

basals of *Pentacrinus decorus* there is but one central opening, so that the primary cords fork within the basals (Pl. LVIII. fig. 1) as they did in *Apiocrinus*. But in *Pentacrinus blakei* this opening is widely extended laterally, while in *Pentacrinus naresianus*, *Pentacrinus alternicirrus*,<sup>1</sup> and especially in *Pentacrinus wyville-thomsoni* (Pl. XXI. fig. 7a), it is more or less completely divided into two by a vertical partition. In *Pentacrinus asterius* and *Metacrinus angulatus*, both of which, and especially the latter, have large basals with a great development of calcareous network on the upper ends of their inner faces, the opening of the central canal is pretty distinctly double.

On the upper surface of the basals the openings are, of course, perfectly separate. They are situated on either side of the median ridge, and correspond to similar openings on the under surface of the two contiguous radials which partly rest upon each single basal (Pl. XII. figs. 11, 14, 22, 25; Pl. XVIII. figs. 5, 7; Pl. XX. figs. 2, 3, 6, 9; Pl. XXI. figs. 6, a, b, c, and 7, b; Pl. XXVI. fig. 9; Pl. XXX. figs. 5, 7, 8; Pl. XXXIII. fig. 5; Pl. L. fig. 5). In most specimens of *Pentacrinus wyville-thomsoni*, as in other Pentacrinidæ, removal of the basals exposes the apertures on the lower surface of the radials where the secondary axial cords enter them, together with the lowest portion of the central plug (Pl. XX. fig. 9). But in one individual of *Pentacrinus wyville-thomsoni* Dr. Carpenter found this plug to be somewhat unusually developed. Its lower surface forms a tolerably well defined pentagonal plate, the angles of which are interrarial in position (Pl. XX. figs. 4, 5, 6, 8). It lies between the basals and radials, and is pierced in the centre for the passage of the plexiform gland rising out of the chambered organ, together with openings through which the secondary axial cords passed on their way from the basals to the radials, the apertures in the latter plates being entirely concealed by it.

The radials of *Pentacrinus* thus differ very considerably from those of *Comatula*, for the proximal openings of their central canals are really on their dorsal faces, viz., at the central ends of what I have called the inner dorsal surface, *i.e.*, that part which rests on the basals (Pl. XII. figs. 11, 22; Pl. XX. fig. 9; Pl. XXI. figs. 6a, 6b, 6c; Pl. L. fig. 5); whereas in the *Comatulæ*, as I have shown elsewhere,<sup>2</sup> these openings are on the inner faces of the radials, *i.e.*, those which form the walls of the radial funnel that contains the plexiform gland rising from the chambered organ. They are also less closely approximated in *Pentacrinus* than in *Comatula*, one being situated on either side of the strong crest which divides the inner dorsal surface into two lateral halves, instead of being only separated by a very delicate calcareous bar. The converging axial cords which enter these openings on the radials of *Pentacrinus* (Pl. XXIV. figs. 7-9; Pl. LVIII. figs. 1-3—*ar*) run upwards and outwards for some little way before they are united by the interrarial and intrararial cords to form the circular commissure

<sup>1</sup> I have only seen single specimens of the dissected calyx in these three species.

<sup>2</sup> *Trans. Linn. Soc. Lond. (Zool.)*, ser. 2, vol. ii. p. 78, pls. iv.-vii., 1877.