

make proportionally larger calcareous secretions; and in addition they have the property of rapid multiplication by budding. The mollusks that grow and multiply most rapidly, and have proportionally the largest shells, are the Lamellibranchs, or bivalves, among which the oyster is a famous example; and the Brachiopods were once the full equals of the ordinary bivalves. Large banks of bivalves seldom occur in regions of corals, the species there being to a great extent Gastropods (or univalves); and hence the contributions of shells to coral reefs from mollusks are small compared with the extent of the beds which, by themselves, they make on other coasts. The coral seas of Florida nowhere have shore shell-beds like those of St. Augustine in Northern Florida outside of the coral-reef seas. There is reason for this in the fact that those bivalves that grow in large banks live in beds of ordinary sand or mud, such as reef-regions do not generally supply.

XII. LIMESTONE CAVERNS.

The elevated coral limestone, although in general a hard and compact rock, abounds in caverns. They may be due in part to open spaces, or regions of loose texture, in or between the strata. But in most cases they are a result of solution and erosion by the fresh waters of the land, or the waves and currents of the ocean, subsequent to the elevation.

On the island of Metia, many caverns open outward in the coral limestone cliff, and in some were large stalactites, as stated on page 157.

In the raised coral rock of Oahu (p. 290) there are several long winding horizontal chambers, some of which are the sources of subterranean streams that open out on the shores between the layers of the rock, or from the mouths of caverns. These running waters, and others trickling from above, are obviously the eroding agents that have made the caves:

As briefly remarked on page 157, caverns are still more remarkable on the island of Atiu, on which the coral reef-rock stands at about the same height above the sea as on Oahu.