

developed on the eastern slopes of the range at this place, it was supposed that the beds above alluded to might represent them in a more altered state. From the knowledge now gained of the Cambrian in the southern part of the mountains it is not improbable that they may eventually be relegated to this systems.

As before observed, the geological structure of the Gold Ranges, or second mountain axis, is little known. Cambrian rocks like those of the Rocky Mountains characterize its eastern portion near the 49th parallel, while its western portion is largely composed of highly crystalline rocks, including gneiss, and intrusions of a granitic character are abundant. These are complicated, where they have been observed, by the occurrence of areas of much altered rocks resembling those of the interior plateau region, next to the west. Among these is a series of dark slates or schists which are the auriferous rocks in the Cariboo district and elsewhere. The age of these has not been determined, but there is reason to suppose that a portion at least are Triassic.

The district coloured as Archæan on the accompanying map, while therefore probably in large part composed of rocks of this period, is much more heterogeneous in character than can be indicated with our present information. The thickness of the crystalline rocks displayed on Shuswap Lake, has been estimated at about 32,300 feet. An isolated area of gneissic rocks doubtless belonging to a contraction of the main axis, as shown on the map, occurs at Carp Lake, west of McLeod Lake.

The Carboniferous rocks of the interior plateau region are very varied in lithological character. They belong for the most part to the upper and lower Cache Creek groups of the original classification, and may be said as a whole to consist of massive limestone and compact or shaly quartzites. They also include, however, a great proportion of diorites or diabases, felspathic rocks and agglomerates, and some serpentine. The last named material occurs in association with the contemporaneous volcanic materials, and doubtless represents the alteration product of olivine rocks. It is in beds of considerable thickness, and wide-spread, and is of interest as being of a period so recent as the Carboniferous. The limestones are not unfrequently converted to coarse-grained marbles, and together with the quartzites, appear in greatest force on the south-western side of the area they occupy. They have now been traced, maintaining their character pretty uniformly throughout, from the 49th to the 53rd parallel. Schistose or shaly argillite rocks, which may represent those folded with the Gold Range series, also occur, and a portion of these probably belongs to the overlying Triassic or Jurassic division.