

sions in the surface of the calcareous axis, which affords them some degree of protection. In *Madrepores* these depressions are crossed by radiating plates, adapted to the form and number of the tentacula. In *Millepores* the cells are closer and more minute, and exhibit none of these star-like radiations. In some species the plates have more of a parallel arrangement; and in others they form a net-work.

The material of which this axis, to which the polypes are attached, is composed, is of various kinds. Sometimes it is horny, flexible, and elastic, corresponding in its nature to animal membrane: at other times it is hard and calcareous, being composed principally of carbonate of lime, with a small quantity of the phosphate; the proportion of this latter ingredient varying in different species. In all cases the particles of calcareous matter are united together by some portion of animal substance which may be obtained by dissolving out the former by an acid. We always find the materials arranged in concentric layers, indicating that their deposition has been successive; and the surface is marked by longitudinal lines, corresponding to the figure of the animal covering of flesh. Sometimes the stem consists of horny and calcareous parts disposed alternately, composing a jointed structure, which some have fancied might be considered as making an approach to an articulated skeleton; for it is capable of considerable flexion, and readily yields to the impulse of the waves, without the risk of being broken. This is the case with the *Isis hippuris*, commonly known by the name of *jointed coral*. (Fig. 68.) There is, in short, hardly any possible combination of these parts which does not occasionally occur amidst the infinite diversities of condition displayed in this department of the animal creation.

These structures are generally attached to submarine rocks by an expansion of the base into a kind of foot, or root, which has a strong power of adhesion. In this respect, therefore, as in so many others, these animals preserve an analogy with plants.

It has been ascertained that, in a great number of instances these fixed zoophytes are multiplied, like the sponge, by the