There are over 30,000 species of crustaceans including the familiar shrimps, crabs, crayfish and barnacles as well as many smaller and less well-known animals.

**A crustacean’s body**

All crustaceans have a body covered with a protective shell composed of a horny substance called *chiton*. The outer skeleton is not continuous but made up of divided sections called *somites*. Crustaceans have a number of jointed legs, two pairs of antennae and sometimes a pair of ‘nippers’. The body is divided into three parts: a head, a middle region (thorax) and a tail region (abdomen). Often the head and thorax are joined together and are covered by a single shell called a *carapace*.

**Habitat**

Crustaceans live in various habitats. Some live in the ocean, some in fresh water and some on the land. Many crustaceans are nocturnal and spend the day hidden in a burrow, buried in the sand or resting in a crevice.

**Reproduction**

Crustaceans reproduce in a very similar way to other animals. The eggs are produced in the ovaries in the female and passed to the outside through oviducts. After the eggs have been fertilised, they begin development and then hatch. When the eggs hatch the young larvae are detached. From this point on they are on their own and must grow, swim and survive. After a series of transformations, the larvae becomes a miniature adult.

Crustaceans cannot grow as many other animals do because of their outer skeleton. Instead they periodically shed the outer skeleton, grow rapidly for a short time, and then form another hard skeleton. While this process is taking place they hide in an isolated place. Crustacean are also able to break off or drop their appendages. This is called autotomy. They have special breaking-off points near the body and if caught they can quickly break-off their appendages to get away. A new appendage is easily grown.

**Feeding**

Crustacean’s food varies, some eat plants, some eat flesh, and some feed from the bottom of the ocean on anything they can find. The way in which they feed themselves also varies. Barnacles and anemone crabs use fine hairs on their appendages to filter food while most of the larger crustaceans are scavengers. The cleaner shrimp feeds on the mucus and parasites covering the skin and gills of fish.
Types of crustaceans on the Great Barrier Reef

Copepods
Plankton is the drifting life of the oceans. Most planktonic animals are very small but extremely numerous and form an extremely important part of marine food webs. The most common planktonic animals are the small crustaceans known as copepods. They are probably the most numerous animal group in the world. Together with copepods, other small crustaceans such as water fleas combine to make this varied group a very important part of the animal plankton.

Barnacles
There are about 100 species of barnacle living on the Reef. Once a barnacle has found space to live, it stays put. Pushing its legs out through a central hole in its cone-shaped shell, it spends its life lying on its back kicking food into its mouth. Barnacles live on hard surfaces including rocks, boat hulls, jetty piles, and other crustaceans, and even hitch rides on turtles and whales.

Shrimp
About fifty per cent of all the mantis shrimps, krill and crabs in Australia are found on the Great Barrier Reef. There are at least 1030 species. Shrimps are among the most diverse and active animals on the Reef, performing a wide range of different roles. Shrimps, along with crabs, crayfish and prawns, are characterised by having five pairs of walking legs, with the first pair modified to form pincers.

Mantis shrimp (Odontodactylus scyllarus)
Mantis shrimps are voracious predators, feeding on other crustaceans and small fish - they are also known as ‘prawn killers’. They have formidable claws that come in two forms: clubs or spears. Their claws are permanently ‘cocked’ back, ready to shoot forward at passing prey. Those mantis shrimps that possess clubs use them to smash the legs off other crustaceans and to crack their shells open. They can also smash snail and clam shells to feed on the soft tissue inside. Those with spear-like claws use them to strike and kill fish and other animals. Mantis shrimps can strike their prey at the speed of a 0.22 calibre bullet. They are difficult to keep in captivity because they can smash aquarium glass up to two centimetres thick.

Lobsters and crayfish
This group of crustaceans has a confusing number of names, including crayfish, cray, lobster, rock lobster and spiny lobster. Generally speaking, the name crayfish is used to describe those large marine crustaceans without claws. Lobsters, on the other hand, have extremely large and well-developed claws which can inflict a painful wound to careless humans. The most commonly encountered species on the Great Barrier Reef are the Painted Crayfish (Panulirus versicolor) and the Ornate Crayfish (Panulirus ornatus), both of which are brightly coloured. A pair of long slender antennae extending from under a coral ledge is generally the first indicator of the presence of crayfish.

Crabs
Crabs come in many shapes, sizes and colours and have tentacles to feel their way around. Crabs live in their shells, under the water and on land. A crab will shed its shell when it is too small and will then grow a new and bigger one. Some crabs will use another animal’s shell as its home while its shell is growing. Crabs are scavengers, feeding on things that are dead or decaying. They will eat almost anything.