

up the principal part of the deposit; these had been present in many of the previous deposits, but never in such abundance as in this instance. There was no carbonate of lime, and Radiolaria, which had been so abundant in previous deposits in this section, were only represented by a few specimens. The same remark as to the absence of Radiolaria applies to the next two stations, where the depths were 2350 and 2325 fathoms respectively, but there was in these 28 and 9 per cent. of carbonate of lime, which was due to the presence of calcareous Foraminifera. The deposit in 1525 fathoms was a Volcanic Mud containing 20 per cent. of carbonate of lime (see Chart 38 and Diagram 19).

In every instance the dredgings and trawlings yielded some manganese nodules and pumice, but on two or three occasions the manganese nodules were in extraordinary abundance. From 2750 fathoms on the 11th September there was over a peck of heavy, very compact, oval-shaped nodules. The largest were 10 centimetres in width and 5 centimetres in depth; the upper surface was smooth, while the under one was rough and irregular. Although differing in size, most of these nodules had the same shape, indeed it may be remarked that there is generally a close resemblance both in composition and shape and sometimes in size among the nodules from any single dredging. Among the nodules were sixteen sharks' teeth of considerable size, two being those of *Carcharodon*, nine *Oxyrhina*, and five *Lamna*; some of these were deeply imbedded in deposits of manganese. There were in addition to the above eight earbones of Cetaceans belonging to the genera *Globiocephalus*, *Mesoplodon*, and species of Delphinidæ.

On the 16th September, from 2350 fathoms, the trawl brought up more than half a ton of manganese nodules, which filled two small casks. The great majority of these nodules were small and nearly round, resembling a lot of marbles with a mean diameter of three quarters of an inch. The nuclei of these nodules were generally palagonite or other volcanic material, but very frequently small sharks' teeth or fragments of bone. Among the nodules were counted two hundred and fifty sharks' teeth, without taking into account those less than half an inch in length. Three of the teeth belonged to *Carcharodon*, being from 2 to 2½ inches (5 to 6·3 centimetres) across at the base of the dentine. Ten resembled those of *Carcharias*, and the remainder were referred to the genera *Lamna* and *Oxyrhina*. The Cetacean bones among the nodules consisted of two tympano-periotic bones of *Mesoplodon*, eight separate petrous bones, and six tympanic bullæ belonging to *Globiocephalus*, *Delphinus*, and *Kogia* (?).

*Off Tahiti.*—So irregular was the ground from the reef out to 35 fathoms that dredging was almost, if not quite, impossible; still by means of the swabs and tangles some Corals were obtained. From 35 to 40 fathoms down to 150 fathoms dredging was equally difficult. Here a number of Sponges, Alcyonarians, Corals, and other invertebrates were obtained. Beyond 150 fathoms the bottom was a Coral Sand with volcanic minerals and pelagic shells. The soundings taken by the ship at depths of 420, 590, 620, and 680 fathoms showed the presence of a Volcanic Mud, containing from 19