

internodes, especially as compared with *Pentacrinus mülleri*, in which the stem reaches about the same length. There are also more arms in *Pentacrinus decorus* than in *Pentacrinus blakei*, in which palmar series are very rarely present, so that the total number of arms would not exceed twenty. But the great distinguishing character of *Pentacrinus blakei* is the nature of its bifascial articulations and syzygies. Seen from the dorsal side or in profile (Pl. XXXI. figs. 1, 2; Pl. XXXII. fig. 15), the third radial shows a strong backward projection into the second. But its proximal face not only is concave from side to side, but also slopes strongly downwards and backwards; and the upper ventral edge of the second radial is bent forward so as to fit into the gap thus formed (Pl. XXXII. fig. 18). There is a very slight indication of this in *Pentacrinus naresianus* (Pl. XXX. figs. 1, 11, 12); but the two species resemble one another much more closely in the curious angular form of the syzygial faces. Those of *Pentacrinus naresianus* (Pl. XXX. figs. 20, 21, 23) have been already described, and those of *Pentacrinus blakei* are shown in Pl. XXXII. Whether it be a brachial syzygy (figs. 4, 5, 7) or one in the distichal axillary (figs. 9, 12, 14) the form is just the same. The proximal face of the epizygal rises to a sharp crest, which is interrupted by the central canal, and fits into a corresponding re-entering angle on the distal face of the hypozygal, so that the muscle-plates of its proximal face are bent strongly forwards, just as they are in the bifascial articulation of the second radials with the axillaries (Pl. XXXII. figs. 15, 18). The general appearance of the syzygies in the side view of an arm is well shown in Pl. XXXIII. fig. 2, which should be compared with the corresponding figure of *Pentacrinus naresianus* (Pl. XXX. fig. 23). The flattened shape of the lower joints is also well shown in the former figure. Judging from the torn fragment of the disk which came away from this arm-base, we may suppose that its anambulacral plating was tolerably well developed. This plating extends out on to the arms, covering in the muscular bundles at the sides of the narrow arm-groove, though to a less extent than in the four preceding species. The pinnule-ambulacra (Pl. XXXIII. fig. 1) are much in the same condition as those of *Pentacrinus naresianus* (Pl. XXVII. fig. 11), the covering plates resting upon the toothed edge of a continuous calcareous band which is not perfectly differentiated into side plates.

8. *Pentacrinus decorus*, Wyville Thomson, 1864 (Pl. XXXIII. figs. 4-6; Pls. XXXIV.-XXXVII.; Pl. LVII. figs. 2-5; Pl. LVIII. figs. 1-3; Pl. LIX. figs. 1-4; Pl. LXII.).

1864. *Pentacrinus (Neocrinus) decorus*, Wyville Thomson, The Intellectual Observer, August 1864, p. 7.

1864. *Pentacrinus decorus*, Lütken, Vidensk. Meddel. f. d. nat. Foren. i Kjøbenhavn, 1864, Nr. 13-16, p. 208.

1865. *Pentacrinus (Neocrinus) decorus*, Wyville Thomson, Phil. Trans., 1865, vol. clv. p. 542.

1869. *Pentacrinus Mülleri*, Pourtalès, Bull. Mus. Comp. Zoöl., vol. i., No. 11, p. 357.

1872. *Pentacrinus Mülleri*, Wyville Thomson, Proc. Roy. Soc. Edin., vol. vii. p. 766; and The Depths of the Sea, p. 442.