portion distended to a bulk which may be more than double of that which it had previous to the introduction of the fluid, and which it resumes when, from the application of irritants, the polypes contract themselves, and by their contractions force out all the imbibed water.—The tortuous filaments suspended from the base of the stomach have been generally taken for ovaries, but the observations of Dr Grant and M. Edwards seem to have disproved this opinion. The latter of these eminent naturalists believes them to be analogous to the biliary canals of insects. *

The affinity in structure between the asteroid zoophytes and those which we name *helianthoid*, from their resemblance to some compound flowers, is evident, although in the latter there is a still further recession from the simplicity of polype anatomy. We find in them a mucous coat covering the surface,—beneath it a layer of transverse submuscular fibres, while the body is supported by numerous strong cartilaginous lamellæ arranged in longitudinal parallelism. Each of the lamellæ is attached inferiorly to the circular layer which constitutes the base of the animal, and divides into three fascicles,—one which goes to the stomach and to the rim of the oral aperture,—another to the roots of the tentacula,—and the third is prolonged to the outer labial border, where it is bent back to form its free margin. † The stomach has its distinct and proper parietes; there are special organs for the developement of the reproductive gemmæ; and even some traces, as is asserted, of a nervous system; while the numerous tentacula are perforated like canals, in order that the water of respiration may be introduced into the interior, and the nutritive fluids more thoroughly influenced by its oxygen.

It has been mentioned already that there is no proper circulation—no movement of a fluid analogous to blood in appropriate vessels—in any zoophyte, but in many of the hydroida it has been discovered that there is a continuous and uniform current of a fluid, containing granular bodies which have themselves a rotatory motion, within the tubular portions of the horny polypidom. Cavolini first detected this sort of circulation, which

* Ann. des Sc. Nat. iv. 331; an. 1835.

† Blainville, Man. d'Actinologie, p. 68.