

may be seen in an optical section of the decalcified pinnule to end in a small rounded opening. One of these openings is shown in Pl. LIV. fig. 3, and I do not think that, as a rule, there is more than one to each pinnule.

In nearly all the Crinoids which I have examined the structure of the genital gland is the same as described by Ludwig in *Antedon eschrichti*. The epithelial lining of the genital tube is continuous with that of the ovary. Individual cells of this lining enlarge at the expense of their fellows, and are gradually enclosed in follicles which are derived from the original ovarian epithelium. These follicles project freely into the lumen of the gland; but there is practically nothing which could be called an ovarian stroma.

In *Actinometra nigra*, however, there is a highly organised stroma separating the follicles; and young ova may be found in it at all stages of growth, the smallest being no larger than the nucleolus of a mature ovum. But I have been unable to make out the derivation of these germs from the epithelial cells as clearly as may be seen in *Antedon eschrichti* and similar forms.

In *Actinometra parvicirra*, on the other hand, I have failed to discover any follicular structure at all. The ova are smaller than in other types, and project slightly from the surface of a dense brown stroma in which no organised structure can be made out (fig. 4 on p. 113; Pl. LXI. figs. 3, 4). The genital cord of both these species (Pl. LXI. figs. 5, 6) is very different from that of the other Crinoids, varying greatly in shape and appearance. But the description and illustration of its peculiarities must be deferred to another occasion.

In two other multiradiate species of *Actinometra* from the Philippine Islands, however, *Actinometra dissimilis* and *Actinometra nobilis*, the genital cord of the arms is much less complex, and closely resembles that of *Antedon eschrichti*, except that it frequently contains a quantity of ill defined pigment masses. The ovaries have the same structure as those of *Antedon eschrichti* and *Antedon rosacea*; and the ova which they contain, exhibit exactly the same relation between yolk and yolk-sac as have been described by Ludwig in the ova of the latter type.¹ The whole ovum appears to be surrounded with a network formed of dark threads and clear meshes. The latter, however, are larger, and the former smaller and more delicate than in the ova of *Antedon rosacea*, as described by Ludwig.

F. THE NERVOUS SYSTEM.

That portion of the organisation of a Crinoid which corresponds to the ambulacral nervous system of other Echinoderms is of a somewhat limited character. So far as is yet known, it is confined to the ciliated floor of the food-grooves and to its minute lateral extensions in the direction of the tentacles. "Andere Zweige als die schon

¹ Die Bildung der Eihülle bei *Antedon rosacea*, *Zool. Anzeiger*, Jahrg. iii., 1880, pp. 470, 471.