

Animals and plants on the rocky shore have found ways to adapt to the continually changing conditions.



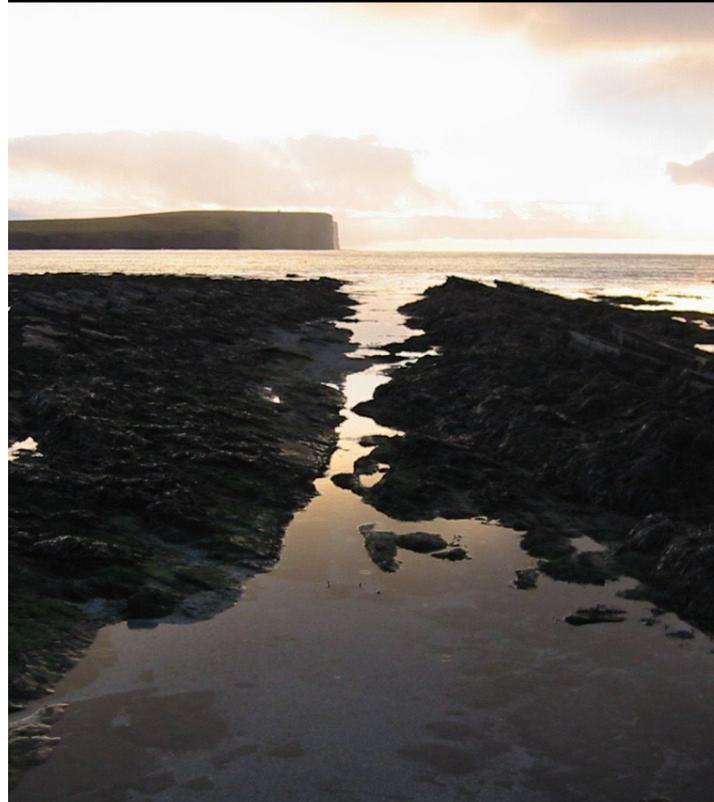
dog whelks

The rocky shore is a difficult place to live – when the tide goes out many marine plants and animals are left high and dry; when the tide comes in it brings with it other dangers.

At low tide life on the shore has to survive drying out, getting too hot or too cold and being eaten by other animals. When the tide is in animals can move about and feed, but there is still the danger of being swept away by strong currents or waves and being eaten by large predators who come in with the tide.



Orkney's rocky shores



find out more about our rich and varied wildlife

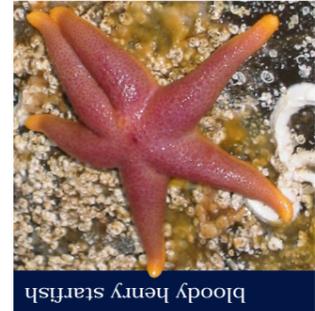
design and illustration: Iain Ashman
 photography: xSNH, RSPB, Richard Welby
 bottom Birsay shore and Marwick Head
 cover images: top Birsay shore

Seaweeds attach themselves to rocks with strong holdfasts. They have thick leathery fronds and coat themselves in mucus to prevent drying out when they are not covered by seawater.

Some animals have adapted by developing hard inside their hard shells. Other creatures survive by hiding under seaweed or stones, in crevices and under overhangs or in rock pools.

As you go further down the shore, where the rocks are exposed for only a short time, the variety of life increases. Down near the low tide mark you can see crabs, starfish, brittlestars, sponges, butterflyfish and much more.

Seaweeds show a similar zonation: the brown wracks can survive several hours of exposure, while the large kelps are only exposed at a very low tide. Most red and green seaweeds are only found on the lower shore or in rock pools.



bloody henry starfish

In the middle shore, between the high and low tide levels, rocks can be uncovered by the sea for several hours at a time. Limpets, barnacles and winkles live here and hide inside their shells when the tide is out. Shore crabs and sea anemones can also survive here by hiding under stones and seaweed.

All life on the rocky shore is influenced by the twice daily tidal cycle. The shore is divided into a series of horizontal zones, each containing different animals and plants according to how long the area is uncovered by the sea. Only a few creatures can survive in the splash zone above the average high tide level. Here you can find sea slaters and nerite winkles hiding in crevices.

On very exposed shores the constant bombardment of the sea means that only the hardest of creatures, such as barnacles and limpets, can survive. More sheltered shores and rock pools support a much greater variety of life.

finding seashore animals

- Look carefully amongst seaweed
- Lift stones and look underneath – but always replace rocks in the same position and the same way up
- Sit quietly by a rock pool and watch

seashore code

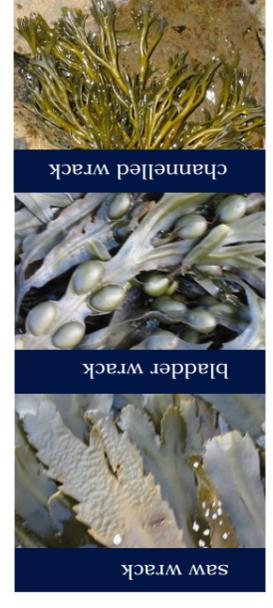
- Life on the shore is fascinating to look at, but we also need to treat it with respect
- Watch shorelife without disturbing it
- If you really want a closer look, collect one animal carefully and place in a bucket of seawater for a short time only
- Return sea creatures to the spot where you found them
- Don't pull shells like limpets off the rocks
- Protect animal's homes. If you lift rocks or move seaweeds, replace them carefully the way you found them
- Don't pull seaweeds off the rocks, there is usually loose weed around
- Don't take creatures home in a bucket, they won't live long
- Only take home empty shells
- Leave bird corpses on the beach, they are counted in a monthly beached bird survey

be safe on the shore

- Take care on slippery rocks and seaweed
- Be aware of the incoming tide
- Watch out for waves
- Flotsam and jetsam washed up on the beach can be dangerous – leave well alone

please remember

- To take care on cliffs - they can be dangerous
- To avoid disturbing nesting birds
- To keep dogs under control at all times
- To take your litter home with you
- Not to pick wild flowers
- Respect private property



channelled wrack

bladder wrack

saw wrack

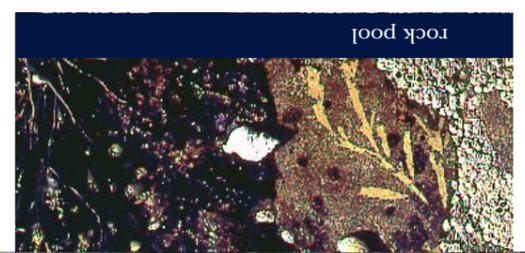
birds

Rocky shores are favourite feeding grounds for oystercatchers, turnstones and purple sandpipers. The oystercatcher's bill is good for prising shells from rocks, while purple sandpipers probe amongst the seaweeds eating invertebrates such as winkles. Turnstones are aptly named, turning over stones and moving seaweed with their short, upturned bills to find the sea creatures hiding there. Both turnstones and purple sandpipers are camouflaged amongst the seaweed covered rocks, making them easy to overlook.

At high tide there is good underwater feeding for birds – eider duck, black gull, eel and shags can all be seen feeding close to the shore.

Many rocky shores have rock pools where there is some water even at low tide. As they do not dry out completely it is possible for animals to live here which would normally be much further down the shore. This makes rock pools probably the easiest places for observing a great variety of sea life. Watching quietly beside a rock pool you might see hermit crabs and dog whelks crawling around, or sea urchins, sea slugs and even fish.

rock pools



rock pool



edible crab



Birsay shoreline



rock pool