

9. *Pentacrinus mollis*, n. sp. (Pl. XXXIII. figs. 7-10).*Dimensions.*

Greatest height of specimen (fig. 9),	10.00 mm.
Least height (fig. 10),	8.00 "
Diameter of calyx across the first radials,	6.50 "
Diameter of disk,	4.75 "

This is a very singular type, and it is with much hesitation that I have referred it to *Pentacrinus*; for it differs considerably from this genus in the relative proportions of the lower parts of the calyx, and its stem is entirely unknown. But on the other hand it presents no character which seems to me of sufficient importance to justify a generic separation.

Its most obvious peculiarity is expressed in the specific name which I have applied to it. The cup, radials, and lower arm-joints, which alone remain, are not formed of the usual hard limestone found in most other Echinoderms. But, externally at any rate, they are of a somewhat leathery texture, and yield readily to pressure, though there appears to be a rather harder core within; while some of the joints show traces of the usual calcareous skeleton, and the disk is extensively plated (Pl. XXXIII. fig. 7).

Nothing remains of the stem except three or four thin stellate joints immediately beneath the calyx. The rays of the star are bent upwards considerably, and enclose in a sort of cup the lower portion of the basal plates with which they correspond in position (Pl. XXXIII. figs. 8-10). There are no traces of broken ligament-fibres on the under face of the lowest remaining stem-joint, and this would seem therefore to have been the upper joint of a syzygial pair with its cirri as yet undeveloped.

The basals which form an entirely closed ring are unusually high for a *Pentacrinus*, but also of considerable width, so as to support the expanding calyx above them. Their outline, so far as it can be seen, is irregularly quadrate, the two lateral edges approaching one another somewhat rapidly until they disappear beneath the upturned stem-joints; while the upper edges meet at a very open angle. The basi-radial suture therefore has five well marked depressions in which the radials rest, and five intervening elevations which mark the middle lines of the basals. The radials are short and widely pentagonal, sloping upwards and outwards at a considerable angle. They have a somewhat strongly marked median ridge which starts from near the basi-radial suture, but disappears before reaching their distal edge, as is well shown in fig. 8; and the distal edge itself is more or less everted, while the dorsal ligament uniting the first and second radials is somewhat prominent. The remaining radials and the lower arm-joints are only properly visible in the anterior and left antero-lateral rays as shown in Pl. XXXIII. fig. 9; for the joints of the other three rays are so shrivelled and contorted as to make their recognition a matter of considerable difficulty. Their general aspect is somewhat diagrammatically represented in Pl. XXXIII. fig. 10.