

## BATHYMETRICAL AND GEOGRAPHICAL DISTRIBUTION.

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From whatever point of view the student may approach problems in any way connected with Oceanography, he will find the large amount of information brought together in the foregoing pages of great assistance in forming a general picture of the physical and biological conditions prevailing in the different regions of the Great Ocean Basins.

The principal object in view in preparing the preceding descriptions has been to summarize the observations at each of the stations. This great array of new facts may be compared and discussed in many ways. At one time it was proposed to conclude these volumes with a large number of other Summaries of a special and of a general kind, and to discuss in detail the many theoretical views suggested by the Challenger's researches. It is not now possible to carry out this intention in the present work, for the completion of the Challenger Report is urgently demanded. A few of the Summaries bearing on the bathymetrical and geographical distribution of the animals captured in the trawl or dredge are, however, appended for the convenience of naturalists. These organisms are for the most part believed to have lived on or near the bottom of the ocean. In all cases, however, the naturalists simply recorded the greatest depth to which the trawl or dredge was believed to have descended at each station. It is evident that the instrument may in the course of its progress have been dragged into deeper or shallower water than was recorded by the sounding line, and may have captured animals in its descent through the water, or in being hauled up again to the surface. In the great majority of cases there is little difficulty in separating the animals captured on the bottom from those taken in the surface and sub-surface waters. Those about which there is some doubt, and those in the following lists which belong to the surface or intermediate waters, will be referred to later on. In preparing the lists, however, it was considered the best plan, in the first instance, simply to take all the animals brought up in the trawl or dredge at each station as the basis of the following lists.

The species have been grouped together in seven zones of depth, viz. :—

(1), The zone deeper than 2500 fathoms ; (2), The zone between 2000 and 2500 fathoms ; (3), The zone between 1500 and 2000 fathoms ; (4), The zone between 1000 and 1500 fathoms ; (5), The zone between 500 and 1000 fathoms ; (6), The zone between 100 and 500 fathoms ; (7), The zone between 0 and 100 fathoms.

For the deeper of these zones an interval of 500 fathoms has been chosen, while, in order to separate the essentially shallow-water species, the 100-fathom line has been adopted as the limit of the shallowest zone.

In the first of the following lists, for example, all the animals procured in the trawls