

fixing their permanent abode, and proceeding in their farther development. The time of their remaining in this free and moving state varies according to circumstances, from a few hours to about three days. When about to fix, the slightest agitation of the water causes them to desist, and to recommence their gliding motions, which they continue for some time longer. If, when any of these gemmules has begun to fix, it be again disturbed, and separated from the surface to which it had become attached, it generally remains free, and perishes. During the process of fixing, it exhibits no peculiar appearance or change of form; it simply lies on its side: and the cilia continue to vibrate over the whole surface, producing a constant current in the water, apparently for the purpose of cleaning the space immediately surrounding the gemmule. It remains for three days in this attitude, without undergoing any perceptible change of form, and without relaxing the vibrations of its cilia. At the end of this time, the cilia cease to move, and shortly after disappear: then the gemmule begins to swell, the surrounding margin becomes more transparent, and the whole gradually assumes the form of a cell, surrounded by a delicate white opaque line, which is the rudiment of the calcareous wall of the future cell. Towards the base of this rudimental cell, the gelatinous substance in the interior may be perceived to become more consistent and opaque at a particular point; from this dull spot within the cell, short straight tentacula begin to bud, extending upwards in the direction of the future aperture. The gelatinous spot, from which the tentacula originated, assumes the vermiform appearance of the body of a polype; and we may distinctly perceive the bundles of fibres which connect its head with the base of the cell. The structure of the polype is perfected by the addition of a closed capsule; and when it is first detected protruding from the cell, it possesses all the parts of an adult polype, and vibrates the cilia of its tentacula with as much regularity and velocity as at any future period. Before the polype is capable of protruding from