

a younger specimen from the same station had a disk of 6 mm. in diameter and an arm 33 mm. long. There were seven slender arm spines, the upper ones much the largest, and bearing fine thorns on the lower part of the shaft; the arms were decidedly knotted, though not so much so as in some other species (e.g., *Ophiacantha serrata*). The disk stumps had a short trunk which supported a crown of four or five thorns.

Another specimen (Station 122) was a little larger than the foregoing, and resembled it. There were eight scarcely thorny arm spines, the three uppermost much the longest, 3.3 mm. The disk was closely and evenly set with slender stumps, having a trunk surmounted by a crown of rather long thorns. Station 218 furnished specimens remarkable for the number of arm spines. With a disk of only 7 mm. and arms of 32 mm. there were eleven arm spines, the uppermost being 2.3 mm. long, the lowest 1 mm., and the rest intermediate; the disk stumps were as in Station 122, but stouter. The great number of arm spines in rather small individuals is a grave variation; but others from the same quarter of the globe (Station 191) were normal in this respect. A specimen off Tristan d'Acunha had a disk 7 mm. in diameter and the arm about 37 mm. long. The outermost mouth papilla on either side was wide, and the next two were longer than usual. The upper arm spine was 3 mm. long, and feebly thorny for its whole length.

*Ophiacantha cosmica* appears in the entire southern hemisphere, from the Brazil coast, by the lone Island of Tristan d'Acunha, the antarctic zone, off New Guinea, and between Juan Fernandez and the South American coast, where it lives in 2225 fathoms. Off Brazil it is found in only 350 fathoms. Its extreme variations are described above, and are not very great. *Ophiacantha millespina*, Vll., stands very near and needs more study to establish its place.

Station 122.—September 10, 1873; lat. 9° 5' S. to 9° 10' S. long. 34° 49' W. to 34° 53' W.; 350 fathoms; mud. Off Tristan d'Acunha; 1000 fathoms. Station 146.—December 29, 1873; lat. 46° 46' S., long. 45° 31' E.; 1375 fathoms; globigerina ooze. Station 147.—December 30, 1873; lat. 46° 16' S., long. 48° 27' E.; 1600 fathoms; globigerina ooze. Station 153.—February 14, 1874; lat. 65° 42' S., long. 79° 49' E.; 1675 fathoms; mud. Station 156.—February 26, 1874; lat. 62° 26' S., long. 95° 44' E.; 1975 fathoms; diatom ooze. Station 157.—March 3, 1874; lat. 53° 55' S., long. 108° 35' E.; 1950 fathoms; diatom ooze. Station 158.—March 7, 1874; lat. 50° 1' S., long. 123° 4' E.; 1800 fathoms; globigerina ooze. Station 191.—September 23, 1874; lat. 5° 41' S., long. 134° 4' E.; 800 fathoms; mud. Station 218.—March 1, 1875; lat. 2° 33' S., long. 144° 4' E.; 1070 fathoms; globigerina ooze. Station 298.—November 17, 1875; lat. 34° 7' S., long. 73° 56' W.; 2225 fathoms; grey mud. Station 299.—December 14, 1875; lat. 33° 31' S., long. 74° 43' W.; 2160 fathoms; grey mud.