

The ovaries consist of deep, lobed, and contorted folds of the lining membrane of the disk wall on its floor, sides, and a portion of its roof. These folds are crammed with egg clusters, so as to resemble puddings or sausages (figs. 2 and 3, δ , δ); and, whatever their form, all end by adhering at their inner margins to the outer ends of the corresponding stomach pouches, whose basal lines of adhesion they also continue along the arms, and along the median line of each interbrachial space. As has been said before, the body cavity is thus divided into ten radiating compartments freely communicating at their inner ends by large holes through the partitions. A genital opening enters each of the compartments (fig. 3, *n*, *o*). *Gorgonocephalus*, therefore, has no closed bursa, with its cluster of genital tubes, but the entire body cavity, except the open (perihæmal) ring outside the mouth, is also the genital cavity. It was a similar arrangement that the older anatomists attributed to Ophiurans; and it is strange that their observations were true only of genera that had never been dissected.

As to internal composition, the ovarian lobes are uniform, and everywhere contain, under a thin, membranous envelope, crowded masses of egg clusters averaging about 1 mm. in length, and separated from each other by delicate membranous partitions (fig. 5). The eggs which compose each cluster are round, and about $\frac{1}{4}$ of a millimetre in diameter. The general envelope, as may be seen in the figure, becomes thicker at the free margin, and especially so at points where it grows to the stomach pouches. Its function of supporting the stomach points to its homology with those slender threads that suspend the Ophiuran stomach to the body wall. I was not able to detect on the surface of the ovarian lobes any pores for the egress of eggs, such as exist in the bursa of Ophiurans. It is therefore probable that the membrane ruptures at the breeding season, and the eggs are poured into the radiating compartments of the body cavity. Here the sea water might bring in spermatozoa for impregnation, after which the eggs of any compartment could be discharged through any one of the ten genital openings.

The chief difference between these organs in *Gorgonocephalus* and among Ophiurans is the greater specialisation in the latter, where the lining membrane of the disk wall becomes free, and enlarges opposite each genital opening into a closed pouch (bursa), which is extended in the form of finger-like tubes (ovarian tubes). In other words, the lining membrane, instead of being pierced by the genital opening, is continuous and simply becomes free and voluminous. In *Gorgonocephalus*, on the contrary, the genital opening pierces not only the disk wall but its lining membrane, and enters the body cavity, while nearly the whole of the lining membrane takes on the egg-bearing function, and by the growth of the eggs is gradually stretched and thrown into folded lobes.