

A wee bit of maritime history... 20



Some things about Seaweeds

There are thousands of sorts of seaweeds on the coasts of the world's oceans. Just in Strangford Lough there are more than 400 different species! Some grow on the shore between the high tide and the low tide, some grow underwater all the time. They all grow attached to rocks, boulders or pebbles and all of them need sunlight – so they don't grow down in the deep, dark waters.

Seaweeds on a rocky shore



The easiest ones to see are the clumps of brown seaweeds on the shore. If you go and take a closer look (*take care not to fall over*) you will see that they do not all look the same and that the different looking sorts grow at different heights on the shore. Every day these seaweeds have to survive the crashing of waves and the tide going in and out, but they have evolved to be good at this. Most of them grow some sort of 'bubbles' in their branches so that when the tide is in, and the seaweed is underwater, the branches float upwards to get more sunlight. If, when the tide is out, you look underneath the hanging fronds of the big seaweeds you will find all sorts of other seaweeds – little ones, bigger ones, greens and browns and reds and pinks – and all sorts of tiny animals as well. All of them sheltering under the big seaweed from the sun and wind, while the tide is out. All the seaweeds get eaten (dead or alive) by the little animals, which get eaten by the bigger animals and so on. It's all very complicated and exciting to understand.

At the top of the shore, where the sea only covers them for an hour or so at a time, grows a seaweed called “channel wrack.” This doesn’t get very big and it can dry out until it is crunchy and dead looking - but once the sea wets it again it goes back to being soft. The tips of the branches may look swollen in the summer months, and the branches are not flat but curved up at the sides, like tiny straws cut in half long-ways.

channel wrack (*Pelvetia canaliculata*)



A little bit further down on the shore grows spiral wrack. The fronds of the branches look flat, but if you take a bit and hold it up, they hang down twisted in a spiral. The tips of the fronds may be spotty and swollen or have ‘bubbles’ in them, especially in the summer. There is a line – or rib – down the middle of each frond. This seaweed gets wetted by the tide every day.

spiral wrack (*Fucus spiralis*)



In the middle of the shore, growing together and often quite mixed up, are two different, usually big, brown seaweeds. One of these has fronds that are full of smooth, round ‘bubbles’ that are arranged in pairs either side of a mid-rib line. This is bladder wrack. Sometimes there are lots of ‘bubbles’ sometimes only a few. If the seaweed washes up onto a beach and dries out, these

bladder wrack (*Fucus vesiculosus*)



Also in the middle of the shore, grows the egg or knotted wrack. This seaweed has three different looking sorts of ‘bubbles.’ On the ends of short, summer branches are the spotty-looking ones. Near the ends of every branch are shiny, egg-shaped ones and further from the ends, are the huge egg-shaped ones. Every year a new egg-shaped bubble will grow in the fronds. If you count them back from the tip to where the seaweed is attached to the rock, this will tell you how old the clump is.

egg or knotted wrack (*Ascophyllum nodosum*)



Growing down at the lowest part of the shore you will find serrated or saw wrack. Even on a very low tide it is only out of the water for an hour or so. This seaweed has wide, flat fronds with mid-ribs, and jagged edges like the teeth on a saw. There are no 'bubbles' in the fronds, but in the summer the tips of the branches may be swollen. They may also have tiny hairs on the fronds, which help gather nutrients from the water so that the seaweed can grow fast.

serrated wrack (*Fucus serratus*)



Growing underwater below the low-tide level or in pools on the lower shore are the big, brown seaweeds known as kelps. Most of our kelps have a long stalk and a big flat blade that splits into ribbons – they may stick out of the water when the tide is very low. Kelps are sometimes known as 'tangle,' from the Viking word for seaweed: tang. On the stalks of some of the kelps grows the red seaweed called dulse (*Palmaria palmata*).



Irish moss or Carragheen, used to make milk jellies (*Chondrus crispus*). Gather it in spring while it is red/brown in colour, with iridescent blue tips; remove the tiny snails that live in it, take it home and peg it on the washing line for a few weeks to bleach in the sun and rain. Dry slowly in a cool oven and keep in a sealed jar on a sunny window ledge.



Maerl is a little seaweed that is free living (not attached to the rocks). It looks and feel like coral and is bright pink when it is alive. There are several other coralline seaweeds found underwater in rockpools on the shore.

Seaweeds are really useful. Just like plants, they grow using the energy of sunlight to fix CO₂ (photosynthesis). They are the fuel for the food-webs and ecosystems of our coastal waters. Humans have found all sorts of uses for seaweeds. Many different sorts

Porphyra species are dried in sheets for sushi or in Wales, cooked as laver to eat with bacon. Some seaweeds are eaten as a salad.



Laminaria species are dried (as kombu) then used for making stock. *Palmaria* is dried (dulse) and eaten crispy as a snack or crumbled on potatoes.

Seaweed gathered from the beaches was, and still is, spread on the land as fertiliser.



Seaweed from the shore was dried like hay and then slowly and stinkily burned. The soft, sticky ash left behind (called kelp), was cooled into blocks then sold into the soap and glass making industries. At other times the ash was sold to the chemical industry to extract iodine for medical use.



Over the years, all sorts of compounds found in seaweeds have been discovered to be useful for all sorts of different things – some of which you could never guess!



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