

two leading characters are—(1) the persistence of the embryonic basals which do not undergo transformation into a rosette, but remain on the exterior of the calyx between the centro-dorsal and the radials; and (2) the absence of pinnules from the lowest joints of the arms (Pl. VI. figs. 5, 7). A third character, of no great morphological value, but important from its apparent constancy, is the acorn-like shape of the centro-dorsal, and the arrangement of the cirrus-sockets upon it in alternating double rows, with the ends of their horseshoe-like rims projecting somewhat outwards.

The extent of development of the basals of *Atelecrinus* varies with the size of the individual, apparently diminishing with age as in the Pentacrinoid larvæ of ordinary *Comatulæ* (Pl. XIV. figs. 5–7). In the smallest specimen of *Atelecrinus balanoides* they are wide but low pentagons which fall away very rapidly from their interradial apices to the points where they meet one another beneath the radials. The middle of each basal rests on the top of one of the interradial ridges at the upper end of the centro-dorsal, just as the basals of *Pentacrinus* rest on the upper ends of the interradial ridges of the stem. In older individuals, however, just as in the *Antedon*-larva (Pl. XIV. figs. 5–7), the amount of the first radials which is visible on the exterior of the calyx becomes relatively less and less, and the same is the case with the basals. These are best described as triangular, with their lower angles extended so as to meet those of their fellows and separate the radials from the centro-dorsal by what is practically little more than a line, only visible at all under specially favourable conditions of light. Each of the basals, when isolated, has the form of a short triangular prism with a flattened plate-like extension on each side. They are in complete lateral contact, so as to form an unbroken ring on the under surface of the radial pentagon, very much as in *Pentacrinus alternicirrus* or in *Pentacrinus wyville-thomsoni*. *Atelecrinus cubensis* has comparatively large basals which are of nearly uniform height (0.5 mm.) all round the calyx, rising very slightly at the interradial angles; while in *Atelecrinus wyvillii* each basal is slightly arched, with its apex interradial, and it is only in contact with the outer edge of the centro-dorsal at the interbasal sutures (Pl. VI. fig. 5).

All three species agree, however, in the absence of any rosette and in the persistence of the basals upon the exterior of the calyx, a feature which appears in no other recent *Comatula* except *Thaumatocrinus* and the very doubtful *Comaster*; while a further peculiarity lies in the complete closure of the basal ring so as to separate the radials altogether from the centro-dorsal. Several, if not all, fossil *Comatulæ* have persistent primary basals in the form of prismatic rods, which meet one another in the centre of the under surface of the radial pentagon, and extend outwards towards its interradial angles. But they do not always reach the periphery so as to appear externally between the radials and the centro-dorsal, as they gradually thin out; and there is only one described form in which there is a complete ring of united basals on the exterior of the calyx.

As regards the characters of its calyx, therefore, *Atelecrinus* is certainly to be