

The singular observation was afterward made by Mr. Buchanan, that this black or brown substance which incrustated the coral, and appeared to pass into and to form its bases of attachment, consisted of almost pure black oxide of manganese. The whole of the coral was dead, and appeared to have been so for a long time. It was so fresh in its texture that it was scarcely possible to suppose that it was subfossil, although, from the comparatively great depth at which it was found, and the many evidences of volcanic action over the whole of this region, one could scarcely avoid speculating whether it might not have lived at a higher level, and been carried into its present position by a subsidence at the sea-bottom.

Attached to the branches of the coral there were several specimens of a magnificent sponge belonging to the HEXACTINELLIDÆ. One specimen, consisting of two individuals united together by their bases, is 60 centimetres across, and has very much the appearance of the large example of the tinder-fungus attached to the trunk of a tree (Fig. 38). Both surfaces of the sponge are covered with a delicate net-work of square meshes closely resembling that of *Hyalonema*, and formed by spicules of almost the same patterns. The sponge is bordered by a fringe of fine spicules, and from the base a large brush of strong, glassy, anchoring spicules project, fixing it to its place of attachment. The form of the barbed end of the anchoring spicules is as yet unique among sponges. Two wide, compressed flukes form an anchor very much like that of one of the skin-spicules of *Synapta*. The sponge when brought up was of a delicate cream color. It was necessary to steep it in fresh water to free it from salt, and the color changed to a leaden gray. A number of small examples of the sponge, some of them not much beyond the condition of gemmules, were found attached to the larger specimens and to branches of the coral, so that we have an opportunity of studying the earlier stages of its development.