but concerning which the necessary data are yet wanting. In water 1500 or 2000 fathoms deep the dredge cannot, in favourable circumstances, be recovered in much less than 2 or 3 hours, during all which time a process of washing and sifting goes on as the vessel at the surface sways and pitches, and the dredge below to some extent at least is jerked and dragged through the water. The result is, of course, inevitable that while impacted mud remains in the dredge or trawlbag, many of the loose shells which can pass through the meshes are lost. In these circumstances it is not wonderful that the deeper the water the fewer are the shells secured, and that the deep-sea dredging expeditions following that of the Challenger, and using wire rope, which permits more dredgings to be made in the same space of time, have apparently obtained from the Gulf of Mexico, from the North-East Atlantic, and from the Mediterranean results relatively richer than those which the Challenger presents. This shows that mechanical improvements may yet be introduced which will greatly extend our knowledge of life in the ocean depths far from land and enable us to make successful attempts at generalisation.

If, however, the collection falls short of our hopes, it must still be remembered that it is really both interesting and large; the absolute number of species is very considerable, many forms are quite new, and many come from an all but unexplored field; while even of species previously known, additional facts of value have been secured regarding their distribution or their continuance as living and not mere fossil forms.

It must be obvious that the determination of old species has been, in the present instance, peculiarly difficult. The collection is a sporadic one, gathered in small quantities from the most diverse localities, requiring therefore the study of many and different geographical groups, and the consultation of many writers on these groups. In this labour I have had kind help from many friends, to whom reference will be found in the course of this Report; but I must here express my special obligation to Mr E. A. Smith, of the Molluscan Department of the British Museum, and to my friend Dr Gwyn Jeffreys, whose death a year ago is lamented by all students of the Mollusca, and by none more deeply than by myself. Still, with all help generously given, the work I have had to overtake has been one of very great difficulty, and the result is not what I designed, but what circumstances have allowed. When my very dear friend, the late Sir Wyville Thomson, asked me, in 1876, to take charge of the whole Mollusca of the Expedition, I was master of my own time, and could consult both collections and books as need arose. In 1878, however, circumstances occurred which brought back on me the full pressure of professional duty, and fixed my residence in a country district at a distance from Museums and scientific works. I at once returned the whole collection, and all my bulky but yet chaotic work to the Challenger office, seeing no possibility of completing my task. It was only at my friend's urgent request that I consented to prosecute it as I could, gladly lightening the burden by handing over to Mr E. A. Smith first the Land and Fresh Water Shells, and subsequently the Lamellibranchiata. Mr Smith's