

Honden Island (Paumotus), all others having disappeared, owing to its imperfect connection with the sea. Upon the reefs inclosing the harbour of Rewa (Viti Lebu), where a large river, three hundred yards wide, empties, which during freshets enables vessels at anchor two and a half miles off its mouth to dip up fresh water alongside, there is a single porous species of *Madrepora* (*M. cribrifera*), growing here and there in patches over a surface of dead coral rock or sand. In similar places about other regions, species of *Porites* are most common. In many instances, the living *Porites* were seen standing six inches above low tide, where they were exposed to sunshine and to rains; and associated with them in such exposed situations there were usually great numbers of *Alcyonia* and *Xeniæ*. The *Siderinæ* endure well exposure to the air.

The exposure of six inches above low tide, where the tide is six feet, as in the Feejees, is of much shorter duration than in the Paumotus, where the tide is less than half this amount; and consequently the height of growing coral, as compared with low-tide level, varies with the height of the tides.

*Porites* also occur in the impure waters adjoining the shores; and the massive species in such places commonly spread out into flat disks, the top having died from the deposition of sediment upon it.

The effects of sediment on growing zoöphytes are strongly marked, and may be often perceived when a mingling of fresh water alone produces little influence. We have mentioned that the *Porites* are reduced to flattened masses by the lodgment of sediment. The same takes place with the hemispheres of *Astræa*; and it is not uncommon that in this way large areas at top are deprived of life. The other portions still live unaffected by the injury thus sustained. Even the *Fungiæ*, which are broad simple species, are occasionally destroyed over a part of the disk through the same cause, and yet the rest remains alive. It is natural, therefore, that wherever streams or currents are moving or transporting sediment, there no corals