



Earth Facts

FROM THE JAMAICA ENVIRONMENT TRUST

WHY CORAL REEFS ARE IMPORTANT

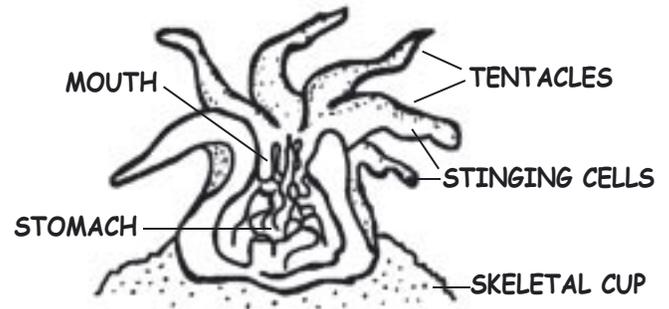
WHAT IS A CORAL REEF?

A coral reef is made up of millions of tiny animals called polyps and their homes. Each polyp lives inside a hard limestone shell or coralline cup, which we know as "coral". A reef is formed when many coral colonies grow next to and on top of each other.

A coral reef is usually made up of layers of dead coral covered only by a thin outside skin of live coral.

Coral polyps are nocturnal and come out at night to feed on plankton. They look like an upside down jellyfish.

Coral reefs occur between the Tropics of Capricorn and Cancer and need specific conditions to survive. Most corals



need shallow, clear, sunlit salt water with temperatures between 64F and 86F (18C and 30C). If the temperature goes outside this range for a prolonged period the coral will die.

There are more than 2,500 different species of coral – of which almost 1,000 are reef building hard coral.

DIFFERENT TYPES OF CORAL REEFS

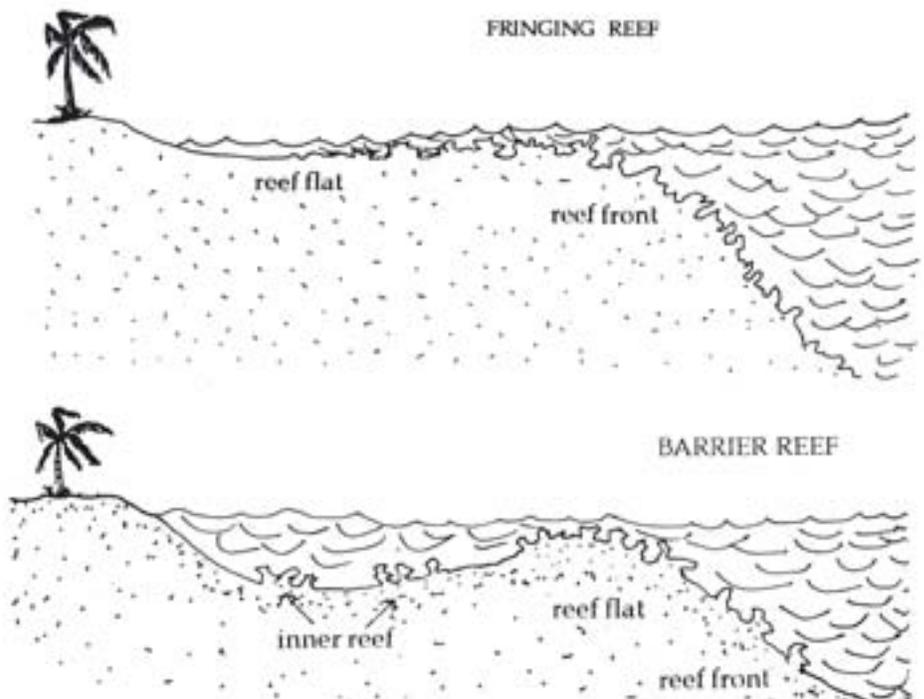
Fringing reefs

Fringing reefs are formed close to shore and are usually an extension of the land mass. They have shallow water lagoons between land and reef. Jamaica has almost continuous fringing reefs along the north coast from Negril to Morant Bay.

Barrier reefs

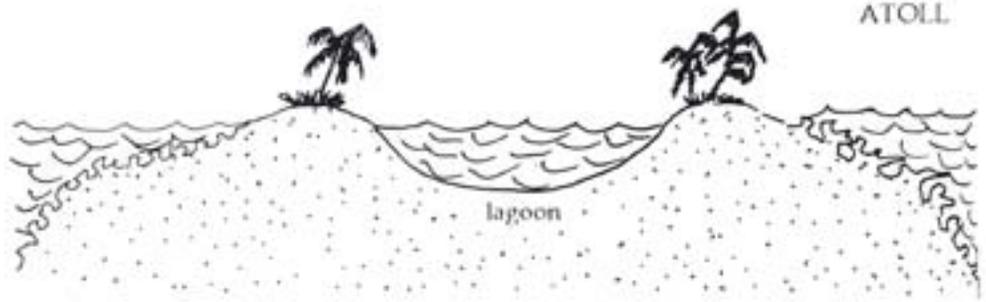
Barrier reefs are generally offshore and are separated from the land mass by deep channels. Barrier reefs are found along Jamaica's south coast, for example, as you go from Lime Cay to the Pedro Banks. The Australian Great Barrier Reef is the largest barrier reef in the world. The Belize Barrier Reef is the second largest.

Fringing reefs and barrier reefs sometimes occur together.



Atolls

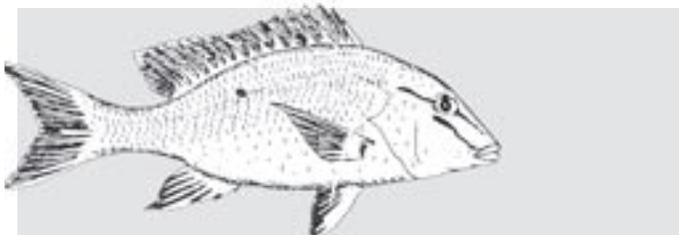
When corals grow around a volcanic island, an atoll results as the island gradually subsides, leaving only a ring of coral visible near the sea surface. There are many atolls in the Pacific Ocean.



Patch reefs

Patch reefs are isolated patches of reefs on parts of the sea floor that rise close to the surface. They may be found in lagoons created by barrier reefs. If parts

of the reef are pushed above sea level, a white sandy island called a coral cay may form. All the Port Royal cays, including Lime Cay, are coral cays.



WHY ARE CORAL REEFS IMPORTANT?

Coral reefs are the most productive shallow water ecosystems in the world.

An ecosystem is a community of living organisms, their habitat, their interactions with each other and their physical environment, and the flow of energy and matter through the system.

Even though coral reefs cover less than 2% of the ocean floor, they contain roughly 25% of the ocean's species and one third of the world's fish species.

Coral reefs:

- Protect coastal areas by reducing storm damage, coastal erosion and flooding.
- Are a habitat for fish and shell fish, which are important sources of protein for humans.
- Provide shelter and food for many species of marine life and birds.
- Provide jobs through fishing and tourism.
- Help as a source of drugs for cancer, AIDS, arthritis, asthma and many other illnesses.
- Offer us an extraordinary, wondrous underwater world to study and enjoy.

WHAT ARE WE DOING TO CORAL REEFS?

We:

- Pollute them with sewage, oil spills, fertilizers and pesticides
- Overfish grazers like parrot fish, allowing algae to overtake the reefs
- Destroy them with dynamite and other harmful fishing practices
- Smother them with silt from deforestation and development
- Drop anchors and ground boats on them
- Step on them, break them and cut them off for jewellery and curios

Pollution

After rains, water runoff carries rubbish, sewage, oils, chemicals, fertilizers and pesticides into the ocean. Coral reefs are also being killed by pollutants pumped into the water by irresponsible industries, smothered by eroded sediment from land development and choked by untreated sewage from urban areas and tourist resorts. Fertilizers, pesticides and phosphate-laden detergents leaching into the sea promote algae growth which grows all over the coral reef and kills it.

Harmful fishing practices

Reefs are being destroyed by poor fishing practices, such as the use of nets with too small mesh, poison, chlorine bleach and dynamite.

Damage from boats, divers and tourism

Anchors and chains dropped carelessly can destroy hundreds of corals in an instant. Even the slightest touch of a hand or swim fin can damage sensitive coral polyps, exposing them to algae overgrowth and bacterial infection. Hundreds of years of coral growth can be destroyed in minutes.

WHAT CAN WE DO?

Remember, what you do or don't do makes a difference to the survival of coral reef ecosystems.

Fishermen and boat handlers:

- Do **NOT** anchor on coral. Always check that the anchor is properly set in sand and that the chain rope is unlikely to snag coral.
- Do **NOT** fish using dynamite, poison or fish nets with small mesh sizes
- **DO** obey closed seasons and protected area rules

Divers and snorkelers

- When diving or snorkeling, look but do **NOT** touch. Do **NOT** grasp, stand or sit on living coral.
- **DO** avoid stirring up sediment
- **DO** take all trash back to land for disposal. A plastic bottle takes about 450 years to biodegrade!

Coastal home owners

- **DO** keep construction well back from the high water mark.
- **DO** encourage the growth of indigenous vegetation above the beach to prevent erosion.
- **DO** reduce/eliminate pesticide and fertilizer use.
- **DO** conduct coastal clean-ups.
- Do **NOT** remove mangroves and sea grass beds.
- **DO** use phosphate-free detergents.

All concerned individuals

- **DO** remember that what we do on land always ends up in the sea. Reduce/eliminate the use of pesticides and excessive amounts of fertilizers.
- **DO** recycle as much as possible and always dispose of garbage properly.
- **DO** avoid the temptation to buy coral jewelry and other products made from marine life.
- **DO** tell your Member of Parliament (MP) to ensure we do everything possible to protect our reefs.



FINAL THOUGHT

Once famous for its beautiful reefs, Jamaica's coral reefs have been substantially transformed to algae turfs. **All is not lost;** with perseverance the reefs can come back. You can help by being aware of your environment, by reading and talking about the issues or by joining a recognized environmental group.

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