

the cavity with its granular contents bears a smaller proportion to the thickness of the tubular wall. I suspect that this varies somewhat according to the sexual maturity of the individual; but I have generally noticed that the vessels of this plexus in *Antedon eschrichti* do not show such a clear section as the visceral blood-vessels, their lumen being occupied by cellular structures; while in some disks of this species I have found as distinct a genital tube within the vessels of this subambulacral plexus as is to be met with in the arms between the bases of two successive pinnules.

Further, in one example of *Antedon rosacea*, I found a small but well-developed ovary occupying the position of the genital plexus beneath the left posterior ambulacrum of the disk. The first traces of it appear in the sections which pass through the hinder part of the spongy organ; and it extends outwards to the point where the primary radial groove divides into the two which proceed to the arms. It contains the nuclei of half a dozen ova in various stages of development, some with a germinal spot, and some without.

A still larger and more fully developed ovary occurs in the disk of one of the three examples of *Actinometra pulchella* which I have cut into sections. It commences close to the peristome, and extends outwards beneath the left anterior ambulacrum nearly to its bifurcation, lying close down upon the upper surface of the intestine, and moulded to the plications of its wall.

In *Antedon carinata* I have not only found a distinct genital tube within some of the vessels forming the plexus beneath the disk ambulacra, but I have also met with detached portions of ovaries containing more or less fully developed ova in various parts of the body-cavity, *e.g.*, in the spaces of the connective-tissue network forming the lip; in the intervisceral portion of the body-cavity, between the two parts of the coiled gut; and in the subtentacular canals between the genital plexus and the water-vessels.

There can, therefore, I think, be hardly any question as to the relation between the genital glands and portions of the blood-vascular system; while the occasional development of rudimentary ovaries within the disk of recent Crinoids is of considerable importance. For it shows that there is no morphological improbability in the theory which supposes the genital glands of extinct armless types, like the Blastoids and Cystids, to have been situated within the body, rather than in the so-called pinnules, even when these are present, which is by no means always the case.

The fertile intra-pinnular portions of the genital glands vary considerably in shape. In most of the British varieties of *Antedon rosacea*, in *Antedon angusticalyx*, *Antedon acoela*, and *Eudiocrinus japonicus*, they are short, thick, and rounded. They sometimes terminate in rounded ends, and are sometimes continued onwards as slender cords through two or three pinnule-joints. But in the *Antedon rosacea* from Naples, and in the group of species allied to *Antedon eschrichti*, they are long and fusiform, extending over several pinnule-joints. The same is the case in *Hyocrinus* (Pl. Vc. figs. 8, 10, *t*), *Bathycrinus* (Pl. VII. fig. 7; Pl. VIII. fig. 5), and *Rhizocrinus* (Pl. X. fig. 20), though to