

Coral Reef Treasures



Ahoy, Matey!!!

Coral reefs are the greatest treasure of the Bahamas... rich in beauty, fish, plants and wildlife. Find out below what hidden treasures lie beneath these crystal blue waters and why we should protect them. Know it well or you may be made to walk the plank!!!



Dolphin Encounters - Project BEACH

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Nature's Underwater City

A coral reef is like an underwater city. It has a hard foundation for plants and animals to build upon, and a diverse community in constant motion. This seemingly peaceful world is actually hectic! Reef fishes, sharks, sea turtles, dolphins and invertebrates all compete for space and food, each with its own unique survival plan.

Corals grow best in clear, warm, sunlit ocean water. Wave action, water depth, light and the shape of the corals determine where each coral species grows best. The thick, broad **elkhorn coral** can withstand strong wave action on the shallow reef crest.

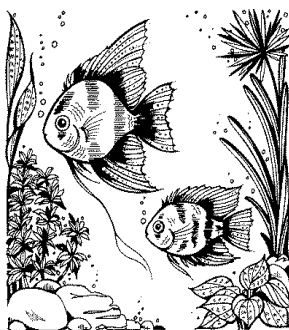
Fragile corals may grow either on the back of the reef, on the lagoon side, or in deeper water, where it's calm. Corals that require less light grow in deeper water on the ocean side of the reef.

The Reef Builders

The body of a coral animal is a delicate tube-like sac, surrounded by stinging tentacles. Corals are related to jellyfishes and sea anemones, which are all members of the phylum **Cnidaria**.

Some coral polyps are reef builders with hard, cup-like skeletons around their bodies, such as brain coral. Their stony skeletons are made of **calcium carbonate** which cements adjacent coral cups together to form colonies. It takes millions of polyps thousands of years to build a reef!!!

New corals will form over the reef left by previous generations. Many other organisms help cement the reef together. Brittle red and green sea plants called coralline algae, deposit calcium carbonate, which helps "glue" the corals and strengthen the reef.



The Reef Colonizers

Not all corals are stony. Some have flexible skeletons, like sea fans and sea whips. Soft corals are not reef builders but, instead, are fragile reef colonizers. They add swaying movements, bursts of color and often bizarre shapes to the reefs.

Life On A Reef

There are three kinds of reefs. The **fringing reefs** form close to land, such as Andros' reefs. The **barrier reefs** grow far from the mainland. The Great Barrier Reef of Australia, the largest in the world, is 1,240 miles long! The barrier reef in Belize is the largest in the western hemisphere. An **atoll** is a reef that forms a ring around the cone of an extinct volcano. This type of reef is commonly found in the Indian and Pacific Oceans.

Reefs Never Sleep

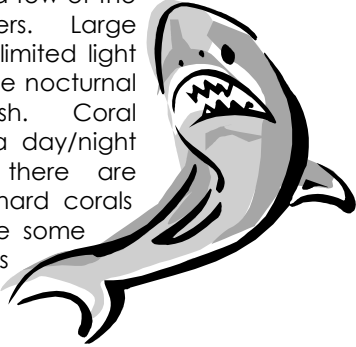
On the reef there are many different animals using limited resources. Specialized adaptations and day/night shifts reduce the competition for food and shelter. Dusk is the time for change on the reef. The sinking sun, like a delayed traffic light, stimulates movement as some animals head home for the night, while others, the nocturnal feeders and hunters, awaken.

Nine To Fivers

The day shift is dominated by groupers, butterflyfishes, parrotfishes, snappers, grunts and tangs. Beautiful colors, patterns, stripes and dots are typical of the daytime reef dwellers. Their splashy suits help them hide, confuse their enemies, and even advertise their readiness to court and mate.

Night Stalkers

The sea urchins are among the first to move at sunset, coming out of their crevices to graze on algae growing on the reef. Moray eels, squirrelfish and sharks are just a few of the other night stalkers. Large eyes that optimize limited light conditions reveal the nocturnal habits of squirrelfish. Coral polyps also have a day/night shift. Although there are exceptions, many hard corals feed at night, while some of the soft corals feed principally during the day.



Going, Going... Almost Gone

Coral, for all its sturdy appearance, is fragile and vulnerable. The millions of annual divers, snorkelers and fishermen who visit the coral reef ecosystem threaten its very existence. People damage reefs in many ways:

Delicate corals living on reefs have existed for millions of years. Today, coral reefs around the world are in danger!!!

- * marine pollution
- * human touch of coral reefs
- * careless anchor mooring
- * deforestation
- * boat traffic in shallow waters
- * global warming



*Help Protect Reefs:
Take Home Pictures
& Memories*

If reefs are not protected now, scientists predict that up to 60% could be destroyed worldwide in the next 20 to 50 years. In optimum conditions, hard corals such as boulder and brain coral may only grow up to three

quarters of an inch a year. Branching corals such as elkhorn, grow up to 4 inches a year. Such slow growth rates make it difficult for reef ecosystems to reestablish themselves after any damage.

Reef Rescue

By helping to protect our coral reefs, you will be providing the oceans with food for animals and people, as well as shelter for thousands of species. In turn, the reefs will protect shorelines from erosion and storm damage by absorbing the impact of powerful ocean waves.

Especially in the Bahamas, reefs are an important source of income for fisheries and tourism. By educating our tourists and protecting the reefs, Bahamians directly protect jobs involving fishing, boating, diving and snorkeling. All Bahamians benefit indirectly because those same tourists pay for hotels, food and shopping in local stores.



Reefs even benefit people medically. Current research focuses on the treatment of AIDS, asthma, arthritis and broken bones. Scientists continue to search for new bioactive substances from coral reef ecosystems.

How Can You Help...

* When diving or snorkeling, be a courteous observer and only look without touching or damaging corals. Even touching coral can kill it. When boating on coral reefs be careful to anchor clear of any coral.

* Do not buy curios such as dead corals or shells of any threatened or endangered animals.

* Participate in a local beach clean-up or a clean-up of your local neighborhood. No matter where you live, all pollution will make its way eventually to the ocean and coral reefs.

* Recycle!!! It limits the trash that makes it to the ocean. Take the time to teach your friends and family what you have learned. Remember: it's everybody's ocean. We all need to do our part to protect it.