

which the support depends being converted into stone by a deposition of calcareous matter in their texture,—the corium in this manner becoming a solid polypidom, and the muscular leaflets partitions of limestone.\*

When a *Helianthoid* Polype is at rest and unalarmed, it can dilate the body to fully twice its ordinary bulk by imbibing water through the mouth or tentacula,† the bases of which open in the spaces between the perpendicular lamellæ. These spaces being filled, the water is then made to permeate the rim of the oral disk, which is full of cavities and cells for its reception; and the tentacula are in the same manner distended, the water being forced into them from behind while the little opening on their tips is held close. The whole animal is thus distended to a wonderful degree, and every organ stretched and displayed;—the tentacula spread out in quest of prey,—the skin rendered almost clear from very fulness; and the stomach, pushed beyond its natural bounds, lies over the sides in swollen diaphanous lobes. The water thus introduced is doubtless subservient to the purposes of respiration, and to aid this, the vermiform filaments, and the internal surface of the stomach and tentacula are clothed with vibratile cilia, exciting and directing currents over the surfaces.‡ Since too the contents of the stomach must be fully exposed to the influence of the water, the

\* “ Dans cette classe d’animaux, le polypier ou la partie solide qui reste quand le partie animale a été desséchée et enlevée, est donc une sorte de réseau calcaire d’un tissu plus ou moins compacte, qui remplissoit les mailles, les vacuoles de celle-ci. La proportion de ces deux parties est en rapport avec l’âge du zoan-thaire : plus il est jeune, plus il y a de matière animale ; plus il est âgé, et plus il y a de matière inorganique : aussi la base de ces polypiers, le plus souvent morte, est-elle fort dure, tandis que le sommet ou les bords essentiellement vivans sont entièrement mous.” Blainville, *Actinolog.* 311.—See also Harvey in *Mag. Nat. Hist.* n. s. 1. 474.

† “ It has not, so far as I know, been clearly shewn by which of the communicating orifices the water enters. Though I took considerable pains, I have not been able satisfactorily to ascertain this point ; I may remark, however, that I have repeatedly noticed water entering at the mouth.” Sharpey in *Cyclop. Anat. and Phys.* i. 614.—Delle Chiaje asserts that it enters by the tentacula. *Bull. des Sc. Nat.* xvii. 471. He adds, “ Il est curieux d’observer le courant d’eau qui, lorsque l’Actinie se relâche, pénètre par quelques tentacules, et dès qu’elle se contracte, sort par d’autres tentacules précisément opposés aux premiers. Ce phénomène s’observe sur toutes les espèces d’Actinies.”

‡ Sharpey in *lib. cit.* i. 614—15.