

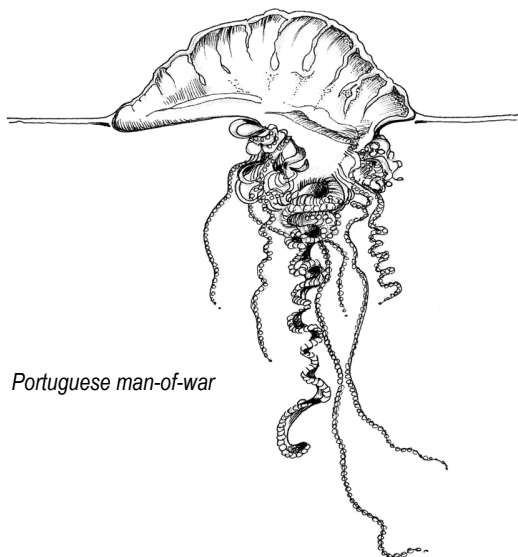
# Marine Creatures of Couran Cove Island Resort

Here at Couran Cove Island Resort, we have the privilege of being surrounded by wildlife filled waters. The Pacific Ocean is to our east and the Broadwater (part of Moreton Bay) is to our west. The diversity of organisms that inhabit these waters is extraordinary, ranging from sea urchins to whales!

## Cnidarians

These are a group of invertebrates that are incredibly diverse in their morphology. It includes all of the jelly fish (including the comb and box jellies), corals, sea fans, sea pens, blue bottles and the sea anemones.

One of the most well known cnidarian is the Portuguese man-of-war that is often seen washed up on beaches all around Australia. All cnidarians are radially symmetrical, for example sea stars. The name 'cnidarian' means 'stinging creature' and most of them have a toxin in the stinger which aids to disable their prey. Although most are harmless to humans, some can be painful or even fatal (such as the deadly box jellies).



*Portuguese man-of-war*

## Echinoderms

This group of marine creatures includes some of the more well known animals such as star fish, sea urchins, sea cucumbers, sand dollars.

They are all radially symmetrical and are only found in the sea. They generally have only five arms, however there are some exceptions. Many echinoderms have suckers on their feet that are used to capture & hold prey, as well as to fasten themselves to solid surfaces. Some of them swim and move by rapidly moving their arms.

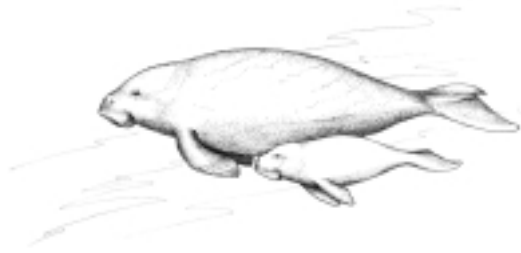
## Sea Lizards

Sea lizards are a type of nudibranch (or 'sea slug') with a thin body (about 35mm long) a tapering tail and three pairs of long fan-like fingers. They generally inhabit the open sea however several specimens have been recorded washed up on beaches after storms or onshore winds. They have generally been observed floating upside down on the surface of water, as well as somersaulting. The fingers have terminal sacs for storing stinging cells that they steal from their prey (Blue Bottles and By-the-wind Sailors). These stinging cells are in turn used for the sea lizards own defence against predators.

## Cephalopods

The cephalopods include squid, octopus and cuttlefish. They are all characterised by the head being partially or completely fused with the foot, as well as possessing between eight to ten arms. On each of the arms there are powerful suction discs. The only genus of cephalopods to have a shell is the *Nautilus*. Cephalopods are more active than any other marine invertebrate and have highly developed and complex nervous and sensory systems. They are believed to be the most intelligent marine invertebrates and have shown a rapid learning ability and quick adaptation to new behaviour patterns.

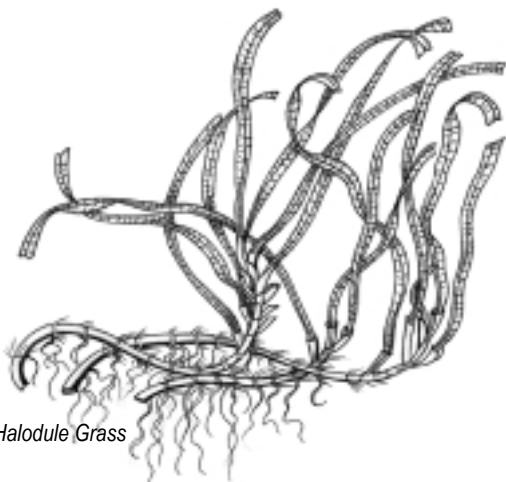
All cephalopods have special nerve-activated pigment cells in the outer body layer which enables them to change colour quickly when escaping predators, communicating with one another or when attempting to breed. Cephalopods are an important food source for numerous fish, seals, whales and seabirds (some one which rely entirely on cephalopods). Movement is attained by forcing water from the mantle cavity through a funnel shaped siphon thereby moving rapidly by a form of jet propulsion.



## Marine Mammals

### Dugong

Dugong are found discontinuously in coastal waters east of Africa from the Red Sea to north eastern India, along the Malay peninsula and around the tropical coastal waters of Australia. Often referred to as 'sea cows', these large herbivorous mammals feed almost exclusively on seagrass, as well as supplementing their diet with various species of algae. They have a large flattened mouth and lips with bristles that are ideal for grazing on the bottom dwelling sea grass beds.



*Halodule Grass*



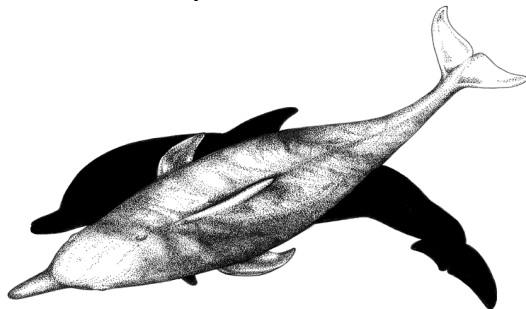
*Halophila Grass*

The adults range in length from 2.4 to 4m and can attain a weight of up to 900kg. Breeding takes place throughout the year and newborns are about 1m long after a year of gestation. Lactation continues for 18months and the young stay with the mother for at least a year. Sexual maturity is not reached until at least 9 years of age, therefore this slow breeding cycle

means that they are particularly receptive to extinction through adverse human activities (such as destroying feeding grounds etc). They are currently listed as endangered.

### Dolphin

The most commonly observed dolphin in both the Broadwater (on the islands western side) and the ocean (on the islands eastern side), is the Bottlenose Dolphin. It is believed that more than 350 inhabit Moreton Bay and they are often seen riding the bow waves of large boats. Although individuals are seen, groups (of up to 10 individuals), are more common. All dolphins dorsal fins are comprised of cartilage that can be as distinctive as a humans face and scientists often use these unique fins to identify individuals. Like the whales, the blowhole serves as a dolphin's nostril, allowing it to breathe while swimming at top speed. Dolphins come equipped with elastic lenses on their eyes that expand and contract to let them focus both above and below the water. They also have special glands that protect their eyes from salt water. Communication occurs via echolocation, a type of sonar system that is also used by some whales and bats.



### Humpback Whales

The Humpback Whale is a truly magnificent marine mammal. Attaining an adult length of up to 15m, they possess extremely long pectoral flippers, which are one-third of their body length. Although most individuals are observed with a black upper body and white underbelly, in recent years an albino individual has been seen off the Queensland coast. The name 'humpback' was derived by the arching behaviour these whales exhibit before deep diving. Humpback whales are 'baleen' whales which means they use a series of filtering plates in their mouth to consume enormous quantities of krill, plankton and other small marine organisms. Annual migration of these creatures from the summer feeding grounds in Antarctic waters to their warmer breeding grounds off the central Queensland coast occurs from May/June through to October. Migrating individuals and pods can be easily observed from the beach on South Stradbroke Island. Other whales that have been observed in waters off the coast of South Stradbroke Island are Killer Whales, Dwarf Minke Whales and Brydes Whales.





## Marine Reptiles

### Sea Snakes

At least 32 species of sea snake have been recorded in northern Australian waters and some species are also found in the southern waters off Victoria, Tasmania and South Australia. Their flattened tails and valvular nostrils make sea snakes readily identifiable. They are, of course, excellent swimmers and divers, feeding on fish and eels. They shed their skins much more frequently than land snakes, as often as every two weeks. The young are born alive at sea, except for those of the Banded Sea Krait (*Laticauda colubrina*), which comes ashore to lay its eggs. All sea snakes are venomous, and *rhabdomyolysis* is a major feature of sea snake envenomation, resulting in muscle pain, tenderness and sometimes spasm.

*Myoglobinuria* (renal disfunctioning) develops after 3-6 hours. The bite itself is not particularly painful, and may go unnoticed, distinguishing it from envenomation by stinging fishes or jellyfish, both of which usually cause immediate and often excruciating pain. Envenomation may be treated with sea snake antivenom (based on the venom of the beaked sea snake, *Enhydrina schistosa*) or tiger snake antivenom. Three species of sea snake have been identified this far south: Stokes Viper; Elegant Sea Snake; and the Yellow-bellied Sea Snake. Sightings of these snakes in waters off the island are, however, unusual.

### Turtles

Throughout the world there are seven known species of marine turtle, and of this six occur in Australian waters. The marine turtles that are known to inhabit the Broadwater and the rest of Moreton Bay include the Loggerhead Turtle, the Green Turtle, the Hawkesbill Turtle and the Leatherback Turtle. All marine turtles migrate extremely long distances (up to 3000km) between their feeding grounds and their breeding grounds. The females repeatedly return to the same beach of their birth to lay several consecutive clutches of eggs over a two week period (up to 100 eggs for each clutch at intervals of 2-7 years).

Marine turtles throughout the world are under threat from pollution, modification of habitat, accidental drowning by fishing nets and long-lines, over-harvesting and introduced animals, such as foxes, pigs and dogs, preying on eggs and hatchlings. In Australia, all species of marine turtles are protected under various State and Territory legislation and the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999.