

The Selkirk Series.—Between the foregoing series and the next overlying mass of beds in the Selkirk section no distinct line of division, even of a lithological character, has been observed, there being apparently, on the contrary, a considerable thickness of passage beds, in which the dark schists of the lower series alternate with gray quartzites and gray glossy schists characteristic of the upper series. The estimated thickness of this overlying series is 25,000 feet; and of its rocks the higher central peaks of this part of the range, comprising mounts Sir Donald, Macdonald, Tupper, Hermit, Cheops, Ross peak and others, appear to be wholly composed. Lithologically, it consists of a great volume of gray schists and gray quartzites, which are occasionally somewhat dolomitic. The quartzites probably preponderate, and vary in color from nearly white to gray and greenish-gray, being seldom dark in tint. They often, however, weather to pale brownish colors and pass into coarse grits and fine-grained conglomerates; and these grits and conglomerates have become more or less schistose in structure as a result of pressure, which has also led to the development in them of much fine silvery mica. The schists vary in color from pale neutral-gray to greenish-gray, and from dull to silvery and lustrous, being in many cases apparently true sericite-schists. They are sometimes wrinkled and contorted, particularly on the east side of the main synclinal, where also they occasionally become coarsely micaceous. To the east of this main synclinal and beyond the great fault shown in the diagrammatic section (p. 174) they are more crushed and altered and more highly micaceous than elsewhere, probably as a result of the dynamic conditions to which they have been subjected in this region.

The rocks of this great series appear to represent the Adams Lake series to the west, while they undoubtedly correspond, at least in a general way, to the Castle Mountain group of the Rocky Mountain section on the east, for which group Mr. McConnell ascertained a minimum thickness of 7,700 feet, but found reason to believe that its total volume in the western part of the range approached 10,000 feet.

It will be understood from what has already been said that the line indicated between this and the underlying series in the Selkirks is based entirely on general lithological differences, while there is every reason to believe that a plane of division drawn to correspond with that between the Castle Mountain and Bow River series in the Rocky Mountains would lie several thousand feet above the recognized summit of the Nisconlith series in the Selkirks. In the Rocky Mountains, the lower Cambrian (*Olenellus*) fauna is known to be common to the lower part of the Castle Mountain and upper part of the Bow River series;* the separation being there made at the base of the distinctly calcareous upper part of the Cambrian, while certain rather characteristic quartz-conglomerates observed in the upper part of the Bow

* This fauna is known to characterize several thousand feet of the Castle Mountain series, and has been found as well about 3,000 feet down in the upper part of the Bow River series.