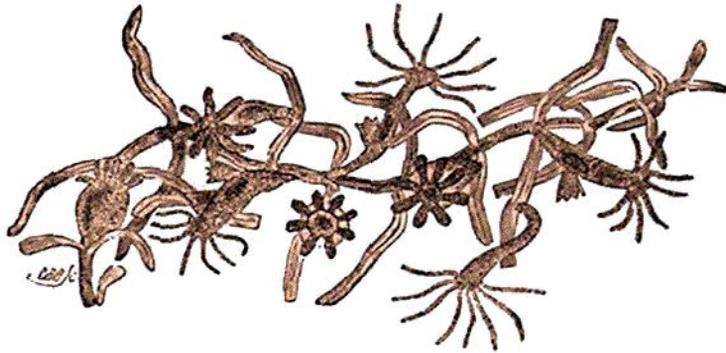


point, so that they can change the figure of their bodies from a globe to a cylinder, or distort it with strictures, and can shorten and extend the tentacula at will, sometimes to an extent which is astonishing, although nothing like muscular tissue can be detected in their structure. * When therefore they have occasion to conceal themselves within their cells, they are not necessitated, like the ascidian, to bend the body in order to obtain sufficient space for the tentacula, but they shorten the body and the tentacula at the same time, causing the one to assume a more globular form, and the other to dwindle down to mere knobs or

Fig. 4.



papillæ (Fig. 4.) † The tentacula, even when fully extended,

gradually into those placed more towards the surface, infers that they are a kind of *glands* or rather *vesicles*, which have the power of sucking in and again transpiring the nutritive fluid.—Hist. des Polypes, p. 132. Lamarck adopts this opinion, Anim. s. Vert. ii. 9, which is probably correct, but it ought to be remembered that it is somewhat hypothetical. Consult in relation to this subject Roge's Bridgewater Treatise, Vol. ii. p. 77–8, Carus's Comp. Anat. Eng. Trans. Vol. i. p. 25, §. 23; and the reader will find Edwards' and Dutrochet's opinions on the nature of the elementary corpuscles in Bostock's Elementary System of Physiology, Vol. iii. p. 348 et seq. Tiedemann sums up our *actual knowledge* in the following sentence.—“ In animals of a simple structure, polypi, entozoa, and some others, in which no vascular system for the movement of the humours has hitherto been discovered, the nutritious assimilated liquid passes directly into the parenchyma of the body, with which it enters into combination.”—Comp. Physiology, p. 35.

* Trembley, Mem. pour l'hist. des Polypes, p. 25. Carus' Comp. Anat. i. p. 43. —Mr Lister, however, says that “ in the substance of the necks of the polypi (of *Sertularia pumila*,) transverse lines were visible, bearing a resemblance to those characteristic of voluntary muscles in the higher animals;” but we may doubt whether they are truly muscular, for this accurate observer shortly after acknowledges, that “ nothing like muscular contraction was seen in the pulp of this (*Plumularia setacea*,) or any other species.”—Phil. Trans. 1334, pp. 371–372.

† The figures represent *Hydra viridis* in various attitudes and states.