

with a disk of 3 mm. and arms 14 mm. long, presented no variations beyond those of age, except that the lowest arm spine was rather less curved; there were four spines beside this, the uppermost being sometimes as long as 1.7 mm.

Station 170.—July 14, 1874; off Kermadec Island, Fiji; lat. 29° 55' S., long. 178° 14' W.; 520 fathoms. Station 171.—July 15, 1874; lat. 28° 33' S., long. 177° 50' W.; 600 fathoms.

*Ophiacantha cosmica*, Lym. (Pl. XIII. figs. 13–15).

*Ophiacantha cosmica*, Lym., Bull. Mus. Comp. Zool., vol. v., part 7, p. 146, pl. x. figs. 251–254, 262–265, 269, 270, 1878.

Eight or more feebly thorny arm spines. Side arm plates only moderately prominent. Disk crotchets rather coarse.

(Type specimen from Station 157.) Diameter of disk 18 mm. Length of arm 100 mm. Width of arm without spines 4 mm. Seven mouth papillæ to each angle, whereof the innermost is broad and flat, like the teeth; the others are short, pointed, and very stout; outside these, and a little higher in mouth slit, is often a rounded scale of the second mouth tentacle. Besides these there are, on the mouth frames, from two to four small, peg-like papillæ. Mouth shields wide heart-shape, with angle inward; length to breadth, 2 : 3.5. Side mouth shields rather narrow, somewhat curved, meeting within, closely joined to surrounding parts. Under arm plates wide pentagonal, with outer side curved, and laterals a little re-enteringly curved. Upper arm plates wide fan shaped, with an angle inward, which in the basal plates is truncated. Side arm plates stout and moderately prominent; meeting below, near base of arm, but not above. Towards end of arm they meet above and below, and are more prominent, so as to give it a somewhat knotted look. Disk full, and rising considerably above the arms; densely and evenly set with small stumps, which, being freed of skin, are seen to be composed of five or six thorns, of different lengths, soldered side by side; these stumps appear also on the first two upper arm plates. Radial shields and disk scales hidden. Eight even, translucent, cylindrical arm spines, which taper to a blunt point and are under the microscope slightly rough but not thorny; lengths to that of an arm joint, 3.5, 3.5, 2.8, 2.5, 2.5, 2.2, 2, 2 : 1.5. Tentacle scales rather small, longer than broad, pointed. Colour in alcohol, straw.

The specimen just described is unusually large for this division of the genus, which leads one to think that the bulk of those now known are immature, and therefore to be treated with all the more caution. The young of *Ophiacantha* differs from the adult as follows:—(1) The arm spines are fewer, longer, and more slender and thorny; (2) the side arm plates are much larger and more projecting, giving a strongly knotted or beaded look to the arm; (3) the mouth papillæ are often less numerous and more slender; (4) the armature of the disk is more delicate, and the stumps or spines more thorny. Thus,