

The general relations of these seven genera of Comatulidæ are expressed in the following table:—

I. Centro-dorsal has no articular facet on its lower surface.		
A. Five rays.		
i. Mouth central or subcentral. Oral pinnules have no comb.		
a. Radials separated by interradials, . . . . .	1.	<i>Thaumatocrinus</i> , n. gen.
b. Radials united laterally.		
(1) Basals persist as a closed ring. No pinnules on lower brachials, . . . . .	2.	<i>Atelecrinus</i> , n. gen.
(2) Basal ring incomplete or invisible externally.		
a. Five arms only, . . . . .	3.	<i>Eudiocrinus</i> , Carpenter.
β. Ten arms, . . . . .	4.	<i>Antedon</i> , de Fréminville.
ii. Mouth excentric or marginal. Oral pinnules have a terminal comb, . . . . .		
B. Ten rays, . . . . .	6.	<i>Promachocrinus</i> , n. gen.
II. Centro-dorsal has an articular facet below, . . . . .		7. <i>Thiolliericrinus</i> , Étallon.

### Genus 1. *Thaumatocrinus*, P. H. Carpenter, 1883.

1883. *Thaumatocrinus*, P. H. Carpenter, Phil. Trans., 1883, pt. iii. p. 919, pl. lxxi.

*Definition.*—Calyx composed of a centro-dorsal, basals, radials, and primary interradials, the latter resting on the basals and so separating the radials laterally. That on the anal side bears a short jointed appendage. Mouth central and protected by five large oral plates which occupy the greater part of the disk, and are separated from the calyx-interradials by two or three rows of small irregular plates. Five arms only.

*Remarks.*—*Thaumatocrinus* has already been described and its peculiarities discussed in Part I. of this Report (pp. 370–372), and it is not necessary therefore to refer again to the reappearance of certain Palæocrinoidal characters in this remarkable genus. As compared with the more typical Comatulæ it is peculiar in having persistent basal and oral plates, the latter occurring in no other Comatulid, and in the simplicity of the rays, which remain undivided, so that there are only five arms, as in *Eudiocrinus* (Pl. VII.).

*Thaumatocrinus renovatus*, P. H. Carpenter, 1883 (fig. 1; Part I. pl. lvi. figs. 1–5).

*Description of an Individual.*—The total width of the calyx across the disk is barely 2 mm.; and the height of the centro-dorsal and radials together is about the same. The former is rounded below, with its central canal completely closed up, so that it must have been detached for some little time from the remainder of the stem. The bases of half a dozen cirri are attached to it, and there are pits for the reception of two or three more. In the largest stump which is preserved the first two joints are quite short, as is usually the case in all cirri; but the third reaches a length of 1.5 mm., so that the cirri must have been very like those of some species of *Eudiocrinus*, which have a succession of very long joints following the short basal ones (Pl. VII. figs. 2, 7).