eighteen or twenty joints, the lowest of which are cuboidal. The next few, though still very thick, are much flattened laterally and gradually diminish in width, with the lateral edges of the dorsal surface raised and thickened. The terminal part of the pinnule consists of much smaller joints, and is more or less distinctly serrate. In the pinnules of the third and the next following distichals the dorsal surface of the two or three thick basal joints is rather broad, but the following joints diminish rapidly both in breadth and in thickness. Beyond the distichal axillaries all the pinnule-joints are longer than wide, with the exception of the first two, which are much expanded, and this character is very marked in all the following pinnules till about the level of the fourth axillaries. Beyond this point the second and third pinnule-joints more nearly resemble their successors, though traces of the expansion of the first joint are visible for some distance farther.

The disk (so far as it is visible) is well protected by plates, both on its ventral surface and on its sides, right down to the hypozygal of the second brachial. The brachial ambulacra are but little above the narrow arm-groove, and are protected like those of the large lower pinnules by very irregular plates. The terminal pinnules have well defined and rather pointed side plates.

Colour—a uniform dusky purple when fresh (Moseley); in spirit, light brownish-white.

Locality.—Station 214, February 10, 1875; off the Meangis Islands; lat. 4° 33′ N., long. 127° 6′ E.; 500 fathoms; blue mud; bottom temperature, 41°·8 F. Two specimens, with *Myzostoma wyville-thomsoni*, von Graff.

Remarks.—This elegant little species is the smallest *Metacrinus* which I have yet seen, with the exception of *Metacrinus nodosus;* and it has many points of resemblance with that type, as will be explained later. Although the stem and cup are much less robust than in *Metacrinus wyvillii*, the number of arms is nearly half as large again as in that species, which rarely has an axillary beyond the palmars; while in *Metacrinus costatus* this is generally the case on four out of the eight tertiary arms, and there may be another axillary beyond the supra-palmar. The number of internodal joints is nearly the same in the two species, being rarely less than seven in *Metacrinus costatus*, though sometimes falling to five in *Metacrinus wyvillii*. But they are totally different in their form and external markings, as will be evident from a comparison of Pl. XLVII. figs. 1–4, and Pl. XLIX. figs. 3, 4. The nodal joints are also quite different in the two species. The cirrus-sockets of *Metacrinus wyvillii* (Pl. XLVII. figs. 1, 2) extend both upwards and downwards on to the supra- and infra-nodal joints beyond the articular facets, which occupy the whole height of the nodal joints. But this is far from being the case in *Metacrinus costatus;* and the nodal joints therefore are less deeply incised than in *Metacrinus wyvillii*, while their angles are much sharper and more produced outwards (Pl. XLIX. figs. 3, 5). There is also a good deal of difference between the pinnules of the two types. Both those on the radials and distichals of *Metacrinus wyvillii* and those