

even in this case careful management of light may reveal some indications. In many instances, however, even where the limestones have become perfectly crystalline, and the cleavage planes cut freely across the fossils, these exhibit their forms and minute structures in great perfection. This is the case in many of the Lower Silurian limestones of Canada, as I have elsewhere shown.<sup>1</sup> The grey crystalline Trenton limestone of Montreal, used as a building stone, is an excellent illustration. To the naked eye it is a grey marble composed of cleavable crystals; but when examined in thin slices, it shows its organic fragments in the greatest beauty, and all their minute parts are perfectly marked out by delicate carbonaceous lines. The only exception in this limestone is in the case of the crinoids, in which the cellular structure is filled with transparent calc-spar, perfectly identical with the original solid matter, so that they appear solid and homogeneous, but there are examples in which even the minute meshes of these become apparent. The specimen represented in Fig. 14 is a mass of Corals, Polyzoa, and Crinoids, and shows these under a low power, as represented in the figure. The specimen in Fig. 15 shows the Laurentian Eozoon in a similar state of preservation. It is from a sketch by Dr. Carpenter, and exhibits the delicate canals partly filled with calcite or dolomite, as clear and colourless as that of the shell itself, and distinguishable only by careful management of the light.

In the case of recent and fossil Foraminifers, these very frequently have their chambers filled solid with calcareous matter, and as Dr. Carpenter well remarks, even well preserved Tertiary Nummulites in this state often fail greatly in showing their structures, though in the same condition they occasionally show these in great perfection. Among the finest I have seen are specimens from the Mount of Olives, and Dr. Carpenter

<sup>1</sup> *Canadian Naturalist*, 1859: "Microscopic Structure of Canadian Limestones."