

four, but occasionally three or five to each ray. Primary arms of one to four distichal joints, of which the first two are united by a ligamentous articulation. The second one bears a pinnule, and the next may be either a simple axillary or consist of two syzygial joints. Secondary arms (rare) of two palmar joints united by syzygy. Arms of about ninety slightly overlapping joints, nearly oblong at first, but afterwards becoming more unequal sided. The first free brachial bears a pinnule, and the second is usually a syzygial joint, while other syzygies occur on the arms at intervals of two to twenty joints. The proximal face of the epizygial forms a sharp angle which projects backwards into the retreating distal face of the hypozygal.

The lowest brachial pinnules consist of seventeen or eighteen joints, the first six of which are rather broad, and the later ones more slender. Farther out on the arm this inequality gradually disappears, all the joints but the first two being moderately long and narrow. The disk, so far as visible, is covered with small, closely set plates which extend on to the arms, covering the muscular bundles at the sides of the narrow arm-groove. The covering plates of the pinnule-ambulacra rest upon a denticulated band of limestone which is not fully differentiated into side plates.

Colour in spirit, yellowish-white.

*Localities.*—All in the Caribbean Sea. From the dredgings of the U.S. Coast Survey steamer "Blake." Cruise of 1878-79. No. 157, off Montserrat; 120 fathoms. No. 209, off Martinique; 189 fathoms; hard bottom; bottom temperature,  $49\frac{3}{4}$ ° F. No. 291, off Barbados; 200 fathoms; flat calcareous stones; bottom temperature,  $49\frac{3}{4}$ ° F. No. 295, off Barbados; 180 fathoms; hard bottom; bottom temperature,  $50\frac{3}{4}$ ° F.

*Remarks.*—This interesting species, like *Pentacrinus asterius*, appears to be somewhat rare, having only been dredged four times by the "Blake"; and it has never, so far as I know, been obtained by Mr. Damon's agents, as the other three West Indian species have been. I have only been able to examine a mutilated specimen from Montserrat, and three nearly perfect ones from Barbados.

The slender cirri and their close approximation on the stem give this type a more elegant appearance than *Pentacrinus decorus*, which is its nearest ally, these two being the only species with more than ten arms which have a bifascial articulation between the radials. The third species with this character (*Pentacrinus naresianus*) is only ten-armed; but it has a singular resemblance to *Pentacrinus blakei* in the form of the syzygies on the arms. The stem of *Pentacrinus blakei* is at once distinguished from that of *Pentacrinus decorus* by the shortness of the internodes and the absence of any enlargement at the nodes (Pl. XXXI. fig. 3). The cirrus-sockets, too, are generally prolonged downwards to a less extent than they are in *Pentacrinus decorus* (Pl. XXXVI.); though *Pentacrinus blakei* shows a considerable amount of variability in this respect, some sockets having almost no downward extensions at all, while others are more like those of *Pentacrinus decorus*. There is, however, remarkably little variation in the length of the