

close proximity of two areas with widely different bottom temperature, were considered of sufficient importance to render the further elucidation of the physical and biological conditions of the channel desirable.¹

Six of the bottom-dredgings procured on the cruise of the "Knight Errant" have been examined, of which four, namely, Stations 1, 4, 6 and 7 represent the warm area, and may be associated with Nos. 47, 50, and 51 of the "Porcupine" series; whilst the remainder, namely, Stations 2 and 8, are from the cold region, of which the "Porcupine" material from Nos. 57 and 77 also furnishes examples.

STATION 1.—July 27, 1880. Lat. 60° 4' N., long. 7° 31' W. Depth, 305 fathoms; bottom temperature, 47°·1 Fahr. (8°·4 C.); surface, 54°·8 Fahr. (12°·6 C.).

STATION 4.—August 10. Lat. 59° 33' N., long. 7° 14' W. Depth, 555 fathoms; bottom temperature, 45°·4 Fahr. (7°·4 C.); surface, 57° Fahr. (13°·9 C.).

STATIONS 6 and 7.—August 12. Lat. 59° 37' N., long. 7° 19' W. Depth, 530 fathoms; bottom temperature 45°·9 Fahr. (7°·7 C.); surface, 56°·6 Fahr. (13°·7 C.).

The sand and mud from the warm bottoms above enumerated contained Rhizopoda of the large arenaceous types, such as *Saccamina*, *Astrorhiza*, *Rhabdammina*, *Jaculella*, *Marsipella*, and *Hyperammia*; and amongst calcareous forms, *Pullenia* and *Sphæroidina*, with abundance of *Globigerina bulloides* and *Globigerina inflata*.

STATION 2.—July 29. Lat. 60° 29' N., long. 8° 19' W. Depth, 375 fathoms; bottom temperature, 31° Fahr. (—0°·56 C.); surface, 53° Fahr. (11°·7 C.).

STATION 8.—August 17. Lat. 60° 3' N., long. 5° 51' W. Depth, 540 fathoms; bottom temperature, 29°·2 Fahr. (—1°·56 C.); surface, 56°·5 (13°·6 C.).

In the dredged material from the cold area the larger arenaceous Rhizopoda, *Astrorhizidæ*, are almost completely replaced by *Lituolidæ*. *Cassidulina lævigata* and *Pullenia sphæroides* are prominent species, and the genus *Cornuspira* is represented by a few specimens of gigantic size. A large proportion of the *Globigerinæ* are of the small thick-shelled arctic variety, *Globigerina borealis*.

Pelagic Fauna.

Gatherings were made by means of the tow-net at various depths from the actual surface down to thirty-five fathoms, on nine different days between July 27th and August

¹ The detailed report of the cruise of the "Knight Errant," by Staff-Commander Tizard, R.N., and Mr. John Murray, assisted by various naturalists, appears in the *Proceedings of the Royal Society of Edinburgh*, 1882, vol. xi. pp. 638-720.