

Reef Varieties Body Fringing Reefs, Barrier Reefs & Atolls

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Opinion

Coral reefs are marine ecosystems that are colonies of living animals. These colonies are groups of individual animals called polyps. The polyps actually secrete a substance that is called calcium carbonate that forms the reef structure upon which they live. Light is essential to coral reef animals, especially in regards to photosynthesis. Within each coral polyp are single celled algae called zooxanthellae. Zooxanthellae, utilize sunlight for photosynthesis, a process by which the algae is using the sunlight to produce food and oxygen for the polyp. In return, the zooxanthellae receive compounds needed for sustenance and photosynthesis. Thus, the polyp and zooxanthellae live in a relationship that is mutually beneficial for both [1].

A reef may be a ridge or shoal of rock, coral or similar comparatively stable material, lying below the surface of a natural body of water. several reefs result from natural, abiotic processes—deposition of sand, [citation needed] wave erosion planning down rock outcrops, etc.—but there are reefs like the coral reefs of tropical waters shaped by organic phenomenon processes dominated by corals and coralline protactist, associate degree artificial reefs like shipwrecks and different evolution underwater structures might occur purposely or because the results of an accident, and generally have a designed role in enhancing the physical quality of plain sand bottoms, to draw in a a lot of numerous assemblage of organisms [2]. Reefs area unit usually quite almost about the surface, however not all definitions need this. These organic phenomenon reef varieties wrestle further names relying upon however the reef lies in regard to the land, if any. Reef varieties embody fringing reefs, barrier reefs, and atolls. A fringing reef may be a reef that's hooked up to associate Degree Island.

A coral reef forms a chalky barrier around associate degree island leading to a lagoon between the shore and therefore the reef. Associate degree coral reef may be a ring reef with no land gift. The reef front (ocean side) may be a high energy venue whereas the interior lagoon is going to be at a lower energy with fine grained sediments. Coral reefs have existed for many countless years and provided a environment for a few of the richest diversity on the Earth's surface. They're the marine version of tropical rainforests. Reefs harbour a slice of the marine organic phenomenon all the means from little autotrophic Protestants (autotrophs fix carbon through photosynthesis) to massive, predatory fish [3]. Many countless humans live close to reefs and receive necessary resources from them. Reefs host productive fisheries; they additionally give protection to low-lying coastal square measures from storms and are very important for variety of key habitats, together with Rhizosphere mangle forests. The organisms that have created reefs, mostly corals, have evolved over time, and thereupon amendment therefore has the locations of reefs and therefore the dynamics of the reef community modified. Over their long history, reefs have had many intervals of crisis; particularly, they virtually ceased to exist at the Permian-Triassic boundary, wherever over ninetyeth of marine species became extinct, and through the Cretaceous concerning a hundred million years past once big clams took over these structures for many tens of countless years. Each of those past were doubtless characterised by ocean natural action. However, reefs are remarkably resilient over time and customarily are able to adapt to environmental amendment.

For instance, as we'll see in Module ten, they're able to grow quick enough to stay up with terribly fast rates of water level rise [4]. Coral reefs square measure the foremost numerous of all marine ecosystems.

They teem with life, with maybe one-quarter of all ocean species reckoning on reefs for food and shelter. this is often a stimulating data point once you take into account that reefs cowl simply a little fraction (less than one %) of the earth's surface and fewer than 2% of the ocean floor. as a result of their therefore numerous, coral reefs square measure typically known as the rainforests of the ocean. sadly, individuals additionally cause the best threat to coral reefs. Overfishing and harmful fishing, pollution, warming, ever-changing ocean chemistry, and invasive species square measure all taking a large toll. In some places, reefs are entirely destroyed, and in several places reef these days square measure a pale shadow of what they once were. Corals square measure associated with ocean anemones, and that they all share constant straightforward structure, the polyp [5]. The polyp is sort of a tin will open at only one finish: the open end includes a mouth encircled by a hoop of tentacles. The tentacles have stinging cells, known as nematocysts, that permit the coral polyp to capture little organisms that swim too shut. Within the body of the polyp square measure organic process and fruitful tissues.

Acknowledgment

None

Conflict of Interest

None

References

1. Robbins SJ, Song W, Engelberts JP, Slaby BM, Boyd J, et al. (2021) A genomic view of the microbiome of coral reef demosponges. *ISME J* 15: 1641-1654.
2. Samuel RB, James AF, Brian CM, Peter CW (2019) Reef fish functional traits evolve fastest at trophic extremes. *Nat Ecol Evol* 3: 191-199.
3. Mardi MN, Jennifer F, Luke DN, Alan PR, Jody MW, et al. (2021) Inter-reef Halimeda algal habitats within the Great Barrier Reef support a distinct biotic community and high biodiversity. *Nat Ecol Evol* 5: 647-655.
4. Benjamin MM, Kosmas H, Robin SW, Hoppner MP, Carole CB, et al. (2019) The evolution of microendemism in a reef fish (*Hypoplectrus maya*). *Mol Ecol* 28: 2872-2885.
5. Madeleine HO, Bongaerts, Pedro F, Lesa MP, Sarah EB, et al. (2018) Adaptation to reef habitats through selection on the coral animal and its associated microbiome. *Mol Ecol* 27: 2956-2971.

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