

island, and stretches, with some interruptions of intervening sand, nearly from the north to the south end. Its surface is even, and in many places covered by a thick growth of purslane, whose thread-like roots abound in the guano where it grows. The deposit rests on a hard coral bottom, and varies in depth from six inches to four feet. The fact already observed at Baker's, that vegetation flourishes most where the guano is shallow, is also quite apparent here, and the consequent characteristic difference between the guano of the deep and shallow parts is distinctly marked.

Some interesting pseudomorphs occur buried in the guano of this island. Coral fragments of various species were found that had long been covered up under the deposit, and in some of which the carbonic acid had been almost entirely replaced by phosphoric acid. In such I have found seventy per cent. of phosphate of lime. In many others the change was only partial, and, on breaking some of these, in the centre was usually found a nucleus or *core* of coral, still retaining its original hardness and composition, while the external parts had been changed from carbonate to phosphate, which, though soft and friable, still preserved the structure and appearance of the coral.

Jarvis's Island is situated in lat. $0^{\circ} 22'$ south, and long. $159^{\circ} 58'$ west, from Greenwich. It is nearly two miles long by one mile wide, trending east and west, and containing about 1,000 acres. Like Baker's and Howland's, it has the general features of a coral island, but it differs from them essentially in the fact that it once contained a lagoon which has gradually been filled up with sand and detritus, while the whole island has undergone some elevation. It therefore presents a basin-like form, the surface being depressed from the outer edge toward the centre. It is encircled by a fringing reef, or shore platform, about 300 feet wide; from this a gradually sloping beach recedes, the crown of which is from eighteen to twenty-eight feet high, forming a ridge or border, of varying width, which surrounds the island like a wall, from the in-shore edge of which the surface of the island is gently depressed.