

It is important to observe that no ear-bones or fragments of other cetacean bones were obtained from the dredgings north of the Equator. The stations south of the Equator, where the bones of Cetacea were found, may be arranged in two groups, the one in comparatively close proximity to continental land, the other in mid-ocean. In the first of these groups the number of ear-bones found in any single station was small, apparently, because, from their proximity to land, and to the influence of the solids suspended in the currents of great rivers, they would become covered over, and imbedded in detritus falling to the bottom of the ocean. Thus only one bone, and that the tympanic bulla of a *Ziphius*, resembling *Ziphius cavirostris*, was obtained in the South Atlantic at Station 131, off the east coast of South America. One station (160) south of the Australian continent yielded only a few ear-bones. A station (299) off the west coast of South America yielded only the tympano-periotic bone of a single species, one of the Delphinidæ. Stations 143 and 293 gave only fragments of bone, which could not definitely be pronounced to be cetacean. All the other stations, viz., 274, 276, 281, 285, 286, 289, belonged to the second group, and were in the central southern portion of the Pacific Ocean, *i.e.*, in localities the farthest removed from continental land. These, as Mr Murray has pointed out in his Report, are areas of exceedingly slowly accumulating deposits, and consequently in them the bones dredged up at each station were, as a rule, much more numerous than at the stations nearer to the great continents, for they were not imbedded in thick strata of substances which had fallen to the bottom.

In all the localities, except 299, 293, and 143, where merely a single ear-bone or a small fragment of bone was found, the deposit at the bottom of the ocean was, as Mr Murray informs me, a red or chocolate-coloured clay, containing, besides the ear-bones, many hundreds of sharks' teeth and nodules of manganese. The preservation of the ear-bones and of the fragments of the beaks of ziphioid whales is accounted for by the extreme density of these portions of the skeleton. Some of the bones were in a much better state of preservation than others. In some the manganese coating was extremely thin, and but little had entered into the Haversian canals and lacunæ, so that a fractured surface was greyish-white (Mr Murray's Pl. X. figs. 1*a*, 1*b*, 2*a*, 4*a*). Others again were not only thickly encrusted with the mineral, but the Haversian canals and lacunæ were infiltrated with it, so that a fractured surface was dark brown or black, and the bones were extremely brittle. The chemical composition of these bones was thus entirely altered, and this was more especially the case with the fragments of the flat bones, and others of a more porous texture which formed the nuclei of so many of the manganese and iron nodules. It is worthy of note that no bone was identified as belonging to the great sperm whale (*Physeter macrocephalus*), although the track of the Challenger, at the stations where such large hauls of cetacean bones were dredged up, was through the seas frequented by this huge cetacean; but the tympanic of the short-headed sperm whale (*Kogia*) was obtained at one station (286). Further, it is to be noted that the bones obtained did not present