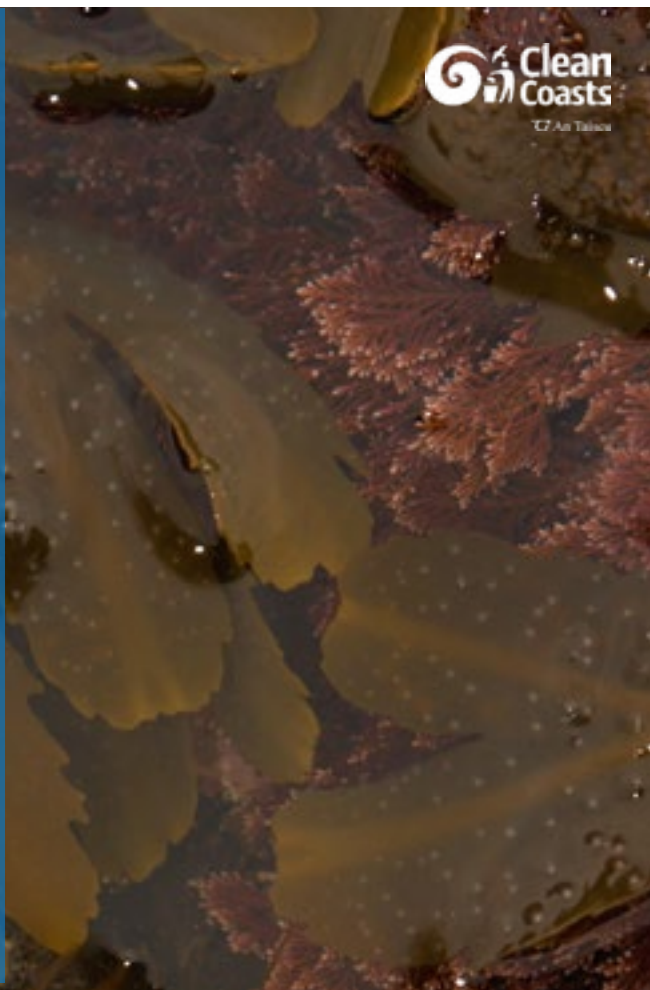
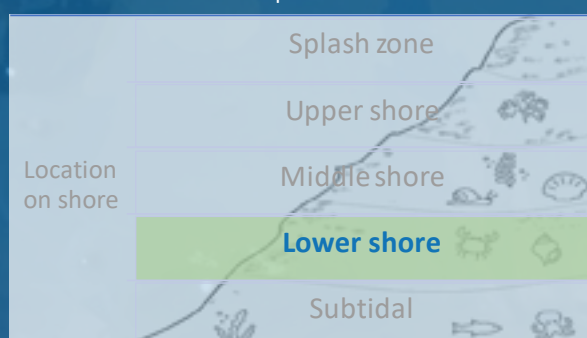
Irish name: Míoránach

Habitat: rocky shore

Size: 30cm in length

Colour: olive-brown, darker when submerged

Distribution: widespread around Ireland's coast



Serrated wrack or Toothed wrack is a common wrack seaweed that grows just above the low water mark on rocky shores. Its name comes from the serrated edges on its fronds. These edges are so serrated that some people even call this seaweed Saw Wrack. Serrated Wrack provides shelter for many creatures in the lower shores, including Flat periwinkles and many small crustaceans.

Other seaweeds are found to grow on its fronds, including Dulse. The dense bunches provide shade and shelter in rockpools too - lift up a bunch and see what's hiding underneath (though make sure you put everything back where you found it!).





# Species: Sugar kelp

**Scientific name:** *Saccharina latissimi*

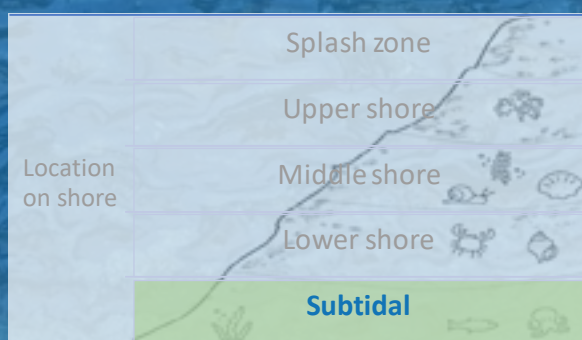
**Irish name:** Rufa

**Habitat:** rocky shore

**Size:** can grow up to 4m long

**Colour:** greenish dark brown to yellowish brown

**Distribution:** widespread along Ireland's coast



Sugar kelp is a brown seaweed which can be found in the lower shore. It is common along the Irish coast on sheltered rocky shores and tends to grow in patches along the water's edge. Just like other kelps, it is only visible during very low tides. Sugar kelp has a small, branching holdfast and a short stipe. It has a long, frilly frond and the centre is dimpled with no midrib. This species of kelp varies in colour from green/dark brown to yellowish brown and is slightly transparent.

Traditionally, sugar kelp was used for fertiliser in Ireland. When dried, the sugars from the plant form a sweet-tasting white powder on the fronds. It is commercially grown, predominantly in Asia, as a food product and is commonly used as a sweetener in food and drinks. Also known as poor-man's weather glass, when removed from water, the plant tends to go brittle when humidity decreases, soften when humidity increases and, as such, could be used to predict the weather.





# Molluscs



Image by Olivia Jones

Shellfish are part of a group called Molluscs, one of the most diverse groups of animals on land and in the ocean. They all have the same characteristics, a head and a foot, and bodies that are covered or partially covered by a soft fleshy skin called a mantle. Most molluscs also have a hard shell which protects them and grows at the same rate as their body, however, in some molluscs such as the cuttlefish their shell is internal, whereas others like the sea slug and the octopus have no shells at all.

Shell species range in size from 2-3mm to up over 1m, the largest species recorded to date is a Giant Clam, measuring 137cm. They can be categorised by how many shells they have, single shelled molluscs are called gastropods, e.g., periwinkles, two shelled species are called bivalves, e.g., mussels, and chitons have up to eight shells that form a chain mail type structure.

Many marine shellfish are found along the intertidal shoreline, hidden under seaweed, attached to rocks and buried in the sand.



Image by Olivia Jones



## Species: Edible periwinkle

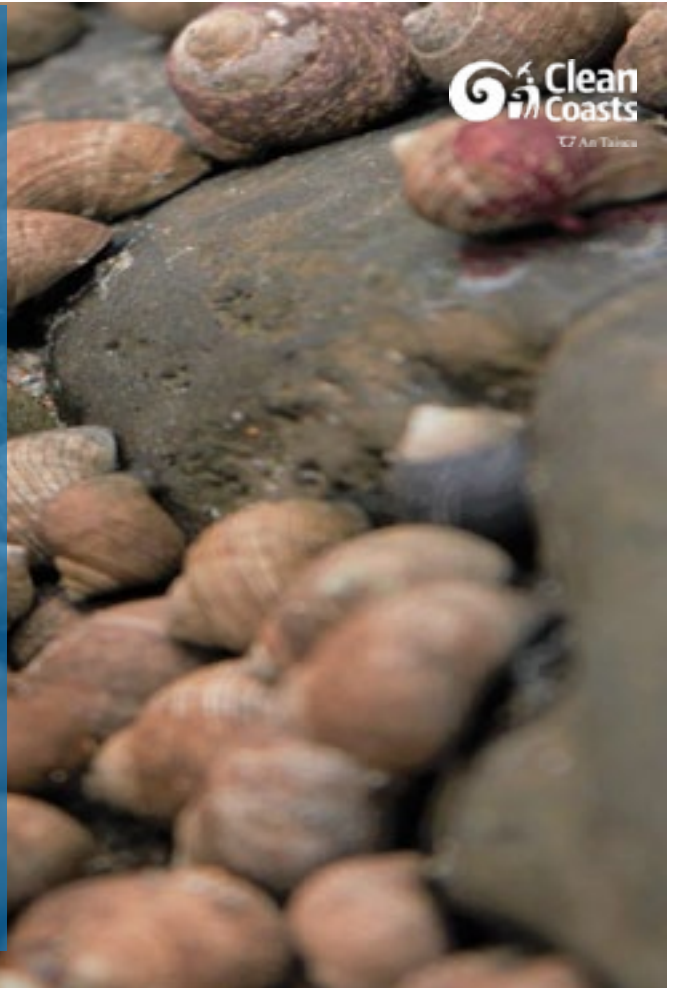
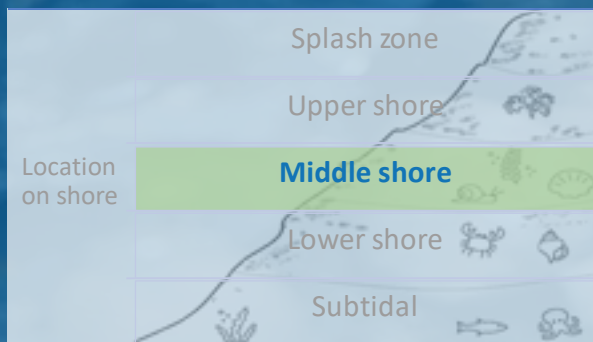
Scientific name: *Littorina littorea*

Habitat: rocky shore

Size: up to 2cm in length

Colour: greyish-brown

Distribution: widespread around Ireland's coast



The edible periwinkle is a large sea snail found on rocks and amongst seaweeds around the middle to lower parts of the shore. Known as the edible periwinkle, common periwinkle or winkle, it looks pretty similar to a land snail, with a dark brown or grey banded shell and little eye stalks poking out.

The edible periwinkle feeds by grazing on algae on the rocks using its rasping tongue, called a radula. They don't like dry areas, so will often be spotted clumped together in a crevice or rockpool at low tide.

The edible periwinkle has a rounded, whorled shell, usually greyish-brown in colour. It has concentric ridges, dark lines and a pointed apex. It is distinguished from similar, snail-like periwinkles and topshells by the slightly larger size, rounded shape and generally plainer colours.



# Species: Dog whelk

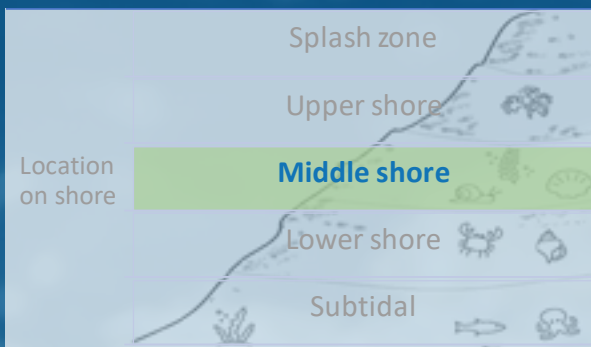
Scientific name: *Nucella lapillus*

Habitat: rocky shore

Size: 3-6cm in length

Colour: white, brown or yellow shells

Distribution: widespread around Ireland's coast



Dog whelk have a conical shell with a pointed spire that look similar to that of a snail. They predominantly have white shells in Ireland, but they may also be brown or yellow.

Dog whelks can be found on the lower shore, usually on the hunt for barnacles or mussels which are their favourite food!

The dog whelk feeds on these animals by piercing a hole through their shells and then injecting an enzyme that digests the animal in its own shell! The dog whelk then uses its straw-like tongue to suck the resulting 'soup' out through the shell.

Dog whelks lay their eggs in small yellow capsules which you may spot under rocky overhangs on the lower shore. Each capsule can contain up to a thousand eggs.



Image by Dave Wall



Image by Olivia Jones



# Species: Limpet

**Scientific name:** *Patella vulgata*

**Habitat:** rocky shore

**Size:** up to 4cm shell length

**Colour:** the common limpet is usually white-grey in colour, but limpets vary in colour from yellows, browns and oranges!

**Distribution:** widespread around Ireland's coast

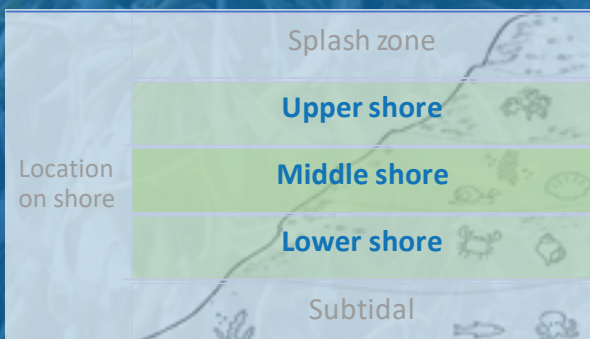


Image by Olivia Jones

Common limpets are the small cone-like shells that are often seen firmly clamped to the side of rocks in rockpools. Although they may not look impressive at first glance, once the tide comes in they spring to action, moving around rocks eating algae by scraping it off using their tongue. Their tongue is the world's strongest known biological structure – it needs to be to constantly scrape algae off tough rocks!

Limpets move around over the rocks when the tide is in, but always return to their own favourite spot when the tide goes out, following the mucus trail that they have deposited. This spot becomes worn by the edges of the shell, and eventually an obvious 'scar' in the rock is created. This 'home scar' helps the limpet to better attach to the rock, stopping it drying out until the next tide comes in.



Image by Suzanne Longmuir



Image by Dave Wall



# Species: Sea hare

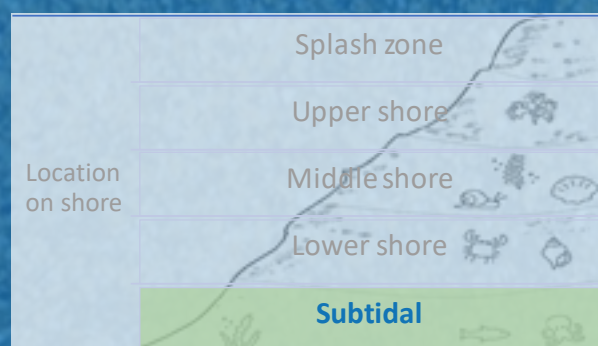
Scientific name: *Aplysia punctata*

Habitat: rocky shore

Size: usually around 7cm but can grow up to 20cm

Colour: green, brown, red or purple, often with black or white spots and veining

Distribution: northern and western coasts of Ireland



The sea hare can usually be found in shallow waters and sometimes in the lower shore or in rockpools. It generally resides in algal seaweed beds which it uses for feeding, reproduction and protection. The body colour of this species is variable and ranges from olive, brown, red or purple. This variation is said to reflect the individual's algal diet.

The sea hare has a long and narrow body with two long, slender tentacles on its head. A transparent shell is located internally to protect vital organs and can be seen through a large opening in the mantle. The sea hare can expel both white and purple secretions when it is disturbed. This gastropod can be found along the coastlines of the Northeast Atlantic from Greenland to the Mediterranean.



Image by Suzanne Longmuir



Image by Jorg Ger



# Worms



Image by Olivia Jones

The marine environment is home to many species of worms, however, they are not usually that obvious to the eye. Some species move about freely, whereas others have evolved to become master builders and create structures that can help us identify them, for example on a rocky shore you might come across sand in a honeycomb formation, these structures are built by the honeycomb worm, or you may see tiny white tube structures on rocks, these are the calcareous homes of coil and keel worms. Other worms such as Lugworms live beneath the sand and deposit mounds of spiraled sand on the shoreline. Flatworms leave no evidence of their presence, however, they can be spotted living under rocks and seaweed.

Worms are also a pivotal element in the marine food web, as they are both predators to smaller invertebrates and prey for fish and larger sea creatures. Some ocean floor dwelling worms even play an important role in regulating the climate as they convert organic matter into carbon dioxide, which is then in consumed by phytoplankton during photosynthesis, who in turn release oxygen from this process into the atmosphere.



Image by Olivia Jones



## Species: Lugworm

Scientific name: *Arenicola marina*

Irish name: An Lugach

**Habitat:** found in both sand and mud on exposed and sheltered coastline, in the mid to lower tidal zone

**Size:** 12-20cm in length

**Colour:** Varies from black, brown, pink or green

**Distribution:** Widespread around Ireland's coast

Image by Suzanne Longmuir

Have you ever spotted these coiled piles of sand whilst walking on the beach? Well, they're not just pretty patterns made by the sea – they're actually deposits from animals that burrow beneath the sand. If you look around these coiled sand casts, you will see a small depression in the sand which is the entrance to this animal's burrow. The animal is a lugworm and whilst you are walking on the beach, it's highly likely that you'll be walking above many of these worm's homes.

The worms themselves are variable in colour from black to pink and are rarely seen except by fishermen who dig them up for bait. They feed on small animals and dead matter that are filtered through the sand. Lugworm's predators include curlew and godwit who can pull them from their burrows with their long beaks.



Images by Olivia Jones