

exhibit canals only in places. Elsewhere they may have perhaps been destroyed by decay and pressure. Matthew regards these forms as fossils; and if so, they are undoubtedly allied to *Cryptozoon*, if not properly belonging to the genus. They are in any case the oldest known forms referable to this type. In other beds of the same age fragments of *Eozoon* showing the canal systems have been found, and also needles supposed to be spicules of sponges, and carbonaceous films and fibres which may be of vegetable origin.

III. GENERAL REMARKS ON CRYPTOZOON AND ARCHEOZOON.

If we endeavour in imagination to restore these curious organisms, the task is a very difficult one. They no doubt grew on the sea bottom, and must have had great powers of assimilation and increase in bulk. Still, it must be borne in mind that they were largely made up of inorganic particles collected from the mud and fine sand in process of deposition. The amount of actual organic matter in the hard parts even of large specimens is not very great, and the soft living material, if they were animal, must have been confined to the canals and to the exterior surfaces.

As the only marine animals known to accumulate foreign matter in this manner are the Protozoa of the Rhizopod type, one naturally turns to them for analogies, and perhaps species of the genus *Loftusia* most nearly resemble them in general arrangement. But this type is, I believe, not known lower than the Lower Carboniferous; *L. Columbiana*, A. M. Dawson, found with the genus *Fusulina* in rocks of that age in British Columbia, being the oldest known species.¹ I am not aware that any of the *Stromatopora*, properly so called, as nearly resemble *Cryptozoon*, unless my genus *Megastroma* from the Carboniferous of Nova Scotia is referable to that group.

- Journal London Geol. Survey, Vol. 35, p. 69, et seqr.