

radials; but this is not quite the case in the original of fig. 2 on Pl. XXIX., for the basals form a compact ring entirely separating the radials from the top of the stem. In other specimens, again, some of the basals meet their fellows, while the remainder are more or less completely separated by the downward extending radials.

*Pentacrinus naresianus* does not appear to be one of those which live in a semi-free condition like the three last described, while the stem grows to a greater length than in most of these forms. It is broken below in all the specimens obtained, and though this has sometimes taken place at a node, the fracture is evidently a recent one, the syzygial surface not being worn and more or less rounded, as in *Pentacrinus wyville-thomsoni* and the other semi-free types.

The young individuals of *Pentacrinus naresianus*, besides exhibiting the usual characters common to all young Pentacrinidæ (*ante*, pp. 289–291), have one or two peculiarities of their own. The second radials are less closely united, only meeting one another for half the length of their sides (Pl. XXXa. fig. 1); while the sides of the axillaries and of the two following joints are not so much flattened as in the adult, but the edges where the ventral and dorsal surfaces meet are sharp and straight.

The characters of the arm-syzygies are also slightly different from those which appear in the adult. The backward projection of the epizygal is much nearer the edge of the joint than in the adult arm, in which the crest of the ridge on the syzygial face crosses the axial canal. This gives an entirely different appearance to the joints when seen in profile, as will be evident upon a comparison of figs. 9–12 on Pl. XXXa., which represent a young and an old syzygial pair, as seen from the side and from above respectively.

The difference in the sculpture on the young and on the older stem-joints is also shown in Pl. XXXa. figs. 2, 3, 7. In the young individual figured on the same plate the head is but 55 mm. long, and there are only about fifty joints in the arms. The diameter of the stem is 2 mm. Its internodes are exceptionally long, seventeen or eighteen joints; and there are only two cirri at one of the nodes (the fifth),<sup>1</sup> just as is apparently the case through the whole stem of *Pentacrinus didactylus*.

Two stem-fragments from this Station (170), one of which (and possibly both) belong to this same individual, exhibit some remarkable peculiarities of growth. In the upper one (Pl. XXXa. fig. 5) two of the nodal joints are slightly enlarged as described above. But seven joints lower down a kind of calcareous sheath appears on the outside of the stem, which is segmented in the same way as the stem, and is continued downwards over the next node. This is of an altogether abnormal character. The outer crust shows various irregular lines, and seems to have filled up the downward extensions of the cirrus-sockets on to the infra-nodal joints, so that no trace of them is visible.

<sup>1</sup> The absent cirri at this node were erroneously inserted by the artist, when restoring the broken ones elsewhere; and I did not notice the fact till it was unfortunately too late to remedy it.