

"In layers of limestone still lower in the section an obscure *Stromatoporoid* form occurs in abundance, along with fragments of a Trilobite and a *Salterella*." Small specimens of these stromatoporoid forms were kindly supplied to me by Dr. Walcott, and on being sliced, though most of them were imperfectly preserved, one of them exhibited the concentric laminae of *Cryptozoon*, and the intermediate layers composed of microscopic grains which were ascertained by Dr. Adams to be partly silicious and partly calcareous (Dolomite and calcite). Instead of the irregular curving canals of the typical *Cryptozoon*, where best preserved they show ragged cells, giving off on all sides numerous small tortuous and branching canals (Fig. 3), but this structure I regard as possibly corresponding to that of *Cryptozoon*, and I would therefore venture to name the species *C. Occidentale*, in hope of the discovery of better specimens.

II. ARCHLEOZOON.

Still older specimens referable to the same general type have been found by Dr. G. F. Matthew in the Upper Laurentian (Grenville Series) of Southern New Brunswick. Dr. Matthew having kindly presented a large slab of these fossils to the Peter Redpath Museum, I have been enabled to study them both macroscopically and microscopically. As described by Matthew, with reference to their mode of occurrence *in situ*, they consist of cylindrical or polygonal columns apparently multiplying by budding, and composed of laminae and intermediate layers which are convex upwards and are in places separated by spaces occupied with calcite.¹ The laminae have the same aspect with those of *Cryptozoon*; but the intervening thick granular layers, which have a very uniform appearance,

¹ In the slab presented to the Peter Redpath Museum the individual masses are apparently not *in situ*, but more or less broken and piled up together; some of them are six inches in diameter. The laminae of white calcite in several of the specimens I regard as inorganic and filling lacunae or cavities.