

On the 12th February, at 9 A.M., a sounding, trawling, and temperatures were obtained in 2550 fathoms (see Sheet 31), this work being completed by 7 P.M., when sail was again made to the eastward. The deposit was a blue mud which did not effervesce with weak acid, and contained no calcareous shells, although pelagic Molluscs and Foraminifera were taken abundantly at the surface. The trawl contained only a few fragments of pumice about the size of hens' eggs. On this occasion the trawl was used without any bag being sewed in at the bottom, and it is possible that delicate organisms, such as Holothurians, deep-sea fish, Umbellulas, and similar animals which live at these depths might be completely destroyed and washed through the netting on being hauled up through such a great depth of water.

During the two previous days the wind had been unsteady, varying from N.W. to E.N.E., its general direction being N. by E. and its velocity 12 to 15 miles per hour; the weather squally and rainy; the current slightly to the north-eastward.

On the 13th February, at 6 P.M., a fresh S.W. breeze was experienced, which continued steady until 4 A.M. on the 14th, when it again became light and variable. The weather overcast and showery.

On the 15th, at 10 P.M., the weather being quite calm, steam was got up and the ship proceeded towards the supposed position of the Carteret Shoal.

At 5 A.M. on the 16th, a sounding was obtained in 1675 fathoms in lat. $2^{\circ} 46' N.$, long. $133^{\circ} 59' E.$, 15 miles southwest of the supposed position of the Carteret Shoal. The deposit was a light grey Globigerina ooze, consisting of immense numbers of the dead shells of pelagic Foraminifera. After obtaining serial temperatures, the ship steamed to the northeast, and at noon, when in lat. $2^{\circ} 56' N.$, long. $134^{\circ} 11' E.$, being exactly on the position of this danger as marked on the chart, a sounding was obtained in 2000 fathoms and the trawl was put over (see Sheet 31). The deposit at this depth contained very much less carbonate of lime than at 1675 fathoms. The trawl brought up a good many pieces of pumice partly coated with manganese, one deep-sea fish, and about thirty specimens belonging to various invertebrate groups.

No sign of a shoal was seen, nor of shoal water; indeed no such signs were expected, as from Carteret's account of the reef it could hardly be in the position marked. In the narrative of his voyage¹ he sees the St. David or Freewill Islands on September 25th, 1767, to which he gives a certain position, and three days afterwards he sights the reef named after him, which he places in lat. $2^{\circ} 53' N.$ and long. $1^{\circ} 41' W.$ of the Freewill Islands; this would place the reef N. $53^{\circ} W.$ 200 miles from those islands, but in the chart furnished, the reef is marked due north from them. If the Freewill Islands be in their correct position, then the position of the Carteret Shoal, as given by its original discoverer, would be nearly the same as that of the reef at present marked as the Helen Shoal, and

¹ Hawksworth's Voyages, vol. i. pp. 607-610, London, 1773.