

and the junctions in the mature animal are somewhat obscure.

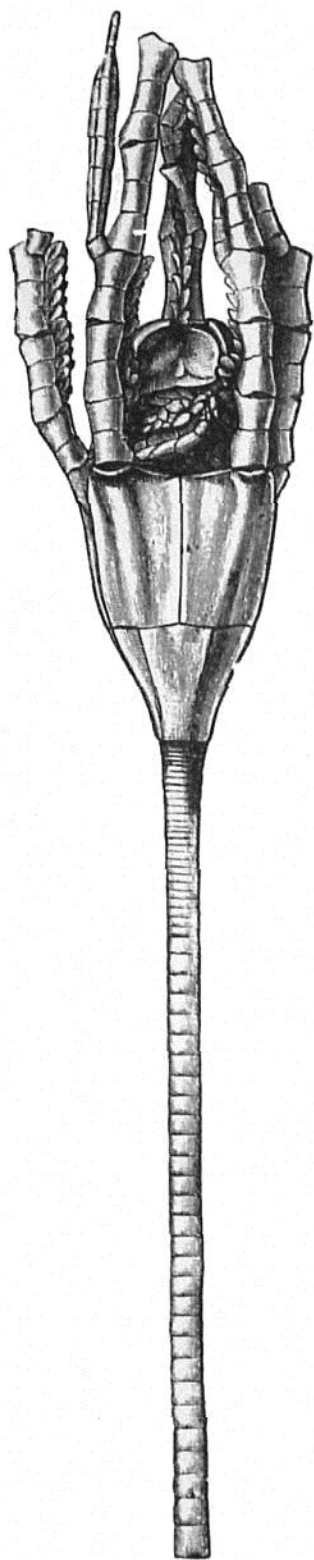


FIG. 25.—*Hyocrinus Bethellianus*. About four times the natural size. (Station CXLVII.)

The second tier consists of five radials, which are thin, broad, and spade-shaped, with a slight blunt ridge running up the centre and ending in a narrow articulating surface for an almost cylindrical first brachial. The arms are five in number; they consist of long cylindrical joints deeply grooved and intersected by syzygial junctions. The first three joints in each arm consist each of two parts separated by a syzygy; the third joint bears at its distal end an articulating surface, from which a pinnule springs. The fourth arm-joint is intersected by two syzygies, and thus consists of three parts, and so do all the succeeding joints; and each joint gives off a pinnule from its distal end, the pinnules arising from either side of the arm alternately.

The proximal pinnules are very long, running on nearly to the end of the arm, and the succeeding pinnules are gradually shorter, all of them, however, running out nearly to the end of the arm, so that distally the ends of the five arms and of all the pinnules meet nearly on a level. This is an arrangement hitherto entirely unknown in recent crinoids, although we have something very close to it in some species of the paleozoic genera *Poteriocrinus* and *Cyathocrinus*. Here I believe, however, the resemblance between *Hyocrinus* and the early fossil forms ends. The

outer part of the disk is paved with plates irregular in form and closely set. Round the mouth there are five very strong and