

of attachment to the under surface of the upper body-wall, and have their free border more and more curved. The mesenteries of higher order are attached to the outer surface of the alimentary tube. The mesenteries are all perforated by several irregularly oval apertures traversed in the recent coral by spines and calcareous trabeculæ projecting from the faces of the septa. The mesenteries are provided with well-developed muscular slips, which have rather a complicated arrangement within the major mesenteries. Near the summits of these mesenteries the muscular fibres are directed nearly horizontally outwards, stretching directly between the line of attachment of the mesentery to the alimentary tube and the upper wall of the body. In the lower part of the mesentery the fibres are disposed in curved lines crossing one another, but with a general downward direction towards the base. Some of these vertical fibres are continued upwards so as to cross the horizontal ones above them just described to some little extent, as shown in the figure. The inferior border of the mesenteries overlies in the recent coral the costal trabeculæ as already described; hence in a vertical section of the decalcified coral, such as shown in the figure, a groove or hollow is seen beneath the lower border of the mesenteries, left by the removal of the costal calcareous trabeculæ. The lower borders of the mesenteries are attached to a series of processes of soft tissue which join the basal ridges of soft tissue lying between the costæ. This series of processes is seen in the figure at the base, and the processes are seen to be separated from one another by a series of apertures, through which, in the recent coral, passed the calcareous trabeculæ seen in figure 5, Plate XVI. It is to this series of processes that the vertical muscular fibres of the mesenteries are attached. They are gathered towards the lower borders of the mesenteries into a series of distinct bundles which pass down into these processes, and hence the muscular arrangement towards the lower borders of the mesenteries appears very complicated to the eye. Towards the inner regions of the lower parts of the mesenteries some muscular fibres are directed almost horizontally inwards towards the columella.

Most of the major mesenteries in the single specimen dissected bore large ova and embryos at the upper parts of their free margins. Some of the embryos were in an advanced stage of development, but were so far contracted by the action of reagents that their form could not be satisfactorily made out; nor could it be determined whether they were free in the mesenterial chambers or still attached. In nearly all the mesenterial cavities were found one or two small crustacea (a Gammarid?), which must apparently live as commensals within the cavities of the living coral.

*Leptopenus*, n. gen.

Corallum discoid, excessively thin and fragile, with the wall so completely covered by perforations as to resemble lace-work, being built up of a network of delicate radiating and circumferentially-directed trabeculæ. Perforations placed at regular intervals