

preservation allowed of a detailed histological examination, which on the one hand confirmed the view already put forward as to the endodermal origin of the reproductive organs, and on the other threw new light on the nature of the filamental apparatus.

The youngest ovicells are placed on the margins of the ovary, especially on the lower and upper; they were unmistakably recognisable as ova from the size of $9\ \mu$ upwards, and then consisted almost entirely of the nucleus, surrounded by a thin mantle of protoplasm. They lie between the bases of the epithelial cells, distinctly still outside the supporting lamella, often united in small groups. So far *Corallimorphus* confirmed what had already been observed in *Calliactis (Sagartia) parasitica* (Actinien, p. 88); but, on the other hand, it was a new condition, that relatively large ova, measuring from $40\text{--}50\ \mu$ in longitudinal diameter, were still found in the endoderm; since they were almost as long as the epithelial cells, one end reached nearly as far as the surface. Twice I observed one of these larger cells, which was clearly in the act of migrating into the mesoderm (figs. 2 and 3). It had an amoeboid, hour-glass-shaped, constricted body, of which one end lay in the epithelium, the other in the mesoderm; the nucleus was mostly in the latter, but the point of it projected into the former.

The ovicells enclosed in the mesoderm all appeared to me to have, from the first, the filamental apparatus, though in different stages of development. In the largest, almost mature ovicells (fig. 7), it is a conical body, whose base rests on the surface of the ovum. It likewise lies in the mesoderm, and its extreme point only reaches to the base of the epithelium: in this way it is distinguished from the formation of the same name in *Calliactis*, which belongs to the epithelium itself, and even projects as far as its upper surface. The distinction is of no importance, and is clearly owing to the different development of the connective tissue, which is very visible in *Corallimorphus*, whilst in *Calliactis* it is so scanty that the ovicells lie close to one another, and only a delicate supporting framework remains when they are taken away.

A second difference is of greater importance. In *Calliactis* it was not possible to distinguish nuclei in the filamental apparatus, which thus showed itself to be a differentiation of the ovum itself, whilst its cellular structure is very distinct in *Corallimorphus*. The apparatus consists of filament-shaped cells, carrying their nuclei on the base resting on the ovicell. Preparations stained with carmine showed us here a corona of oval bodies coloured red. It is possible that, in spite of all trouble taken, I did not succeed in finding out the nuclei in *Calliactis*, because I was working with osmium preparations, in which the nuclei often are difficult to colour. I might, however, have had to deal with different stages of differentiation of the structure, and this is corroborated by the following observations on the development of the apparatus in *Corallimorphus*.

Young ovicells have a single finely striated process, piercing the supporting lamella, by which they are fastened on the base of the epithelium. The epithelium is modified in a peculiar fashion at the point in question; whilst it is elsewhere overloaded with roundish