formed, like the anambulacral plates, of a calcareous network interpenetrated by an organic basis, which is of the same nature as in the joints of the rays and arms (Pls. LVII., LXII.).

The simple spicules and thin networks of limestone which occur in the less heavily plated disks are especially abundant in the visceral layer of the peritoneum. This is well seen in those Crinoids, such as *Antedon rosacea*[1] and *Actinometra strota*, in which there is but little connection between this visceral layer and the parietal one lining the interior of the cup, so that the entire visceral mass is readily detached from the calyx.

Unlike that which lines the cup, the oral perisome is usually very closely adherent to the visceral mass, and cannot be separated from it without some trouble. The peritoneal covering of the latter also contains limestone deposits, so that sections through the upper part of the disk show two layers of plates and spicules. The upper one is in the perisome itself, and belongs to the anambulacral system; while the lower belongs to the upper surface of the visceral mass. These lower plates were described and figured by Müller.[2] Together with those of the sides and lower parts of the visceral mass they seem to be the modern representatives of the so-called "intervisceral plexus" which lined the cup of the Actinocrinidæ. Wachsmuth[3] has pointed out that in some members of this family "almost the entire test is lined with a delicate calcareous plexus or network. This lining is not in contact with the test directly, but connected with it by small partitions, producing innumerable little chambers, which communicate with each other and with the visceral cavity." It rarely extends below the level of the second radials, and passes gradually upwards into the plates, coating the interpalmar areas on the upper surface of the disk below the vault. These, which extend right up to the edge of the peristome, are of course anambulacral in character, and it is not easy, any more than it is in *Pentacrinus*, to say where the one set begins and the other ends. But so far as the lower part of the cup is concerned, the intervisceral plexus of the Actinocrinidæ is merely a greater development of the limestone deposits in the visceral layer of the peritoneum of recent Crinoids.

All of these have more or less abundant plates and spicules in the connective tissue which lies beneath the peristome and supports the lip, and also in that which unites the coils of the digestive tube (Pl. LXII.). In the regular endocyclic Crinoids this organ makes rather more than a single round turn upon itself (fig. 2 on p. 89); and it is the aggregation of limestone deposits upon its central side which forms the so-called "columella," once regarded as a sand canal.

This supporting skeleton of the digestive tube, like that enclosing the visceral mass, was much better developed in the Actinocrinidæ than in recent forms. Occupying

[1] Ludwig (*op. cit.*, p. 330, Taf. xix.) has given an excellent diagrammatic section of this type, in which this point is well illustrated.

[2] Bau der Echinodermen, p. 58, Taf. vi. fig. 9, *f*.

[3] Revision, part ii. p. 26.