

these nuclei is very remarkable, especially when the small proportion of siliceous organisms in the deposit is remembered. One of the tow-nets contained several rounded lumps of the deposit, loosely held together by dendritic depositions of manganese and iron, which seemed to indicate the beginning of the nodule formation.

Station 299, 2160 fathoms.—The deposit at this station was a Blue Mud, but just on the border-line between Blue Mud and Red Clay. There was over a litre of manganese nodules in the trawl. Some of these were formed round nuclei of pumice, while in others no apparent nucleus was present. The prevailing form, represented in Pl. III. fig. 4, is like an inverted cone with the apex removed. The lower part of the nodule was very areolar in structure, containing much clayey matter in alternate layers, and concentric round a point which would be represented by the apex of the cone. The upper part of the cone is also made up of concentric layers, but is much harder and more compact. Another nodule from this station is represented in Fig. 35, with a *Scalpellum* attached. There were also in the trawl a tympanic bulla of a *Globocephalus*, with the petrous bone attached, and a Cephalopod beak, both coated with manganese.



FIG. 35.—Manganese Nodule with *Scalpellum darwini* growing on it. Station 299, 2160 fathoms. South Pacific.

Station 300, 1375 fathoms.—The trawl appeared to have caught on the bottom, and it was with great difficulty that it could be released, the accumulators being stretched to their utmost. The beam of the trawl was scored in several places by patches of black manganese, as if the beam had caught on something coated with that substance. Amongst the ooze in the bag of the trawl were three or four basaltic pebbles, coated with manganese, and four flattened pieces of volcanic tufa, coated on one surface by deposits of manganese, 6 to 12 mm. in thickness.

Station 302, 1450 fathoms.—The trawl, as at Station 300, caught upon the bottom, and was with difficulty released. The bag of the trawl contained about a peck of ooze, containing many manganese concretions and volcanic pebbles. Among the manganese nodules were some large flat-shaped fragments, apparently torn from larger masses. They consisted of alternate layers, and were black-brown throughout. The majority of the nodules had nuclei of basic volcanic glass, surrounded by altered layers; one of the nuclei is represented in Pl. XVI. fig. 4, and another in Pl. XVII. fig. 4. Other nodules appeared to have been formed around small aggregations of the deposit, for in them could be seen many casts of Foraminifera.