

STATION 255.

Mr. Murray was away in a boat, and as it was quite calm he observed a number of things on the surface. There were large masses of Diatoms united into balls or elongated masses, the latter sometimes over six inches in length and two inches in diameter; they were made up of two kinds of Diatoms, or two different stages of development. *Hastigerina* was the most abundant thing on the surface, the specimens looking like little red dots all over the surface, and in the tow-net presenting a red mass. One specimen was taken in a small bottle, and on being placed under the microscope presented a wonderful appearance. The spines were exceedingly long, tapering to a point, and very flexible at the extremities. Between the spines were many small spheres, the pseudopodia running along the spines and occasionally leaving them. The spheres retired on treatment with colouring solution or acid. The specimen with fully-extended spheres floated, while those from the tow-net lay in a mass at the bottom of the globe; all attempts to mount specimens with the spheres extended failed. There were many compound Radiolaria, *Veilella* with *Ianthinæ* attached, many specimens of *Halobates*, and in addition all the things mentioned at the previous Station, except that *Lepas* was not noticed, nor any of its larval stages, which again indicated that the ship had passed into a region of the ocean where the fauna was different. Several small pieces of pumice were picked up, some of them covered with a brown-coloured Alga, or mould.

STATION 256.

Station 256 (Sounding 398), Yokohama to Sandwich Islands (see Chart 36 and Diagram 19).

July 21, 1875; lat. 30° 22' N., long. 154° 56' W.

Temperature of air at noon, 76°·8; mean for the day, 74°·5.

Temperature of water:—

Surface,	74·0	400 fathoms,	39·7
25 fathoms,	70·0	500 "	38·2
50 "	65·0	600 "	37·3
75 "	60·0	700 "	36·7
100 "	55·6	800 "	36·3
125 "	53·2	900 "	36·1
150 "	51·2	1000 "	35·9
175 "	49·5	1100 "	35·8
200 "	48·0	1200 "	35·7
225 "	46·5	1300 "	35·5
250 "	45·2	1400 "	35·4
275 "	43·8	1500 "	35·3
300 "	42·8	Bottom,	35·2