

by syzygy into groups of two or three, only the terminal joints of which bear pinnules. Lowest pinnules the longest, and the following ones proportionately shorter, so that they all terminate on the same level as the arm-ends. Mouth protected by five large oral plates. Stem composed of short, cylindrical joints with simple or slightly striated faces. Mode of attachment unknown.

A. GENERAL ACCOUNT OF THE TYPE.

Hyocrinus bethellianus, Wyville Thomson, 1876 (Pl. Vc. figs. 4-10; Pl. VI.).

Hyocrinus bethellianus, Wyv. Thoms., Journ. Linn. Soc. Lond. (Zool.) (1876), 1878, vol. xiii. p. 51.

Hyocrinus bethellianus, Wyv. Thoms., The Atlantic, 1877, vol. ii. pp. 96-99.

Dimensions.

Total length of calyx and arms (<i>vide</i> C. W. T.),	60.00 mm.
Total height of calyx,	7.25 "
Total diameter of calyx,	6.00 "
Height of radial,	4.00 "
Width of radial,	3.00 "
Height of oral plates,	2.75 "
Length of first pinnule,	31.00 "
Diameter of arm-joints,	1.00 "
Greatest height of stem-joints,	1.15 "
Diameter of stem-joints,	1.25 "

The stem is rigid, and consists of short, cylindrical joints, usually a trifle higher than wide, and closely united by thin disks of ligamentous fibres (Pl. Vc. fig. 5, *ls*). The terminal faces of the joints (Pl. Vc. fig. 4) are slightly hollowed, and either plain or marked with indistinct radiating striæ. The opening of the central canal is more or less definitely stellate, and in the substance of each joint itself there is a considerable space (Pl. Vc. fig. 5, *rs*) around the central axis (*ca*). The longest portion of the stem obtained was about 170 mm. in length, but its mode of attachment is not known. Towards the upper end the joints become much shorter, and in the uppermost 5 mm. they are mere disks with a slightly increased width (Pl. VI. fig. 3). The cup, which enlarges gradually upwards, consists of two tiers of very thin plates, the basals and radials, the latter being rather the higher of the two. The basiradial and the five interradial sutures are fairly distinct, but neither in the specimen represented in Pl. VI. nor in a fragment from the same locality, can I make out more than three interbasal sutures. Were it not that this seems to be the case in both specimens, I should be inclined to regard it as unimportant; but under the circumstances I think we must consider that the lower part of the cup consists of two larger pieces and one smaller one, as in certain Palæocrinoids. The small single basal is the one immediately to the right of the anus, *i.e.*, in the interradius beyond the anus to a watch-hand, when the disk is placed upwards. The remainder of