Pl. XXXVI.; Pl. XXXVII. fig. 22; Pl. XXXIX. figs. 4, 7–11; Pl. XLI. figs. 1–3, 5–8, 15–17; Pl. XLV. figs. 2, 4; Pl. XLVII. figs. 1–9; Pl. XLIX. figs. 3–5).

The same characters may be seen in the numerous *Pentacrinus* joints figured in Tabs. 97–99 of the Encriniden, and on pls. xiv.–xvii. of de Loriol's Swiss Crinoids. In some of these fossil joints the number of ridges at the sides of the petaloid figures may sometimes reach eight or ten; but the inner ones always meet their fellows in the interpetaloid spaces, while the outer ones appear externally. This is not the case in *Extracrinus*, which has a more extensive but smaller crenulation at the sides of the linear petals, as pointed out already (*ante*, p. 276).

In the recent species of *Pentacrinus* the cirrus-socket may extend downwards below the articular surface so as to encroach very considerably on the internodal joint beneath it, as in *Pentacrinus naresianus* and *Pentacrinus decorus* (Pl. XXXa. fig. 6; Pl. XXXVI.), and in a less degree also in *Pentacrinus mülleri* and *Pentacrinus blakei* (Pl. XXXI. fig. 3); or the joint above the node may be slightly incised to receive the upper part of the socket, as in *Pentacrinus alternicirrus* (Pl. XXVII. fig. 1), *Pentacrinus wyville-thomsoni* (Pl. XIX. figs. 3, 4), and occasionally also in *Pentacrinus asterius*. But in these cases the alteration of the supra-nodal joint is not very considerable. Among the *Pentacrinus* species it is most marked in *Pentacrinus wyville-thomsoni* (Pl. XXII. fig. 17). With the exception of those on the lowest nodal joint the cirri of this type are often found directed upwards (Pl. XIX. fig. 1), while in others like *Pentacrinus mülleri*, *Pentacrinus maclearanus*, *Pentacrinus naresianus*, *Pentacrinus blakei*, and *Pentacrinus decorus* they are directed downwards (Pls. XIV., XVI., XXVIII., XXIX., XXXI., XXXIV.), and their bases are received in the hollowed sides of the infra-nodal joints.

On the other hand, the tendency of the cirri of *Metacrinus* is to take an upward direction, the supra-nodal joints being slightly incised to receive their bases. This is well shown in *Metacrinus angulatus* (Pl. XXXVIII.; Pl XXXIX. fig. 9), *Metacrinus cingulatus* (Pl. XL.), *Metacrinus wyvillii* (Pl. XLVIII.), *Metacrinus costatus* (Pl. XLIX. figs. 1–3), *Metacrinus interruptus* (Pl. LII.), and *Metacrinus tuberosus* (Pl. LIII. figs. 1, 2). In some species, such as *Metacrinus varians* (Pl. XLIV.), this character is not very prominent; but it can be traced with more or less distinctness in all the species of the genus that I have seen, and is therefore (as far as it goes) of considerable value in the separation of *Metacrinus* from *Pentacrinus*, as in the case of *Metacrinus tuberosus* (Pl. LIII. figs. 1–6) and *Metacrinus stewarti*,[1] of which only the stems are known. But I have been unable to apply it to the determination of any fossil species, as this point is naturally but rarely illustrated in sufficient detail in the figures of Quenstedt and de Loriol.

[1] On Three New Species of Metacrinus, *Trans. Linn. Soc. Lond.* (Zool.), ser. 2, vol. ii. p. 443.