

If in this stage the gonophore be laid open, and the protoplasm masses, whose formation we have been tracing, be liberated under the microscope, we shall often succeed in witnessing very minute processes of clear protoplasm, which have become developed over the surface. These, however, are not permanent structures, and they will often, while the object continues under observation, become entirely withdrawn. They are in fact true pseudopodia, and are probably employed in the nutrition of the masses from which they arise.

The contents of the gonophore, however, are destined to undergo further change before the period of their liberation has arrived. The separate protoplasm masses increase in size, the residual matter which had surrounded them has disappeared, having probably afforded material for their nutrition, they begin to coalesce with one another, and there is ultimately formed a single large *plasmodium* which entirely fills the cavity of the gonophore. When this plasmodium is examined under the compressorium, the same nuclei which had hitherto characterised the products of the coalescence of the ova are seen to be scattered in great number through its substance. These nuclei, however, have already begun to suffer a change, for while in some the nucleolus is still distinct, in others it has quite disappeared, and while in some the contents consist of a minutely granular matter, in others they are quite homogeneous.

When the separate protoplasm masses have all united with one another, or a little before they have become so completely fused together as to have their original distinctness entirely lost, the time has arrived when the contents of the gonophore are to be expelled. Its walls, which present the remarkable character of having a strong muscular layer developed in them, now begin to contract on the contained plasmodium, which is thus gradually forced out through the summit of the gonophore. By the continued contraction of the walls of the gonophore, the plasmodium is at last entirely expelled, completely enveloped, however, in a transparent structureless membrane. The empty gonophore may now be seen retracted in the form of a shallow thick-walled cup with everted edges, upon the summit of its short peduncle.

The liberated plasmodium closely enveloped in its structureless capsule is of a nearly spherical form, and now lies upon the retracted gonophore. It does not, however, continue long in this position, for the function of the claspers is soon brought into play. These remarkable bodies, which have no representative in any other known Hydroid, are long, cylindrical, very contractile, tentacle-like organs which spring from the body of the hydranth. Each is slightly enlarged towards its distal extremity where it terminates in a sucker-like disc. One of these claspers (sometimes two or even three) now stretches itself out towards the liberated plasmodium, and as soon as it reaches it, it becomes attached by its sucker-like extremity to the capsule and then by strong contractions pulls the plasmodium still enveloped in its capsule away from the remains of the gonophore on which it had lain.