

VII.—*On the Formation of Fjords, Cañons, Benches, Prairies, and Intermittent Rivers.* By ROBERT BROWN, F.R.G.S. &c.

Read, March 8, 1869.

I HAVE classed the several physical features enumerated in the title of this communication together, not only because they are all found in the same geographical region, but because many of the causes producing them are mutual, and necessary to a right understanding of all four.

1. FJORDS.—Intersecting the sea-coasts of various portions of the world, more particularly in northern latitudes, are deep, narrow inlets of the sea, surrounded generally by high precipitous cliffs, and varying in length from 2 or 3 miles to 100 or more, variously known as “inlets,” “canals,” “fjords,” and even, on the western shores of Scotland, as “lochs.” The nature of these inlets is everywhere identical, even though existing in widely-distant parts of the world, so much so as to suggest a common origin. On the extreme north-west coast of America they intersect the sea-line of British Columbia to a depth, in some cases, of upwards of a hundred miles, the soundings in them showing a great depth of water, high precipitous walls on either side, and generally with a valley towards the head. On the eastern shore of the opposite Island of Vancouver no such inlets are found, but on the western coast of the same island they are again found in perfection; shewing that, in all probability, Vancouver Island was isolated from the mainland by some throe of Nature prior to the formation of the present “canals” on the British Columbia shore, but that the present inlets on the western shore of Vancouver Island formed, at a former period, the sea-board termination of the mainland, and were dug out under conditions identical with those which subsequently formed the fjords now intersecting the coast.

Jervis Inlet may be taken as the type of nearly all of these inlets here, as well as in other portions of the world. It extends in a northerly direction for more than 40 miles, while its width rarely exceeds $1\frac{1}{2}$ mile, and in some places is even less. It is hemmed in on all sides by mountains of the most rugged and stupendous character, rising from its almost perpendicular shores to a height of from 5000 to 6000 feet. The hardy pine, where no other tree can find soil to sustain life, holds but a feeble and uncertain tenure here; and it is not uncommon to see whole mountain sides denuded by the blasts of winter or the still more certain destruction of the avalanche which accompanies the thaw of summer. Strikingly grand and magnificent, there is a solemnity in the silence and utter desolation which prevails here during the months of winter, not a native, not a