appeared black and opaque under the microscope, and the margins red. The deposit contained no carbonate of lime, but enormous numbers of crystals of phillipsite, either simple, twinned, or aggregated into spherules, were present. Some of these had a coating of manganese. A few Radiolaria were observed, but their rarity was in striking contrast with the extraordinary abundance of these organisms at the previous station to the northward (Station 274).

Station 276, 2350 fathoms.—The sounding tube had sunk about a foot into the deposit, and the specimen consisted of two layers, the deeper one being darker coloured and containing less carbonate of lime than the upper. The trawl contained some Red Clay along with five or six bushels[1] of manganese nodules, sharks' teeth, earbones of Cetaceans, pumice stones, and volcanic lapilli. The nodules were on the whole of small size when compared with those taken at other stations, their mean diameter being between 2 and 3 cm. Pl. IV. fig. 8 represents one of these nodules (natural size); it is spherical, with a scaly surface, and exhibits the general form and aspect of the spherical nodules from this station, although many of them are much smaller, while a few are a little larger. Pl. IV. fig. 7 represents a similar nodule in section. It is seen to consist of three zones: an external thin layer, which corresponds to the scales that can be removed from the outside of the nodules, and is about 1 to 2 mm. in thickness. The median zone is more massive; upon a polished surface no pronounced concentric structure can be seen, but the compactness of the manganese diminishes towards the centre, which is occupied by a yellowish earthy nucleus, originally a piece of pumice in all probability. Pl. IV. fig. 6 shows the upper surface of an irregular form of nodule, several of which were obtained at this station. They present a scoriaceous aspect, and are sometimes perforated by holes, the contours being rounded. The interior is formed by a great number of little earthy concretions, or by a palagonitic tufa. Pl. IX. fig. 8 shows another spherical nodule, from which the manganese has been removed. The external zone retains its normal concentric structure; the intermediate zone does not show any concentric arrangement, but presents a peculiar spongy structure. The nucleus is a fragment of basic volcanic rock.

The nuclei of the nodules from this station consisted of lapilli belonging to the basaltic series of rocks, of pumice, of aggregations of the deposit, of palagonitic fragments, of sharks' teeth, of otoliths of fish, of the earbones and other bones of Cetaceans. An unaltered fragment of volcanic glass, forming the nucleus of one of the nodules, is shown in Pl. XVI. fig. 1. Nuclei of palagonitic lapilli are represented in Pl. XVIII. figs. 2, 3, and 4, along with the zeolitic crystals which surround and fill the pores. Other palagonitic lapilli from this station are represented in Pl. XIX. figs. 1, 2, and 4. Pl. XXI. fig. 1 represents the palagonitic tufa forming the nucleus of one of the flattened nodules. The four figures on Pl. XXII. represent crystals of phillipsite, isolated and in

[1] About 200 litres.