

With regard to the support beneath the radial pentagon of *Eudesicrinus*, I see no reason for doubting that the upper part consists of united basals. In fact, one of de Loriol's figures¹ shows a distinct horizontal sutural line crossing the middle of the support, and separating the infra-radial portion with interradianal crests on its upper surface from the more spreading, attached part below. In another specimen this suture seems to be indicated by an external circular ridge; but the upper face of the support is marked by five petaloid depressions, one of them considerably larger than the rest, which surround a central pit. De Loriol, and, I think, rightly so, regards these depressions as corresponding to the cavities of the chambered organ, the largest being that of the large radial in the trivium. Similar but more regular depressions appear round the middle of the upper surface of the large basal pentagon in *Apiocrinus milleri*, Quenstedt; and they are also shown in de Loriol's figure of *Apiocrinus roissyanus*,² while it will be remembered that the chambered organ is invariably in close relation with the basals (Pl. VIIb. figs. 1, 2; Pl. XXIV. figs. 6, 7; Pl. LVIII. figs. 1, 3—*ch*; Pl. LXI.). There can then, I think, be no doubt as to the presence of basals in *Eudesicrinus*, so that the so-called support does not in reality differ essentially from the centro-dorsal of *Cotylecrinus*. The radials, however, are very different in the two cases. Those of *Cotylecrinus* are equal and similar; but in *Eudesicrinus* they are thus described by de Loriol,³ "Ces pièces sont fort inégales; l'une est notablement plus longue et plus large que les autres, convexe et un peu arquée en dehors, mais d'une manière uniforme; les deux qui la touchent, bien plus courtes et plus étroites qu'elle-même, ne sont guère plus larges, mais plus longues que les deux autres; ces dernières, qui sont les plus courtes et placées vis-à-vis de la plus large, s'arquent en dedans et se coudent un peu vers leur bord supérieur. Dans les échantillons frais la surface externe est couverte de granules épars, écartés, plus ou moins gros et plus ou moins serrés."

Here then we have a type which bears an unusually close resemblance to *Holopus*. The calyx is higher on one side than on the other owing to the inequality of the radials, the central one of the trivium being the largest, while the outer surface, not only of the radials, but also of the arm-joints, is coarsely granular or tubercular. *Eudesicrinus*, however, differs from *Holopus* in one or two minor points. The fossæ on the radials which lodged the dorsal ligaments are larger; and there seems to have been a true muscular joint between the second and the axillary radials, a character presented by no recent Crinoid, and also, so far as I know, by no other fossil species. In *Eugeniocrinus mayalis* from the same horizon the two joints are united by syzygy, just as I believe to be the case in *Holopus*, while the calyx is less coarsely granular. These two species are quite small relatively to *Holopus*, the radials of *Eudesicrinus* not reaching a height of more than 11 mm. Associated with them in the *Leptæna*-bed (Middle to Upper Lias) of Calvados, in Normandy, are some wedge-shaped arm-joints with the muscle-plates on their broad outer sides produced into strong upward processes.⁴ These joints have very much the appear-

¹ Paléont. Franç., *loc. cit.*, pl. 29, fig. 7.

² *Ibid.*, pl. 44, fig. 2, b.

³ *Ibid.*, p. 78.

⁴ *Ibid.*, pl. 11, figs. 1-4.