

at right angles to one another. These clefts are filled up with a hard flinty-looking substance, which appears from its structure to have been gradually deposited from water trickling down the sides. Its mass is concretionary and sometimes foliated; its color is white to yellowish white or brownish yellow. It scratches glass with ease, and does not effervesce with acids. Plates of two to three millimetres in thickness are quite translucent. Heated in the forceps, it does not fuse, but turns perfectly white, and is then easily crumbled between the fingers, and in the closed tube it gives off alkaline reacting and empyreumatic-smelling water. It was found to consist of phosphate of alumina and iron, with some silicate and sulphate of lime.

“Rat Island is the largest of the secondary islands, and the most distant from the main island. It is composed on the western side of massive basaltic rock, and on the eastern of sandstone. The sandstone probably overlies the basalt, as, in its structure, it bears the marks of having been deposited in drifts, and the sand is calcareous, consisting of shell débris. On the way to and from Rat Island we had to pass along the western side of Booby Island. The wave-worn cliffs showed that the island was entirely formed of the above-mentioned calcareous sandstone; no igneous rock was visible, and, as the peculiar wind-blown stratification-marks are continued below the level of the sea, it is probable that the land here is sinking, or, at all events, has sunk. Platform Island consists of a mass of perfect basaltic columns rising out of the water and supporting a covering of massive basalt, on which is spread out the platform of calcareous rock on which are the ruins of a fort, and from which the island doubtless takes its name.”

In the pinnace we went along the northern shore of the main island, dredging nine times, in water from seven to twenty fathoms deep. We got surprisingly little, only a few crustaceans, one or two star-fishes, and a pretty little *Cidaris*. We