

As it was intended that the exploration in the 'Porcupine' in the summer of 1869 should occupy much more time, and if possible be much more thorough than that in the 'Lightning' the year before, the preparations for the 'Porcupine' expedition were much more elaborate and comprehensive. The Committee of the Royal Society were desirous that various important questions as to the physical condition and chemical composition of the water at great depths should be investigated; and the singular temperature results of the former cruise ably discussed by Dr. Carpenter in his preliminary report had excited so much curiosity and interest that their further elucidation was regarded as vieing in importance with that of the distribution and conditions of animal life. It was consequently decided that the naturalists directing the expedition should be accompanied by assistants trained in chemical and physical work, and the chart-room of the vessel was fitted up as a temporary laboratory, with physical and chemical apparatus and microscopes.

The vessel was available from the beginning of May to the middle of September, and as it was impossible for those who had conducted the previous expedition to be absent so long from their public duties, it was resolved to have three separate cruises; and Mr. Gwyn Jeffreys, F.R.S., whose co-operation was specially valuable from his thorough knowledge of the species and distribution of recent and fossil mollusca, was associated with Dr. Carpenter and myself, and undertook the scientific charge of the first cruise.

Mr. Gwyn Jeffreys was accompanied by Mr. W.