

# FISH, FOR ALL FOREVER

## CHAIN OF HABITATS

Fish survival depends on a "chain of habitats", where each type of habitat is equally important to the fish's life cycle. This chain of habitats can be compared to a production line in a factory. If a part is damaged or removed, the entire system will either stop or productivity will decrease.

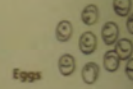
### OPEN WATER

Open water is the principal habitat of plankton. Plankton forms the foundation of the food chain providing a food source for many larger animals.

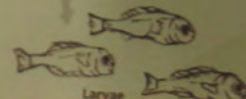
Mature adults of many fish species spend the majority of their lives in open water, only moving to sheltered inshore habitats for specific feeding and breeding activities.



Adult Bream



Eggs



Larvae

### SEAGRASS

Seagrasses are flowering plants that have evolved to live in sea water. Seagrasses in the Great Sandy Strait form extensive meadows.

Dugong and Green Turtles need seagrass to survive. Seagrass habitat represents some of the most significant nursery and feeding areas for fish and shellfish.



Juvenile

### MANGROVES

Mangroves produce large amounts of organic matter from their leaves, bark and wood. This provides nourishment to marine ecosystems.

Mangroves provide nursery and feeding areas for fish species such as bream and whiting. They also provide a refuge for small fish to shelter from large predators that cannot access the upper reaches of mangrove areas.



### SALTMARSH

Saltmarsh commonly occurs in zones between the mangrove fringe and land vegetation. Whiting, mullet, mangrove jack, barramundi, mud crab and prawns all live in saltmarsh.

### Did you know?

The Great Sandy Strait also has coral communities. The link between corals, seagrass, mangroves and their fish is vital for the health of the Great Sandy Strait.

### What we can do to protect fish habitat

- Take our rubbish with us.
- Avoid changing oil or filling fuel tanks near the water.
- Do not anchor on coral or seagrass. Drift if possible, or anchor in sand.



Burnett Mary REGIONAL GROUP  
Partnership for Sustainable Resource Management



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Fraser Coast REGIONAL COUNCIL





## Urang-Urang Crossing

Urang-Urang are the pippi shells that are native to this beach. These have been a food source for the Butchulla people for thousands of years.

As a child I used to be sent down to this beach with a bucket to collect the Urang-Urang by digging them up with my feet. My family would then make a lovely soup with them.

This area, around the beaches, mangroves and mud flats are full of food sources for my people.

A small shellfish lived on the branches of the mangroves, they were known as penny-winkles, the Butchulla word for them is 'boppram'. We would sometimes eat them on the beach by throwing them on the hot coals, or we could take them home for everyone to share.

Another food that I fondly remember was bingu, a large flat shellfish, which we would collect on the mud flats that was like an oyster. Sadly, despite Butchulla people sustainably eating them for thousands of years, in the last few decades, like the sand crabs and the star fish, these are now all gone.

Auntie Frances Gala  
April 2015

This area around Moolyir Creek is very significant for the Butchulla people. It is a traditional site for initiation, where several Bora Rings are present. It is a very sacred place for all of our people.

Auntie Joyce Smith  
April 2015

ARTWORK: JOEL BARNEY



# MANGROVES

Our coastal guards protecting us from wind, waves, cyclones and tides

## MANGROVES ARE AMAZING

Special adaptations allow mangroves to grow in soft, salty, saturated soil that contains no oxygen - something that most other plants cannot do.

### SPECIAL LEAVES

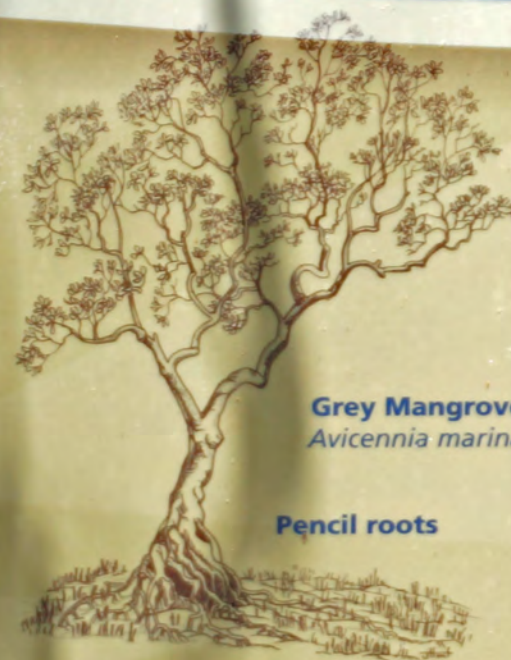
Leathery leaves help to reduce water loss. Some mangroves excrete salt through glands in their leaves. Others store salt in their leaves which are then dropped from the tree.

### SALT-WATER FILTERS

Some mangrove roots have filters which extract salt before entering the root system.

### ABOVE GROUND ROOTS

Mangroves have developed above-ground roots so they can live with mud, salt and waves. The roots anchor the mangrove and take oxygen to the roots below. The shape of the roots vary between different species of mangroves.



### SPECIAL SEEDS

Mangroves have different shaped seeds. The seeds float on water and can be carried long distances.

### ALMOND-SHAPED SEEDS

Many mangrove seeds germinate while still attached to the parent tree, eventually dropping into the mud, where they sprout and continue to grow.

### SPEAR-SHAPED SEEDS

When they drop they embed themselves firmly in the mud next to the parent tree.

## Why mangroves are important

### Filtering Run-off

Mangroves reduce the spread of fresh water run-off and trap sediment. This reduces siltation in the ocean.

### Shoreline protection

Mangroves reduce the intensity of waves and wind as they reach the shore. They have proven to be extremely effective during major storm and surge events, including tsunamis.

### Habitat

Mangroves provide habitat and breeding sites for a wide range of birds, fish, frogs, turtles, reptiles, insects and small mammals.

### Protecting Threatened Species

The water mouse (*Xeromys myoides*) is a threatened species. It burrows in grasses and reeds and builds a muddy nest at the base of mangroves, foraging at night on fish, crabs and worms.



## What we can do to protect mangroves

All mangroves are protected under legislation and must not be removed, damaged or destroyed.

- Spread the word about our Amazing Mangroves.
- Control erosion upstream - this reduces sedimentation in mangrove areas.
- Take our rubbish with us.

Contact the Fishwatch hotline on 1800 017 116 if you see mangroves being damaged.

### Did you know?

A mangrove plant community is very diverse—much like the diversity of species found in a rainforest. This is why mangroves are often referred to as a Mangrove Forest—a forest of plants adapted to life in salt water.



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