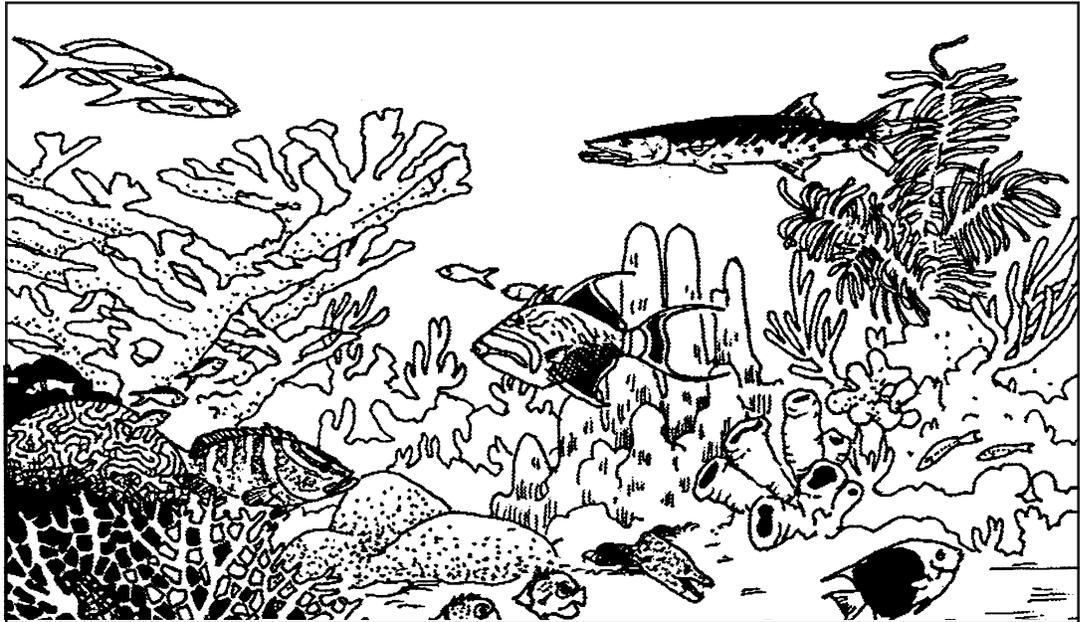# CORAL REEF

SCIENTIFIC NAME

Symmetrical Brain Coral *(Diploria strigosa)*, Grooved Brain Coral *(Diploria labyrinthiformis)*, Mustard Hill Coral *(Porites astreoides)*, Finger Coral *(Porites porites)*, Boulder Star Coral *(Montastraea annularis)*, Mountainous Star Coral *(Montastraea faveolata)*, Great Star Coral *(Monstastraea cavernosa)*, Massive Starlet Coral *(Siderastrea siderea)*, Lettuce coral *(Agaricia agaricites)*.

DESCRIPTION

A Coral Reef is one of the natural wonders of the world. Unlike the vegetation of land communities where plants outnumber animals, very few things growing on coral reefs are true plants. The architects and master builders of the reefs are billions of tiny animals called polyps, some no larger than a pinhead. They secrete a limey skeleton that is the basic structure of the reef. Almost one hundred different species decorate the ocean floor with an infinite variety of patterns that appear as spires and pinnacles of pillar corals, "trees and shrubs" of stone hard elkhorns, huge boulders that look like giant brains, and delicate flower-like figures of lettuce and leaf corals.

New colonies and new coral structures are constantly being built on top of the dead skeletons of older colonies. But the rate is very slow. Branching coral such as staghorn and elkhorn grow only about three inches a year. Massive corals grow even more slowly: a basketball-size coral may be up to fifty years old. Intermixed and surrounding the hard corals are plant-like gorgonians, soft corals with graceful shapes or sea fans, sea plumes and sea whips.

STATUS

Reef building corals are very particular about their requirements. They occur only off the east coasts of the world's continents, seldom farther north or south of the equator than 22 degrees, in clear water with maximum penetration, and rarely at depths exceeding 200 to 250 feet.

THREATS TO THE REEFS

Dredging: The practice of dredging, filling and coastal pollution are all dangerous to coral reefs that often results in the living coral being covered by silt.

Visitor Damage: Another serious threat to the reefs is damage caused by careless or uninformed visitors. The individual damage from boat anchors, specimen collecting, and other visitor activities, when multiplied by hundreds or thousands, can be more than the stow-growing corals can stand. A common belief is that breaking off apiece of coral does no more damage than pruning a tree or shrub. This may be true in healthy reef environments where conditions are ideal for regrowth. However, regrowth of the broken parts takes a very long time and seemingly insignificant damage such as abrasions, cuts, scrapes, scratches and breakage, invites invasion of algae and other organisms that can spread rapidly and destroy the entire colony. Some of these grow and multiply at astronomical rates, attacking the coral polyps like a disease, stripping the coral of its living tissue until only a bleached white skeleton remains. One of these is caused by blue-green algae.

Trash: Unfortunately, the pristine nature of many reefs has been destroyed by sea-going litter bugs. These inconsiderate individuals leave behind beverage cans, bottles, and discarded boating supplies that suffocate and harm corals. Trash should always be returned to shore and disposed of properly!

Bleaching: In recent years, Bahamian fishermen have introduced the use of household bleach for the taking and capture of crawfish and scalefish. Bleach fishing is very destructive. Bleach kills the reefs and the coral becomes overgrown with algae or green moss. Some reefs are taken over by sea urchins. Most fish will leave the area of a bleached reef. One gallon of bleach can poison about 500,000 gallons of sea water!

IMPORTANCE

Coral reefs are breathtakingly beautiful as well as providing free services vital for the protection and economic welfare of humans. Among these are:

Storm Protection: The corals form a natural and self-repairing breakwater that protect against the violence of ocean storms and hurricanes. Their porous structure is ideal for absorbing and dissipating the energy of oncoming waves.

Food Production: The reefs provide food and shelter for much of the marine life that makes up our commercial and sport fishing industry.

Tourism: The major industry of The Bahamas is tourism. Our coral reefs attract thousands of divers and sightseers every year; the reefs also support fish that attract fishermen and protect the integrity of the islands that people come to enjoy.

Nature's Sand Factory: Corals and calcareous algae are major sources of sand. Fishes alone, browsing on these organisms, contribute an estimated two and one-half tons of sand per acre every year. This sandy sediment is essential for the growth of the seagrass that are habitats for thousands of organisms. Most of these, including crustaceans (crabs, shrimp), mollusks (clams, conch, helmets), grazing fishes and similar marine life, cannot exist without a hard sandy bottom. The sand is also washed to shore where it builds and replenishes our white sandy beaches.

Scientific Research: It has been said that we know more about the surface of the moon than we know about the world underwater. Reefs serve as a living laboratory attracting scientists from all over the world who study and learn about the strange inhabitants of this wet-world.

WHEN A REEF DIES

In a coral community the forces of construction and destruction are constantly at work. Under healthy, natural conditions the constructive forces stay ahead and the reef continues to grow. However, if human damage tips the balance in favor of the forces of destruction, the reef will die. The inhabitants of a coral reef community are dependent on each other for all their needs just as citizens of a modem city are. When corals die, marine life must either migrate or starve. Dead coral structures, like abandoned buildings, will eventually decay and erode into rubble infested by parasites and algae.