



Estuary adaptations transcript

Living things must adapt to the places and environment they live in so that they can survive and thrive. This means that they develop special features which help them to survive in their particular habitat.

In and around saltmarshes, animals and plants must cope with extreme conditions like being exposed to the hot sun when the tide is out, being dislodged by waves and being exposed to different predators.

Today we are going to focus on three animals and plants that we commonly find around Yorkshire saltmarshes, and look at what adaptations they have developed to survive:

Shore crabs

Shore crabs have a hard exoskeleton shell that offers it protection from the pounding waves when the tide comes back in.

This also offers them protection from predators that want to eat them like other crabs, fish and birds.

Shore crabs vary considerably in colour from greens to reds and this is dependent on where they are found, to better blend with their surroundings

This particular shore crab is a green colour to camouflage amongst the seaweed and grasses, making it difficult for predators to find them.

Sometimes you will find a crab with a missing claw or leg. This is usually an escape strategy where they can drop their limbs if a predator has got hold of them and so escape. They also have the amazing ability to re-grow these missing limbs!

Lugworm

Another common animal you will find around saltmarshes and on mud flats are lugworms.

Unlike crabs, they have a soft flexible body and make burrows for protection from predators and the elements.

Lugworms can be detected on the surface of the mud by their characteristic cast or fecal mound. This is waste material and silt that has passed through their gut. They feed by sucking algae, organic matter and micro-organisms into their burrow when the tide is in. Water is also drawn into the burrow so they can extract oxygen using their simple gills. Enough water is held in the burrow and surrounding mud to keep them alive when the tide is out.

The lugworm will stay safe, deep down in its burrow when the tide is out. Occasionally it will come near to the surface to excrete a cast and this is when it can be vulnerable to being eaten by wading birds using their long beaks to probe deep in the mud. When the tide comes back in and they are covered in water again, they begin to feed by munching on the fine mud and silt. Even when the tide is in the worms are vulnerable to predators (each time they go to the loo!) as fish such as cod and flounder can detect them and usually bite their tails off! Luckily, the worms will grow back a new tail in a matter of days though... When the tide eventually goes back out, the lugworm will stay deep in its burrow and happily digest the previous tides' meal.

Lugworms are very useful in mudflats and saltmarsh areas as their burrows aerate the mud and make it more suitable for other creatures to live. They are known as bio-engineers because they physically change the habitat they live in and improve it.

Glasswort

It is not just creatures that have adapted to live around saltmarshes, but plants as well. They have also developed special features to help them survive in these tough conditions.

This is a saltmarsh plant called 'Glasswort'.

It needs firm mud or silt to root into and needs to be very flexible and strong to stay there. Its roots are salt resistant and so it can grow in places other wetland plants cannot. It has an advantage here as it is not shaded out by other plants.

Glasswort has a fleshy stem and scaly leaves that can store lots of water so it doesn't dry out in the often harsh, salty and dry conditions it lives in. Related to cacti, it changes colour from green to red through the seasons from spring to autumn.