

Types of Coral Reefs and the Influence of the Climate on them

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Introduction

Coral reefs are present underwater which itself is an ecosystem which are formed by the corals and polyps which are marine invertebrates. The chemical constituent of the coral reefs is Calcium carbonate. The coral reefs are usually found in the shallow, clear and sunny waters because the organisms growing on the reef needs sunlight for their survival. These reefs occupy less than 0.1% of the total ocean area but constitute 25% of the marine species. Thus they are considered as one of the important ecosystems to maintain the ecological balance.

The Coral reefs are later divided into many types. They are

The Fringing reefs are most common types of reefs. These are attached to the shore and are extended up to kilometers and are usually present below the low water level.

Barrier Reefs are the other kind of reefs which are separated by the land by a channel. The examples of barrier reef are Australia's Great Barrier Reef, New Caledion Barrier Reef, Moyotte of Barrirer Islands.

The Platform Reefs are formed by the rise of the sea bed towards the ocean to ensure the growth of the organisms. They are located around 100-200 kilometers away from the sea shore.

The last type of reefs are Atoll, which are formed by fringing reefs that are formed around the volcanic islands, later in the course of time the island sinks below Individual reefs are shaped by winds and currents, which also determine the orientation, shape, and location of coral sand cays, or "low islands," that form on reefs. Currents are primarily caused by prevailing winds, although in places with a large tidal range, tidal influences may become more important. The presence of zooxanthellae in the living tissues of all reef corals, as well as many massive-shelled mollusks (Tridacnidae) and other shelled invertebrates, as well as soft-bodied hydrozoans, scyphozoans, and anthozoans, is the most important biological factor of reef accumulation.

A number of factors are threatening coral reef organisms' survival as well as the reefs' structural integrity. Predatory

species, bleaching, and the consequences of different human activities affect many coral reefs. Coral reef deterioration may be aided by biological factors such as fish and invertebrates that feed on the soft tissues of reef builders and critters that dig through coral rock. *Acanthaster planci*, the crown-of-thorns starfish, is one of the most destructive organisms known, having multiplied dramatically throughout the 1960s and stripped the soft tissues from significant portions of several reefs in the southwest Pacific. *A. planci* eats coral tissues by everting its stomach and liquifying and absorbing them.

Another group of coral reef ecologists is attempting to grow corals on steel frames that have been installed over damaged reef areas. According to New Scientist, electrical currents transmitted via the steel frames speed up coral development by three to four times. It's possible that this procedure will aid in the rebuilding of the reef and increase the coral's ability to withstand bleaching occurrences.

Conflict of Interest

We have no conflict of interests to disclose and the manuscript has been read and approved by all named authors. The Authors are very thankful and honored to publish this article in the respective Journal and are also very great full to the reviewers for their positive response to this article publication.

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