

might have satisfied any unprejudiced investigator that they are not Polyps, nay, not even Radiata, but a kind of low Mollusks.¹

What are commonly called Corals are communities of individuals possessing a solid frame, but of the most heterogeneous structure, and having no common character except the solidity of their frame. The moment we take into account the anatomical structure of the beings forming such communities, we must distinguish several kinds of Coral stocks. First, those which are uniformly calcareous, formed by genuine Polyps allied to the Actiniæ. In fact these Coral stocks differ from the Actiniæ only by the presence of solid deposits in the walls of their body. Such are the Astræans and Madreporæ, all of which have, like the Actiniæ, numerous simple tentacles, and a digestive cavity hanging below the mouth, as well as radiating partitions projecting into the main cavity of the body, and to which the ovaries and spermaries are suspended. Secondly, on account of the similarity in the organization of their individuals, we would unite, as another group of Corals, the various solid stocks formed by Halcyonoid Polyps. Some of them are calcareous, like the Actinoids, the Red Coral, for instance; others are horny, the Gorgoniæ; and others consist of calcareous tubes, such as Tubipora. The Corals of these Halcyonoid Polyps are, it is true, far more diversified than those of the Actinoids, though there seems to be much less difference between the animals themselves than among the latter. They all have eight fringed tentacles, and agree fully in this respect, as well as in their general structure, with those Halcyonoids which have no solid frame at all, as the genera Halcyonium and Renilla, or only a simple horny rod in their axis, as Virgularia and Pennatula.

On account of the special homologies of the Actinoids and Halcyonoids, there can be no doubt that these two types of Polyps belong to one and the same natural group, as Dana has first shown. They all have vertical radiating partitions dividing the main cavity of the body into chambers, which communicate freely with the cavity of the tentacles; in all, the ovaries and spermaries are found hanging freely from the free inner edge of these partitions, and in all there is a distinct digestive sac suspended in the upper part of the main cavity of the body. They are, in one word, strictly homologous to the Actiniæ, the structure of which we have considered more fully above.

Among the Stony Corals generally referred to the Actinoid Polyps there is one

¹ Siebold in his Text-book of Comparative Anatomy, and Kölliker in his Schwimmpolypen, referred to above, (p. 27, note 12.) still unite the Bryozoa with the Polyps. Kölliker is particularly explicit on that point, and believes that the expression by which Mollusks and Radiates may be clearly distinguished

has not yet been found. But, surely, *bilateral* animals with an *alimentary canal* open at both extremities and *bent in a plane dividing the body into equal halves* can no longer be associated with Polyps, which are built upon a plan characterized by *radiation around a vertical axis*.