

In the next stage observed (Pl. IX. SP', OV'), the spadix is still further complicated at its margin by subdivision of its lobes, which form a sort of network over one-half of the surface of the ovum, terminating in a fringe of numerous tentacular-like lobes. The ovum is a large ovoid mass, composed of fine rounded particles densely packed together.

In the next stage observed, the developing ovum has already assumed the elongate cylindrical form of a planula (Pl. IX. P1). The stages by which the planula breaks its connection with the spadix were not traced. The earliest planulæ observed appeared to be composed entirely of a uniform mass of fine rounded particles, like those constituting the substance of the latest stage seen in relation with the spadix. The formation of the ectoderm appears to take place by delamination. As the planula develops it becomes much elongated, and an outer layer becomes gradually more and more plainly observable on its surface as distinct from a general mass beneath it (Pl. IX. P2). The early-formed ectoderm layer (Pl. XI. fig. 5) is composed of closely-set, very fine rounded particles; whilst the inner mass, or endoderm, is made up of larger transparent oil-globules. As development proceeds, the ectoderm layer thickens and becomes highly transparent, and being colourless contrasts with the more opaque red-pigmented endoderm within.

The mature planula measures nearly a quarter of an inch in actual length, and is so long that it has to be doubled up in order to allow of its accommodation within the gonophore sac. The planula has a thick, highly transparent, gelatinous-looking ectoderm, and a darkly pigmented endoderm. It is long and worm-like in form (Pl. IX. P3). The surface of the ectoderm is marked out into polygonal areas, which are defined on the surface of the planula at an early period of development (Pl. XI. fig. 6).

A vertical section of the ectoderm of the mature panula (Pl. XI. fig. 7) shows that this thick layer is composed of a transparent gelatinous-looking mass, which is traversed by tracts of small rounded non-transparent elements, which stretch vertically to the surface of the planula, from the surface of the endoderm to that of the ectoderm. These tracts are continued outwards from a layer of similar elements, which rests at the base of the ectoderm, directly upon the surface of the endoderm. The opaque tracts are disposed at roughly regular intervals, and form vertical layers which, rising to the surface of the ectoderm and meeting one another, enclose the polygonal areas already described. In these tracts, apparently out of the opaque elements composing them, numerous thread cells of the larger kind are developed, and are more abundant and thickly set towards the surface of the planula; hence, when the lines enclosing the polygonal areas are viewed from the surface of the planula, they appear mainly composed of rows of nematocysts viewed end on, but partly also of the already described opaque rounded bodies (Pl. XI. fig. 8). Some of the nematocysts contained in the ectoderm of the mature planula were observed to have their contained threads fully developed.