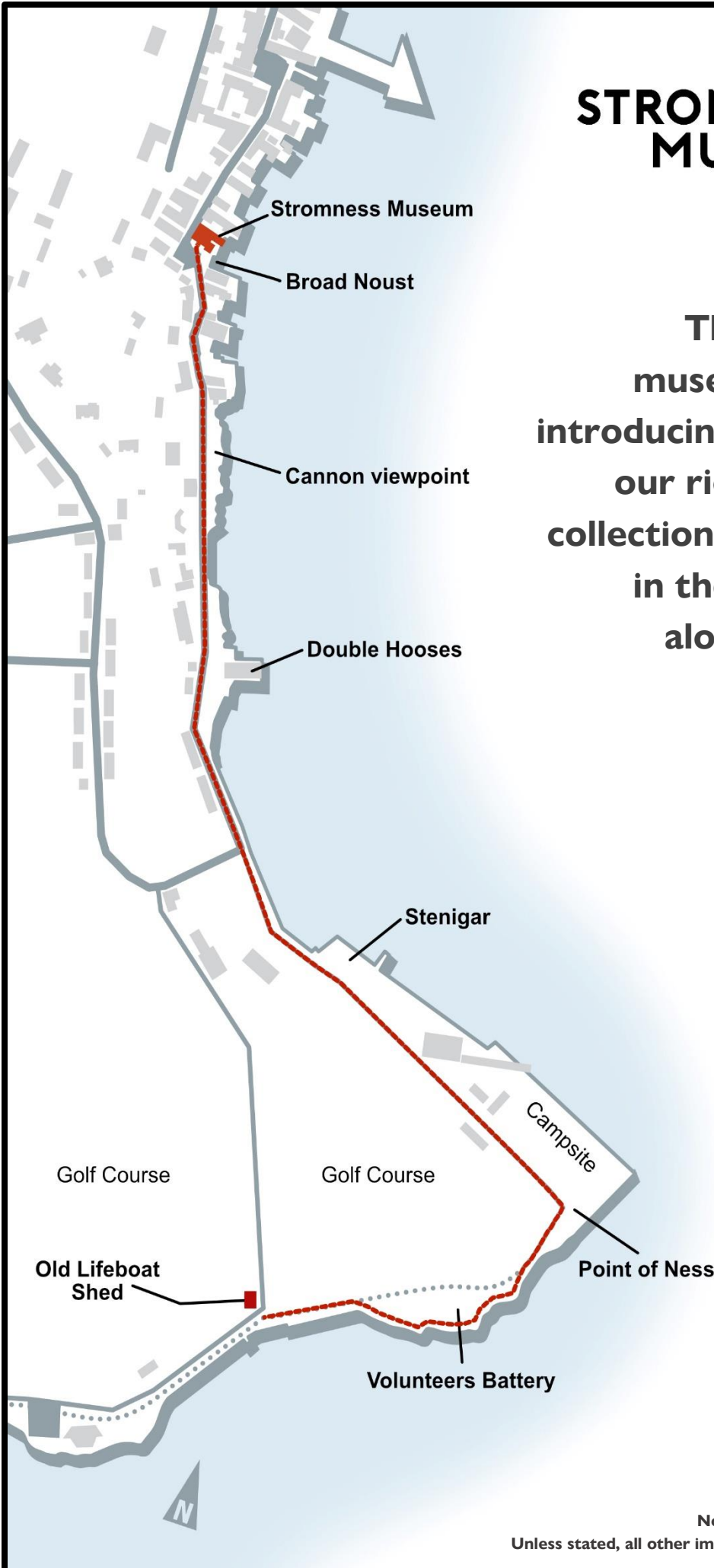


STROMNESS MUSEUM



This walk turns the museum inside-out by introducing specimens from our rich natural history collection and placing them in their natural homes along the Stromness shoreline

Use this guide and follow the coastal route to explore our amazing marine environment



1. Stromness Museum/ Broad Noust

Our shoreline nature walk starts from Broad Noust in front of the Stromness museum. Take a wander down onto the shore, have a look and see if you can identify some of the shoreline species here.

Seaweeds

Stromness Museum holds a collection of almost 400 pressed seaweed specimens, some dating back to the 1870's.

There are a variety of seaweeds to be found on the shore here, which live between the high and low tide mark, such as Bladder wrack, Spiral wrack, and Serrated wrack. Bladder wrack can be recognised by its pairs of air-filled bladders which keep it afloat when submerged.



Bladder wrack on shore



Bladder wrack pressed seaweed, collected by George Ellison in 1929 from West Shore, Stromness ©Stromness Museum



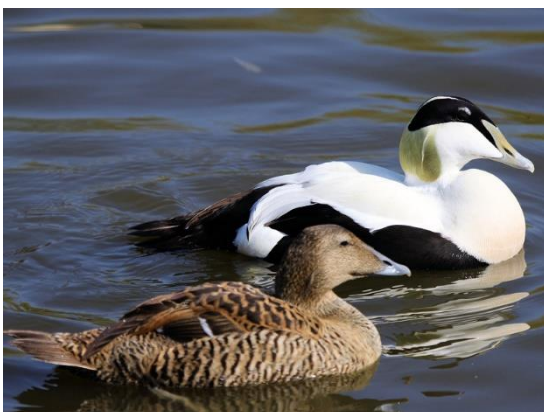
Shells

This is a favourite beach for local children to collect shells. Limpet shells are frequently found washed up here. Did you know that limpet's 'teeth' are the strongest biological structure in the world? This was discovered in 2015. Before this spider's silk was thought to be the strongest.

Common mussel with encrusting barnacles in Stromness Museum's collection ©SM



Limpets from Robert Rendall's shell collection in Stromness Museum ©Stromness Museum



Eider ducks (Nigel Key/ www.slim-bridge.co.uk)

Birds

Eiders are large sea ducks which are commonly seen around the piers and along the shore. The females are a mottled brown colour, whereas the males are black and white with green feathers at the back of the head. The soft downy feathers of the Eider duck are highly prized for its insulating qualities and is traditionally used in luxury bedding.

The museum's magnificent bird collection is a rare survival of the Victorian period. It includes native species as well as the more exotic. There are approximately 240 birds in the collection the majority of which are on display.



Eider ducks in museum's collection ©Stromness Museum

Interim Stop: Login's Well



As well as being of historical importance, this well is a man-made habitat where some plants thrive. You can see ferns growing on the cracks between the stones of the well interior. One of these is Sea Spleenwort, which lives where there is sea spray, such as on cliffs and in maritime caves.

Left: Ferns inside Login's Well

2. Cannon viewpoint - can be found 90m up the hill from Login's Well, on your left

Geology

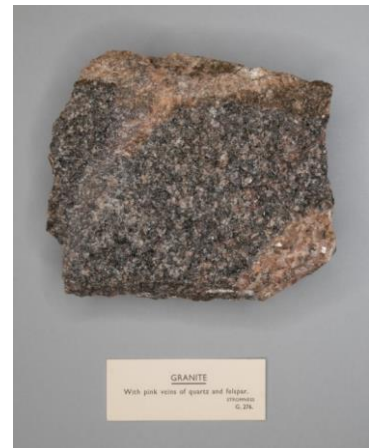
Looking down onto the shore you can see the oldest rocks in Orkney – granite gneiss which was thrust up to the earth's surface when two ancient continents Laurentia and Baltica collided during the Caledonian mountain building episode about 425 million years ago.



The hard granite slowly wore away, but left an island, sticking up from Lake Orcadie (which we will hear about later).

Please be aware the ground falls away steeply to the shore here.

Left: Granite gneiss on the shore at the Cannon.



Granite specimen from Stromness Museum collection @SM

Birds

Grey Heron - Spot these tall, elegant birds standing statue-like on the water's edge, waiting patiently for their next meal to swim by. Feeding mainly on fish, they also like to eat small birds, mammals, and amphibians.

Make sure you look out for these incredible birds in flight too!



Tony Hammond/ www.flickr.com



Grey heron in museum's collection @Stromness Museum



Pair of red-breasted merganser ducks. Male's head is bottle green and female's is chestnut
(Ray Scott/ <https://community.rspb.org.uk/>)

Red-breasted Merganser- These attractive ducks with their spiky hair belong to the 'sawbill' family, so called because of their long-serrated bill which is good for catching fish.

They can be found close to the shore throughout the year, usually in pairs or small groups although form into larger flocks in the autumn.



Male, red-breasted merganser in museum's collection ©Stromness Museum

3. Double Hooses – walk on for 75m until you pass a row of houses on the left known as the 'Double Hooses', continue past them for 20m and here you will find access down to the shore.

Seaweeds

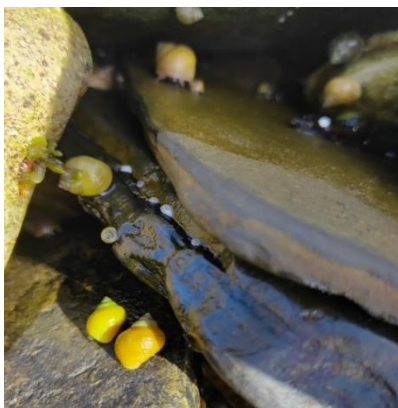
As well as the wracks we mentioned earlier, you might spot Channelled wrack on the shore here. This seaweed lives around the high-tide mark and can survive for over a week unsubmerged. The 'V' shaped swellings on the ends of the fronds are its reproductive structures.



Channelled wrack in Stromness Museum, collected by Robert Rendall in Birsay in 1962
©Stromness Museum

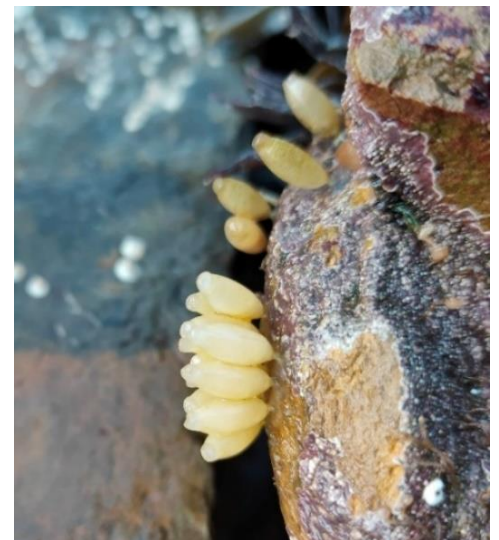


Channelled wrack on shore



Shells

In between the angular chunks of granite on the shore here you can find a variety of shells, such as Dog whelk and Rough periwinkle.



Top left: Many Rough periwinkles can be found on shore here

Middle: Dog whelk from Robert Rendall's shell collection ©SM

Top right: Dog whelk eggs (8mm long) can be seen here in February time

Bottom: Rough periwinkles from Robert Rendall's shell collection ©SM

HOW TO KNOW OUR COMMON SEA GULLS

| | body 2ain long | yellow beak | hale flesh legs |
|--------------------------|----------------|--------------------------|-----------------|
| GREAT BLACK BACKED GULL | 23 | yellow | yellow |
| LESSER BLACK BACKED GULL | 23 | yellow | flesh |
| HERRING GULL | 18 | greenish with yellow tip | greenish yellow |
| COMMON GULL | 16 | red | red |
| BLACK HEADED GULL | 15½ | greenish yellow | black |



GREAT BLACK BACKED GULL



LESSER BLACK BACKED GULL



HERRING GULL



COMMON GULL



BLACK HEADED GULL



KITTIWAKE GULL

Geo. Ellison
Lisocard 1928

Birds

Gulls are a familiar sight around many coastal towns. Stromness has a number of these species, most common are the Great black-back, Herring and Common gull however you may see Black-headed gulls and Kittiwakes also.



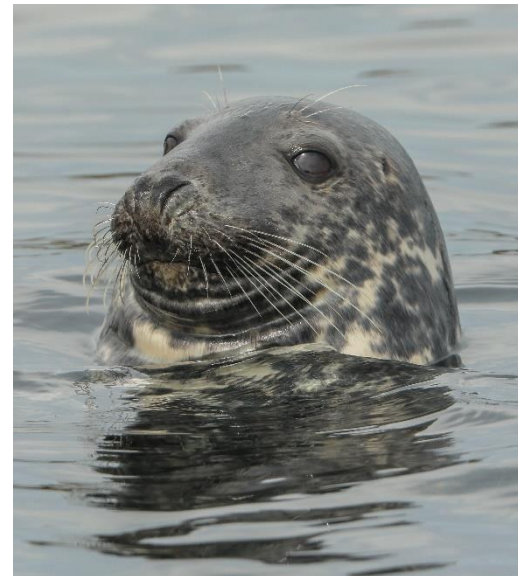
Greater black-backed gull in museum's collection ©SM

Left: A beautifully illustrated panel by George Ellison describing the various species of gull found around Stromness

Marine mammals

There are two species of seals to be found in Orkney: the Grey seal and the Common/ Harbour seal, with around 15% of the world's seal population making Orkney their home.

Frequently seen bobbing about in the sea, these inquisitive creatures will often follow you in the water as you walk along the shore and are firm favourite with visitors and locals alike.



Grey seal (Wyne Havenhand/ www.flickr.com)

Left: A fun activity to play on the shore is 'Stone Skimming'.

This game can be enjoyed by kids and adults of all ages!

4. Stenigar – continue along the pavement for 480m, on the left you'll find a slip way with easy access to the shore

Seaweed

Spiral wrack can be found on the shore at Stenigar. This seaweed looks a bit like Bladder wrack. However, instead of having air-filled bladders, it has warty heart-shaped sacs, which have reproductive functions. The fronds are often twisted.

Some people like to eat them as you would olives in a martini!



Spiral wrack on shore



Queen scallop with encrusting barnacles on Stromness shore

Shells

Look out for discarded King and Queen scallop shells here. These are the shells of animals caught in Orkney's waters and thrown overboard by scallop fishing boats.

Scallops are bivalves, which means the shell is made up of two halves, or valves. Queen scallops can be differentiated from the King scallop as 'queenies' have two rounded valves. The King scallop has one flat and one rounded. Queen scallops are also smaller.

Plants

On the top of the wall at the slipway you might find Sea pink (Thrift)



Ribwort plantain



Sea pinks in Magnus Spence's herbarium ©Stromness Museum



Sea pinks at the Stenigar slip way

Keep a look out for Ribwort plantain, used by children in Orkney to play 'Soldiers'





Shag with crest in museum's collection
©Stromness Museum

Birds

Shags are found all around our coasts and can be seen flying very low over the sea. They are swift underwater swimmers, and you will see them jump clear of the water before diving down in pursuit of fish. These birds are frequently spotted perched on buoys or rocks with outstretched wings, drying their feathers which are not waterproof.

The common name 'shag' refers to the bird's tufted crest and originated from the Old Norse word 'skegg' (beard).



David Hastings/ www.birdimages.net



Fulmar in flight (Creative Commons)

Fulmars ride on the shore's updrafts and you will see these birds gliding silently past, close to path. Although gull-like, fulmars are actually related to the albatross and can be identified by their tubed beaks and flight on stiff wings.

The name fulmar comes from the Old Norse words 'full' (foul), and 'mar' (gull). This refers to their pungent-smelling stomach oil which they spit out at predators to warn them off, if too close to their nests. It also acts as a food source during long flights or used to feed their young.



Fulmar in museum's collection ©Stromness Museum



Redshank (Mike Hoy/ www.mikehoy50.co.uk)

Redshanks are common residents of Orkney and one of the noisiest. This bird can be heard long before its seen and will alert everything else with its loud piping call. As its name suggests, redshanks' most distinctive feature are their bright orange legs. Look out for it perched on a fence post or feeding on the shore.

5. Point of Ness – walk along the road for 650m, passing through the campsite to the shore at Ness

Plants

Scurvy grass thrives in salty environments. The name gives a clue to one of this plant's properties: the leaves are bursting with Vitamin C and sailors used to eat it to ward off scurvy whilst at sea.



Scurvy grass on the shore



*Scurvy grass in Magnus Spence's herbarium
©Stromness Museum*



Sea plantain in Magnus Spence's herbarium ©SM

Sea plantain is a relative of Ribwort plantain. This coastal species is also edible. The leaves can be eaten raw or cooked and the seeds can be ground into a flour.



Sea plantain on the shore

Cetaceans

Whales, dolphins, and porpoises are frequently seen around the coast of Orkney. Successful cetacean spotting requires calm sea conditions, good vantage point and a little bit of luck so keep your eyes peeled and scan the sea for fins!



Orca in Orkney waters (Graham Campbell/ www.orkney.com)

Orcas, sometimes known as 'killer whales' are unmistakable with their black and white markings and enormous dorsal fin. Male Orcas have the largest dorsal fin of any marine mammal which can be up to 6 feet tall. They are becoming regular visitors to Orkney and are occasionally seen in Hoy Sound.

Harbour porpoises are the smallest of our marine mammals and can be spotted close to shore either alone or in small groups. Look out for a small, triangular dorsal fin breaking the surface and you may hear their loud 'chuff' noise as they come to the surface for air.



Harbour porpoises | (marinediscovery.co.uk)

Other cetacean you might spot here are the Minke whale, Common dolphin and Risso's dolphin

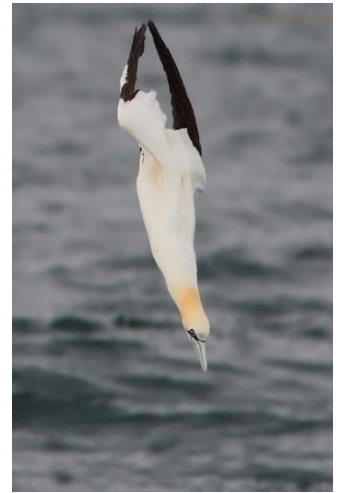
Birds



Gannet in flight (Graham Campbell)

Gannets are one of our largest seabirds and feed on fish, which they catch by diving head-first into the sea with their wings folded back.

You can watch this spectacular sight from the shoreline here as they dive from heights of 30m, hitting the water at speeds of up to 60mph!



Robert Houde/ www.pbase.com

6. Volunteer`s Battery (ruins)- take the coastal path for 40m or walk along the shore to our next stop

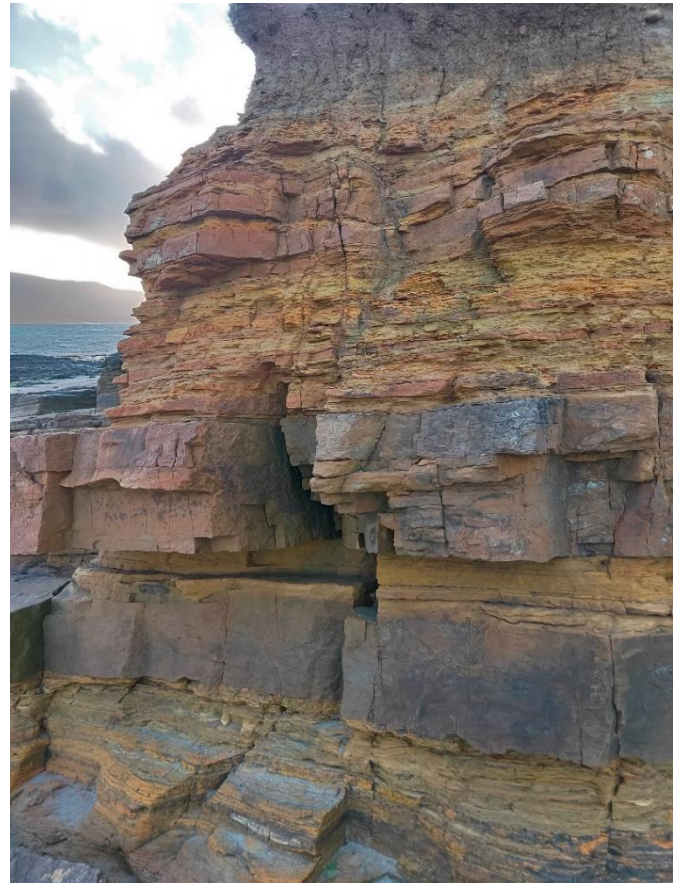
Geology

Find a safe route onto the shore to get a closer look at some rock formations or search for stromatolites.

In a time before the dinosaurs, in the Middle Devonian era, Orkney was just south of the equator. A large basin had formed in this desert environment, known as the Orcadian Basin. Sometimes this basin contained a lake (Lake Orcadie) and at other times was completely dried out.

On the shore here you can see the layers of sedimentary rock, made up of sand, silt and mud which washed into the lake from the higher ground. Preserved in the layers are fossilised ripple marks; mud cracks and even fish and plants which lived in the lake. These different fossilised remains can tell us about the changing climatic conditions in the middle Devonian era.

For instance, the ripples were formed in shallow water and the mud cracks formed when the lake had dried out.



*Opposite are rock samples from the Stromness Museum of fossilised ripple rock and mud cracks from the Orcadian basin
©Stromness Museum*



Stromatolites

These are the remains of structures created by algal growths near the edges of Lake Orcadie. They are evidence of one of the most primitive life forms.



Stromatolites found in rocks on the shore



Stromatolites sample from museum collection ©SM

The presence of stromatolites usually means that the water was quite salty, meaning that Lake Orcadie was not always made up of freshwater.

Plants and Butterflies



Birds-foot trefoil in Magnus Spence's herbarium ©Stromness Museum

Birds-foot trefoil is abundant on this stretch of shoreline. It gets its name because the seed pods are the shape of a bird's curved talon.

On a sunny summer's day, you might be lucky enough to see a Common Blue butterfly here. It lays its eggs on Birds-foot trefoil, which becomes the food plant for its caterpillars.



Coltsfoot (Alison Skene)

This dandelion-like flower is one of the first to appear each year, as early as February. It is also unusual, as the flowers appear before any leaves have grown.



Coltsfoot from Magnus Spence's herbarium ©Stromness Museum



Common Blue butterflies from R I Lorimer's collection in Stromness Museum ©Stromness Museum

Birds



Turnstone (www.northlinkferries.co.uk)

Turnstones - so-named for their habit of flipping over large stones - can be spotted fluttering about the rocks, looking for food underneath them.



Common seal (Anne Burgess/ geograph.org.uk/p/5814177)

Marine mammals

Both grey and harbour seals can be spotted lounging around on the skerry rocks here. Telling them apart can be quite difficult however there are some features which can help you identify them.

Harbour seals are smaller than grey seals, they have a round head with a 'dog-like' snout, V-shaped nostrils and their coat is evenly spotted all over. Grey seals have a flatter, elongated head with what is called a 'Roman nose' with nostrils that don't meet at the bottom and their coat has larger, irregular spots on the back.

7. Old Lifeboat Shed- walk along the coastal path or continue along the shore for 400m to our last stop



Silverweed plant

On the ground around the Old Lifeboat shed you will find the distinctive silvery leaves of silverweed.

Its Latin name is *Potentilla anserina* and 'potentilla' means 'little powerful one' as this plant has many medicinal uses including as an anti-inflammatory. It can be used to treat sore throats, stomach aches, ulcers and more.



Silverweed specimen from Magnus Spence herbarium ©SM

Footnotes:

If foraging for wild plants or seaweeds, only do so when certain of correct identification. Only take small amounts and don't uproot.

Across from the Old Lifeboat Shed is a small concrete slipway which you can use to safely access the shore

Shells



On the shore here you might come across a variety of shells such as the Grey topshell or the Blue-rayed limpet.

Top left – Grey topshell in Robert Rendall collection ©SM

Centre – Grey topshell alive underwater (Alastair Skene)

Top right-Blue-rayed limpet in Robert Rendall collection ©SM

Right- Live Blue-rayed limpet on kelp at Ness skerries



Birds



Oyster catcher (www.northlinkferries.co.uk)

The Ringed Plover is a small, plump bird that can be seen foraging for food on the gravel shoreline.

Its characteristic feeding actions include a stop-start dash across the beach, pausing to pick up food or foot trembling in the water, and tapping its feet fast on the ground, to tempt underground prey to the surface.

The Oystercatcher is very noisy wading bird with a loud 'peep-ing' call. Look out for it hunting on the shore for shellfish to eat which it prises, or hammers open with its bill. It can also be spotted on the golf course probing the ground for worms.



Ringed plover (LRP-6.jpg (1000x771) (ianandhelen.co.uk))



Curlew (Christine Hall/ [June 2019 Newsletter | Orkney.com](#))

The Curlew is a large wading bird that can be found here all year round.

Its evocative 'cur-lee' call is a recognisable sound and its long, downcurved bill is an unmistakable feature, perfect for probing the ground for prey.

Lichens

The lichens growing on the sea defence wall show clear horizontal 'zonation' that is, different species grow at different heights up the wall, dependant on how much salt and seawater they can tolerate.

The base of the wall is covered in black lichen, grading into orange lichens and then white at the top. On some parts of the top of the wall you might also see Sea Ivory, the fluffy green lichen.

Hope you enjoyed our guided shoreline walk!



**Why not visit the museum to discover more about
Orkney`s natural history and the town`s heritage
There`s lots to see and learn!**

**Particularly notable collections which feature in the guide are the Magnus Spence herbarium
and Robert Rendall shell collection.**

Although both of these are not on public display, they are viewable by appointment.

Latin & Orcadian names for all the species mentioned:

| Common name | Latin name | Orcadian name |
|-----------------------|---|-----------------------------------|
| Seaweeds | | |
| Bladder Wrack | <i>Fucus vesiculosus</i> (Linnaeus, 1753) | Paddy tang, Bow tang, Black tang |
| Spiral Wrack | <i>Fucus spiralis</i> (Linnaeus, 1753) | |
| Serrated Wrack | <i>Fucus serratus</i> (Linnaeus, 1753) | Prickly tang |
| Channelled Wrack | <i>Pelvetia canaliculata</i> (Linnaeus) Decaisne & Thuret, 1845 | Cow tang, teeting tang, calf weed |
| Plants | | |
| Sea Spleenwort | <i>Asplenium marinum</i> (Linnaeus 1753) | |
| Sea pink / Thrift | <i>Armeria maritima</i> (Mill.) Willd. | Arby |
| Ribwort Plantain | <i>Plantago lanceolata</i> (Linnaeus 1753) | |
| Scurvy grass | <i>Cochlearia pyrenaica</i> (Candolle, 1821) | |
| Sea plantain | <i>Plantago maritima</i> (Linnaeus 1753) | |
| Bird's-foot Trefoil | <i>Lotus corniculatus</i> (Linnaeus 1753) | Cocks and hens, Smero |
| Coltsfoot | <i>Tussilago farfara</i> (Linnaeus 1753) | Tishalago |
| Silverweed | <i>Potentilla anserina</i> (Linnaeus 1753) | Moors, Moorek |
| Butterflies | | |
| Common Blue butterfly | <i>Polyommatus icarus</i> (Rottemburg, 1775) | |
| Shells | | |
| Common Limpet | <i>Patella vulgata</i> (Linnaeus, 1758) | Spicko (a big limpet) |
| Common Mussel | <i>Mytilus edulis</i> (Linnaeus, 1758) | craa shell, kraeno |
| Dog Whelk | <i>Nucella lapillus</i> (Linnaeus, 1758) | katty-whelk |
| Rough Periwinkle | <i>Littorina saxatilis</i> (Olivi, 1792) | |
| Queen scallop | <i>Aequipecten opercularis</i> (Linnaeus, 1758) | gimmer shell |
| King scallop | <i>Pecten maximus</i> (Linnaeus, 1758) | harpo |
| Blue-rayed limpet | <i>Patella pellucida</i> (Linnaeus, 1758) | Lady limpet, Mary shell, Bishop |
| Grey topshell | <i>Steromphala cineraria</i> (Linnaeus, 1758) | Silver willie |

| Birds | | |
|-------------------------|-----------------------------------|--------------------|
| Eider | <i>Somateria mollissima</i> | Dunter |
| Red-breasted Merganser | <i>Mergus serrator</i> | Sawbill, Herald |
| Grey Heron | <i>Ardea cinerea</i> | Hergie |
| Great black-backed Gull | <i>Larus marinus</i> | Baakie, Swartback |
| Herring Gull | <i>Larus argentatus</i> | White-maa, Whiteie |
| Common Gull | <i>Larus canus</i> | White-maa, Cullya |
| Black-headed Gull | <i>Larus ridibundus</i> | Rittock, Swarfarro |
| Kittiwake | <i>Rissa tridactyla</i> | Kittick |
| Shag | <i>Phalacrocorax aristotelis</i> | Scarf |
| Fulmar | <i>Fulmarus glacialis</i> | Mallimack |
| Redshank | <i>Tringa totanus</i> | Watery Pleeps |
| Gannet | <i>Morus bassanus</i> | Sula; Solan Goose |
| Turnstone | <i>Arenaria interpres</i> | Staney Putter |
| Oystercatcher | <i>Haematopus ostralegus</i> | Sleldro |
| Ringed Plover | <i>Charadrius hiaticula</i> | Sinloo |
| Curlew | <i>Numenius arquata</i> | Whaup |
| Marine Mammals | | |
| Grey Seal | <i>Halichoerus grypus</i> | Selkie |
| Common/Harbour Seal | <i>Phoca vitulina</i> | |
| Cetacean | | |
| Orca | <i>Orchinus orca</i> | |
| Harbour Porpoise | <i>Phocoena phocoena</i> | |
| Minke Whale | <i>Balaenoptera acutorostrata</i> | |
| Common Dolphin | <i>Delphinus delphis</i> | |
| Risso`s Dolphin | <i>Grampus griseus</i> | |