

Two cañons occur between the mouth and the forks of the stream. The lower one, at a distance of two miles from the Beaver river, is deep, narrow, and about two-thirds of a mile in length, around which a portage of half a mile has to be made. The stream here contracts to a width of twenty feet, and the walls are 150 feet high and almost vertical. The cañon lies at the entrance of the creek to the valley of the Beaver river, and is cut in a bed of dark, massive limestone which strikes at right angles to the course of the stream, or parallel to the Beaver river. It is the result of former glacial conditions, and has been formed since the ice retreated from the valley of the Beaver river. Evidences of a terminal moraine occur at the cañon, and the valley of Braine creek approaches a hanging valley in character.

The second cañon lies four and a half miles above the first. This is caused by an eruptive mass of diabase, which cuts across and obstructs the valley of the creek. Its length is about 300 yards and the drop in it about twenty-five feet.

Immediately above each of these cañons the bed of the stream expands to a width of two-thirds of a mile, and occupies a greater part of the valley. These expansions in the beginning of July were still almost entirely filled with sheets of ice, varying in thickness up to ten feet, and through these the water has cut narrow winding channels. As the course of the stream is continually shifting, the water melts and wears away the ice at the base of the ice sheet, until it overhangs to such an extent that it is not able to support its own weight, and it falls with a splash. The result is that the course of the stream is diverted to the opposite side, where the same action is repeated.

Wherever the ice has melted away from the surface of the gravel, it has left on the pebbles a white deposit of carbonate, originally derived from the limestone bed over which the stream flows. This was first carried in solution in the water, then precipitated by freezing, and finally left as a residue on the melting of the ice. These large ice sheets, which cover several acres and are sometimes a mile in length, are formed in the winter time by the constant overflowing of the water. A great many of the small tributaries of Braine creek are fed from springs in the limestone, and these probably maintain a continuous outflow throughout the year, so that even in the coldest weather there must be a certain quantity of water flowing down the creek, thus accounting for the formation of the ice sheets. These latter attain a considerable thickness, but whether the accumulation of ice during the winter is balanced by a proportionate thawing during the summer was not determined; it is, however, probable that, except for a few isolated and shaded patches, the thawing action of the summer predominates, and all or most of the ice disappears.