

Student

Fact Files



Australian Government
Great Barrier Reef
Marine Park Authority

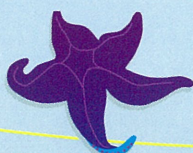
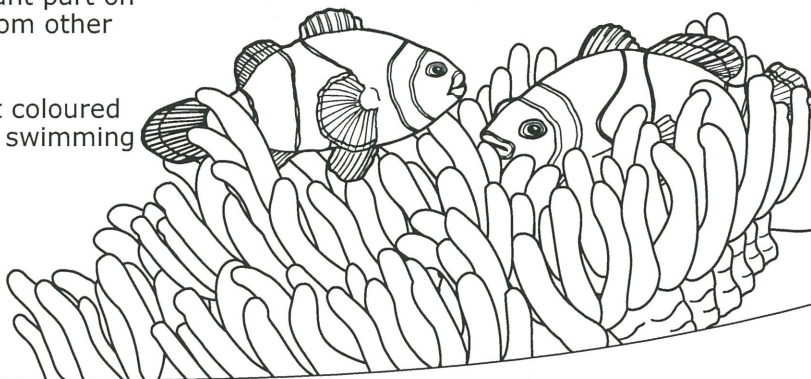
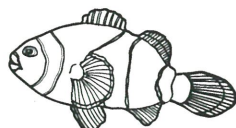
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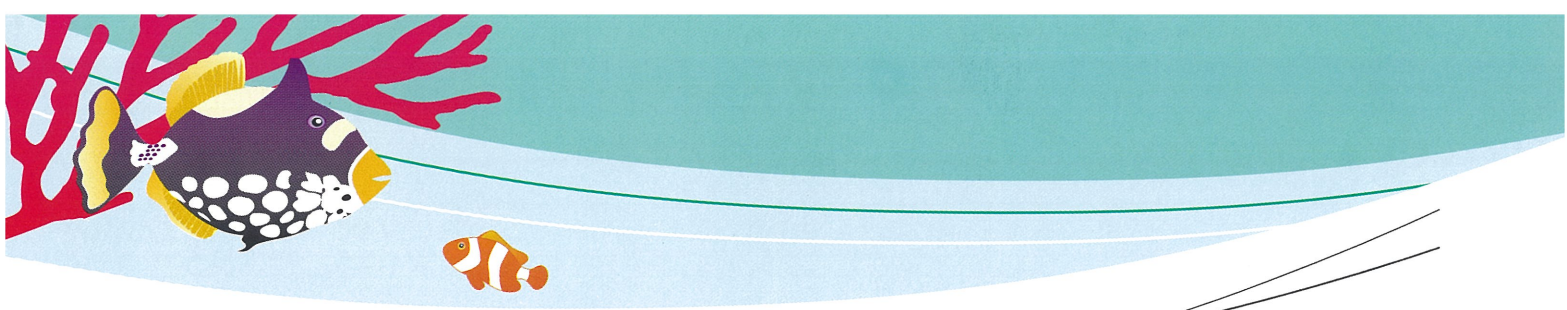
Relationships

- Marine animals often have symbiotic relationships with other animals that live in the ocean. These relationships often benefit both parties and are known as mutualistic relationships.
- Clown anemonefish are one of only a few animals that can live within sea anemones without being stung by their tentacles.
- The anemone and the clown anemonefish both benefit from their close relationship as they protect each other from predators.
- Cleaner shrimp play an important part on the Reef as they clean and groom other marine animals.
- Cleaner shrimp use their bright coloured bodies and a distinctive way of swimming to advertise their services.
- When fish want to be cleaned they signal to the shrimp by doing a headstand!
- Remoras (small bony fish) hitch rides on animals such as sharks and turtles.
- Pearlfish live inside sea cucumbers during the day.
- Sea cucumbers don't necessarily like pearlfish living inside them.
- Pearlfish also live in the body cavities of giant clams and pearl oysters.



our great barrier reef
let's keep it great



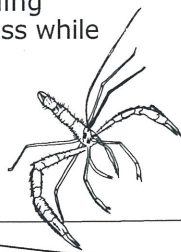


Clown anemonefish and Sea anemones

Clown anemonefish are among the most magnificent fish on the Reef and are coloured in various combinations of orange, red and yellow with white and/or black stripes. In the Great Barrier Reef, all clown anemonefish nestle safely amongst the stinging tentacles of large sea anemones. The anemones' tentacles can paralyse most other fish, but have no effect on clown anemonefish. Scientists have discovered that clown anemonefish can live within an anemone because they have a layer of mucous that keeps the tentacles from stinging them. Clown anemonefish use the anemones' stings for protection, as the anemone keeps predators at bay. In the wild, a clown anemonefish never lives without its host anemone, but the partnership benefits the anemones too. They often get scraps of food that the clown anemonefish drop when they eat and predators that chase clown anemonefish may fall prey to the anemones' tentacles. The aggressive clown anemonefish also protects the anemone by chasing away anemone-eating fish, such as butterflyfish. Because both parties benefit, this is called a mutualistic relationship.

Cleaner shrimp and their clients

Cleaner shrimps live in crevices on the Reef and wait for clients (usually fish) to stop by to be cleaned. Cleaner shrimp include the banded coral shrimp who have long, red-and-white antennae so fish wanting a wash can easily recognise them. To begin cleaning, the shrimp swims or crawls aboard the fish and plucks various parasites, lose skin and mucus from it. This relationship benefits both parties, as the shrimp gets food whilst the fish rid themselves of parasites and infections. Cleaner shrimps will also tend to infected areas, and eat dead flesh, which helps the healing process. The host always hovers motionless while the cleaner shrimp is working.

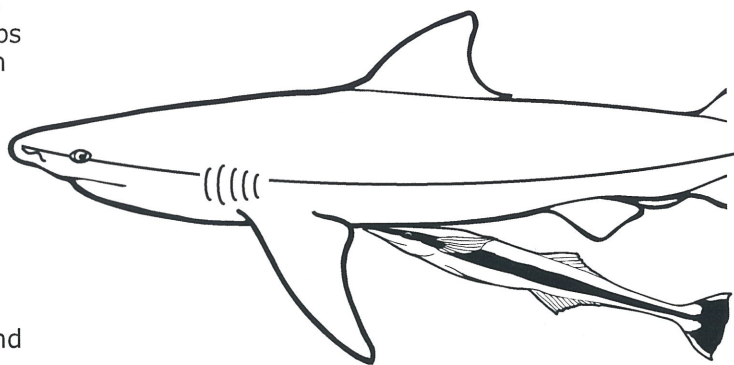


Alpheid shrimp and Gobies

A number of alpheid shrimps live together in symbiotic relationships with different species of gobies. The shrimp excavates and constantly tends to the burrow while the gobies act as sentinels. In the event of danger, the gobies retreat into the burrow, giving the shrimp a warning.

Remoras and their hosts

Remoras are bony fish with an oval disk on the top of their heads. They use this disk to attach themselves to sharks, other fish and turtles to hitch rides across the ocean. Whilst attached to an animal, remora feed on scraps dropped by their hosts. This relationship is one-sided and is known as a commensalistic relationship.



Sea cucumbers and Pearlfish

Some sea cucumbers have tiny fish known as pearlfish living inside them. The pearlfish live inside the sea cucumber during the day and then emerge at night to feed. When morning comes, it simply waits for the sea cucumber to breathe and it swims back inside. Sea cucumbers don't necessarily like pearlfish living inside them. When a pearlfish tries to enter the body cavities of the sea cucumber it quickly closes them, but as sea cucumbers breathe through these cavities, they must eventually open and in swims the pearlfish. Young pearlfish feed upon the gonads of sea cucumbers.

