

however, more separated, and the surface has a more rugged appearance. The nucleus of this mass had probably originally been a fragment of pumice. The dredge and tow-nets contained about twenty fragments of pumice, all rounded, and from 0.5 to 2 cm. in diameter. Their surfaces were coated with manganese, and in some instances the fragments were cemented together by the manganese.

Station 254, 3025 fathoms.—One manganese nodule, about  $1\frac{1}{2}$  inches in diameter, was procured in the water-bottle, and in the sample of the deposit from the sounding tube there were numerous black grains of manganese.

Station 256, 2950 fathoms.—A few manganese nodules, sharks' teeth, and pumice fragments were obtained in the clay from the dredge. In some instances the sharks' teeth had but a slight coating of manganese, and in others they were surrounded by concentric layers nearly 1 cm. in thickness. One nodule had a nucleus of bone, but most of the others had apparently formed around pumice.

Station 258, 2775 fathoms.—Two small nodules came up, adhering with some clay to the under surface of the water-bottle, and in the specimen of clay obtained by the sounding tube were a good many manganese particles.

Station 264, 3000 fathoms.—The trawl brought up seven or eight small manganese nodules and hardened pieces of the deposit, frequently traversed in every direction by worm-tubes and coated with manganese. One or two of the nodules had palagonitic nuclei.

Station 265, 2900 fathoms.—The dredge and tow-nets brought up a large quantity of Radiolarian Ooze of a dark colour. Almost the whole of this ooze passed through the finest sieves, but in the siftings were several pieces of pumice, and one small manganese nodule about 2 cm. in diameter. The nodule had a rugged exterior; the nucleus consisted of a yellowish homogeneous substance, penetrated in all directions by dendrites of manganese. Under the microscope this nucleus appeared finely granular, and contained many Radiolarian skeletons, but no crystalline particles were observed. This nucleus was probably an agglomerated portion of the deposit.

Station 272, 2600 fathoms.—The trawl and attached tow-nets brought up some Radiolarian Ooze, in which was a small piece of basic pumice, and two or three small manganese nodules; in some of the nodules the nuclei were composed of pumice, while in others no nucleus could be recognised.

Station 274, 2750 fathoms.—The trawl and attached tow-nets brought up a quantity of chocolate-coloured ooze, and over a peck (9 litres) of manganese nodules, earbones of Cetaceans, sharks' teeth, and pumice fragments. The manganese nodules were oval, flattened, or somewhat kidney-shaped, the largest specimens measuring  $10 \times 7 \times 4$  cm. Pl. IV. fig. 2 represents a typical specimen; there were about one hundred more or less resembling this one in form and appearance. These nodules are heavier and more massive than the generality of those procured at other stations, and they have almost all the same