bud out before its predecessor was quite free. The somewhat cup-shaped buds, when set free, become, by the direction in which future growth takes place, flat and disc-shaped, and develop eggs, from which spring free-swimming larvæ, which start fresh stocks.

The mass of nurse stocks which I found was surrounded on the reef by a group of fully-formed *Fungias* of all sizes, I counted twenty in all. Some six of these were small and still showed the scar of attachment, which disappears in the process of subsequent growth.

A species of *Millepora* (*M. nodosa. Esper*), is a very common coral upon the Tahitian reefs. It forms irregular nodular masses usually of small size, and often encrusts dead corals of other species. The tips of the lobes of the living coral are of a bright gamboge-yellow colour, which shades off into a yellowish-brown on either side of the lobes. Mr. Murray succeeded in getting the polyps of the coral to expand under the microscope, and handed them over to me for examination. I found them, as Agassiz had discovered long before, to be Hydroids allied to the *Medusæ* and not to the *Actinozoa* and Sea Anemones, like the majority of modern stony corals. I studied the structure of the coral minutely.*

The hard part of the coral or calcareous skeleton is finely porous throughout, being excavated by a complex reticulation of fine and tortuous canals which are in the freest possible communication with one another. Within this porous mass at its surface are excavated cylindrical holes or pores of two sizes.

The canal spaces in the skeleton are, when the coral is living, filled by a network of living tissue made up of a mesh-work of branching and communicating tubes, which form a canal system, by means of which a free circulation can pass from one part of the coral to another.

Two kinds of Polyps inhabit the pores described as existing on the surface of the coral. The larger pores are occupied by short stout cylindrical polyps which have each four tentacles and a mouth and stomach, and which are hence termed "*Gastrozooids*," whilst their pores are termed "*Gastropores*." The smaller pores shelter each a very different kind of polyp, which has a long and slender sinuous body provided with numerous tentacles, and devoid of any mouth or stomach; this latter form of polyp, because its function is merely to catch food, is called a "*Dactylozooid*," and its pore a "*Dactylopore*."

* For further details, see H. N. Moseley, "On the Structure of a Species of Millepora occurring at Tahiti." Phil. Trans. Roy. Soc., Vol. 167, 1877, p. 117.