

River series of the Rocky Mountains are paralleled by similar conglomerates which abound in the upper series of the Selkirks. No unconformity has been observed between the upper and the lower masses of strata in either place.

Though in the Selkirk section the lower of the two great series which have been described resembles the Nisconlith of the interior plateau so closely as to warrant extending the same name to it, the fact that the overlying member of the section differs considerably from the Adams Lake series of the interior plateau, while on the other side it probably represents not only the whole Castle Mountain group but also the upper part of the Bow River series of the Rocky Mountains, renders necessary the application to it of a provisional distinctive name. It is therefore proposed to refer to this rock-mass as the *Selkirk Series*.

General Relations of the Cambrian.—Regarded as a whole, we find reason to believe that the Selkirk section exhibits a great Cambrian formation which (by analogy with the Rocky Mountains) includes the lower part of the Cambro-Silurian and reaches down from it to and far beneath a horizon at which the *Olenellus* or lower Cambrian fauna has been found, with an aggregate thickness of about 40,000 feet.

The comparatively pure limestones of which the Cambrian of the eastern part of the Rocky Mountains is composed are replaced in the western part of that range by rocks largely clastic in origin. This change in lithological character appears to continue and to become still more marked and to be accompanied by increasing thickness in the Selkirk range. Much of the clastic material is silicious, and the introduction of an increased proportion of such material may be explained by considering it as a result of approach to the shore line of Archean rocks on the west. While the principal development of contemporaneous volcanic products, whether in the Paleozoic, Mesozoic or Tertiary, is confined to a region west of the local Archean axis, the writer is inclined to believe that a portion of the remarkable difference found to occur in the western extension of the Cambrian may be due to the inclusion in its rocks, on this side, of volcanic ash deposits or other fine-grained volcanic materials, of which the composition was such as to favor the subsequent production of sericitic or sericite-like schists.

Speaking generally, the great Cambrian formation of the Rocky Mountain and Selkirk ranges shows many points of resemblance to the Cambrian and so-called "Algonkian" rocks of Utah and Nevada, the resemblance being particularly close in some respects to the series shown in the well-known Wasatch section, in which more or less distinctly micaceous schists are also found. It is, further, not at all unlike the Cambrian of Wales, which, though the organic remains are chiefly confined to some upper beds, has a thickness of 25,000 feet and is believed to exceed this in Shropshire.* The provisional

* Text Book of Geology; Geikie, 2nd edition, 1885, p. 651.