

next syzygy is from the eighth to the thirtieth brachial, after which there is an interval of five to eleven joints between successive syzygies in the free arms. These consist of from ninety to one hundred slightly overlapping joints, nearly oblong in shape in the lower parts, but gradually becoming squarer, and finally elongated.

The first pinnule is on the first distichal, if it be united to the second by muscles. In other cases the second distichal bears the first pinnule; and the same is the case in the free arms. The lowest pinnules consist of about a dozen flattened joints, all of which except the first are longer than broad. They have sharp dorsal edges, and are much flattened laterally, especially those near the base of the pinnule, the terminal ones being more slender, so that the pinnule tapers considerably. Farther out on the arm the joints become more equal, the three lowest being the only ones that are much flattened, but the pinnules do not increase greatly in length.

The disk bears numerous plates of variable size, rather closely set, but not forming a perfectly continuous pavement; and several of them support small blunt spinelets. The ambulacra of the disk and arm-bases are protected by somewhat narrow and spine-like plates irregularly disposed. Arm-groove moderately wide and continuously plated. Pinnule-ambulacra variable, sometimes having moderately distinct side plates and sometimes hardly any trace of them.

Colour when fresh, white, purple, or yellow (Sigsbee), bleaching nearly white in spirit.

Localities.—Abundant in the Gulf Stream and in the Caribbean Sea, but not known elsewhere. A few specimens have been obtained by the collectors for Sir Rawson Rawson and Mr. Damon; also by W. Stimpson off Cuba, and by Captain E. Cole of the telegraph steamer "Investigator" at the following localities—south side of Porto Rico, 667 fathoms; off Saba Island, 320 fathoms (with *Pentacrinus asterius*); between Saba and Eustatius Islands, 531 fathoms (with *Pentacrinus mülleri*). But great numbers have been dredged by the surveying ships of the U.S. Coast Survey, as recorded in the following list:—

S.S. "Corwin," 1867. 1.6 miles from Chorrera, Cuba; 270 fathoms.

S.S. "Bibb," 1869. Off Double-headed Shot Keys; 315 and 471 (?) fathoms.

S.S. "Blake," Cruise of 1877-78. No. 21, off Bahia Honda; lat. 23° 2' N., long. 83° 13' W.; 287 fathoms. Off Havana (Sigsbee); 150 to 200 fathoms. No. 56, off Havana; lat. 22° 9' 15" N., long. 82° 21' W.; 175 fathoms. No. 57, off Havana; lat. 22° 9' N., long. 82° 21' W.; 177 fathoms.

Cruise of 1878-79. No. 100, off Morro Light; 250 to 400 fathoms. No. 101, off Morro Light; 175 to 250 fathoms. Nos. 155 and 156, off Montserrat; 88 fathoms; bottom temperature, 69° F. No. 157, off Montserrat; 120 fathoms; bottom temperature, 69° F. No. 233, off St. Vincent; 174 fathoms; rocky bottom; bottom temperature, 49½° F. No. 269, off St. Vincent; 124 fathoms; bottom temperature, 57½° F. No. 296, off Barbados; 84 fathoms; bottom temperature, 61½° F. No. 298, off Barbados; 120 fathoms; bottom temperature, 61° F.

Cruise of 1879-80 (Bartlett). Off Santiago de Cuba. Off Kingston (Jamaica); 100 fathoms.

Captain Sigsbee¹ describes the specimens dredged by him in the following terms:—
"Some of them came up on the tangles, some on the dredge. They were as brittle as

¹ *Bull. Mus. Comp. Zool.*, vol. v., No. 6, p. 60.