

destitute of any supporting calcareous plate, though sometimes traces of an undeveloped one are distinguishable. The individuals from Station 241, which differ from the others by their very thin body-wall, have the deposits of the pedicels very much scattered and rod-like up to their base, which is not generally the case. The pedicels, as well as the processes and tentacles, are very brittle and easily broken off. The tentacles are provided with a number of larger or smaller, comparatively short and thick spicula, with their ends slightly or not at all branched. The processes also are supported by a great number of smaller, more or less rounded or elongated perforated plates, and besides these by long more or less straight rods (Pl. XXXI. fig. 2), the ends of which are rather dilated, thin, and perforated; these rods, as well as the elongated plates, have not a transverse position, but lie in the direction of the processes, whereby the flexibility is considerably limited. The oral disk is strengthened by plates and by short, straight rods with their ends either unbranched or having short branches. The calcareous ring (Pl. XXXVII. fig. 4) consists of radial and interradial pieces or ossicles, which are extremely friable, and present the structure of a very fine network, and are united with one another by connective tissue. In consequence of their extreme friability, it is rather difficult to isolate them from one another; they break off even on the most careful treatment with solution of potass. The five radial pieces, being of a more solid structure, are however comparatively easily distinguishable; they measure about 3.4 mm. in breadth, and each has a deep furrow for the passage of the nerve-cord, which proceeds from the circumoesophageal nerve to the parietes of the body. The interradial parts of the calcareous ring are more irregular, very thin, and deeply concave anteriorly; it is impossible to determine whether they are simple or compound, but on treating them with solution of potass, I thought I could observe that they were divided each into three pieces. The polian vesicle arises from the left ventral portion of the circular vessel, and is of a cylindrical or extremely elongated conical form; its size varies greatly, and in one individual from Station 244 it reaches the enormous length of 134 mm., thus attaining almost the length of the animal itself. The madreporic canal (Pl. XXXVIII. fig. 11) contains calcareous deposits of varying appearance, partly small perforated plates, partly spicula, which are also to be found in the adjacent mesenteric membrane. The madreporic canal springs from the dorsal part of the circular vessel and, taking a curved course, passes upwards and forwards to the dorsal body-wall, where it terminates in the porous madreporic tubercle (Pl. XXXVIII. fig. 12), which is closely united with the inside of the perisoma in the medio-dorsal line a little behind the crown of tentacles. Through the openings in the madreporic tubercle, the interior of the ambulacral system communicates with the peritoneal cavity. The large ambulacral cavities (Pl. XLI. figs. 1, 2, and 4), which lie within the perisoma and communicate with the pedicels and processes, are very peculiar, and deserve the greatest attention. In the anatomical part of the report they will be described in more detail. Those ambulacral cavities are distinguished by their size, as