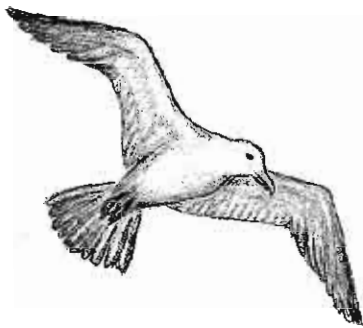


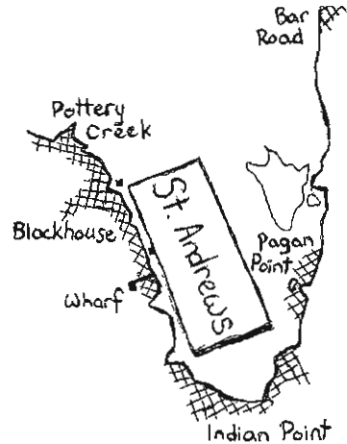
St. Andrews



Beach Walk Guide



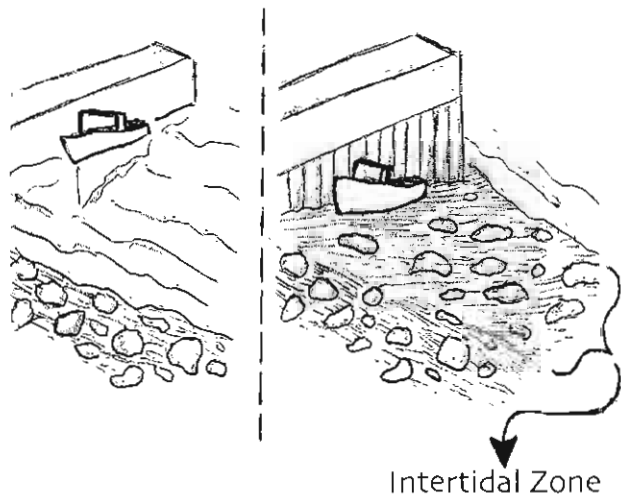
Good locations for Beach Walks:



Tides

The tides are the cyclic rising and falling of the ocean due to the gravitational pull of the Moon, and to a lesser extent the Sun. There are approximately two low tides and two high tides per day. The area of the shore that is covered by water at high tide, and uncovered at low tide is called the "intertidal zone". The best time and place to go for a beach walk is along the intertidal zone during low tide, when you can see all sorts of interesting creatures!

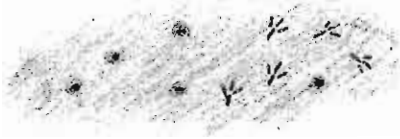
High Tide / Low Tide



Types of Shores

Sand & Mud

- Sheltered
- Creatures are often found buried in the sediment. This enables them to hide from predators, avoid being swept away by currents, and protects them from direct sun exposure.



Rocky

- Exposed
- Creatures are found on and under rocks. They need to hold on tight to not get washed away by waves, or carried off by predators.



Tide Pools

When the tide goes out, pools of water are left over in the intertidal zone. These are good places to look for creatures that are trying to stay wet while the tide is low.



The intertidal zone is a tough place to live. When the tide is low, creatures try to avoid drying out by holding water in their shells, moving to somewhere wetter, or just tolerating the conditions and waiting for the tide to come back in. They also have to deal with the large fluctuations in temperature and salinity. In addition, they still have to avoid being eaten by predators! The intertidal creatures have adapted many different ways of dealing with their difficult habitat.

Produced by

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Written and designed by
Faye d Eon-Eggertson

Common Things You Might See:

There are many organisms that can be found on a beach walk. Many of the creatures may not look too active, but they are very much alive; hanging around and waiting for the tide to come back in. Filter-feeders strain the water for food particles that float by, and therefore wait until high tide to feed.

Periwinkle

- Can tolerate dry conditions and freezing temperatures very well.
- Herbivores; eat the algae on rocks.



Mussels

- If you look closely, you'll be able to see the stringy adhesive they secrete to help them stick to rocks.
- Filter-feeders



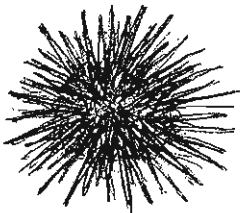
Sea weeds

- There are many different kinds of sea weeds that can be found.
- Look under them to find creatures trying to stay wet
- Photosynthetic



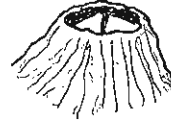
Sea Urchin

- Their sharp spines help to protect them from predators.
- Greenish colour
- Herbivores



Barnacles

- Can tolerate a wide range of conditions, including being out of water for a long time, and freezing temperatures.
- Can stick to almost anything; abundant in the intertidal zone.
- Filter-feeders



Whelk

- They drill a hole in the shells of other animals with their radula (specialized tongue-like organ).
- Carnivores; eat other molluscs (including periwinkles).



Hermit Crab

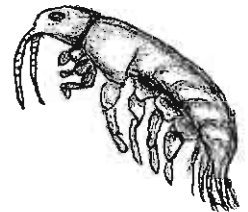
Please don't take shells that you find... I need them to make my home!



- They don't make their own shell, but use one made by somebody else.
- When they outgrow their shell, they move to a bigger one.

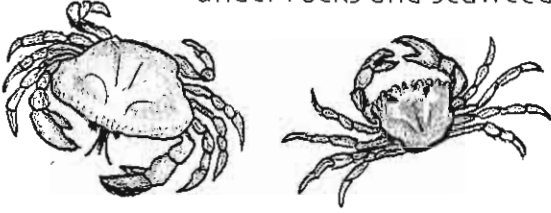
Side-swimmers

- Resemble small shrimp.
- They are often found trying to stay wet at low tide in tide pools and under seaweed.
- Their name comes from their tendency to swim on their side.



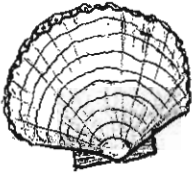
Crabs

- Usually find somewhere to hide during low tide to avoid being eaten; look under rocks and seaweed.



Scallops

- Have dozens of primitive eyes.
- Can move by ejecting water out of their shells.
- Filter-feeders



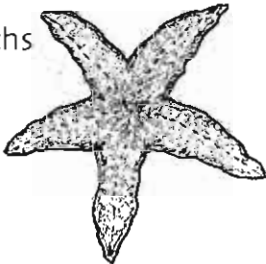
Clams

- Use a specialized "foot" to bury in sediment.
- From their burrow, they stick a siphon out into the water to filter feed.
- Can often see clam holes in the sediment.



Sea Stars

- Different kinds
- Use their tube feet to move around and to pull open shells.
- Very important to the ecosystem for keeping the bivalve population balanced.
- Can see their mouths on the underside of their body (in the centre).



Tunicates

- Also known as sea squirts
- Have a notochord (primitive backbone) during larval stage of development
- Orange/peach colour
- Filter-feeders

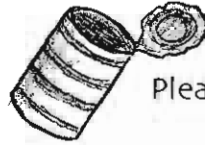


Shorebirds

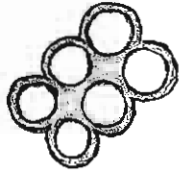
- Predators of intertidal creatures.
- Gulls often fly off with animals then drop them on the rocks to break through the shell.
- Some shorebirds have long beaks that are perfect for digging in the sand for creatures to eat.



Garbage – Uh oh!



Please pick it up!



Animals can eat it or get caught in it and die – plus, it doesn't look very pretty.

Please respect our beaches and don't litter or take any creatures home with you!

There are many more things you can find on the beach. If you find something interesting, there are many places in town that can tell you about it, as well as books and online resources.