

CORAL REEFS

- GENERALLY LOCATED IN WARM tropical REGIONS BETWEEN 35° N AND 35°S
- Three PRIMARY REGIONS FOR CORAL REEFS
 - Indo-Pacific (including Indian and Pacific Ocean)
 - Red sea
 - Western Atlantic (including Caribbean)
 - 60 % of world's reef found in Indian Ocean and Red sea
 - 25 % in Pacific
 - 15 % in Western Atlantic and Caribbean
- TYPES OF CORAL REEFS
- Three Main Types:
 - 1. Fringing
 - 2. Barrier
 - 3. Atoll

1. FRINGING REEFS

- Most common
- Border shorelines and grow on continental shelf or around islands
- Best conditions are rocky shorelines
- vulnerable to sediment, freshwater runoff, and human disturbance
- STRUCTURE OF FRINGING REEF
- REEF FLAT (Back Reef): widest part, shallow, sometimes exposed at low tide, slopes gently toward sea
 - Most affected by sediment and freshwater runoff

- Bottom primarily sand, mud, or coral rubble

- REEF SLOPE (Fore Reef): has densest cover of coral, most species, not affected by sediment or runoff
waves provide circulation and nutrients and wash away sediment
- REEF CREST: shallow upper edge of reef slope, usually has most luxuriant coral growth (closer to sunlight)
- If a lot of wave action it will have more algal growth

2. BARRIER REEF – occur further from shore than fringing reefs, 100km (60mi) or more

- separated from shore by fringing reefs with a lagoon in middle

Parts of Barrier Reef:

Back-reef slope

Reef flat

Fore-reef slope

The Great Barrier Reef is the world's largest reef system composed of over 2,900 individual reefs and 900 islands stretching for over 2,600 kms (1,600 mi) over an area of approximately 344,000 square kms (133,000 sq mi). The reef is located in the Coral Sea, off the coast of Queensland in north-east Australia.

Sylvia Earle Barrier Reef

3. ATOLL REEF: is a ring of reef, often an island, surrounding a central lagoon

- Most occur in Indo-West Pacific region (tropical Indian and Western Pacific oceans)

CORAL EVOLUTION = FRINGING → BARRIER → ATOLL