

estimate of the thickness of the Cambrian arrived at in the Selkirks is, however, greater than that elsewhere known.

In a late paper on the stratigraphical position of the *Olenellus* fauna,\* Mr. C. D. Walcott has suggested that the Bow River series of the Canadian Rocky Mountains may be regarded as "Algonkian." He does not, however, appear to have been aware of the fact above alluded to, that the *Olenellus* fauna characterizes both the upper part of this series and the lower part of the Castle Mountain group. With this circumstance in evidence, together with the apparently complete stratigraphical conformity of the two series, the writer cannot but regard it as more in consonance with the conditions, so far as these are known, and therefore as more philosophical to include, for the present at least, the whole of this great conformable mass of rocks, to its base, under the name Cambrian. In Utah and Nevada, where Mr. Walcott's observations on the western Cambrian have chiefly been made, it seems that the beds classed as "Algonkian" likewise in general conformably underlie those in which the *Olenellus* fauna is known, the conditions being apparently in most cases similar to those here described. On the propriety of the use of the new term in regions with which he is not personally familiar the writer wishes to offer no opinion, but he may take the opportunity of stating that he has met with no rocks in Canada to which its application can at present be considered appropriate, either in the interest of precision in the expression of facts already ascertained, or because of the discovery of heretofore unrecognized relations as between the older formations.

So far as could be definitely ascertained in the course of the rather hasty examination upon which this paper is based, the lowest beds of the Cambrian in the Selkirks (seen not far east of Albert Cañon station) are in angular conformity to the Archean rocks (seen to the west of the same station). The actual junction, however, remains to be studied, as there is here a gap in the section on the line of railway. In the meantime it may be stated that, notwithstanding the appearance of conformity, there is reason to believe that a great break in time is here passed over; for, although coarse, glittering micaceous schists are found in some parts of the Cambrian, the rocks of the lower series differ markedly even from these in their completely crystalline character. The essential diversity in age of the two series is further shown by the circumstance that the highest rocks of the Archean here met with do not include the notably silicious beds, the calcareous gneisses and the marbles which characterize the upper parts of this system as exposed on Kootanie lake and near Shuswap lake. It is also found that the very numerous granitic veins which everywhere cut the Archean rocks do not enter the overlying Cambrian strata, while a large quantity of pale-pur-

\* Am. Journ. Sci., 2nd ser., vol. XXXVIII, 1889 p. 32.