

long parallel tubes, and with little development of supplemental or intermediate skeleton. The appearance of parallel tubulation running through and past several successive chamberlets was more conspicuous in these specimens than in the ordinary acervuline *Eozoon*, and the chamberlets themselves more cylindrical and tortuous. These specimens may either be portions of the acervuline superficial part of *Eozoon* broken off and separately preserved, or they may constitute a distinct varietal form. As the latter seems on the whole most probable, I would name this form variety *acervulina*.

These varieties are of much more rare occurrence than the ordinary type of *Eozoon*.

The ordinary specimens of *Eozoon* found at St. Pierre are mineralized with serpentine; but fragments imbedded in the dolomitic limestones have their canals filled with a transparent mineral which, from its optical character, is evidently dolomite, though the quantity obtained was not sufficient for any definite chemical test. Parts of the canals in these specimens were filled with calcite, as shown by its dissolving entirely away in a dilute acid. In one of the serpentinous specimens also I have observed that, while portions of the groups of canals, especially the basal portions, are filled with serpentine, the extremities of the canals and their finer branches present, under polarized light, the aspect of calcite; and that they are filled with this mineral is proved by these portions of the canal-filling being entirely removed when treated with dilute acid. It would thus appear that in these specimens, while the terminal parts of the canals have been filled with calcite, the basal portions have been occupied by serpentine. This is not, however, a new fact, as similar appearances have been already described both by Dr. Carpenter and the writer.

In one specimen I observed a portion of the fossil entirely replaced by serpentine, the walls of the skeleton being represented by a lighter-coloured serpentine than that filling the chambers, and still retaining traces of the canals. The walls thus replaced by serpentine could be clearly traced into connexion with the portions of those still existing as calcite. This shows that the serpentine, like the quartz in silicified shells and corals, has had the power of replacing the calcite of the fossils; and I believe that its partial action in this way accounts for some irregularities observed in the less perfectly preserved specimens. Nor is it improbable, as Dr. Hunt has already suggested, that some of the masses of serpentine and pyroxene on which specimens of *Eozoon* are based, may represent older and more perfectly mineralized masses of the fossil.

In some of the specimens of *Eozoon*, the superficial laminae are apparently broken and displaced in such a manner as to suggest the idea that partial disintegration by the waves had taken place before they were finally buried. It is also observable that in some of the masses the compression to which they have been subjected has produced a microscopic faulting, which slightly displaces the laminae.

One of the most interesting features of the St.-Pierre limestone.