

I confess that in the intervening time I have seen no good reason to induce me to doubt the essential validity of the work embodied in this paper of 1865, or to modify to any considerable extent the conclusions therein stated. On the other hand, many new and confirmatory facts have been disclosed, and after careful and, I trust, candid study of the objections raised, down to those which have recently appeared in the Dublin Transactions, I believe that they largely depend on the want of knowledge of the character of the Grenville formation, and on misapprehension as to the form and structure of Eozoön and its mode of occurrence.

It is true that in those members of the Laurentian system of Logan which are below and above the Grenville Series, later observations have not only failed to detect fossils, but have shown valid reasons adverse to the probability of their occurrence, at least in the portions of those formations hitherto open to our study.<sup>1</sup>

The lowest Laurentian gneiss of Logan (Trembling Mountain gneiss, Ottawa gneiss, fundamental gneiss), which occupies a vast area in Northern Canada,<sup>2</sup> and is the only part of the system known to many geologists, consists, so far as known, wholly of foliated or massive orthoclase gneiss, with bands of hornblendic schist (amphibolite), and of hornblendo-micaceous schist. While in some places it appears to have a truly bedded structure, especially where different varieties of gneiss, amphibolite, and biotitic schist alternate, in others its foliation is obscure, or seems to have been induced by heat and pressure. Dr. F. D. Adams, who has given much study both to its character on the large scale, and to the microscopic structure of the rocks, in his latest publication on the subject<sup>3</sup> characterizes it as

<sup>1</sup> See *Geological Magazine*, June, 1895.

<sup>2</sup> According to the geological map of Northern Canada prepared by Dr. G. M. Dawson for the Geological Survey, the area of Laurantian rocks exceeds two millions of square miles. Of this, so far as is known the older or fundamental gneiss occupies by far the larger portion.

<sup>3</sup> *Journal of Geology*, Vol. i, No. 4, 1893.