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Phylum

COELENTERATA, CORAL REEFS

Meaning of Coral Reef:- Coral colonies grow continuously in the size by budding of polyps and often form extensive masses, known as coral reefs. According to T. Wayland Vaughan (1917), a coral reef is a ridge or mound of limestone, the upper surface of which is near the surface of sea and which is formed chiefly of $CaCO_3$ secreted by coral polyps. Principal builders of coral reefs are stony corals (Madreporaria), but other important contributors are the hydrocorallines and alcyonarians. Coralline algae and foraminiferan protozoa also take part in the formation of coral reef.

Reef building coral require warm shallow water (normally above $20^{\circ}C$). They are therefore limited to the Indo-Pacific, the central-western Pacific, and the Caribbean regions north of Bermuda. About 50 species of corals, contribute in the formation of reefs along the Florida Keys and in the West-Indies.

The Great Barrier Reef of Australia is largest runs in 2600 km. India has them in Andaman Nicobar, Gulf of Kutch, Gulf of Manner and Lakshadweep.

Kinds of Coral Reefs

The coral reefs are of three kinds, depending on how they are formed.

1. Fringing reefs:- coral reefs lying close to the shores of some volcanic island or part of some continent are termed fringing reefs. A fringing reef may extend out to a distance of a quarter mile from the shore with the most active zone of the coral growth facing the sea. This seaward zone of the coral ~~leaf~~ growth facing the sea. This seaward zone is commonly called the edge or front. A shallow water channel called the edge or front. A shallow water channel, 50 to 100 meters broad, lies between the reef-edge and shore. At low tide, water of channel recedes at quickly exposing a flat bottom surface, called reef flat. It is largely composed of coral sand, mud, dead and living coral colonies and other animals.

2. Barrier reef:- Barrier reefs are like fringing reefs but they are located some distance away from the shore. The stretch of water, separating the barrier reef from land, may be half a km or more in width. It is called a lagoon. It is 20 meters to 100 meters deep and suitable for navigation.

Most notable example of barrier reef is the Great Barrier Reef along the north-eastern coast and up to 150 km from shore.

3. Atoll. An atoll is also termed a coral island or lagoon island. It is a ring-like or horse-shoe-shaped reef that encircles a lagoon but not an island. The lagoon varies from a few to about 90 km across. It may be complete or broken by a number of channels, of which only a few are navigable. Outer side of the reef slopes off rather steeply into the depth of ocean.

The atoll of Bikini, famous for atomic and hydrogen bomb tests, lies in the Pacific Ocean. Fig.

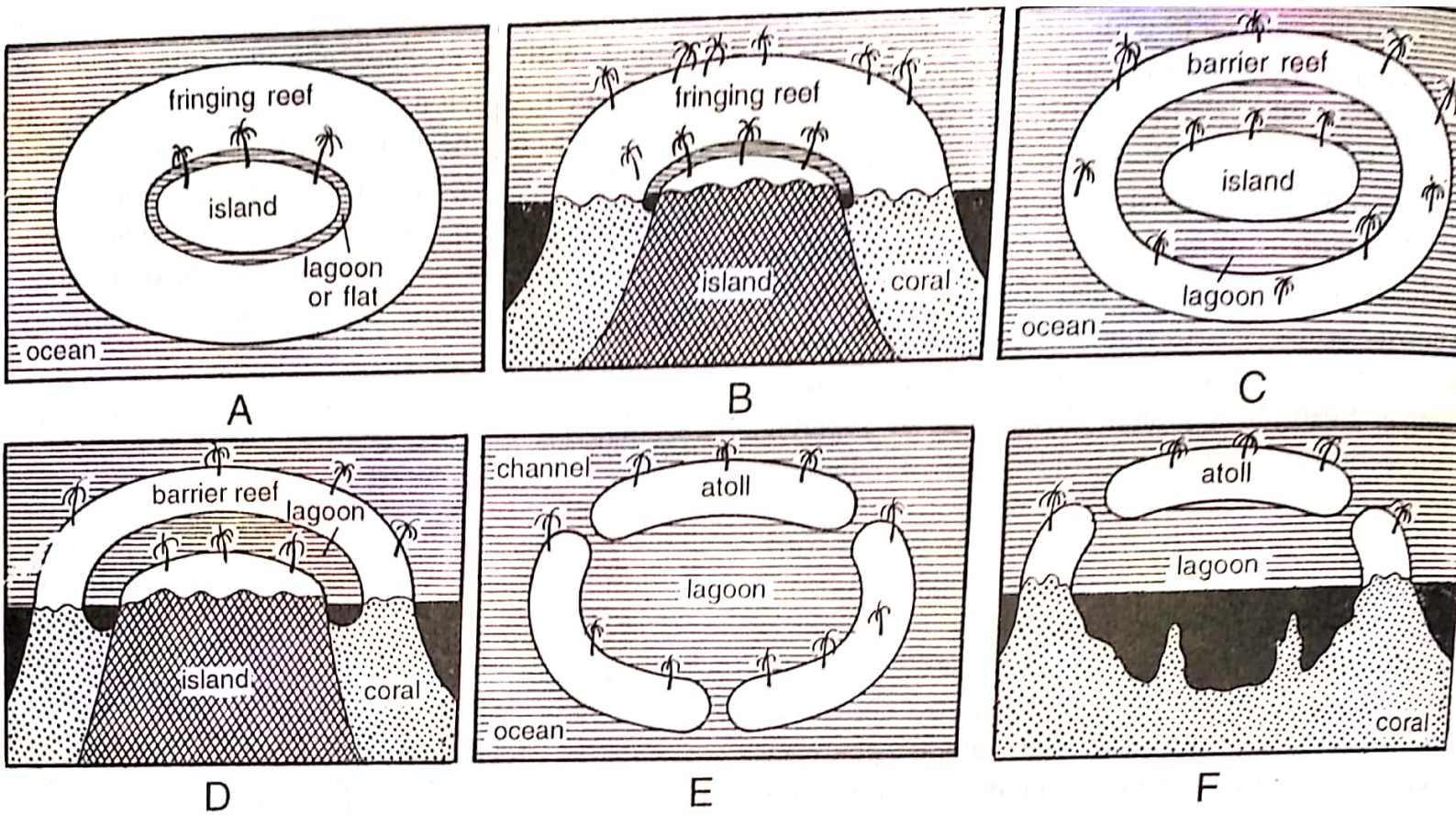


Fig. 7. Coral reefs. **A.** Fringing reef. **B.** Fringing reef in section. **C.** Barrier reef. **D.** Barrier reef in section. **E.** Atoll. **F.** Atoll in section.