Supplementary Note to Article I.

(23 December, 1890.)

The writer has lately had opportunity to make a preliminary examination of the minute features of the fossil from Green Head, described in the above article, and finds it to be a protozoon, allied more closely to Cryptozoon than Eozoon. The microscopic characters are most easily recognized in the earthy (as distinguished from the calcareous) layers, and consists of minute, branching canals. Under a one-inch objective the smaller canals have the appearance of minute threads, which run sometimes for a distance of two millimetres without branching. The larger canals branch more frequently and are more sinuous. The canals cross and anastomose with each other; they run chiefly at right angles to the axis of the fossil, and appear to branch most in going outward from the centre. More rarely they ascend from the earthy to the calcareous layer, branching upward.

The organization of this protozoan was evidently quite different from Eozoon, where the canals belong to the supplemental or calcareous skeleton; in this species they are rare in the calcareous, but abundant in the earthy layers, and are chiefly horizontal, while in Eozoon they are represented as mostly vertical. I have discovered no trace of the tubulated layer of Eozoon in the Acadian fossil.

Prof. Hall's description of the canals of Cryptozoon is very brief; they are said to run irregularly in all directions, and his fossil may have a closer relation to ours than this brief description would indicate. Still the mode of growth of Cryptozoon is so radically different, that it can hardly be of the same genus. I would propose, therefore, for the Acadian fossil the name of *Archæozoon Acadiense*, with the following macroscopic characters:

Animal growing in closely crowded colonies and forming irregularly cylindrical calcareous columns. The columns are built up of alternating layers of calcareous and earthy (silicate) matter, the calcareous layers being usually thicker towards the outside of the column, and sometimes failing to cover the whole surface. The layers are more or less vaulted, having usually the form of an inverted saucer, though often taking the shape of a bluntly pointed cone; and sometimes they are nearly or quite flat. There is often a space between the columns, which appears to have been filled up by a later, irregular growth.