

# Fire, Ice, and Other Forces

The Highway 20 landscape provides a glimpse of tremendous geological forces at work over millions of years. During the last Ice Age 12,000 years ago, the floor of the Bella Coola Valley was beneath ice 2 km (more than a mile) thick: ice slowly sliding, grinding around the highest mountain peaks, with a pressure crushing everything in its path as it inched seaward along a fault line through the rugged Coast Mountains. Likewise, ice spread eastward across the Chilcotin Plateau, levelling the land and littering the landscape with volcanic rocks of a much older origin.



Tectonic action on this edge of North America has been lifting the Coast Mountains for two billion years. More than 11 million years ago, it fractured the earth's crust, resulting in volcanic eruptions and exposing the granite now visible, bringing with it pockets of sedimentary rock bearing marine fossils embedded in the sea floor millions of years before that.

The Rainbow Range east of Bella Coola provides colourful evidence of these volcanic origins, and nearby Anahim Peak, a volcanic cone rising steeply above the Dean River Plain, was a significant source of obsidian arrowheads and blades for First Nations. Evidence of volcanic action is further seen in the rim rock of the Precipice south of Anahim and most noticeably at Bull Canyon along the Chilko River west of Alexis Creek.

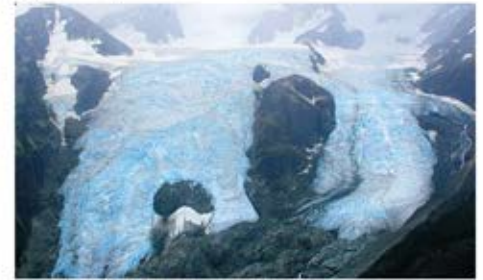


As the North American Plate continued sliding slowly westward at a pace of 2 to 3 cm. (1 inch) per year, the volcanic activity moved eastward, with the most recent being an eruption along the Fraser River a mere 7,000 years ago. Tectonic action also accounts for the major east-west fault line forming the Bella Coola Valley, dividing the jagged mountains to the south from the much older more rounded ranges to the north where the striations carved by the ice are highly visible from the valley floor.

The thunder of avalanches and rock-slides are the audible evidence of continuing geological change. The growth of alluvial fans which raise the Valley tributaries above the forest floor results from this constant erosion. And in recent years, the disappearance of glaciers visible from the Valley floor just decades ago is visual evidence of another force at work: climate change.



Tectonic plates sliding, mountain peaks uplifting, glaciers receding, and rock eroding provide a window into both the past and the future of our tremendously dynamic planet.



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