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river to a depth of nearly 3,000 feet, and it appears to persist to still greater depth. All the members of the Mt. Stevens group suffered prolonged dynamic metamorphism, were much disturbed, broken, contorted, and plicated, and were afterwards subjected to long periods of erosion, concerning which relatively little is known. They are thought to be, in all probability, of Pre-Cambrian age.

More recent than the members of the Mt. Stevens group are certain pyroxenites with which are probably associated peridotites and related rocks. Outcrops of the pyroxenites were seen only in one small area situated on the southern portion of Tally-Ho mountain, and at this point they cut the members of the Mt. Stevens group. No other definite information was obtained in the district concerning the age of these rocks, but from their lithological similarity to rocks in other portions of Yukon and in northern British Columbia, they are thought to be probably of about Devonian age. In the writer's former report on this district, these rocks were included in the Perkins group, a name the use of which it is now considered advisable to discontinue.

At a few points, mainly along the west face of Needle mountain, and on Idaho hill, small isolated masses of limestone occur, which rarely exceed 100 feet in thickness, and are merely detached blocks that have been carried upward by igneous masses mainly by the Mesozoic andesitic rocks or by the Coast Range intrusives. On the south face of Mt. Bush a fairly persistent bed of limestone, apparently about 6 feet in thickness, also occurs underlying the coal-bearing conglomerates. The isolated limestone masses, as well possibly as the bed on Mt. Bush, are thought to be probably of Carboniferous age. None of this limestone, however, is of any particular areal importance.

In Mesozoic times a considerable thickness of arenaceous and argillaceous sediments was deposited in this portion of Yukon. In Wheaton district these have been for the greater part removed by erosion, but in the northeast corner of the area they are in part still preserved, and have there an aggregate thickness of 5,000 to 6,000 feet. These sediments are divisible into two groups or formations—the Laberge series, and a conglomerate series which appears to correspond to the Kootenay. The Laberge beds consist mainly of argillites, metargillites, shales, and sandstones, with also some arkoses, greywackes, conglomerates, and breccias. A few indefinite or poorly preserved invertebrate fossil remains have been found in these beds, which have been considered to be of either Lower Cretaceous or Jurassic age. The conglomerate series which in places has a total thickness exceeding 1,000 feet, appears to underlie the Laberge beds, but of this no absolute proof could be obtained, owing to the greatly disturbed condition of these sediments. The conglomerate formation consists prevailing of a fine to medium textured, dark, cherty conglomerate, with also some sandstones, shales, and seams of coal. Fossil plants were collected from these beds during the past summer, which have been determined by Dr. F. H. Knowlton of the United States Geological Survey, to be of Jurassic age. Dr. Knowlton also states that some of the species have been found in the Kootenay or at least have been reported from that formation. Since, therefore, these beds contain coal seams, and are lithologically very similar to the Kootenay members farther south, they would seem in all probability, to belong to that formation.

More recent than these sediments, there occurs an important group of volcanic rocks including mainly andesites, diabases, basalts, and related volcanics, with their associated tuffs and breccias, which have extensively invaded the older rocks of the district. This volcanic group appears to represent the same period of volcanic activity as the "Older Volcanics"¹ of Upper White River district, and other portions of Yukon and Alaska.

¹ Cairnes, D. D., "Upper White River district, Yukon"; Geol. Surv., Can., Memoir 50, 1915, pp. 87-93.