

dary's wheel, and polished, the form of the greater part of the cup is well displayed in section. The fossil itself consists of yellowish white calcareous rock, but the cup is filled with grey compact limestone, holding minute fragments of shells, trilobites, and crinoids. The depth of the cavity is thirty lines, and its width at the bottom eight lines. At eighteen lines from the bottom its width is eleven lines, and it then suddenly widens to thirteen lines. Above this the walls are obscurely preserved, although it can be made out that, on one side, they extend at least one inch higher. The central tube is, in this specimen, filled with calcareous spar, and very indistinctly defined. Remains of several of the septa can, however, be seen—their concave side upwards towards the bottom of the cup.

The second specimen is also a fragment, consisting of the upper fourteen inches. The diameter at the lower end, where broken off, is eighteen lines, and at the supposed margin of the cup thirteen lines. Diameter of the central tube about four lines. Depth of the cup, seven and one-fourth inches. The cup is of the same width as the central tube throughout, except in the upper two inches, where it expands to the width of eight lines. The margin of the cup is not well preserved, but as in the last specimen noticed, is broken so that the entire outline cannot be made out clearly. In this specimen it may be that the cup was not more than two or three inches in depth when perfect, and that its apparent extension downwards is due to the destruction of the septa in the central tube below the bottom.

The third example is a large specimen of *B. undulata*, ten feet five inches in length, eight inches in diameter at the base, and six and a-half at the upper extremity. The cup, exposed by a fracture, is nine inches in depth; width at the bottom about nine lines; at four inches above—twenty one lines; then suddenly enlarging to three inches.

In none of these specimens is the margin of the supposed cup perfect. Not the slightest indication of radiating septa can be detected. In order to determine all the characters of this portion of the fossil, specimens with the cup entirely empty and with the margin perfect as it was during the life of the animal, are required. Numerous individuals were seen lying imbedded in the rocks with the larger end well preserved, but in most instances on approaching the smaller extremity, it was found to become more and more obscure, until it at length blended with the matrix. It would thus appear that the