

# Seashores

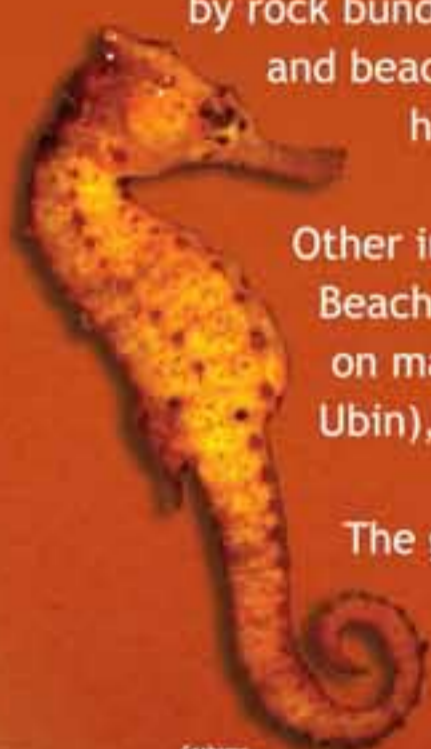
## Seashores In Singapore

The recreational beaches of Singapore - East Coast Park, Changi, Pasir Ris Park and those on Sentosa and other southern islands - are visited by millions of people every year!

Most of these are man-made sandy beaches, which are sub-divided into 'bays' by rock bunds. The rock bunds are popular with recreational fishermen and beach-goers. Although they are artificial rocky-shore habitats, they attract a variety of organisms.

Other interesting seashores include Labrador Beach, which is the only natural rocky-shore on mainland Singapore; and Chek Jawa (on Pulau Ubin), which supports a high diversity of seashore life.

The ground material (substrate) at each of our seashores is usually a combination of two or more types (e.g. sandy/muddy or sandy/muddy and rocky). Seashores on the northern parts of mainland Singapore are generally muddy and are associated with mangrove forests.



Seahorse  
*Hippocampus sp.*



Longtail Tripodfish  
*Tripodichthys biacis*



Pencil Squid  
*Loligo sp.*

## What are Seashores?

Seashores are located on land next to the sea that lies between the highest and lowest tide levels. They are alternately covered during high tides and exposed during low tides.

There are many types of seashores depending on various factors, including the type of substrate (ground material), coastal processes (erosion or deposition) and the slope of the shore. There are sandy shores, rocky shores, mud-flats and shores with headlands and cliffs. Mangroves are a type of seashore with unique vegetation that often occupies muddy seashores. The most popular and well known are sandy shores.

Seashores are generally very rich ecosystems because the sun-lit, shallow areas allow macro-algae and seagrasses to take root, resulting in high primary production. These provide food and shelter for thousands of seashore organisms. Many seashore organisms have adapted to live here, despite strong wave action and water currents, and harsh physical conditions.

## Why Are Seashores Important?

- They sustain high biodiversity and are important habitats for marine organisms
- Mudflats and mangroves are important feeding ground, for migratory birds
- Seashores are breeding sites for turtles, sea-snakes and coastal birds
- They provide people with food and other products (shells etc.)
- They are important recreational areas and support huge beach-resort and tourism industries in many countries

## Where are Seashores Found?



Different kinds of seashores surround every island and continent across all latitudes of the earth. The total coastline in the world is about 1.5 million kilometres.



Turtletail Clam  
*Paphis textilis*



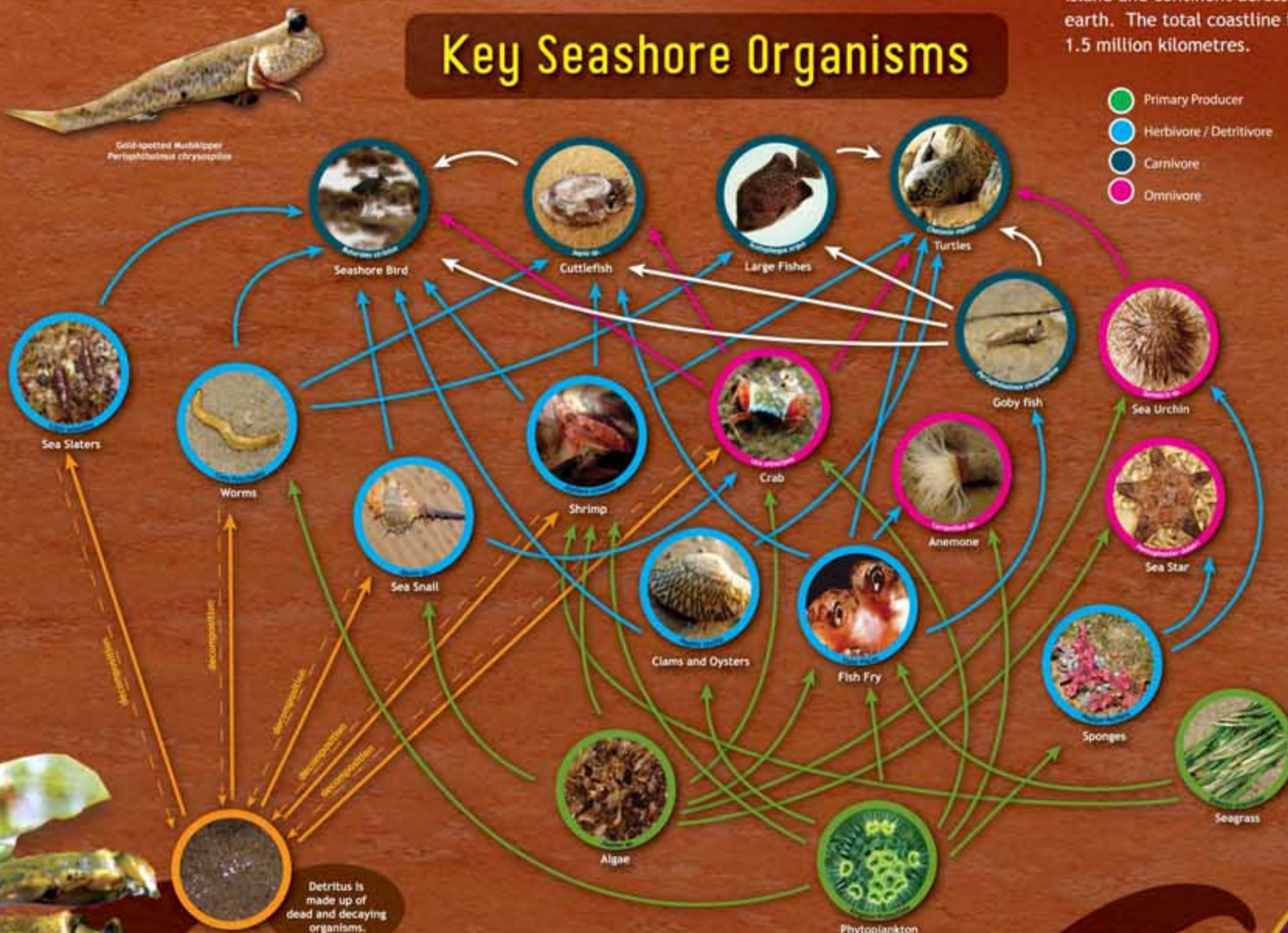
Sandy shores of mainland Singapore

Collectively, our shorelines support diverse seashore communities.



Shell  
*Murex sp.*

## Key Seashore Organisms



- Primary Producer
- Herbivore / Detritivore
- Carnivore
- Omnivore

## Threats to Seashores

- Habitat loss through alternative use
- Pollution (chemical pollution or solid waste pollution - marine debris especially flotsam and jetsam)
- Changes in seawater temperature and salinity (e.g. from heated water and fresh water discharge)
- Over-collection and over-fishing (e.g. for souvenir and aquarium trades)

## Conservation of Seashores

We can conserve seashores by:

- Control of collection of seashore animals and their eggs (e.g. sea turtles)
- Educating people on the importance of seashores, the diversity of seashore life and not to litter
- Educating people to harvest seashore products only where necessary, and at a sustainable rate and not to litter

We hermit crabs are special! Unlike our other crabby cousins (crustaceans) that wear full suits of armour, we only have hard exoskeletons on our heads and legs. To protect the rest of our soft bodies, we 'borrow protection' by occupying empty sea-snail shells. As we outgrow our shells, we 'move into' larger shells of different shapes! Now that's recycling!

Hermit crabs have an important job of cleaning up on the beach! No, not picking your litter! We get rid of dead animals and organic material by eating them! By doing this, we help complete nutrient cycles on our seashore!



Hermit Crab  
*Matuta lunaris*

