Laurentian limestone, of altered limestones from the Primordial and Silurian, and of serpentine marbles of all the varieties furnished by our collections. They were examined with ordinary and polarized light, and with every variety of illumination. They were also examined as decalcified specimens, after the carbonate of lime had been removed by acids. An extensive series of notes and camera tracings were made of all the appearances observed; and of some of the more important structures beautiful drawings were executed by the late Mr. H. S. Smith, the then palæontological draughtsman of the Survey. The result of the whole investigation was a firm conviction that the structure was organic and foraminiferal, and that it could be distinguished from any merely mineral or crystalline forms occurring in these or other limestones.

At this stage of the matter, and after exhibiting to Sir William all the characteristic appearances, in comparison with such concretionary, dendritic and crystalline structures as most resembled them, and also with the structure of recent and fossil Foraminifera, I suggested that the further prosecution of the matter should be handed over to Mr. Billings, as palæontologist of the Survey. I was engaged in other researches, not connected with the Survey or with this particular department, and I knew that no little labour must be devoted to the work and to its publication, and that some controversy might be expected. Mr. Billings, however, with his characteristic caution and modesty, declined. His hands were full of other work. He had not given any special attention to the microscopic appearances of Foraminifera or of mineral substances. It was finally arranged that I should prepare a description of the fossil, which Sir William would take to London, along with the more important specimens, and a detailed list stating all the structures observed in each. Sir William was to submit the manuscript and specimens to Dr. Carpenter, or, failing him, to Prof. T. Rupert Jones, in the hope that these