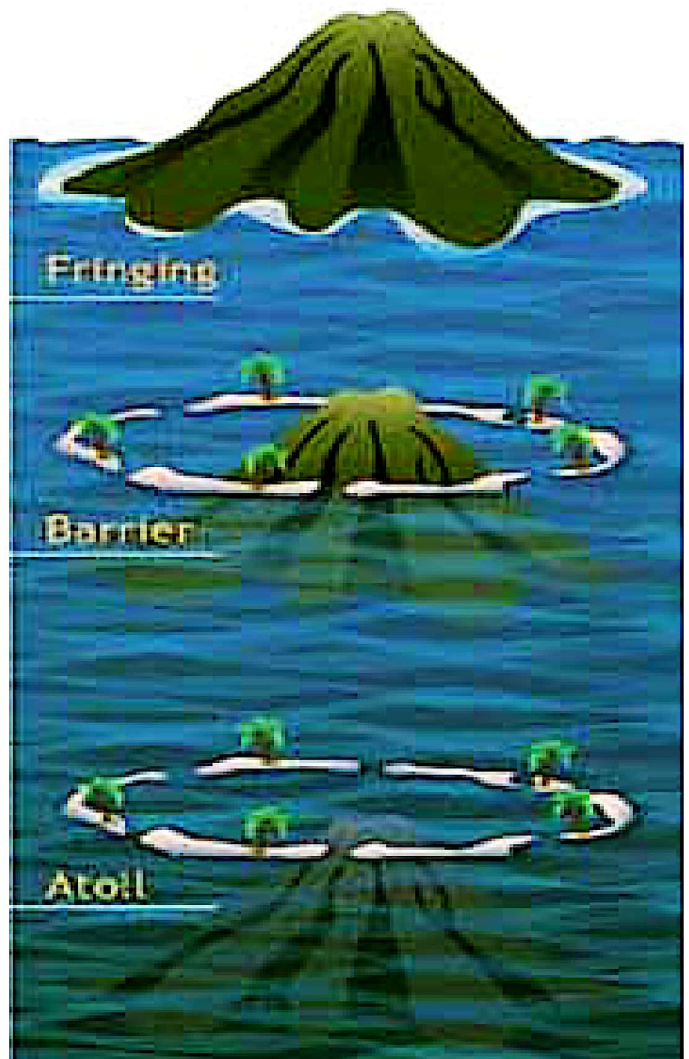


Origin of Coral Reefs and Atolls

Subsidence Theory of Darwin

- Introduced in 1837 and modified in 1842.
- Believed coral can grow only in shallow water.
- These are three stages.

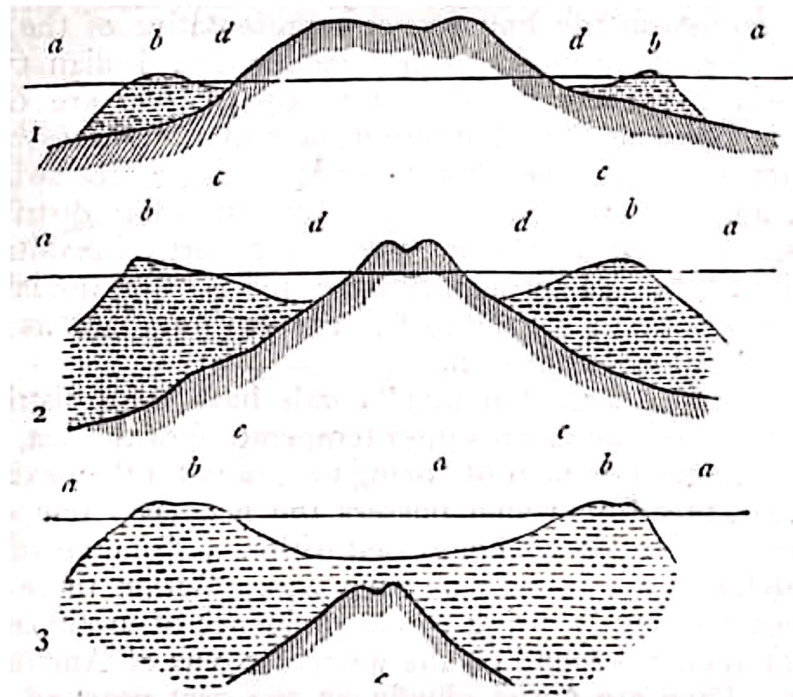
Evaluation – these are not three stages, corals along emerging



Stand Still Theory of Murry

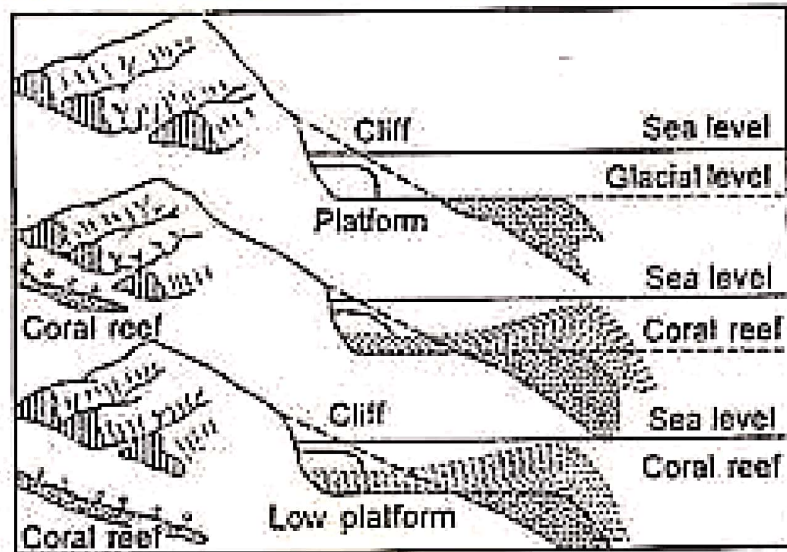
- Propounded in 1880 based on results of challenger expedition
- Corals grow on suitable submarine platforms at depth of 30 fathom=58m
- if depth is more it's due to erosion by wave and if depth is less than due to deposition by waves

Evaluation: Two contradictory things



Glacial Control Theory of Daly

- Given in 1915
- Coral reef formed after Pleistocene Ice Age (2.5 million years ago to 12000 years ago)
- Sea level deepened by 33-38 fathom/65-70m
- Wave cut platforms formed along continental coast

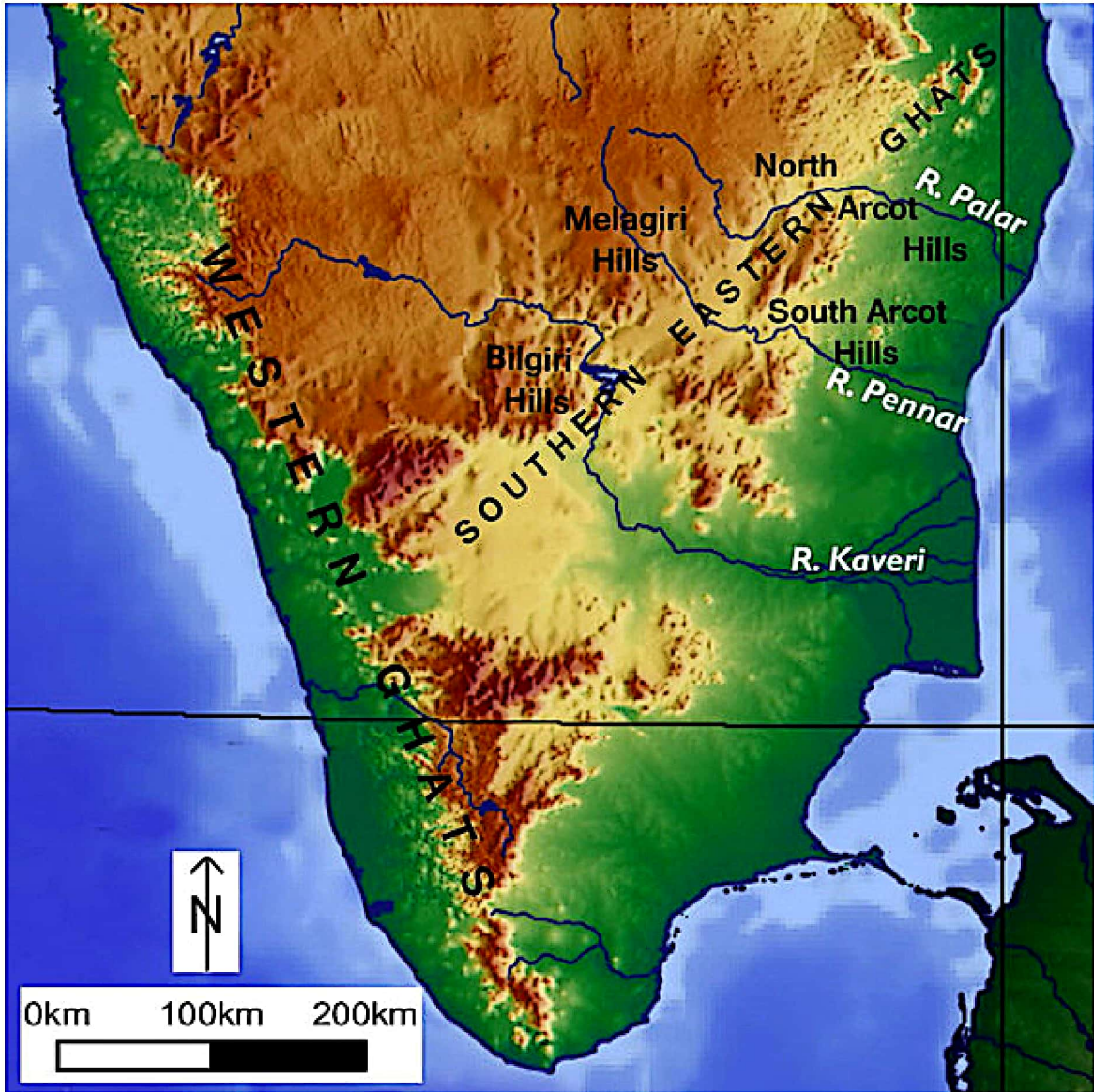


- Existing corals died due to cold and loss of water
- After end of ice age corals again flourished on these newly formed edges of submerged platforms

Evaluation: The depth of all lagoons are not equal and Cliffs formed during period are seldom found.

Concept of W M Davis

- Postulated by 1914-18
- Revived the Subsidence Theory of Darwin
- The shallowness of lagoon is due to deposition, if submarine platforms are stable then every lagoon should be filled
- Uniformity in bottom of lagoons also not due to subsidence but due to deposition
- Due to subsidence any amount of debris may be accommodated into lagoons



Marine pollution

Issue	effect
Oil spill	Marine life – devoid of sunlight and oxygen
Run-off from land	Eutrophication - Algal bloom
Atmospheric input	makes ocean water acidic
Dumping of toxic elements	Toxicity harms marine organism

Origin of Universe

- Due to Big Bang around 15 bn years ago
- At that time it was even smaller than an atom
- After it universe expanded faster than light and came into existence
- <https://www.youtube.com/watch?v=N-wCAfPCPWg>

