

Yokohama Bay that the winds appeared to follow a definite course, viz.:—With a high barometer, light southerly winds and fine weather prevailed; when the barometer fell the wind increased rapidly, and the weather became thick and dirty; when the barometer reached its lowest point the wind suddenly shifted to the westward and northwestward, and the sky became clear; the barometer now gradually rose and the wind which at first blew as hard from the N.W. as it had from the southward gradually decreased, shifted to the northward and northeastward, and fell light.

At 4 P.M. Matoya light bore N. 71° W., Kami Sima N. 15° W., Cape Sima, S. 77° W., and the ship was steered to the southwestward and southward and shortly after the land was lost sight of, the weather becoming thick and squally. The wind increased to a gale by midnight and the sea got up rapidly, so that the vessel with all four boilers was only steaming 3 knots against it.

On the 14th, at 4 A.M., the sea had increased so considerably that the engines were eased, and the ship stood off the land on the starboard tack. At 6 A.M. the barometer reached its lowest point, 29.62 inches, the weather cleared, and the wind shifted to the northwestward, the clouds disappearing as if a curtain had been withdrawn from the sky. After a short interval of calm the wind increased to a single-reefed-topsail breeze from the northwest, and there being a good deal of sea on the south of Oosima, the ship made but little headway against the combined influences of sea, wind, and current. At 0.30 P.M. it was considered advisable to bear up for Oosima Harbour, where the vessel anchored at 3 P.M., with Itsino Sima Rock N. 50° E., Wooded Island S. 40° E., and west point of Mioga Sima S. 5° W.

A number of the officers landed in the course of the afternoon at Nasingari village, and proceeded along the beach to the town of Kusimoto, and returned by a beautiful glen. The water in Oosima Harbour contained many Copepods, Ctenophores, Hydro-medusæ, larvæ of Annelids, Diatoms, and immense numbers of *Noctiluca miliaris*. These last were very large fine specimens, and in a great many instances they had swallowed several large Diatoms. One specimen was seen to eject the frustule of a Diatom through its cell-wall at a point nearly opposite to the point where the flagellum is inserted. The spot where the frustule was ejected closed immediately, but for a long time remained marked by star-like radiating lines; similar star-like spots were noticed in several specimens, but not in the same position. The animal apparently ejects these frustules through any part of the surface of the body. The nucleus, which became coloured with carmine before treatment with spirit, was very minute and circular.

On the 15th, at 5 A.M., the vessel left Oosima Harbour, going out through the south channel (having previously come in through the east). The day was calm and fine and the water smooth, and the ship proceeded along the land for Isumi Strait and Kobé. The Japan Stream was lost at 8 A.M., the surface temperature having decreased from 67° to $65^{\circ}.5$. At 2 P.M. the ship passed through Isumi Strait, where the temperature