developed from the thin disks that successively appear immediately beneath the calyx are different in the two genera (*ante*, pp. 26, 27). There is always a large number of these thin joints at the top of the stem of *Bathycrinus* (Pl. VII. figs. 1–3, 11; Pl. VIIIa. fig. 1), whereas in *Rhizocrinus* (Pl. IX. figs. 1–3; Pl. LIII. figs. 7, 8) there are very few, often not more than one or two, and these by no means so thin as in *Bathycrinus*.

An entire stem, or the upper and middle part of one, could therefore be referred without difficulty to its proper genus. But the lower and middle joints are so much alike in the two genera that the proper identification of a fragment or of isolated joints, either recent or fossil, would become a matter of uncertainty, if not of impossibility.

The genus *Bathycrinus* was never formally defined by Sir Wyville Thomson; but in his first account of it[1] he said that, like *Rhizocrinus*, it "must also be referred to the Apiocrinidæ, since the lower portion of the head consists of a gradually expanding funnel-shaped piece, which seems to be composed of coalesced upper stem-joints;" and he nowhere mentioned the presence of any calycular plates below the radials. Subsequently, however, he stated,[2] after examining *Bathycrinus aldrichianus*, that the stem of this genus "barely enlarges at its junction with the cup;" and he described the lower portion of the latter as consisting of a series of basals which are soldered together into a small ring, scarcely to be distinguished from the upper stem-joint (Pl. VII. figs. 1, 2, 11; Pl. VIIa. figs. 12–14; Pl. VIIb. figs. 1, 2).

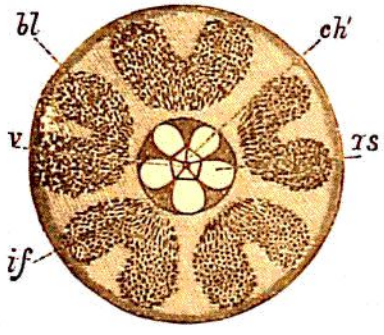

FIG. 11.—Diagram of a horizontal section through the lowest portion of the basal ring of *Bathycrinus aldrichianus*; × 70. *bl*, ligaments uniting the basals to the top stem-joint; *ch'*, the outer vessels in the vascular axis, which are continued downwards from the chambers of the chambered organ; *if*, interradial portions of the fibrillar sheath round the vascular axis which are separated by *rs*, the radial spaces in the upper part of the stem; *v*, central vessel of the vascular axis.

The existence of basals in *Ilycrinus* (*Bathycrinus*) *carpenteri* was also recognised by Danielssen and Koren,[3] who were fortunately able to see the interbasal sutures in young individuals, though these entirely disappear in the adult.

Although invisible on the upper and lower surfaces of the basal ring of *Bathycrinus aldrichianus*, as well as externally (Pl. VIIa. figs. 12–14), the sutures are clearly seen in sections through its middle portion (Pl. VIIb. fig. 2). It expands very slightly from below upwards, and its somewhat hollowed under surface is marked by ten fossæ radiating outwards from the centre and separated by intervening ridges (Pl. VIIa. fig. 14). They correspond to similar fossæ on the upper face of the thin top stem-joint (Pl. VIIa. fig. 3), and lodge five strong but short interradial ligamentous bundles, each having somewhat the form of a horseshoe or V with thick limbs (woodcut, fig. 11, *bl*). These, as already described, unite the basals to the thin, upper stem-joints, and are gradually replaced as the joints become thicker by the two larger bundles which form cushion-like pads between every two of them (*ante*, p, 27; Pl. VIIa. figs. 4–6).

[1] The Depths of the Sea, p. 450.

[2] *Journ. Linn. Soc. Lond.* (Zool.), vol. xiii. (1876) 1878, pp. 48, 50.

[3] *Nyt Mag. f. Naturvidensk.*, Bd. xxiii. pp. 4, 5.