

By this time the coalescence of the separate plasma masses into a single spherical plasmodium has been completed ; but soon after the liberation of the plasmodium and its seizure by the claspers, we find that the whole has become broken up into a multitude of small round or irregularly shaped masses. These all consist of a granular protoplasmic matter without any distinct boundary membrane, and with numerous nucleus-like bodies immersed in their substance. The common external structureless membrane is distinct, but it is still thin and weak.

Notwithstanding the apparent absence of anything like a definite law of cleavage, it is impossible to avoid comparing this breaking up of the plasmodium with the segmentation of the ovum, and hitherto we have seen nothing which in any way resembles this phenomenon. We must, however, be careful not to push this comparison beyond its legitimate limits, for we are not here dealing with an ovum in the ordinary sense, but with a multitude of egg-cells coalesced into a single *syncytium*.

But subsequent stages no less than that just described recall the phenomena which present themselves in the development of the typical ovum into the planula of other Hydroids. The segmented condition of the plasmodium disappears, and its substance is once more found in the state of an undifferentiated plasma.

Soon, however, a definite histological differentiation begins to show itself. This results in the formation of a single spherical body, within which, probably by a process of liquefaction, a large central cavity has made its appearance. At the same time, the walls of the cavity are seen to possess a distinctly cellular structure, and to have become split, apparently by delamination, into two concentric laminae, the first indication of the ectoderm and the endoderm.

This is the foundation of the Actinula. The Actinula of *Myriothela*, however, differs from that of *Tubularia* in the possession of long transitory arms which serve for locomotion. These originate in involutions of the walls of the hollow sphere. By this process, which seems to be without parallel among the Hydroida, the transitory arms of the Actinula show themselves first as hollow caecal projections into the cavity of the sphere. An evagination, however, of these projections soon takes place, so that by their eversion they come to occupy the position of external appendages.

Up to this period the embryo had retained its nearly spherical form, but it now begins to elongate itself and assume an ovoid shape. Then one pole becomes truncated, and a mouth here makes its appearance, while the permanent tentacles begin to shoot out around it in the form of short papilliform processes.

The Actinula is now ready to escape from its enclosing capsule, which since the seizure of the germ by the clasper had all along remained adherent to the extremity of this organ. The capsule now becomes ruptured and allows the larva to enter on a free life in the surrounding water.