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**GLACIAL FEATURES  
OF THE LLOYD GEORGE MOUNTAINS,  
BRITISH COLUMBIA**

by

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The Lloyd George Mountains, situated in approx. N. lat. 58, W. long. 125, and previously unexplored, were investigated during the summer of 1947 by an Anglo-Canadian-American airborne expedition, which was sponsored by Mr. F.S. Smythe. Flying some 400 km. north from Fort St. James to a glacier-fed lake (Haworth Lake) at an altitude of 1160 m., the latter was used as a base to explore the range on foot from the southward. The range is a part of the Rocky Mountains proper, lying east of the Rocky Mountains Trench, and it is carved out of a great thickness of Palaeozoic limestones, which display tilted faultblock structure.

The dominating physiographic feature, from which rise the culminating peaks at c. 3000 m, all of which were ascended, is the George Lloyd Icefield, and its main névé (altitude 2500 m) covers some 130 sq. km; but with dependent glaciers its total extent must be about 260 sq. km. These outlet glaciers descend often by steep ice-falls to deep valleys lying at 1200 m, and they show evidence of slow recession from former terminal moraines not more than 1 km. distant.

The present summer snow-line lies at approx. 2400 m, and a rich alpine flora extends from heavily forested valleys to an upper limit of at least 2150 m.

A particularly interesting discovery, lying in a deep canyon-like valley, below the West Peak of the Lloyd George Group, was a large dying glacier entirely blanketed in its own moraine, upon which was a liberal spread of plants and small conifers up to 4.5 m in height. This stagnant glacier, some 4.5 km. in length, appears to have negligible nourishment either from a small cliff glacier at its head, or from avalanche snow from the precipitous rock walls enclosing it. The dead black ice could be seen in occasional exposures in sink-holes and at the borders of the glacier, and it appeared to extend (in depth) as far as the original terminal moraine at an altitude of about 1500 m. As far as is known, this glacier is the only one of its kind in the Canadian Rockies proper, in which the whole body of ice lies dead and stagnating beneath its mantle of moraine.

As to morphological relics of the former Cordilleran ice-sheet, no direct evidence was seen beyond erratic blocks in some valleys, the certain provenance of which was unknown. Farther south in the Rockies transported material has been found on some mountains up to at least 2450m.; but it is generally supposed that there has been land-elevation since the Glacial Epoch of over 200 m. The high peaks of the Lloyd George Mountains, and of the contiguous ranges, have, however, in many instances long stood above an old accordant summit level, and the glacial relics now seen are those of erosion and destruction.

The contiguous ranges to the north-west, dominated by Mount Roosevelt, Churchill Peak, etc. of c. 3000 m., which were examined from the air, showed a maturely dissected alpine topography with valley glaciers in some cases up to 6 or 7 km. in length.