A Strawberry Fungia Coral.

WHAT IS A CORAL?

Before corals, the earth was populated only by bacteria, single-celled animals like amoeba. The earliest coral fossils date back about 550 million years, while modern corals became abundant about 100 million years ago (the oldest human remains are only 5-7 million years old).

Because of their flower-like appearance, corals were thought to be plants. Not until the invention of the microscope were corals and their relatives (sea fans, sea anemones, and jelly fish) described as animals.

Corals take their color from algae that live within their tissues. Most are shades of brown but the reef explorer will find blue, green and pink colonies. These colorful polyps are extended and feeding at night while during the day, they withdraw to conserve water and avoid predators. All reefs look brown until you start looking closely.

All corals live in the sea and most form large colonies made up of thousands of polyps. Most corals are 'hard corals' forming a rocky limestone skeleton that makes up the foundation of a reef.

Coral polyps are typically a few millimetres in diameter and a colony may grow as little as 2 - 3mm a year. Large, deeper water corals are among the oldest living organisms on earth. A 2009 study revealed that some coral can live for over 4000 years, with many colonies as old as the pyramids.

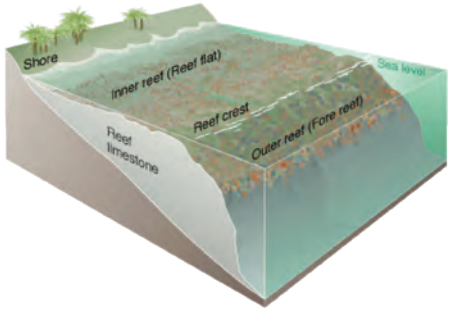
A variety of Staghorn Coral that can be found at The Andaman.

Most coral polyps reproduce asexually by dividing into two new polyps. But once each year corals spawn during the full moons of September to November by releasing eggs and sperm into the seawater. More amazing is that all the corals spawn within the same few hours over thousands of square kilometres. Floating slicks of billions of eggs may be kilometres long.

Corals polyps are little more than a stomach and mouth surrounded by stinging tentacles that catch small prey. Because plankton can be scarce, corals harbor tiny plant cells inside their tissue. Sunlight allows the plant cells to produce sugars and the coral polyps share in the nutritious bounty.

The Andaman's coral reef reveals itself during low tide, approximately 2-3 times a month.

The Andaman Reef is composed of a thin veneer of living coral 'heads' on top of the limestone skeletons of millions of their coral ancestors. The Andaman Reef parallels the shore (a fringing reef) and is at least 50 meters thick and 6000-8000 years old..



A Brown Mushroom Coral found during coral clearing at The Andaman.

SAVING THE WORLD
...one polyp at a time

CORAL CLEARING

The 2004 Tsunami resulted in the destruction of thousands of coral colonies on the Andaman Reef. Many of these could be considered the 'next generation' and as such there are now few young colonies to repopulate the area.

The dead corals that were detached from the reef by the impact of the Tsunami now move around through wave action causing further destruction to living corals and inhibiting re-growth.

Guests and staff volunteer at times of low tide to remove or clear the dead corals from the reef giving the living corals a better chance of survival. The dead coral material will then be 'recycled' to the coral farm where its minerals will be used by propagated corals and speed their growth.

Coral Clearing activities are planned around low tides. Please look out for details in our newsletter "The Andaman Weekly".

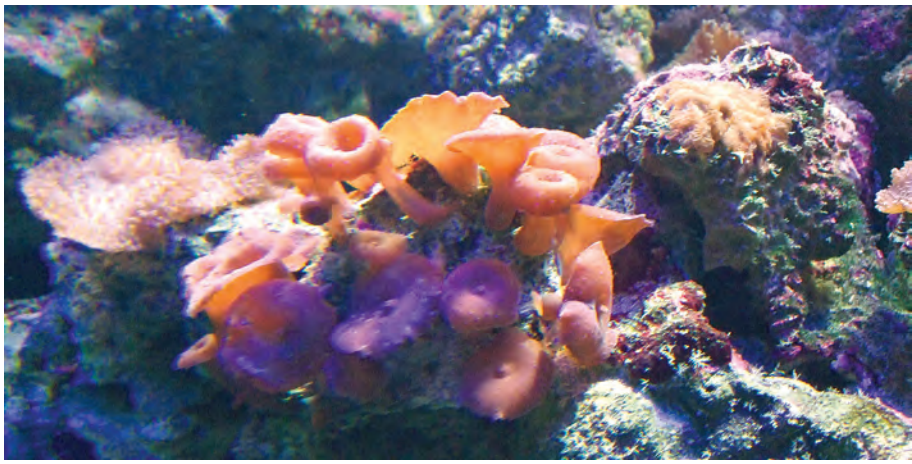
Coral Clearing activity at The Andaman

CORAL RESCUE

Corals settle to the bottom as tiny larva following an annual spawning by reef colonies. Not all of these tiny corals attach themselves to ideal locations and it is possible to find them growing on small fragments of rocky material that will roll around through wave action. Corals that try to grow on these fragments are doomed and are lost to the reef when rapid recovery is desirable.

When guests and the resort team find these tiny corals attached to rock fragments, they can be 're-located' as part of a rescue program.

After carefully separating the tiny corals from the rock fragments, they are attached to larger and 'safer' cement bases that will offer them a good chance of success. The cement bases are then moved out to the reef and placed in areas where natural recovery has yet to begin.



Button Anemonies, Plate Coral and a tiny Brain Coral will be moved from loose rocks to a cement base

CORAL FARM

Corals are simple animals that can be propagated by taking cuttings (like plants) and then encouraging them to continue growing on a new substrate. This requires a number of 'donor' corals as a supply of cuttings and a place for the tiny cuttings to grow free from predation by other marine life.

The Andaman's Coral Farm offers guests the opportunity to participate in this fun and educational activity. The farm is an open pool system that regularly pumps ocean water past the tiny corals and where both guests and the resort team can choose to get involved in helping to grow and nurture new colonies.

It is expected that the tiny corals will be returned to the reef after 4 – 12 months in the farm. If growth is rapid and our success rate high, it will be possible to add about 5,000-10,000 small corals to the Andaman Reef community every year.

Coral Reef Walks are best when the tides are at their lowest.

OTHER ACTIVITIES

The Andaman puts together several educational and recreational activities that revolve around the marine environment.

At present the resort conducts coral reef walks where guests are led by a trained guide across the reef surface at low tide. Discovery of strange and colorful animals is accompanied by natural history information that is informative and always entertaining.

Coral Reef Walks are planned around low tides and details of these are available in our newsletter "The Andaman Weekly". Beach Walks are an alternative activity that takes guests along the shore where they can discover the varied plant and animal life that call this ecosystem home.

Beach talks are also offered when tides are too high for reef walking. Topics covered include the natural history of the bay and its reef which leans toward the geological significance of the area (a UNESCO Geopark). Symbiosis of reef animals is also discussed which reveals some incredible and unusual animal relationships. Another popular topic is 'super animals' that looks at the killers, camouflage experts, giants, and deceivers in the coral reef environment.

Beach talks always end in a fun open discussion and a question and answer session over drinks.

Dr. Gerry engaging guests during one of his Beach Talks.

GERRY GOEDEN

The charismatic Dr. Gerald Goeden, affectionately known as Dr. Gerry to both guests and the team at The Andaman, was born in the United States where his earlier work leaned heavily towards research and conservation.
His involvement with the National Geographic Mangrove Expedition brought him to Australia where he earned his doctorate in Marine Sciences and did extensive work on the Great Barrier Reef.

Dr. Gerry now lives most of his time in Penang and is The Andaman's consultant marine biologist. He has been heavily involved in putting together the various coral activities at the resort, and leads the Coral Clearing and Coral Reef Walks whenever he is on the island. He is also always happy to chat to guests about the natural history of the region over a coffee at breakfast.

Amongst his most significant achievements, Gerry helped to instigate the first underwater Marine National Park in the US, was awarded the Key to the City of Miami for his work in conservation and worked towards the declaration of the first Marine National Park on Australia's Great Barrier Reef. Additionally, Gerry helped to create Australia's first deep-water robot camera system and also developed assessment techniques that forecast the world-wide demise of reef system,s 25 years prior to the current global collapse.

Dr. Gerry has produced 26 technical and scientific research publications in government and international journals. An additional 34 government and departmental reports deal with life support systems and underwater engineering developments.