

| RESIDUE. | | | | ADDITIONAL OBSERVATIONS. |
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| Per cent. | Siliceous Organisms. | Minerals. | Fine Washings. | |
| 77.34 | (2.00 %) Sponge spicules, Astrorhizidæ, Lituolidæ, arenaceous Textularidæ, Diatoms. | (15.00 %), m. di. 0.10 mm., angular; volcanic glass, plagioclase, felspar, magnetite, hornblende, augite, mica. | (60.34 %), many fine mineral fragments, amorphous matter, and remains of siliceous organisms. | A considerable quantity of the mud was obtained, similar in every respect to the last. The upper layer was distinctly red. |
| 80.58 | (2.00 %), Sponge spicules, Astrorhizidæ, Lituolidæ, arenaceous Textularidæ, Diatoms. | (40.00 %), m. di. 0.08 mm., angular; altered volcanic glass, plagioclase, felspar, magnetite, augite, black volcanic particles some of them magnetic. | (38.53 %), many fine mineral particles, amorphous matter, and minute remains of siliceous organisms. | The deposit is similar to the three preceding ones, the minerals being finer and more angular. There was a red coloured surface layer in this as in the last. |
| 46.04 | (2.00 %), Radiolaria, Sponge spicules, <i>Rhizammina</i> , Lituolidæ, casts of calcareous organisms, Diatoms. | (25.00 %), m. di. 0.10 mm., angular; plagioclase, augite, hornblende, mica, olivine, magnetite, fragments of volcanic rocks, manganese grains. | (18.64 %), amorphous matter, fine mineral and siliceous remains. | Two soundings were taken. After treatment with acid there remain very perfect casts of the organisms in a red coloured material which also covers the shells. All the mineral particles are covered with a thin coating of manganese and iron. In the washings from the tow-net there were some fragments of volcanic rock in a high state of decomposition. There were also in the tow-net two or three manganese nodules, one about two inches (5 cm.) long and very irregular. These nodules seem to be formed of portions of the bottom and are perforated in all directions by worm-tubes. In the sounding tube was a piece of wood perforated by worms. One of the nodules had a nucleus composed of clay and of volcanic ashes; among this volcanic débris were fragments of green hornblende, reddish augite, plagioclase, and magnetite. These minerals are imbedded in a mass which appears in some places to be zeolitic. |
| 100.00 | (2.00 %), Radiolaria, Sponge spicules, Astrorhizidæ, Lituolidæ. | (50.00 %), m. di. 0.12 mm., angular and rounded; magnetite, palagonite, hornblende, augite, felspar, phillipsite, black mica. | (48.00 %), amorphous red coloured matter, many fine mineral particles, and remains of siliceous organisms. | No deposit was obtained in or on the sounding tube. In the bag of the trawl, however, there were about two gallons (9 litres) of Red Clay. In the washings there was a great number of dark red and brown spherical and irregular bodies, which are coated with a substance of a zeolitic nature. In the trawl was an immense number of manganese nodules and sharks' teeth. Some of the manganese nodules, measure 18 x 12 x 3 inches (45 x 30 x 7.5 cm.). These, along with most of the smaller ones, have only a slight coating of manganese, the interior being filled with a volcanic tufa. Among the nodules are several fragments of pumice passing into clayey matter. The nodules were overgrown with <i>Hyperammina vagans</i> and other Rhizopods. There appears to be evidence that volcanic disturbances have taken place at the bottom near this locality. |
| 100.00 | (2.00 %), Sponge spicules, Radiolaria, <i>Rhizammina almyiformis</i> , Lituolidæ, Diatoms. | (50.00 %), m. di. 0.15 mm., rounded; palagonite, plagioclase very abundant, augite microliths, magnetic particles, great number of small rounded red transparent grains some of them palagonite, or altered olivine, or felspar coated with iron and manganese. | (48.00 %), much fine red or chocolate coloured matter, many fine mineral fragments, and remains of siliceous organisms. | Only a small quantity of the deposit, similar in every respect to that obtained at the previous station, came up in the tube. The greater part of the washings was composed of the red and yellow rounded bodies noticed on the 6th. There were many fragments of manganese, and several small pieces of pumice. |

Of Tahiti—continued.

Tahiti to Valparaiso.