any notice of its peculiarities. They likewise appear to be absent in the Forest-Marble specimen from Farley in Wiltshire, which was described by Goldfuss as *Pentacrinus scalaris*;[1] while they are certainly absent externally in one of the two known specimens of *Metacrinus costatus*, though fully developed in the other (Pl. XLIX. figs. 1, 2). This is a most curious anomaly; but as the specimen cannot be sacrificed to investigation, it is impossible to ascertain whether the basals are absent entirely, or whether they have been metamorphosed into a rosette.

It is possible that they are so greatly reduced in size as to fail to appear externally, as occasionally happens in *Encrinus* and in the fossil Comatulæ, which retain their embryonic basals in an unmetamorphosed condition.[2] They are sometimes quite small and insignificant in comparison with the radials, as in the Liassic *Pentacrinus tuberculatus*, and in some varieties of the recent *Pentacrinus decorus* (Pls. XXXIV.–XXXVI.). In these and similar forms they appear at the lower angles of the calyx as minute rounded plates, between which the lower edges of the radials rest directly upon the top stem-joints. The basals are therefore only in contact with one another by their inner ends (Pl. XXXIV. fig. 8). But in other species, both recent and fossil, they are considerably larger, and their outer ends separate the radials more completely from the top stem-joint (Pl. XIII. fig. 1; Pl. XV. fig. 2); while the union of their inner ends is more extensive Pl. XII. fig. 16; Pl. XXVI. fig. 11). In fact all degrees of union may be traced (both in different species and in different individuals of the same species) from the condition of *Pentacrinus blakei* and *Pentacrinus decorus* (Pls. XXXI., XXXV.) to that of *Pentacrinus wyville-thomsoni* and *Pentacrinus maclearanus*, in which the radials are separated from the top stem-joint by a ring of large and closely-united basals (Pls. XVI., XIX. figs. 1, 6, 7). The genus *Cainocrinus* of Edward Forbes has been lately revived by de Loriol[3] for a few fossil species which possess a closed basal ring, but are not otherwise different from *Pentacrinus*. The condition of the recent Pentacrinidæ, however, is such as to entirely preclude the possibility of employing this very variable character as a generic distinction.

A similar series of gradations is to be met with among the fossil Comatulæ, in which group there appears to be much more individual variation than among the Pentacrinidæ. In some few species no basals are visible externally at all. In others, the outer ends of small prismatic rods may appear at some angles of the calyx but not at others, while their inner ends do not meet at all or only very slightly so. In some species again, the outer ends of the basal rods are smaller than the inner ends, which meet together and entirely separate the median portion of the radial pentagon from the centro-dorsal beneath. Lastly, in a chalk *Comatula* mentioned by Schlüter[4]

[1] Petrefacta Germaniæ, vol. i. pl. lx. fig. 10.

[2] On the genus Solanocrinus, Goldfuss, and its Relations to recent Comatulæ, *Journ Linn. Soc. Lond. Zool.*, vol. xv. pp. 211, 212.

[3] Swiss Fossil Crinoids, pp. 111, 112.
Ueber einige astylide Crinoiden, *Zeitschr. d. deutsch. geol. Gesellsch.*, 1878, p. 66.