

could obliterate the minutest points of structure ; and that such fusion has not occurred, the preservation in the Laurentian rocks of the most delicate lamination of the beds shows conclusively ; while, as already stated, it can be shown that the alteration which has occurred might have taken place at a temperature far short of that necessary to fuse limestone. Thus has it happened that these most ancient fossils have been handed down to our time in a state of preservation comparable, as Dr. Carpenter states, to that of the best preserved fossil Foraminifera from the more recent formations that have come under his observation in the course of all his long experience.

Let us now look more minutely at the nature of the typical specimens of Eozoon as originally observed and described, and then turn to those preserved in other ways, or more or less destroyed or defaced. Taking a polished specimen from Petite Nation, we find the shell represented by white limestone, and the chambers by light green serpentine. By acting on the surface with a dilute acid we etch out the calcareous part, leaving a cast in serpentine of the cavities originally occupied by the soft animal substance, and when this is done in polished slices, these may be made to print their own characters on paper, as has actually been done in the plate prefixed, which is an electrotype from an etched specimen, and shows both the laminated and acervuline parts of the fossil. If the process of decalcification has been carefully executed, we find in the excavated spaces delicate ramifying processes of opaque serpentine or transparent dolomite, which were originally imbedded in the calcareous substance, and which are often of extreme fineness and complexity.<sup>1</sup> (Figs. 18, 19.) These are casts of the canals which traversed the shell when still inhabited by the animal, and have subsequently been filled with mineral

<sup>1</sup> Very fine specimens can be produced by polishing thin slices, and then etching them slightly with a very weak acid. (Plate prefixed.)