of the anticline does not coincide with the divide, the dip is against the slope : the rocks are far more liable to disintegration, and the glaciers carry a huge load of debris. Ridges running more or less north and south seem to be the worst offenders, *e.g.* the notorious ridge of Mt. Sefton.

Finally, there is an enormous field for new work. Though all the giants have fallen, many of them have only been conquered by one route, and there are still fine alternatives to be elaborated, on perfectly sound lines. In other districts men prepared to endure hardship and discomfort for a sure recompense of imperishable memories will find occupation for a lifetime.

The Mountains of the Whirlpool.*

By J. MONROE THORINGTON, M.D.

'*The first travellers called them the Glittering Mountains, on account of the infinite number of immense rock crystals which, they say, cover their surfaces, and which, when they are not covered with snow, or in bare places, reflect to an immense distance the rays of the sun. The name Rocky Mountains was given them, probably by later travellers, in consequence of the enormous isolated rocks which they offer here and there to view. In fact Millet's rock, and M'Gillivray's above all, appear to me wonders of nature.*'

Gabriel Franchère.

I. *Athabaska Pass and the Voyageurs.*

THE region surrounding the Athabaska Pass has acquired considerable historic interest because of its importance as a trans-Canadian route in the days of the fur trade.[1] For

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* The present paper contains a short history of the Athabaska Pass—its early travellers, the mountains adjacent thereto, the mountaineering, and the writer's expedition of 1924.

Cf. Sketch map, p. 94.

Explanatory notes in quoted documents are in square brackets [ ].

[1] For the relative importance of the Athabaska Pass route compared with other trans-continental routes, consult chapter on 'Routes to British Columbia,' in R. C. Mayne's *Four Years in British Columbia and Vancouver Island* (John Murray. London, 1862), chap. xiii. p. 353.

this reason, perhaps more than any other, descriptions of it are found in the journals of the early voyageurs.

Athabaska Pass, the gateway between the basins of the Athabaska and Columbia Rivers, was crossed by white men in 1811, when the party of David Thompson, of the North-West Company, used it as a route to the Pacific slope, after hostile Piegan Indians had forbidden them the use of Howse Pass.[2] The route had been found by white men before Thompson; at least Alexander Henry[3] speaks of it as 'a route by which a party of Nepisangues [Nipissings] and freemen passed a few years ago.' It is at least certain that the pass and the Canoe River region had been visited earlier by both Iroquois and Nipissing Indians.

Thompson's Narrative.—Crossing westward in January 1811, Thompson writes:[4] '. . . the view now before us was a steep ascent of snow, in all appearances to the height of land between the Atlantic and Pacific Oceans, it was to me a most exhilarating sight, but to my uneducated men a dreadful sight, they had no scientific object in view, their feelings were of the place they were; . . . when night came, we had only wood to make a bottom and on this to lay wherewith to make a small fire, which soon burnt out, and in this exposed situation we passed the rest of a long night without fire, and part of my men had strong feelings of personal insecurity, on our right about one-third of a mile from us lay an enormous glacier, the eastern face of which, quite steep, about two thousand feet in height, was of a clean fine green color, which I much admired, but whatever the appearance, my opinion was, that the whole was not solid ice, but formed on rocks from rills of water frozen in their course; westward of this steep face, we could see the glacier with its patches of snow in a gentle slope for about two miles. . . . My men were not at their ease, yet when night came they admired the brilliancy of the stars, and as one of them said, he thought he could almost touch them with his hand; as usual, when the fire was made I set off to examine the country before

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[2] *Description of and Guide to Jasper Park* (edited by E. Deville, Department of the Interior. Ottawa, 1917), p. 16.

[3] 'New Light on the Early History of the Greater North-West,' *Henry-Thompson Journals*, 1789–1814, Elliott Coues (F. P. Harper. New York, 1897), vol. i. p. 253; vol. ii. p. 652.

[4] *Thompson's Narrative of his Explorations in Western America.* 1784–1812 (The Champlain Society. Toronto, 1916), p. 445 *et seq.*

us, and found we had now to descend the west side of the Mountains : I returned and found part of my men with a Pole of twenty feet in length boring the Snow to find the bottom ; I told them while we had good Snow Shoes it was no matter whether the Snow was ten or one hundred feet deep. On looking into the hole they had bored, I was surprised to see the color of the sides of a beautiful blue ; the surface was of a very light color, but as it descended the color became more deep, and at the lowest point was of a blue, almost black. The altitude of this place above the level of the Ocean, by the point of boiling water is computed to be eleven thousand feet (Sir George Simpson).[5] Many reflections came to my mind : a new world was in a manner before me, and my object was to be at the Pacific Ocean before the month of August, how were we to find the Provisions, and how many Men would remain with me, for they were dispirited, amidst various thoughts I fell asleep on my bed of snow.'

Franchère's Narrative.—Gabriel Franchère was a French-Canadian who had enlisted as a clerk in the Pacific Fur Company, had rounded the Horn in the *Tonquin*, and largely assisted in the establishment of Astor's post at the mouth of the Columbia. In his journal [6] he has recounted the arrival

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[5] While it has been supposed that Thompson later obtained certain of his figures for altitude from Sir George Simpson, there was another gentleman named Simpson who may have been equally responsible for the erroneous figures. At least, Thomas Drummond, Assistant Naturalist to the Second Franklin Expedition, who spent the winter 1825–6 near Jasper House, makes the following statement in his journal : ' The kindness of Lieut. Simpson, R.N., who was at this time surveying the country, gave me the opportunity of ascertaining the latitude of the commencement and termination of the Rocky Mountains Portage. . . . The height of one of the mountains, taken from the commencement of the Portage, Lieut. Simpson reckons at 5900 feet above its apparent base, and he thinks that the altitude of the Rocky Mountains may be stated at about 16,000 feet above the sea.' (See Hooker's *Botanical Miscellany*, vol. i. p. 190.) In none of the literature consulted is there the slightest evidence that David Thompson and Sir George Simpson ever met. David Douglas, however, became acquainted with Sir George Simpson, at Norway House, in 1827.

[6] *Voyage à la côte du Nord-Ouest de l'Amérique Septentrionale* (Montreal, 1820. English translation and edition by J. V. Huntington, *Narrative of a Voyage to the North-West Coast of America*, Gabriel Franchère. Redfield. New York, 1854), pp. 120 and 288.

of Thompson's canoes: '. . . a well-dressed man, who appeared to be the commander, was the first to leap ashore, and addressing us without ceremony, said that his name was David Thompson, and that he was one of the partners of the North-West Company. . . . Mr. Thompson kept a regular journal, and travelled, I thought, more like a geographer than a fur-trader. He was provided with a sextant, chronometer and barometer. . . .' William Henry followed Thompson across the pass later in 1811, bringing supplies. In 1812 Thompson himself returned eastward.

At the onset of the war of 1812, with the selling out of the Astoria post to the British, a number of men, unwilling to continue in service, travelled eastward at various times, crossing the mountains by Athabaska Pass.

In May 1814 Franchère travelled eastward with a brigade of seventy-six men, exclusive of their families. Of the crossing of the pass he writes: '. . . we pursued our journey and entered into the valleys between the mountains, where there lay not less than four or five feet of snow. We were obliged to ford the river ten or a dozen times in the course of the day, sometimes with the water up to our necks. . . . We were obliged to stop every moment to take breath, so stiff was the ascent. Happily it had frozen hard the night before, and the crust of the snow was sufficient to bear us. After two or three hours of incredible exertions and fatigues, we arrived at the *plateau* or summit, and followed the foot-prints of those who had preceded us. This mountain is placed between two others a great deal more elevated, compared with which it is but a hill, and of which, indeed, it is only, as it were, the valley. . . . At last we arrived at a good hard bottom, and a clear space, which our guide said was a little lake frozen over, and here we stopped for the night. This lake, or rather these lakes (for there are two), are situated in the midst of the valley or *cup* of the mountains. On either side are immense glaciers, or ice-bound rocks, on which the rays of the setting sun reflected the most beautiful prismatic colors. One of these peaks was like a fortress of rock; it rose perpendicularly some fifteen or eighteen hundred feet above the level of the lakes, and had the summit covered with ice. Mr. J. Henry, who first discovered the pass, gave this extraordinary rock the name of M'Gillivray's Rock, in honor of one of the partners of the N.W. Company. The lakes themselves are not much over three or four hundred yards in circuit, and not over two hundred yards apart. Canoe river, which, as we have already seen, flows to the west, and falls

into the Columbia, takes its rise in one of them ; while the other gives birth to one of the branches of the *Athabasca*, which runs first eastward, then northward, and which, after its junction with the *Unjighah*, north of the Lake of the Mountains, takes the name of *Slave* river, as far as the lake of that name, and afterward that of *M'Kenzie* river, until it empties into, or is lost in, the Frozen ocean.'

Narrative of Ross Cox.—Returning eastward, in May 1817, with a large party under his charge, Cox,[7] who reached Astoria as clerk on Astor's second ship, the *Beaver*, has left the following description of the pass : ' At one P.M. we arrived at two small lakes, between which we encamped. They are only a few hundred feet each in circumference, and the distance between them does not exceed twenty-five or thirty feet. They lie on the most level part of the height of land, and are situated between an immense cut of the Rocky Mountains. From them two rivers take their rise, which pursue different courses, and fall into separate oceans. . . . The country around our encampment presented the wildest and most terrific appearance of desolation that can be well imagined. The sun shining on a range of stupendous glaciers, threw a chilling brightness over the chaotic mass of rocks, ice, and snow, by which we were surrounded. Close to our encampment one gigantic mountain of conical form towered majestically into the clouds far above the others (this is called M'Gillivray's Rock, in honour of the late Mr. William M'Gillivray, a principal director of the Company), while at intervals the interest of the scene was heightened by the rumblings of the descending *avalanche* ; which, after being detached from its bed of centuries, increased its bulk in its headlong career downwards, until it burst with a frightful crash, more resembling the explosion of a magazine than the dispersion of a mass of snow.

' One of our roughspun unsophisticated Canadians, after gazing upwards for some time in silent wonder, exclaimed with much vehemence, " I'll take my oath, my dear friends, that God Almighty never made such a place ! " '

Narrative of Alexander Ross.—In 1825, four years after the merging of the North-West and Hudson's Bay Companies,

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[7] *Adventures on the Columbia River*, Ross Cox (J. & J. Harper. New York, 1832), p. 246.

Alexander Ross,[8] with the young Governor, George Simpson, crossed the pass, eastward bound. Ross gives us an entertaining picture of the scene: 'Turning around to the east [from Boat Encampment], the view is abruptly checked by the mountains, not in continuous ranges, but heights rising above one another, almost everywhere shrouded in a dark haze, which renders a passage over them extremely doubtful. Yet through the apparently inaccessible barrier the traveller has to make his way. . . . The Governor himself, generally at the head, made the first plunge into the river, and was not the last to get out. His smile encouraged others, and his example checked murmuring. . . . But although we were now on the top of the Grande Côte, or Bell Hill, let not the reader imagine we had reached the highest part of the Rocky Mountains; for we saw heights towering above heights, until their distant summits were lost in the clouds. . . . On the summit of the Grande Côte we found the snow eight feet deep, and there we encamped for the night. . . . Leaving now the Grande Côte we advanced on the morning crust at a quick pace, through a broad level valley, thickly wooded with dwarf pines, for about six miles in an easterly direction, when we reached what is called the great height of land. At this place is a small circular basin of water, twenty yards in diameter, dignified with the name of a lake, out of which flow two small creeks. The one on the west side discharges itself into Portage River; that on the east joins the Athabasca River at a place called the Hole. This elevated pond is further dignified with the name of the "Committee Punch Bowl," in honour of which his Excellency treated us to a bottle of wine, as we had neither time nor convenience to make a bowl of punch, although a glass of it would have been very acceptable. It is a tribute always paid to this place when a nabob of the fur trade passes by.'

Journal of Drummond.—In October 1826 Thomas Drummond, Assistant Naturalist to the Second Franklin Expedition, who had spent the year in the vicinity of Jasper House, made a journey across Athabaska Pass to Boat Encampment and returned. He records[9] that 'at about 15 or 20 miles

[8] *Fur Hunters of the Far West*, Alexander Ross (2 vols. London: Smith, Elder & Co., 1855), vol. ii. p. 189.

[9] 'Sketch of a Journey to the Rocky Mountains and to the Columbia River in North America,' Thomas Drummond, Assistant Naturalist to the Second Land Arctic Exploring Expedition, under the command of Captain Sir John Franklin, R.N.—in Hooker's *Botanical Miscellany*, vol. i. pp. 178–219.

ALEXANDER ROSS.

SIR GEORGE SIMPSON.

above the commencement of the Portage, we left the main branch of the Red Deer River, and followed a lesser stream that here joins it, winding along its banks, and not infrequently scrambling in the bed of it, until we reached a small lake, and the Height of Land. The lake is not more than 200 yards in length, and is called the *Committee's Punch Bowl.* Out of its other extremity flows one of the tributary streams of the Columbia. On reaching the middle, I took a hearty draught, pleasing myself with the thought that some of the water I had tasted might have flowed either into the Frozen or Pacific Oceans.' He adds, almost in afterthought, 'The first glacier I saw was about twenty miles before reaching the lake; but I visited a very large one at ten miles nearer the lake.'

Edward Ermatinger's York Factory Express Journal.—Ermatinger was the son of Lawrence Edward Ermatinger, Assistant Commissary-General, and was born on the island of Elba, off the west coast of Italy, in February 1797. Somewhat of a genius, he attained fluency in the Latin, French, and Italian languages, and became a proficient musician, playing the flute and the violin—talents which were not unuseful in the later times of lonely winters in the trading posts. Being taken to Canada, he served in the employ of the Hudson's Bay Company from 1818 until 1828, eventually settling in St. Thomas, Ontario, where he became merchant, banker, and postmaster.

In his journal, Ermatinger [10] has recorded three crossings of Athabaska Pass: businesslike accounts with but little description of natural surroundings. On the first of these recorded crossings the botanist David Douglas—of whom more will be said—accompanied him.

[1827. East-bound.] 'March — Tuesday, 20th. — Fair weather. The Express boat leaves Vancouver [Fort Vancouver, seven miles north of the present city of Portland, Oregon] at ¼ before 6 o'clock P.M. A second boat accompanies us as far as the Chûtes to assist in carrying over them, and to strengthen the party. Passengers Messrs. McLoughlin, McLeod, Douglas, Pambrun, Annace, and E. Ermatinger.

'Saturday, 28th [April].— . . . Two of our Iroquois who would not have carried snow shoes from the Boat Encampment, had I not insisted upon their having them, now found them very useful and were glad to put them on. A wolverine hovers about our camp. Mr. Douglas wounds him, but he escapes.

[10] 'York Factory Express Journal,' Edward Ermatinger. Reprinted in *Transactions of the Royal Society of Canada*, section ii., 1912, p 67.

'Monday, 30th.— . . . arrive at the foot of the Grand Côte at 8 o'clock. Ascend it for 2 miles and encamp at 11 A.M. Experienced some difficulty in finding the proper track.

'Tuesday, 1st.—Fine weather. Start at ½ past 4 A.M. Snow not less than between 4 and 5 feet deep. Continue to ascend the Grand Côte by very short stages for about 2 miles till we meet the Rocky Hills on the right at 8 A.M., when we incline to the left a little and having journeyed I should say between 3 and 4 miles encamp nearly a mile on this side of the height of land at noon. We experienced again much difficulty in finding and keeping our road. In fact we could not ascend 50 yards before the people were wandering in every direction in search of the track. What few marks have been made to point out the way I conceive are concealed by the depth of snow. Kill a partridge.

'Wednesday, 2nd.—Fine weather. Resume our journey at 3 A.M. in order to avail ourselves of the crust on the snow. Course north-east. Travel at a good pace for about 17 miles and stop at 11 A.M. to breakfast and give the people a rest during the heat of the day.

[1827. West-bound.] 'October 7th. — Fine weather. Started at 8 A.M. and encamped near the height of land, having passed thro' some very bad swamps and mires during the day. View of the mountains very grand.

'October 8th.— . . . the road was never better, we had not the least snow on the way. Apisasis killed a young grizzly bear at the height of land, and one of the men killed a marten on the Big Hill.

[1828. East-bound.] 'Friday, 2nd May.— . . . to the foot of the Grand Côte where we encamp at 2 P.M. We met with a few patches of snow to-day, but we have not yet had occasion to put on snow shoes.

'Saturday, 3rd.—Fine weather. Start at ½ past 4 A.M. Found little snow till we get half-way up the Hill. We are then obliged to put on snow shoes—take breakfast at the top of the Hill between 9 and 10—resume at noon and proceed to within 4 miles of the Height of Land and encamp at ½ past 3 P.M.

'Sunday, 4th.—Rained and snowed during the whole of last night—day fine but cold. Start at half-past 4 A.M. Pass the height of land at 6. Proceed on deep snow near to Campement de fusil—take breakfast. Afterwards snow diminishes fast.'

A journey across Athabaska Pass was, in those days, a serious undertaking: fur traders could not be expected to keep

DAVID DOUGLASS.

extensive journals, still less to waste much time in admiration of scenic beauty. But what a pity Ermatinger could not have told us a little about David Douglas and his scramblings at the pass summit !

Douglas' Journal.—In the spring of 1827, with Ermatinger's York Factory brigade, Douglas came eastward across the pass. The young Scots botanist writes :[11] ' Through 300 yards of gradually rising open low pine wood we passed, and about the same distance of open ground took us to the basin of this mighty river, a small circular lake 20 yards in diameter, in the centre of the valley, with *a small outlet at the west end—namely the Columbia ; and a small outlet at the east end—namely one of the branches of the Athabasca which must be considered one of the tributaries of the McKenzie River*. This is not the only fact of two opposite streams flowing from the same lake.

' This, " the Committee Punchbowl," is considered the half-way house. We were glad the more laborious and arduous part of the journey was done. The little stream Athabasca, over which we conveniently stepped, soon assumed a considerable size. . . .'

Douglas, in his long journal written at the time, and in a shorter journal done at a later time, describes his ascent of a peak close to Athabaska Pass, and the naming of Mts. Brown and Hooker. The over-estimated altitudes, together with the opinions of contemporaneous writers regarding the elevation of the region, will be considered in a further section of this article.

Narrative of De Smet.—In April 1846 the Jesuit Father, Pierre Jean De Smet,[12] *en route* to Oregon Missions, crossed the pass westward : '. . . Not far from our place of encampment, we found a new object of surprise and admiration. An immense mountain of pure ice, 1500 feet high, enclosed between two enormous rocks. So great is the transparency of this beautiful ice, that we can easily distinguish objects in it to the depth of more than six feet. One would say, by its appearance, that in some sudden and extraordinary swell of the river,

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[11] *Douglas' Journal*, 1823–1827. (Royal Horticultural Society. London, 1914), p. 72.

[12] *Oregon Missions and Travel over the Rocky Mountains, in* 1845–46, Father P. J. De Smet (Edward Dunigan. New York, 1847), p. 201.

immense icebergs had been forced between these rocks, and had there piled themselves on one another, so as to form this magnificent glacier. What gives some color of probability to this conjecture is, that on the other side of the glacier, there is a large lake of considerable elevation.[13] From the base of this gigantic iceberg, the river Trou takes its rise. . . . We fell in with the gentlemen of the Hudson Bay Company. . . . The leaders of the company were my old friends, Mr. Ermatinger, of the Honorable Hudson Bay Company, and two distinguished officers of the English army, Captains Ward and Vavasseur, whom I had the honor of entertaining last year at the Great Kalispel lake.'

Warre's Narrative.—In 1845, when there was a possibility of trouble between England and the United States regarding the Oregon boundary, Captain Henry J. Warre,[14] and Lieutenant M. Vavasour, R.E., were sent on a secret mission to seek out routes for troops through the Rocky Mountains. Returning, they left Fort Vancouver on March 26, 1846, travelling *via* Fort Colville to Boat Encampment at the Columbia Loop.

Captain Warre's account of the crossing of Athabaska Pass is brief; but he seems to have been none the less impressed, for he says: 'We had for many days been surrounded by magnificent mountains, and had passed through such a beautiful country, that the effect of this grand and solitary scene (*vide* sketch of the Rocky Mountains, No. 20) was partially destroyed by the sublimity of that which had preceded it. The mountains are about 10,000 feet in height, unequalled in any part of Switzerland for the ruggedness of their peaks and beauty of form, capped and dazzling in their white mantle of snow. . . . On the fourth day we ascended the "Grande Côte" to the height of land on which are situated two small lakes, from whence flow two rivers, the waters of which fall into different oceans—the Columbia into the Pacific, and the Athabasca into the Frozen Ocean. . . . We had, however, scarcely walked 10 miles, when the joyful sound of human voices assured us of more immediate relief, and we soon

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[13] It is quite probable that the Indians of that day knew of Fortress Lake and had visited it.

[14] *Sketches in North America and the Oregon Territory.* Henry James Warre (Dickenson & Co. London, 1849), p. 4. The plates in this very rare book are of unusual interest.

encountered a party of men who had been sent to meet us with provisions, accompanied by Le Père de Smit, a jesuit

Henry L. Warre Del.]

THE ROCKY MOUNTAINS FROM THE COLUMBIA RIVER, LOOKING N.W.
Reduced from an illustration in *Sketches in North America*, by H. J. Warre, London, 1849.

priest from Belgium, and chief of the Roman Catholic missionaries in the Columbia district, who was on his return to that part of Oregon.'

Kane's Narrative.—Following De Smet came the wandering artist, Paul Kane. In November 1846 he wrote [15] as follows: To-day we attained what is called the Height of Land. There is a small lake at this eminence called the Committee's Punch-bowl; this forms the headwaters of the branch of the Columbia River on the west side of the mountains and of the Athabasca on the east side. It is about three-quarters of a mile in circumference, and is remarkable as giving rise to two such mighty rivers; the waters of one emptying into the Pacific Ocean, and the other into the Arctic Sea. We encamped on its margin, with difficulty protecting ourselves from the intense cold. . . . The lake being frozen over to some depth, we walked across it, and shortly after commenced the descent of the Grand Côte, having been seven days continually ascending.'

A year later, in November 1847, he writes of his return journey: 'We started one hour before daybreak to ascend the stupendous Grand Côte, and soon found the snow becoming deeper at every step. One of our horses fell down a declivity of twenty-five to thirty feet with a heavy load on his back, and, strange to say, neither deranged his load nor hurt himself. We soon had him on the track again as well as ever, except that he certainly looked a little *bothered*. The snow now reached up to the horses' sides as we toiled along, and reached the summit just as the sun sank below the horizon; but we could not stop here, as there was no food for the horses. We were therefore obliged to push on past the Committee's Punch Bowl, a lake I have before described.

'It was intensely cold, as might be supposed, in this elevated region. Although the sun shone during the day with intense brilliancy, my long beard became a solid mass of ice.'

Palliser Expedition: Dr. Hector's Narrative.—In February 1859 Dr. Hector,[16] exploring for the Palliser Expedition, had in mind a crossing of Athabaska Pass, but abandoned the idea: 'Tekarra's foot is so much inflamed with his hunting exertions that he will not be able to guide us up the valley to the Committee's Punch Bowl, so I changed my plan and followed up

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[15] *Wanderings of an Artist among the Indians of North America*, Paul Kane (Longmans, Brown, Green, Longmans & Roberts. London, 1859), pp. 160 and 340.

[16] *The Journals, Detailed Reports, and Observations relative to the Exploration by Captain Palliser* (Eyre & Spottiswoode. London, 1863), p. 128.

the main stream of the Athabasca instead. At noon we reached the mouth of Whirlpool River, which is the stream that descends from the Committee's Punch Bowl, and I found the latitude 52° 46′ 54″. Leaving the rest to follow up the Athabasca, I ascended a mountain opposite to the valley of Whirlpool River, and had a fine view up it towards the boat encampment. Having been directed by Tekarra, I easily recognised Mount Brown and Mount Hooker, which are much like the mountains toward the source of the North Saskatchewan. They seemed distant 30 miles to the S. by W.'

Narrative of Moberly.—During the summer of 1872 Walter Moberly, having been ordered to discontinue his survey for the Canadian Pacific Railroad through Howse Pass, came northward across Athabaska Pass. On the Columbia River, he says,[17] 'we ran many rapids and portaged others, then came to a Lake which I named "Kinbaskit," much to the old chief's delight.' Moberly did not go all the way to Boat Encampment, but informs us that, on August 27, 'we resumed our journey and crossed a high ridge, from which the view was magnificent, part of the Selkirk Mountains, where we could see hundreds of snow-capped peaks. . . . We waded the [Wood] river many times, and camped at the foot of Mount Brown, opposite the old camping ground of the H. B. Company. . . . We now began the steep ascent by the old H. B. Company's trail to reach the depression between Mounts Brown and Hooker—the "Athabasca Pass"—gaining an elevated valley, with grassy glades and groves of firs. Where the walking was fair we made good headway, and camped a short distance north of the celebrated "Committee's Punch Bowl." Following along, and gradually ascending Mount Brown, we saw a grizzly bear above us, and shot a ptarmigan, and then coming on a well-beaten cariboo trail, reached the top of a ridge, with a high conical peak immediately on our right, and a mass of hard perpetual snow on the north side of the ridge, down which we went with difficulty, seeing the fresh tracks of four cariboo. There was a fine view from the top of this ridge, the mountains in the north forming

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[17] *The Rocks and Rivers of British Columbia*, Walter Moberly (H. Blacklock & Co. London, 1885), pp. 52, 81. For a condensed, parallel account, see *Blazing the Trail through the Rockies: The story of Walter Moberly and his share in the making of Vancouver*, Noel Robinson (Vancouver News Advertiser. Reprint, 1914), p. 79.

a magnificent amphitheatre, some five miles in width, and the innumerable torrents, dashing down the rocks, with white foam like silver spray, the thick groves of dark fir, the grassy flats and many small lakes, or ponds, rendering it enchanting.

'From what I saw of it, my impression is that there is a pass through from the Canoe to the Whirlpool River, which at some future day may be utilised, but I cannot be quite certain of the pass, as my examination was very limited, and, therefore, imperfect. . . . The stream I followed is the true source of the Fraser River, and I had thus been within a comparatively short time at the sources of the two large rivers of the Pacific Coast, the Columbia and the Fraser.'

Moberly later returned to Kinbasket Lake and assisted in getting the remainder of his outfit to the site of Henry House, where they wintered. His description[18] indicates the difficulties under which the early survey parties laboured. 'On the evening of the 1st October the trail was passable, though not finished, as a great deal of corduroying was needed to the foot of Mount Hooker, a distance of about twenty miles from the Columbia, and nearly all the pack animals on the way between the Boat Encampment and the above point. On the 2nd I started back for Party T, from the foot of the mountain, taking Messrs. Green and Hall a part of the way up Mount Hooker to show them where to open the trail and get the supplies to. My endeavor now was to get the supplies all to the height of land, the ascent to which in one place is at an angle of about seventy-five degrees, so that should I not be able to pack them all the way to the Athabasca depot, before being stopped by the snow, they would be over the height of land, and there would be a descending grade along the Whirlpool and Athabasca rivers over which to convey them on dog sleds.'

Thus we have followed the stories of the voyageurs over a period of sixty years—forming an historic tradition excelled by no other area of the Canadian Alps. The narratives are many, scarcely two in exact agreement as to detail, exaggerated as were the tales of the early continental alpine wanderers, and all possessing a certain charm in their naïve description and in the evident appeal of natural phenomena to men

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[18] *Canadian Pacific Railroad. Report of Progress on the Exploration and Surveys, up to January* 1874, Walter Moberly. Appendix G, pp. 162–73.

unaccustomed in mountain travel. Athabaska Pass was one of the first trans-continental gateways; through it passed pioneers to whom, in a measure, we owe the foundation of civilisation in North America. Fortunate are we that something of their story has been preserved. How strange that their difficult 'height of land' should become an alpine playground!

II. *Nineteenth-Century Speculation in regard to Altitude at Athabaska Pass.*

Dr. Hector, of the Palliser Expedition, has summed up the traffic across the Athabaska Pass, writing: 'As late as 1853 there was a communication at two seasons by this post [Jasper House] with the Columbia district. In March, when the snow had acquired a crust, the express, with letters and accounts, started from Edmonton by the route I had just followed, and continued on to the boat encampment, to which place, by the time they arrived, owing to the earlier spring on the west side of the mountain, the brigade of boats had ascended from Vancouver. The mail from the western department was then exchanged, and taken back to Edmonton, and thence to Norway House, along with the Jasper furs.

'The second time of communication was in the autumn, after the Saskatchewan brigade returned to Edmonton in the beginning of September, upon which the officers and men bound for the western department, taking with them the subsidy of otter skins that the Company annually paid the Russian Government for the rent of the N.W. coast, crossed the portage to Fort Assiniboine, then ascended the Athabasca in boats to Jasper House, with pack-horses, reached the boat encampment, and then descended the Columbia to Vancouver, where they arrived generally about the 1st of November. The journey from York Factory or Hudson's Bay to the Pacific coast by this route generally occupied three and a half months, and involved an amount of hardship and toil that cannot be appreciated by those who have not seen boat travelling in these territories.'

Nearly every individual who has left a descriptive record of the Athabaska Pass region seems to have indulged in speculation as to the altitude of the nearby mountains. Thus we find Thompson stating:[19] 'To ascertain the height of the

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[19] *Thompson's Narrative of his Explorations in Western America*, 1784–1812, pp. 402–3. See also Note 5.

Rocky Mountains above the level of the Ocean had long occupied my attention, but without any satisfaction to myself. . . . At the greatest elevation of the passage across the Mountains by the Athabasca River, the point by boiling water gave 11,000 feet, and the peaks of the Mountains are full 7000 feet above this passage, and the general height may be fairly taken at 18,000 feet above the Pacific Ocean.'

Washington Irving,[20] in his book 'Astoria,' has preserved a letter which confirms Thompson's idea of great elevation at the pass.

'Columbia College, New York,
'*February* 23, 1836.

DEAR SIR,—In compliance with your request, I have to communicate some facts in relation to the heights of the Rocky Mountains and the sources whence I obtained the information.

'In conversation with Simon M'Gillivray, Esq., a partner of the North-West Company, he stated to me his impression, that the mountains in the vicinity of the route pursued by the traders of that company, were nearly as high as the Himalayas. He had himself crossed by this route, seen the snowy summits of the peaks and experienced a degree of cold which required a spirit thermometer to indicate it. His authority for the estimation of the heights was a gentleman who had been employed for several years as surveyor of that company. This conversation occurred about sixteen years since.

'A year or two afterwards, I had the pleasure of dining, at Major Delafield's, with Mr. Thompson, the gentleman referred to by Mr. M'Gillivray. I inquired of him in relation to the circumstances mentioned by Mr. M'Gillivray, and he stated, that, by joint means of the barometer and trigonometric measurements, he had discovered the height of one of the mountains to be about twenty-five thousand feet, and there were others of nearly the same height in the vicinity.

'I am, dear sir,
'Yours truly,
'JAMES RENWICK.

'To W. Irving, Esq.'

It may be calculated from this that Thompson made his statement to Renwick about 1822; and, if the material be reliable, it would indicate that Thompson was responsible for

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[20] *Astoria*, Washington Irving (Philadelphia, 1836), vol. ii. p. 276. Renwick was at this time Professor of Chemistry and Physics at Columbia.

the exaggerated altitudes. At least this dating of his statement precedes the crossing of Athabaska Pass by either Sir George Simpson or David Douglas.

Franchère,[21] more conservative, comes nearer the truth: 'The geographer Pinkerton is assuredly mistaken, when he gives these mountains an elevation of but three thousand feet above the level of the sea; from my own observations I would not hesitate to give them six thousand; we attained, in crossing them, an elevation probably of fifteen hundred feet above the valleys, and were not, perhaps, nearer than half way of their total height, while the valleys themselves must be considerably elevated above the level of the Pacific, considering the prodigious number of rapids and falls which are met with in the Columbia, from the first falls to Canoe river.'

Ross Cox[22] goes to the other extreme: 'The height of the Rocky Mountains varies considerably. The table land which we crossed I should take to be about 11,000 feet above the level of the sea. From the immense number of rapids we had to pass in ascending the Columbia, and its precipitous bed above the lakes, I consider that at their base the mountains cannot be much under 8000 feet above the level of the Pacific; and from the valley of Canoe River to the level parts of the heights of land cannot be less than 3000 feet, but the actual altitude of their highest summits must be much greater. They are covered with eternal ice and snow, and will probably be forever inaccessible to man.'

Thus we see that by the time David Douglas crossed the pass, in 1827, there was already a well-established tradition as to the exalted heights supposed to flank the Height of Land. Douglas saw the mountains under the snow conditions preceding spring, and this may also have added to his perplexity. Too much blame, therefore, must not be placed upon Douglas as the originator of the over-estimated figures of altitude. At this late date it is probably fruitless to discuss the problem —all that is to be said, has been said; and not to the satisfaction of everyone—and we had best be content to retain Douglas' accounts of his doings as a charming historic story, and not inquire too earnestly into the facts of the case.

Douglas wrote two journals: a lengthy one, at the time;

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[21] *Voyage à la Côte du Nord-Ouest de l'Amérique Septentrionale*, p. 299.

[22] *Adventures on the Columbia River*, p. 255.

and a shorter, done apparently after his return to England. From the shorter journal we quote:[23] '. . . we made a short stoppage to rest ourselves, and then descended the eastern side of the Big Hill to a small round open piece of ground, through which flowed the small or east feeder of the Columbia and the same stream that we left yesterday at the western base of the Big Hill. . . . Near this point we put up at midday. . . . After breakfast, about one o'clock, being well refreshed, I set out with the view of ascending what appeared to be the highest peak on the north or left-hand side. The height from its apparent base exceeds 6000 feet, 17,000 feet above the level of the sea.[24] . . . The view from the summit is of that cast too awful to afford pleasure—nothing as far as the eye can reach in every direction but mountains towering above each other, rugged beyond all description; the dazzling reflection from the snow, and the rainbow-like tints of its shattered fragments, together with the enormous icicles suspended from the perpendicular rocks; the majestic but terrible avalanche hurtling down from the southerly exposed rocks producing a crash, and groans through the distant valleys, only equalled by an earthquake. Such gives us a sense of the stupendous and wondrous works of the Almighty. This peak, the highest yet known in the northern continent of America, I felt a sincere pleasure in naming MOUNT BROWN, in honour of R. Brown, Esq., the illustrious botanist, no less distinguished by the amiable qualities of his refined mind. A little to the south is one nearly of the same height, rising more into a sharp point, which I named MOUNT HOOKER, in honour

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[23] *Douglas' Journal*, 1823–1827, p. 71.

[24] This should be compared with the version in the *Companion to the Botanical Magazine*, William Hooker, 1836, vol. ii. p. 136. The copyist has made remarkable changes: 'Being well rested by one o'clock, I set out with the view of ascending what seemed to be the highest peak on the North. Its height does not appear to be less than 16,000 or 17,000 feet above the sea. After passing over the lower ridge, I came to about 1200 feet of by far the most difficult and fatiguing walking I have ever experienced, and the utmost care was required to tread safely over the crust of snow.'

The map contained in vol. i. is the first on which Mounts Hooker and Brown are shown. The mountains are indicated as flanking the pass on either side. Drummond's route is marked in red, Parry's in blue, and Douglas's in green. The date of publication is October 1829. Letters from Douglas to Hooker show that Douglas superintended this map. (Cf. *Canadian Alpine Journal*, ix. 49–53.)

of my early patron the enlightened and learned Professor of Botany in the University of Glasgow, Dr. Hooker. . . .'

In the longer journal, evidently written on the trail, Douglas shows that his thoughts occasionally wandered far from the work at hand; for he says:[25] 'Dreamed last night of being in Regent Street, London! Yet far distant. Progress nine miles.' And the following day, with more accuracy than is observed in the shorter journal: '. . . After breakfast at one o'clock, being as I conceive on the highest part of the route, I became desirous of ascending one of the peaks, and accordingly I set out alone on snow-shoes to that on the left hand or west side, being to all appearance the highest. The labour of ascending the lower part, which is covered with pines, is great beyond description, sinking on many occasions to the middle. Half-way up vegetation ceases entirely, not so much as a vestige of moss or lichen on the stones. Here I found it less laborious as I walked on the hard crust. One-third from the summit it becomes a mountain of pure ice, sealed over by Nature's hand as a momentous work of Nature's God. The height from its base may be about 5500 feet: timber 2750 feet; a few mosses and lichen 500 more; 1000 feet of perpetual snow; the remainder, towards the top 1250, as I have said, glacier with a thin covering of snow on it. The ascent took me five hours; descending only one and a quarter. Places where the descent was gradual, I tied my snow-shoes together, making them carry me in turn as a sledge. Sometimes I came down at one spell 500 to 700 feet in the space of one minute and a half. I remained twenty minutes, my thermometer standing at 18°; night closing fast in on me, and no means of fire, I was reluctantly forced to descend. The sensation I felt is beyond what I can give utterance to. Nothing as far as the eye could perceive, but mountains such as I was on, and many higher, some rugged beyond any description, striking the mind with horror blended with a sense of the wondrous works of the Almighty. The aerial tints of the snow, the heavenly azure of the solid glacier, the rainbow-like hues of their broken fragments, the huge mossy icicles hanging from the perpendicular rocks with the snow sliding from the steep southern rocks with amazing velocity, producing a crash and grumbling like the shock of an earthquake, the echo of which resounding in the valley for several minutes. . . .' Good description for a non-mountaineer; exaggerated of

[25] *Douglas' Journal*, 1823–1827, p. 258.

course, but containing no mention of naming the peaks or over-estimation of their altitude as does the short journal. Perhaps the latter, embellished at a later time, had the names and altitudes added as an afterthought; or at least upon information received from outside sources. It seems useless to speculate further.

Archibald McDonald kept a journal of his canoe voyage across the Continent, when, in 1828, he accompanied Sir George Simpson across Peace River Pass. In notes added by Malcolm McLeod, editor of this journal, we find the following reference to Athabaska Pass.[26] '. . . The "Big Athabasca," or Athabasca River proper, draws from the glaciers of Mt. Brown, the highest peak (16,600 feet) of the Rocky Mountains, and also from a much lower height called the Miette, not far from the Leather or Yellowhead Pass. I have seen, but remember not the glaciers that feed this noble river, having once passed them in very early life and once with "thirty feet" of snow after mid April, under foot in the pass (Athabasca Pass), the highway, then, of the Hudson's Bay Company, to the Columbia.'

De Smet, the priest, is most emphatic in his statement:[27] 'Upper Athabasca is, unquestionably, the most elevated part of North America. All its mountains are prodigious, and their rocky and snow-capt summits seem to lose themselves in the clouds. At this season, immense masses of snow often become loosened and roll down the mountains' side with terrific noise, that resounds throughout these quiet solitudes like distant thunder—so irresistible is the velocity of their descent that they frequently carry with them enormous fragments of rock, and force a passage through the dense forests which cover the base of the mountain. At each hour, the noise of ten avalanches descending at once, breaks upon the ear; on every side we see them precipitated with a frightful rapidity.'

Dr. Hector, somewhat in doubt, although more accurate than his predecessors, is influenced by them; for he remarks,[28]

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[26] 'Peace River. A Canoe Voyage from Hudson's Bay to the Pacific, by the late Sir George Simpson, in 1828.' *Journal of Archibald McDonald*, edited by Malcolm McLeod (Ottawa: J. Durie & Son, 1872), p. 66, note xxxv.

[27] *Oregon Missions and Travel over the Rocky Mountains in* 1845–46, Father P. J. De Smet, p. 197.

[28] *The Journals, Detailed Reports, and Observations relative to the Exploration by Captain Palliser*, p. 149.

'. . . I am inclined to think that none of the Rocky Mountains rise above 13,000 or 13,500 ft., and that my estimate of the height of Mt. Murchison, which I made last year, is too great.'

In the foregoing pages we have the opinion of actual travellers, eyewitnesses, regarding the mountain heights of the upper Columbia Valley and of the Athabaska Pass area. Too much credence should not be given to the hearsay evidence embodied in the work of contemporary writers.[29] Let us now turn our attention to the actual facts of the topography as it is known at the present time.

III. *Mountain Topography Adjacent to Athabaska Pass.*

The Whirlpool Group occupies the rough triangle enclosed between the Whirlpool and Athabaska Rivers on the W. and E., and by Fortress Lake and Wood River on the S. It includes the portion of the Continental Divide between Fortress and Athabaska Passes, an air-line distance of 20 miles, and its continuation to Whirlpool Pass. The air-line between Athabaska and Whirlpool Passes is eight miles.

Most of the area is covered by Sheets 25, 26, and 27 of the Interprovincial Boundary Survey, although the Whirlpool-Athabaska junction and the peaks immediately in the angle are not included. In fact the northern tip of the group, although visible and but a day's trail-riding from Jasper, has yet to be mapped. In this angle are two good peaks, known by local names, the easterly 'Mt. Derelict,' and the western the 'Whirlpool Mtn.' South of the latter, with its

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[29] Thus we find in Greenhow—*Memoir Historical and Political on the North-west Coast of North America and Adjacent Territories*, Robert Greenhow (Washington: Blair & Rives, 1840), p. 11—the following: 'The highest points in the Rocky Mountains, if not in the whole western continent, are those about the 53rd degree of latitude, near the northernmost sources of the Columbia River. Mr. Thompson, of the Hudson's Bay Trading Company, has measured several of these peaks, of which one, called *Mount Brown*, is estimated by him at sixteen thousand feet, and another, *Mount Hooker*, as fifteen thousand seven hundred feet above the ocean level. It has been stated that this gentleman has recently found other peaks further north, which he considers to be more than ten thousand feet higher than either of the ones above mentioned.' For a discussion of the errors in this passage, see *C.A.J.* ix. 52.

Consult also *The Wild North Land*, W. F. Butler (Montreal, 1874), Appendix, p. 347.

upper crags visible from Jasper above the eastern shoulder of Mt. Edith Cavell, is Mt. Fryatt, 11,026 ft., one of the outstanding mountains of the Park. Other peaks, E. of the Divide, included in the mapped area, are Mt. Lapensée, 10,190 ft., and Mt. Belanger, 10,200 ft., just S. of Mt. Fryatt; while further E., Mt. Christie, 10,160 ft., and Brussels Peak, 10,370 ft., culminate a sub-group toward the Athabaska. S.E., only a few miles N. of Fortress Mt., Mt. Catacombs, attaining 10,800 ft., is the chief peak in this direction.

From Fortress Pass, 4388 ft., and Fortress Mtn., 9908 ft., the Divide westward includes no peaks of importance as far as the head of Alnus Creek. At the western end of Fortress Lake, Alnus Valley enters Wood River at an acute angle from the N.W. At the head of Alnus Creek, low passes lead over to Divergence Creek, a Whirlpool tributary, and form a major trench extending through the Whirlpool Group.

It is chiefly with the area W. of Alnus and Divergence Valleys that the present paper is concerned, this portion of the group containing important peaks and many of the finest scenic features.

At the head of Alnus Creek, on the Divide, is Divergence Peak, 9275 ft., whence the watershed swings sharply southward, crossing the summits of Alnus Peak, 9763 ft.; Mt. Ross Cox, 9840 ft.; Mt. Scott, 10,826 ft.; Mt. Oates, 10,220 ft.; and Mt. Ermatinger, 10,080 ft. The watershed now swings abruptly westward, crossing Mt. Hooker, 10,782 ft., and dropping across McGillivray Ridge, descends to Athabaska Pass.

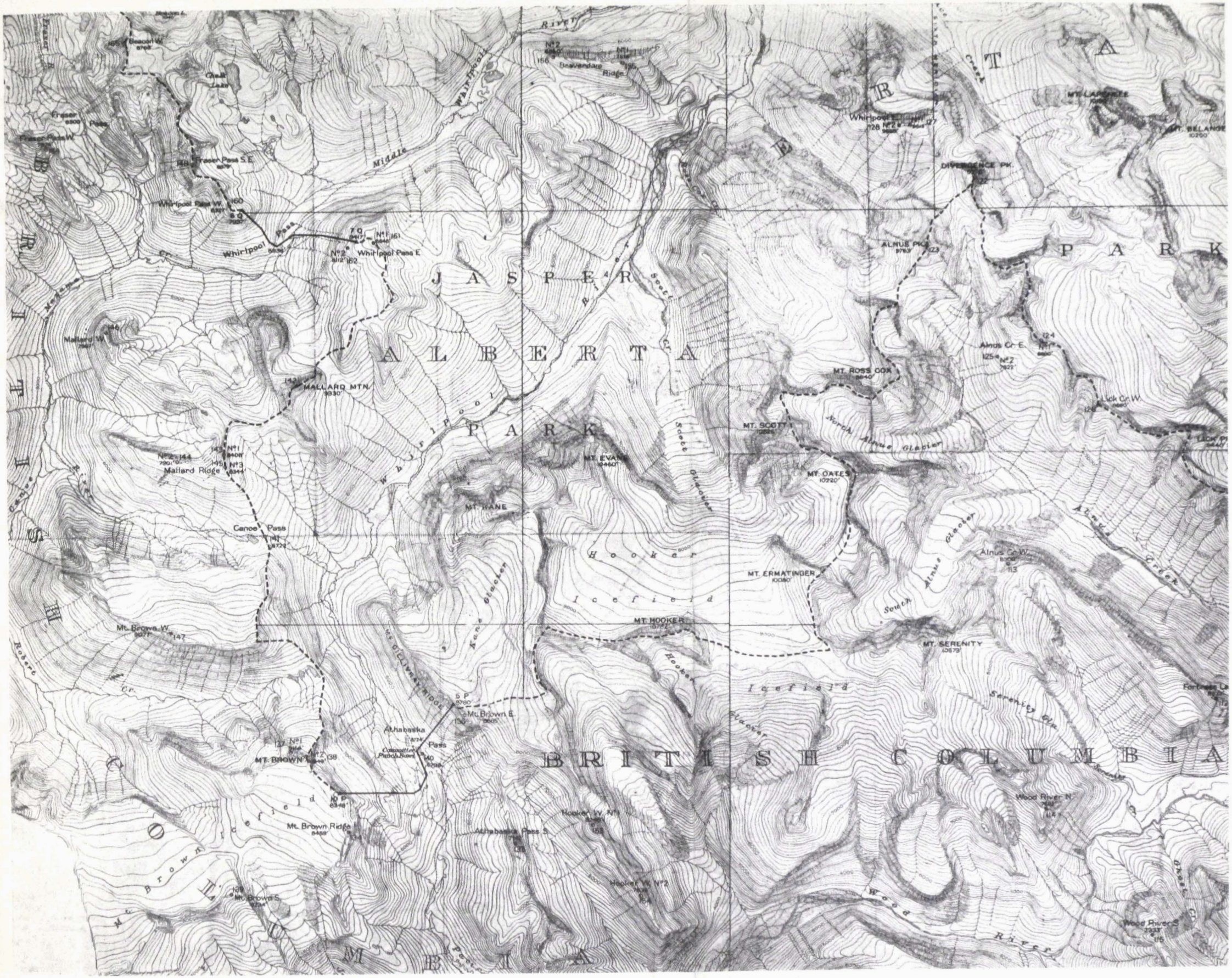
This division of the group, it will be seen, lies between terminal sources of Whirlpool River and Wood River. On the British Columbia side of the Divide, Mt. Serenity, 10,573 ft., connected by spurs with the main watershed between Mts. Ermatinger and Hooker, fills in the great angle formed by Alnus Creek with Wood River.

On the Alberta side of the watershed, Mt. Evans, 10,460 ft., and Mt. Kane, 10,000 ft., rising above the valley of the Whirlpool, form supporting buttresses for the immense basin of the Hooker Icefield, nearly twelve square miles in area, discharging through the icefalls of Kane and Scott Glaciers as a chief source of Whirlpool River.

The Hooker Icefield is spread across on to the British Columbia side of the watershed and includes perhaps another ten square miles: a total of from twenty to twenty-five square miles. Nearly a dozen small tongues discharge their streams southward into the gorge of Wood River, between

Lat. 52° 32′ 16″

Long. 118° 19′



Scale ½″ equals 1 m.

Reduced from Inter-Prov. Atlas Sheets 26 and 27.

Serenity Creek and Athabaska Pass. North of and partially walled in by Mt. Serenity, the S. and N. Alnus Glaciers—of the alpine winding type—descend from the slopes of Mts. Ermatinger, Oates, and Scott, to form sources of Alnus Creek.

Between Mt. Hooker's eastern wall and the point S. of Mt. Ermatinger where the western arête of Mt. Serenity joins the watershed, there is a conspicuous pass, of relatively flat snow, about 8700 ft. in elevation, leading across the Continental Divide.

The air-line distance between Divergence Pk., at the head of Alnus Creek, and the Committee Punch Bowl on Athabaska Pass, is 12 miles. On the Athabaska Pass summit, 5736 ft., are the Punch Bowl and two other adjacent lakelets, giving rise to terminal sources of the Whirlpool River on the E., and Wood River, through Pacific Creek, on the W.

The Continental Divide continues from the pass, rising westward to the summit of Mt. Brown, 9156 ft., thence turning northward and dropping to the icy lakes at the head of Robert Creek, and to Canoe Pass, 6722 ft., connecting Whirlpool River with a branch of Canoe River. Crossing Mallard Mtn., 9330 ft., the Divide reaches Whirlpool Pass. 5936 ft., linking the Middle Whirlpool with the Mazama Creek branch of Canoe River. It will thus be seen that there are no peaks of importance immediately W. of Athabaska Pass and the Whirlpool: the Divide is relatively low and can be crossed at several points. The feature to be noted is the large area of glacier and snowfield on the S.W. side of Mt. Brown, extending into the angle between Wood and Canoe Rivers. The Continental Divide bends considerably in rounding the head of Whirlpool River, consequently the air-line distance between Divergence Pk. and Whirlpool Pass is only about eight miles, practically equal to the distance between Athabaska and Whirlpool Passes.

IV. *Mountaineering.*

The early days of mountaineering in the Canadian Rockies began when there was yet no railroad through Yellowhead Pass; consequently most expeditions, at that time, started from points on the Canadian Pacific Railroad.

Coleman [30] and his companions are responsible for the early enthusiasm resulting in the repeated searches for the mysterious

[30] *The Canadian Rockies, New and Old Trails*, A. P. Coleman (T. Fisher Unwin. London, 1911), pp. 79, 147, 170.

high peaks of the Athabaska Pass. In 1888 they attempted to enter the region by way of the Columbia Loop, and actually reached Kinbasket Lake before abandoning the enterprise. In 1892 a second attempt, by way of North Saskatchewan and Athabaska headwaters, led them to Fortress Lake—which, but for the absence of Mts. Hooker and Brown, and the discrepancy in the size of the lake, might have been the Committee Punch Bowl.

In 1893 a third expedition, led by Coleman, successfully reached the Athabaska Pass. The highest mountain on the western side of the pass was ascended, and was considered to be the peak which Douglas climbed. They also ascended M'Gillivray's Rock, the point where Mt. Hooker is indicated on the Palliser map, but noted that ' a much higher, finer peak rises a few miles E. of the Punch Bowl, with fields of snow and a large glacier, and was estimated at about eleven thousand ft.' Because of the small size of the Committee Punch Bowl, a folding canvas boat, intended for use in rowing around the lake, remained in its pack-cover !

None of the other early expeditions actually reached Athabaska Pass, although the search for the high peaks was by no means given up. Wilcox [31] and Barrett, in 1896, reached Fortress Lake. Wilcox triangulated the massive glacier-bearing peak to the W.—the present Mt. Serenity—at 10,500 ft. Habel,[32] the German explorer, in 1901 spent several days near the lake and mentions Mt. Serenity as ' a very prominent snowy mountain, visible nearly from top to bottom, in shape similar to Mont Blanc.'

Collie,[33] who came out from England first in 1897, became interested in the Brown-Hooker problem. In those days, knowledge of the topography was so imperfect that it was thought that the North Fork of the North Saskatchewan had its source in the neighbourhood of Athabaska Pass.[34] Collie

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[31] *The Rockies of Canada*, W. D. Wilcox (G. P. Putnam's Sons. New York, 1909), p. 139.

[32] ' At the Western Sources of the Athabasca,' Jean Habel, *Appal.* x., 1, p. 28.

[33] *Climbs and Exploration in the Canadian Rockies*, H. E. M. Stutfield and J. N. Collie (Longmans, Green & Co. London, 1903).

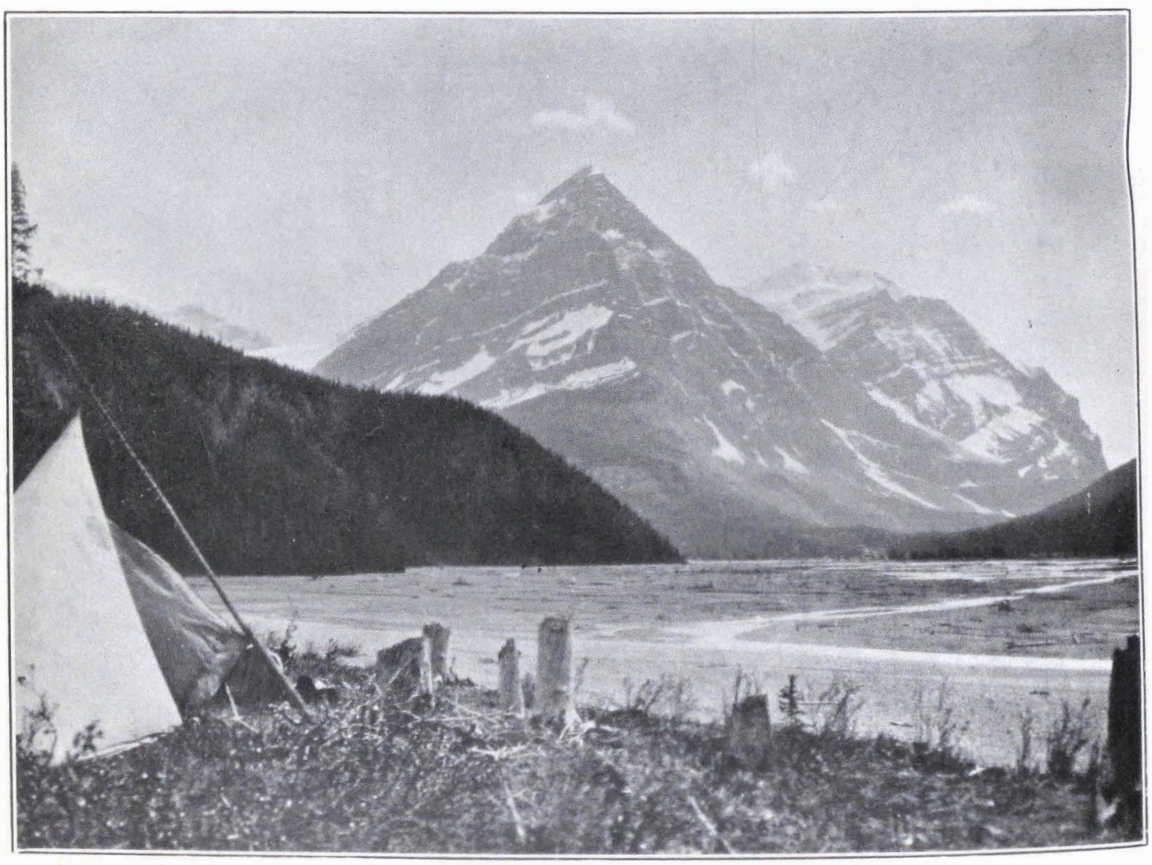
[34] The writer has recently examined the mountaineering letters of the late C. S. Thompson, a well-known climber of Canadian peaks. In the collection are a number of letters from Collie, with pencilled sketch maps, drawn in 1900, indicating the Athabaska Pass area as

McGILLIVRAY'S ROCK AND NORTHERN ENTRANCE TO ATHABASKA PASS.

PACK-TRAIN ARRIVING AT THE COMMITTEE PUNCH BOWL, ATHABASKA PASS.

Photo. J. Monroe Thorington.

SCOTT GLACIER AND MT. HOOKER,
from camp-ground on Whirlpool River, whence first ascents of Mt. Oates and Hooker were accomplished.



MT. EVANS AND MT. OATES,
from Old Hudson's Bay camp-ground in the Whirlpool Valley. This was the probable site of the Encampment de fusil, some nine miles below Athabaska Pass.

Photo. J. Monroe Thorington.

had seen high peaks in the north, from the slopes of Mt. Freshfield, and, in 1898, visited many of them by way of the North Saskatchewan. The Athabaska Pass was not reached, but the climbers had their reward in the discovery of the huge Columbia Icefield.

Following the visit of Coleman, the next attempt at mountaineering from the pass was made, in 1913, by Howard and Mumm,[35] accompanied by the guide Moritz Inderbinen. On the way in from Jasper, minor summits were attained ; but in the immediate vicinity of Athabaska Pass the weather became so unfavourable that little could be done. Mumm and Inderbinen ascended Mt. Brown and visited the Scott Glacier.

The first ascent of importance was that of Mt. Serenity, 10,573 ft., made from Fortress Lake, in 1920, by Carpe,[36] Palmer and Harris. The route to the summit, by way of the Serenity Glacier and the southern arête, required ten hours from a camp at the glacier tongue.

In 1920 the Interprovincial Boundary Survey[37] visited

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being at the head of the North Saskatchewan River. This impression seems to have been derived from preliminary sketch maps by Dr. Hector, of the Palliser Expedition, made before the final Palliser map (in the folio report) was issued.

[35] 'The Whirlpool (1913),' G. E. Howard and A. L. Mumm, *C.A.J.* vi. 74. The article is accompanied by a sketch map, the nomenclature of which has been superseded by, but partially adopted on, Interprovincial Boundary Survey Sheets 26 and 27.

[36] 'The Mountain West of Fortress Lake,' A. Carpe, *C.A.J.* xii. 179.

[37] 'The Location of Mts. Brown and Hooker,' A. O. Wheeler, *C.A.J.* xii. 163. The work of the Survey in the Athabaska Pass area is described and reasons given for adopting its nomenclature in regard to Mts. Brown and Hooker.

It is not the purpose of the present paper to enter into or further complicate the literature of the Hooker-Brown problem. In addition to references already given, one should consult the interesting paper, 'New Light on Mounts Brown and Hooker,' E. W. D. Holway, with supplementary note by James White, *C.A.J.* ix. 45.

Those interested in the region should also consult two additional papers :

(*a*) 'Characteristics of Passes in the Canadian Rockies,' R. W. Cautley, *C.A.J.* xiii. 155.

(*b*) 'Athabaska Pass to Tonquin Valley, *via* Goat and Fraser Rivers,' D. Phillips, *C.A.J.* xiii. 209.

Mr. Cautley describes, among other things, the discovery, just north of the pass summit, of the musket-balls lost by David

Athabaska Pass and established the nomenclature of Map Sheets 26 and 27. A large number of stations were occupied, including Mt. Brown, McGillivray Ridge (Mt. Brown E.), Alnus and Divergence Pks.

The Interprovincial Survey Commission has published[38] the following conclusions in regard to the Hooker-Brown problem:

'*Mt. Brown.*—The mountain ascended by Douglas and named Mt. Brown by him is the one rising directly on the W. side of the pass summit, the altitude being 9156 ft., 3405 ft. above the pass.

'*Mt. Hooker.*—The location is not so clear. Douglas writes in his journal, (1) "A little more to the S. is one nearly the same height, rising more into a sharp point which I named Mt. Hooker." (2) "I set out with a view of ascending what appeared to be the highest peak on the N. or left-hand side." Against these statements is the fact that the direction of the valley at the summit of the pass is practically N. and S. and consequently Douglas' "N. or left-hand side" would truly be "W. or left-hand side"; so also with reference to Mt. Hooker, "a little to the S. is one nearly the same height" would truly be "a little to the E. is one nearly the same height." Douglas' idea of his direction seems to have been as inaccurate as his idea of altitude. On a bearing 18° N. of E. lies a peak, rising into a sharp point, which is distant approximately six miles from the summit of Mt. Brown and which has an altitude of 10,782 ft., or 1626 ft. more than that of Mt. Brown. It seems more likely that this is the mountain Douglas refers to as Hooker. (This is the mountain seen by Coleman and Stewart, and estimated at 11,000 ft.)

Thompson a hundred and ten years before. Thompson mentions the incident. 'Sent the men to collect and bring forward the Goods left by the Way; which they brought except five rounds of Ball, which being in a leather bag, was carried away by a Wolverene' (*Thompson's Narrative*, p. 449). Mr. Cautley's paper is especially valuable as being the first to describe accurately many of the passes of the Canadian Rocky Mountains.

Mr. Phillips' paper includes interesting route data concerning trail approaches to Athabaska Pass.

It may be added that the mountaineering to date, with a summary of early expeditions and history of the region, and notes on the topography, will be found in *A Climber's Guide to the Rocky Mountains of Canada*, H. Palmer and J. M. Thorington (The Knickerbocker Press. New York, 1921), pp. 131–43.

[38] *C.A.J.* xii. 163, 179.

Members of Expedition.

M. M. STRUMIA. J. M. THORINGTON.
CONRAD KAIN. A. J. OSTHEIMER

From the vicinity of Fortress Lake this mountain peak stands up in a sharp white cone. It is not conceivable that the long, evenly crested ridge rising directly above the Punch Bowl from Athabaska Pass summit has anything to do with the question (*i.e.*, McGillivray's Rock). It was, therefore, recommended to the Geographic Board that the 10,782 ft. peak about six miles easterly from Mt. Brown be confirmed as Mt. Hooker, which has been done.'

The writer's expedition in 1924, details of which follow, is the third to reach the Athabaska Pass for purely mountaineering purposes. Within a short space of time we were able to make the first ascent of Mt. Hooker and other peaks of the vicinity, and to explore the intricacies of the Kane and Hooker Icefields, as well as the vast topography of the Mountains of the Whirlpool.

V. *Expedition of* 1924.

With fourteen horses, furnished by the well-known outfitter Donald Phillips, our party, including Mr. A. J. Ostheimer and Dr. M. Strumia, of Philadelphia, the writer, and the guide Conrad Kain, left Jasper on June 26, bound for Athabaska Pass. In charge of the horses came David Moberly, a Cree breed, grand-nephew of Walter Moberly, who years before served as locating-engineer for the Canadian Pacific. Our cook, Jack MacMillan, had assisted his father in building the first trails to Emerald Lake, and had worked for Tom Wilson in the old days.

By road leading across the Miette bridge, towards the snows of Mt. Edith Cavell, we started up the Athabaska Valley, a broad trail bringing us to the mouth of Whirlpool River, the stream which we were to follow to its southern sources. Here was the location of the old ford—la Grand traverse—by which the voyageurs crossed to the Prairie de la Vache, or Buffalo Prairie, on their way to Jasper House.

Past the snow-powdered crags of Mt. Kerkeslin, through a broad valley, there are glimpses of distant peaks on the Sun Wapta and the Chaba; while looming in the Athabaska-Whirlpool angle, companion to the dark towers of Mt. Derelict, the precipices and pinnacles of the 'Whirlpool Mountain,' grim and repellent, with an enormous western gendarme, hide the towering mass of Mt. Fryatt, the loftiest peak of the Whirlpool Group.[39] Through a small lumber-camp, where railroad-ties

[39] For a description of the eastern appearance of the Whirlpool Group from the Athabaska Valley, see *C.A.J.* xiii. 81.

are cut and floated down to Jasper, we passed and camped by the Whirlpool, quiet pools nearby reflecting Needle Peak, guardian of the entrance to Simon Creek—the old 'North Whirlpool.' Across the river, sunset colouring of the range blends with the dull, glowing embers of our camp-fire; soft wind-music in the jack-pine tops; rush of the river; distant bells tinkling—first days on the trail are well remembered.

Mt. Fryatt. 11,026 *ft. Attempted Approach.*—The second elevation in the central area of Jasper Park [40] has long been recognised by mountaineers as a mountain difficult to approach. It is at best a formidable-looking peak, and, rising so much above its neighbouring valleys, climbers have left it severely alone. The Interprovincial Survey had photographed it from the south-west, from the head of Alnus Creek, revealing the presence of three attractive lakes and high meadows at the sources of Divergence Creek, the Whirlpool tributary immediately west of Mt. Fryatt.

On June 27 we crossed the Whirlpool by a lumber-camp bridge, and attempted to take our horses up the creek west of the 'Whirlpool Mountain,' to a low pass leading over to the head of Divergence Creek, where we were desirous of making a high camp. We were unsuccessful in our effort. At an elevation of less than 6000 ft., canyons and cut-banks make the creek bed impossible for horses; it would have been necessary to spend one or two days cutting trail through the high timbered shoulder on the W. bank of the stream. While we were investigating the route, several restless pack-horses succeeded in dislodging one of their fellows over a low rock ledge, the horse turning a complete somersault and landing head downward in the water. It required quick and skilful work on the part of the guides to cut the pack-ropes and prevent the struggling animal from drowning. As usual, more damage was done to the packs than to the horse; but the delay assisted our decision not to proceed further.[41] So we recrossed the

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[40] The altitude of Mt. Edith Cavell is 11,033 ft., and it is usually considered the highest point within the Park. This is, however, not true if the southern boundary of the Park be made to include any of the higher peaks of the Columbia Group.

[41] It is a pleasure to acknowledge the many courtesies extended to our party by Colonel S. Maynard Rogers, Superintendent of Jasper Park. We are also indebted to Warden P. H. Goodair for assistance rendered during our stay in Area No. 10.

Whirlpool and camped on a terrace by an old cabin, not far from the mouth of Simon Creek. Later, on our return, we found that a sudden rise of water had carried away the Whirlpool bridge, and future visitors, approaching Mt. Fryatt from this direction, will cross a difficult ford.

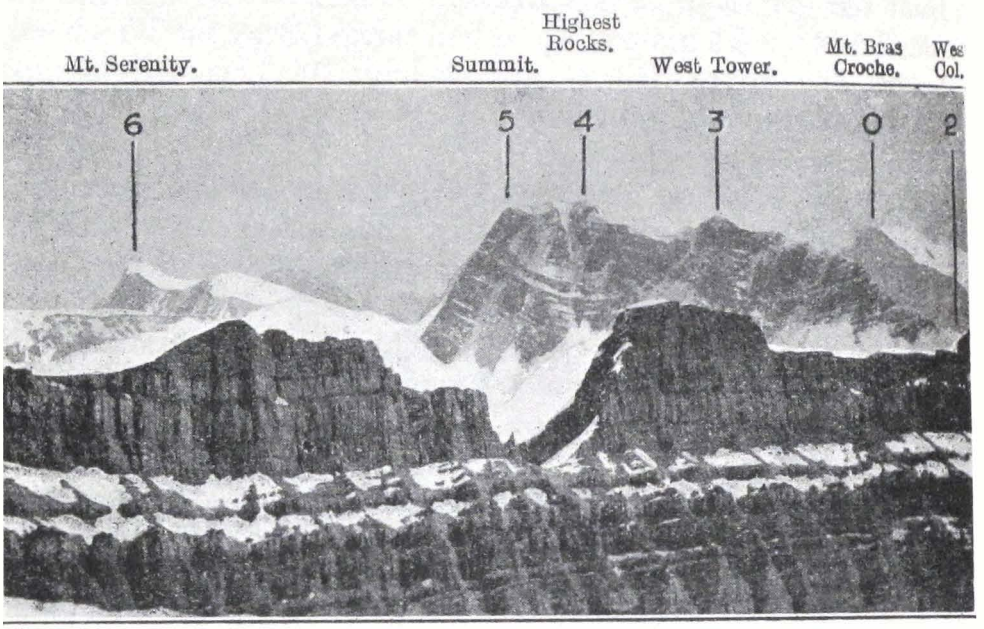
From our camping place, evidently a very old one, we could see far sunlit peaks—Scott, Hooker, Evans, Kane—toward the head of Whirlpool River. How thrilling is the anticipation aroused by the first distant view of an unexplored group !

Morning came, brilliant after a night of heavy showers. In two hours we had forded Simon Creek, happily without wetting any packs. Then over parallel timbered ridges, with intervening muskeg and shallow reedy ponds, emerging on river-flats opposite the ribbed cliffs of Mt. Scott, with new snow melting and sparkling. Then into the timber again, arcaded groves of cottonwood, with the Middle Whirlpool coming down unceremoniously, with no apparent bed of its own, but spreading about the gnarled tree-roots, and the pack-train splashing through. It was as if one wandered in a splendid irrigated garden, a garden of primeval trees with tops so interlaced that only here and there might shafting sunlight penetrate the forest shadows.

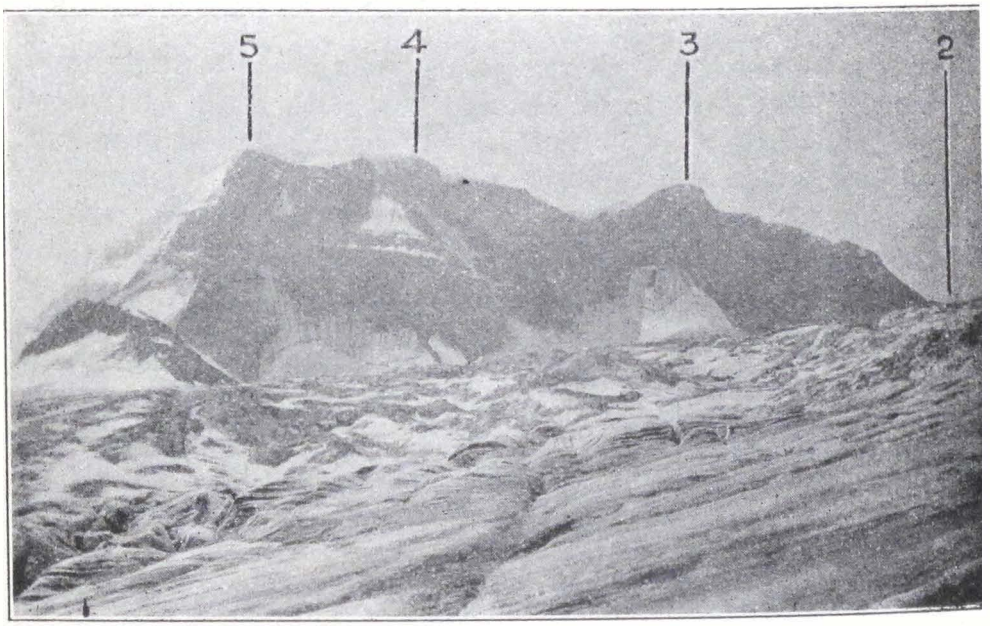
As we neared the timbered point which is the camp-ground, the magnificent ridges of Mt. Hooker, with walls of twisted strata above the Scott icefall, slowly revealed their grandeur. Near our tents was an old roofless log-cabin, of spacious dimension, with hand-forged nails in its walls. There are huge stumps in the clearing, so rotted that a touch will topple them over. We picked up bits of hand-made boxes with marks of the Hudson's Bay Company still legible. Not far away, on a bit of cliff, four goat looked down in silent astonishment at our caravan's arrival. In the evening, white-tailed deer passed close to the campfire on their way to the river : graceful and unafraid they moved along the gravel-bars, from one silvery pool to another, and disappeared in the sun-glint at the edge of the bush.

The Scott Glacier will be much visited in days to come, because of the tremendous spectacular icefalls in which it plunges down to the valley level, to spread in a broad flat tongue toward the wooded morainal fans far below timber-line. We passed close below it on our next day's travel and were to know it better within a short time. The upper névé spreads below the northern wall of Mt. Hooker, and one must journey

far in the Canadian Rockies to find ice scenery which can



MT. HOOKER FROM THE N.W., FROM THE SUMMIT OF MT. KANE.
(Labelled points correspond with companion pictures.)



MT. HOOKER AND THE HOOKER ICEFIELD FROM THE TOP OF THE SCOTT GLACIER.
Lateral distance between points 2 and 5 is about one and a half miles.

compare with the wild splendour of this view. The western margin of the glacier is flanked by the symmetrical rock peak

of Mt. Evans, contrasting with the sheer snowy wall of Mt. Kane just beyond and resembling the southern portion of the Victoria ridge above Lake Louise. From the col between Evans and Kane, a slender precipitous icefall hangs in apparent defiance of the laws of gravity, its stream ending in an airy waterfall spraying into a rock-bowl close to the trail.

Rounding the shoulder of Mt. Kane, trail leads through evergreen timber, thickets of pussy-willow, and patches of spring snow. Crowded clusters of anemones and avalanche-lilies press up through the melting margins—in the shadow of McGillivray's Rock, with the snows of Mt. Brown ahead, we enter on the Athabaska Pass. The valley broadens above the gorge at the foot of Mt. Kane, snow becomes deeper, entirely covering the trail; pack-horses floundering at first, gradually gain confidence in the footing. A gaunt cariboo stalks up and over a nearby ridge, moving so slowly. How surprising it was to reach the summit lakes on the pass and stop by the central one—the Committee Punch Bowl! There was a skim of ice on the water, too cold for bathing, and—unlike Coleman—we had not brought a canvas boat; but one of us can at least be credited with having swum a horse across the Great Divide!

The lakes are desolate, lonely tarns and in winter may be entirely covered. Of course there are no lofty mountains on either side, and one is almost at loss to pick out Mt. Brown, for on the western side of the pass are several summits all about equal in height and resembling each other in outline. It is all so plain in 'Douglas' Journal'; a visit to the pass is the confusing thing. A traveller of to-day, writing on the spot, could never describe the pass and its peaks in Douglas' words—the journal and the lay of the land simply do not agree. The mystery remains.

On account of the snow, we placed camp on Pacific Creek about a mile below the pass summit, with a group of serrated splintered peaks in view down the valley of Wood River.

Mt. Kane. 10,000 *ft. First Ascent.*—On June 30 we left camp (5.20), hoping to reach Mt. Hooker. Following the N. margin of the glacier tongue coming from the shoulder of McGillivray's Rock and the Kane Icefield, in two hours we had reached the upper snows. But on crossing to a higher ridge of the Divide, at 9300 ft., we found ourselves cut off from Mt. Hooker's southern wall by an impassable snow precipice, overhung with cornices and dropping to the broken Wood River glaciers of the Hooker Icefield. The arête connecting with

Mt. Hooker rises into an intervening peak which would have to be traversed and forms a route impossibly long for a single day. So realising that we were defeated, we followed our ridge northward and tramped the long stretches of snow to the Kane-Evans col, which we reached over a small schrund and up some slabby chimneys. We were now at the head of the hanging glacier which is so striking in appearance when seen from the Whirlpool, and upward over snow and ledges made our way to the summit (2.08).

A little to the S.E. there is a break in the banded rock-wall separating the Kane Glacier and Hooker Icefield, affording a possible approach to Mt. Hooker; but from Athabaska Pass it will be a very long journey. Beyond the N. face of Mt. Hooker the view extends to far-away Athabaska sources, with Mt. Alberta, The Twins, and Mt. Columbia, stupendous even through the distances.

The Wood River Group is seen from an unusual angle and presents a fine array of glacial cirques on the N.W., by which the flat upper snows of Mt. Bras Croche might be reached and other peaks explored. Yet one hesitates to recommend a visit by way of Athabaska Pass and the low, timbered reaches of Wood River.

The northern snows of Mt. Kane, so steep they are, seem to overhang the Whirlpool. Far beyond the Rampart Group and southern Fraser sources, our gaze was held by Mt. Robson. Towering nearly two thousand feet above its highest neighbours, its elevation emphasised by low surrounding valleys, one is yet attracted more by the mountain's isolation than by its appearance of height. No great group masks its precipices. From our viewpoint the peak is a steep pyramid, slightly blunted in the summit ice-cap, a streaming glacier continuous with the névé in a vertical height of nearly 4000 ft., and the S.E. shoulder, conspicuous from the Grand Forks Valley, so foreshortened as to be almost unrecognisable.

The west is a chaos of unravelled topography: the northern peaks of the Columbia Loop, the Fraser-Canoe divide, the Gold Range, the Cariboos, and far peaks of the main Fraser Valley. Long familiarity with the main chain of the Canadian Rockies cannot dull the overwhelming sense of hopeless awe aroused by the extent of those unnamed western peaks.

It is not easy nor profitable to describe precisely the Kane traverse. Suffice it to say that the arête west of the summit affords a delightful climb of several hours, with work which does not lack in excitement. The snow ridges encountered

are quite narrow, with airy drops to the Whirlpool Valley; the arête possesses a blunt central tower, with opportunity for interesting hand and friction traverses on the southern slabs. A last curling ladder of snow leads to scree slopes and broken rock descending to the glacier. And so we walked home across the Kane Glacier, in the lengthening shadow of McGillivray's Rock, and the evening glow on the ranges beyond Wood River. (Camp 8.20.)

Mt. Brown. 9,156 *ft.*—On July 1 we wandered up Mt. Brown, past ice-glazed lakelets on benches of snow, like gigantic steps, above the Committee Punch Bowl. Then following the eastern margin of the Brown Icefield, we took what climbing we could find—rope was unnecessary—and were soon walking up the long shale ridge to the top. (9.45–2.45.) Our time was slow, for the day was blistering hot and we were a lazy lot. Still, it makes one doubtful whether David Douglas, under winter conditions and with limited time due to a late start, could have reached this particular summit.[42]

The Brown Icefield drains to Canoe River and to Wood River; the peaks on its western margin are most attractive and should preferably be reached from a camp at the head of Jeffrey Creek. The unnamed pass through the Divide, immediately north of Mt. Brown, deserves a visit; three lakes, icy and varying in hue, form the source of Robert Creek and drain to Canoe River. The Wood River and Columbia Groups are practically in line, Mt. Alberta and The Twins visible, but Columbia hidden by square-topped Bras Croche. Two hours passed; cameras clicked busily, pipes were smoked, we snoozed in the sunlight. The view delighted us—we could not think of it as being 'too awful to afford pleasure.' In another two hours (4.45–6.50) we had glissaded back to the camp-fire; in fact it had been difficult to find a spot free of snow on which to pitch our tents.

On July 2, feeling that we had made a satisfactory reconnaissance of the pass and its surroundings, we returned down the Whirlpool and camped near the Scott Glacier, beside a shallow lake in the wooded moraine. It was a day of travel when Nature seemed pleased to show us her valley inhabitants—the soaring eagle that guards the rock of McGillivray; a lonely startled duck skittering across the Punch Bowl; marmots playing and boxing in sunny snow-patches beside the balsam trees. Flowers everywhere, coming up through melting snow;

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[42] *Cf.* Mr. Mumm's opinion, *C.A.J.* vi. 90.

lilies and anemones, violets and bluebells, columbine and heather; Dave, our Indian, riding ahead with an enormous bouquet nodding from his hat.

Mt. Oates. 10,220 *ft. First Ascent.*—After a night of thunderstorms, the morning of July 3 cleared slowly after a threatening dawn. We made a late start (9.30), expecting only to prospect the Scott icefall for a route to the upper basin. Our camp in the Whirlpool Valley was quite low, 4500 ft., and it was for this reason that we had first investigated the higher level of Athabaska Pass. We now had our tents within a quarter mile of the ice, and soon passed the huge isolated boulders of the terminal debris, and were on the flat tongue. The nearly level ice can be traversed for about a mile, and the eastern moraine, below Mt. Scott, brings one almost to 7000 ft. before it becomes necessary to rope and take to the ice again.

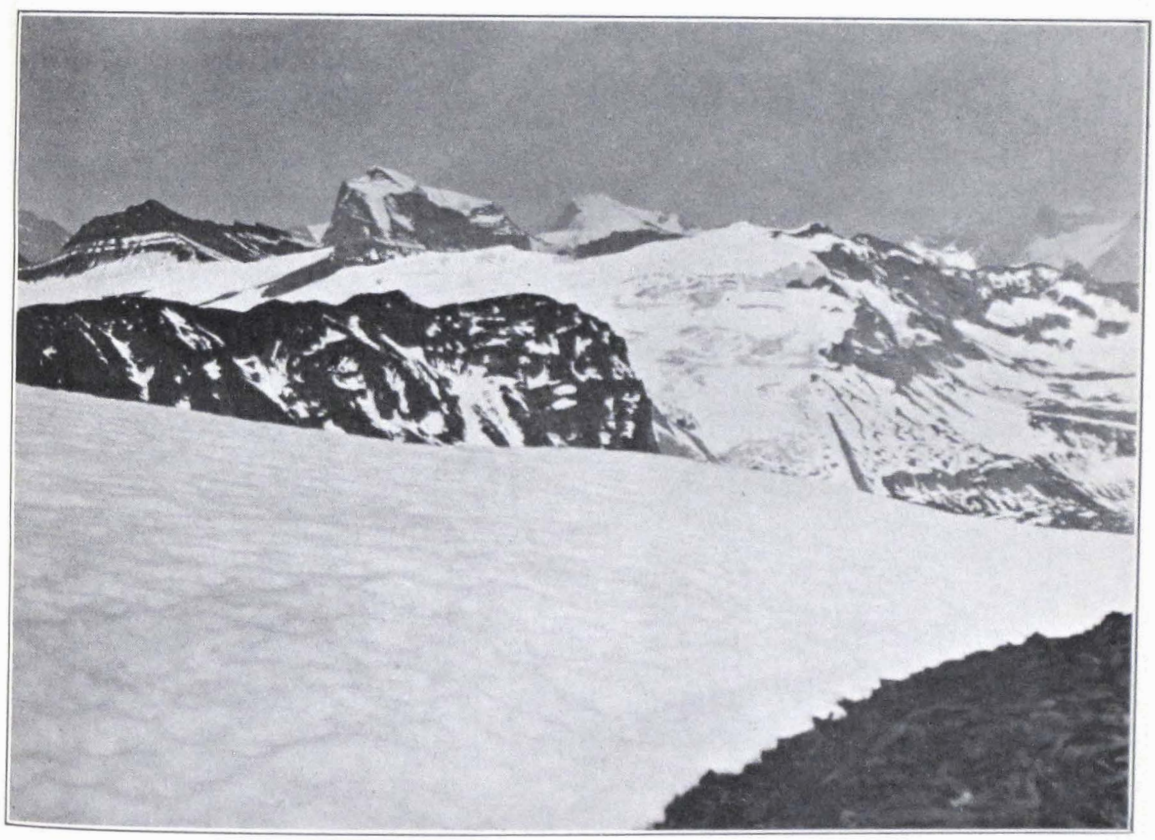
The glacier plunges down from the Hooker névé, at an elevation of 8000 ft., through the portal between Mts. Evans and Scott, with a width of nearly a mile. The fall is extremely broken, with gigantic séracs on the verge of tumbling. A fragmentary medial moraine is formed through the erosion of a buttress, partially exposed in the middle of the icefall, at which level there is a lessening of the ice-slope before the final drop to the bulbous tongue.

From our roping place, one ascends another thousand feet before reaching the Hooker Icefield in the extensive basin between Mts. Evans, Hooker, Ermatinger, Oates, and Scott. This entails a good deal of step-cutting and some careful ice-manship. (1.30.) The basin is more than three miles across, and from cols in its bounding ridges—the eastern and southern are Continental Divide—other icefalls, all badly shattered, pour in until the field presents a wild scene of broken séracs and unsupported pinnacles over an extended area. There is very little in other Canadian icefields of the main chain with which to compare it; one thinks rather of the northern glaciers of Mont Blanc as they come down from the Grand Plateau, but the Hooker Icefield gives an impression of greater breadth and breakage.[43]

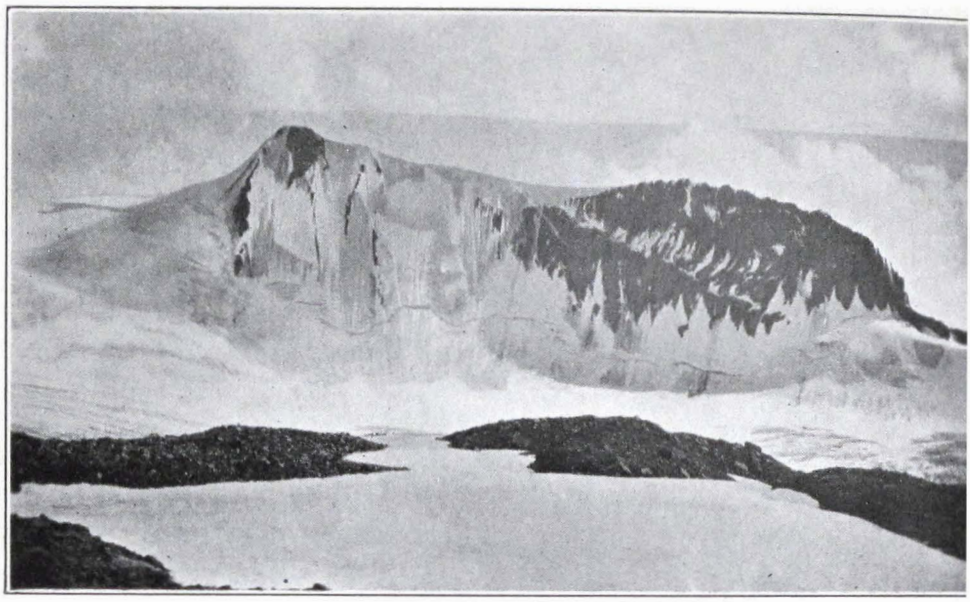
Turning eastward and rounding the cliffs of Mt. Scott, our

[43] *C.A.J.* vi. 90. Mr. Mumm writes, 'We were in the centre of an immense battlemented cirque, and straight ahead of us, in particular, stood out against the sky the most menacing array of towers and pinnacles that I have ever seen.'

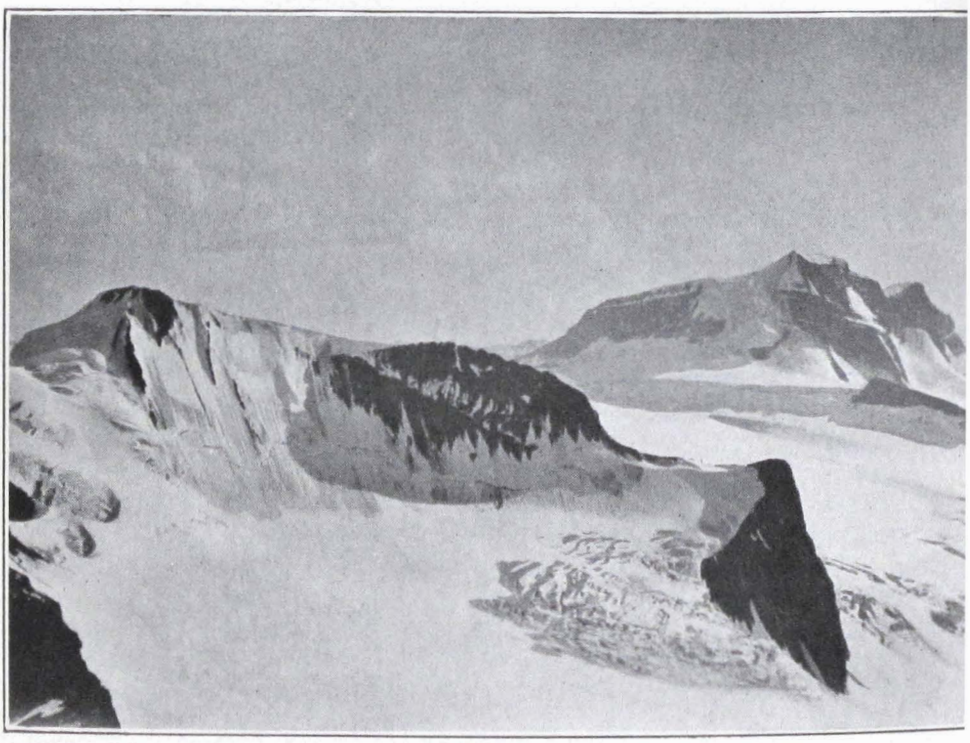
N. FACE OF MT. SERENITY (10,573 FT.), from Mt. Oates.



HOOKER ICEFIELD FROM THE SUMMIT OF MT. BROWN.
McGillivray's Rock rises above the foreground snow, with Mt. Hooker above and Mt. Serenity to its right.



MT. ERMATINGER (10,080 FT.) from the North.



MT. ERMATINGER AND MT. HOOKER, from Mt. Oates.

way lay across a flat of snow, toward a tumultuous waterfall, a broad gully of shale bringing us quickly to an upper snow plateau between Mts. Scott, Oates, and Ermatinger. (2.15.)

Mt. Ermatinger is a mountain of inspiring beauty: a long, knife-edged arête, rising from the Hooker Icefield in a jagged crest of uptilted rock strata, continuing into the north face and merging with a sheer, fluted wall of shining, green ice. The ice-wall is nearly a thousand feet high, broad and unbroken; in our combined experience we could think of but few so glorious. More than anything else it suggested the oncoming mass of a curling sea-wave, about to break and with the sunlight in its crest. Had time and weather permitted, it would have been ours within a few days, the difficulties being easily avoidable. We passed it by with regret, envying those who will first stand on its lovely heights.

We had still the opportunity of making a climb and it was necessary to decide upon the most accessible peak. We had been heading for what seemed to be the highest of the group, believing it to be Mt. Scott. The peak adjoining Mt. Ermatinger on the north we took to be Mt. Oates; but on closer examination of the ground we saw that this is a lower, unnamed summit—which will give someone a strenuous climb—and that the peak we were approaching was really Mt. Oates. We climbed to a little col overlooking the south Alnus Glacier and followed up the ever steepening shale and rock to the summit. There was no difficulty and on the last thousand feet the rope was discarded. (Summit, 5.45.)

Not far away and only 600 ft. above us were the shale-tops of Mt. Scott, with a lengthy talus slope of moderate angle running down to the snow plateau. We had been told that the mountain would afford good rock-work, but from this side it looks monotonously easy. Our own peak was immensely preferable. The only enjoyable way to climb Mt. Scott will be by its western wall.

Below us, on the N., there was a profound drop to the north Alnus Glacier, while down Alnus Creek the waters of Fortress Lake were completely in view. Alberta, The Twins, and Columbia limit the S.E. horizon, and one might trace the Divide around the head of the Chaba icefields, across Fortress Pass, up to the acute angle at Divergence Peak; back again to the conquered peak where some of us—not all—are hard at work cairn-building; thence southward and around the Hooker basin and the subsiding ridges, shimmering in the evening sun-glint, that carry it to Athabaska Pass. And beyond Mt.

Ermatinger—we were always looking back—the majestic northern rock-walls of Mt. Serenity, its lower slopes in the long shadows that fill the valley of Fortress Lake and the head of Wood River.

The return was a race with daylight. It took us only an hour (6.15–7.15) to return to the top of the séracs, and two hours more (9.15) to get down the intricate labyrinth. We were soon off the upper ice (9.30), and, thanking all natural forces for the long twilight of northland July, made camp (10.30) just as the darkness became tantalising. We are convinced that, in many instances, approaching darkness is tantalising in inverse ratio to the distance from the frying-pan! On the upper snows it doesn't matter so much; it is the last uncertain scrambling in the moraine and the glacial brook that brings out profanity.

July 4 was a day of rest in camp, the National Holiday being celebrated with spasmodic efforts at bathing and laundry, and in futile attempts to construct steam-bombs out of jam tins. Conrad was the object of much photographic activity: the entire pack-train followed him into the pond—we had been out from Jasper for more than a week, and there were lots of salt on his hide!

Mt. Hooker. 10,782 *ft. First Ascent.*—We began, on July 5, an ascent which eventually took more time than we had expected. In fact, it turned out to be an endurance record for a Canadian climb—a record that we have since been told we are quite welcome to. We started for Mt. Hooker (4.45), taking forty-five minutes to the ice and an equal time to the rocks at the foot of the W. wall of the glacier. In selecting the wall, below Mt. Evans, it had been hoped to establish a quicker approach to the upper snows than had been found in the ice route to Mt. Oates. Further, the rocks offered a more direct route to the mountain. It proved not to be so short.

Two 20-ft. chimneys were followed by ascending ledges and slabs, and consumed an hour. We traversed southward and upward across a slanting watercourse and crossed below a large waterfall in the centre of the wall. By re-entering this gully it seemed possible to ascend directly by broken ledges; we had barely started when a whizzing and Conrad's cry of 'Stonefalls!' made us take what cover was available. It was the beginning of a raking fire in which we were all struck, but luckily without serious damage. Conrad, calmly saying 'Gentlemen, we must

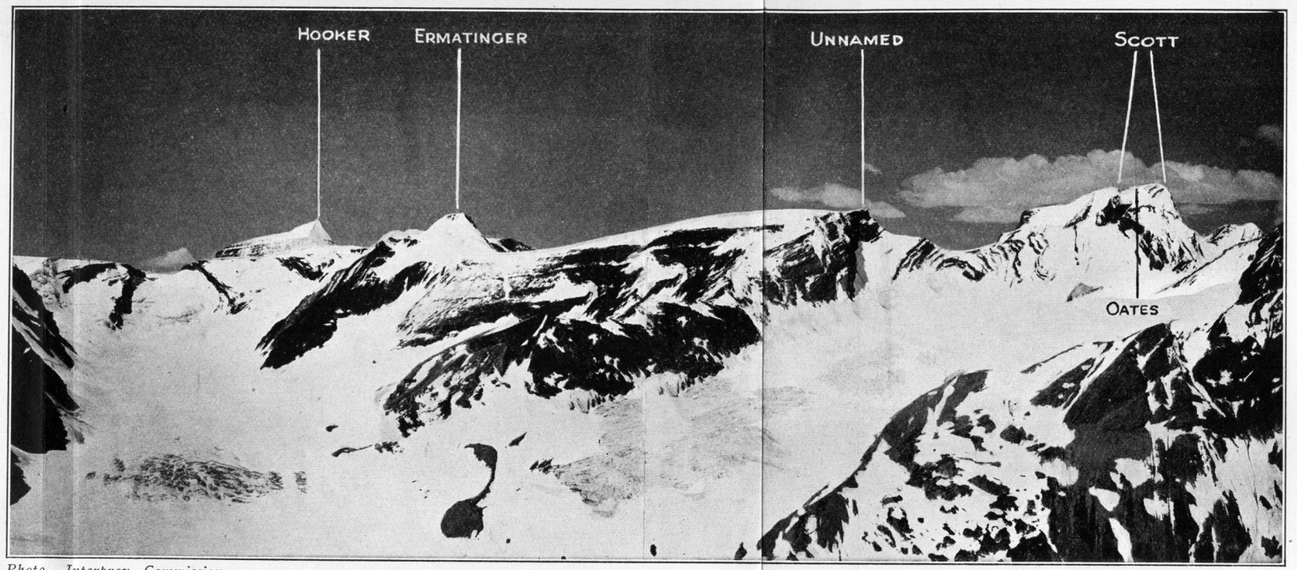


Photo. Interprov. Commission.

SOUTH ALNUS GLACIER AND PEAKS OF WHIRLPOOL GROUP.
From the East.

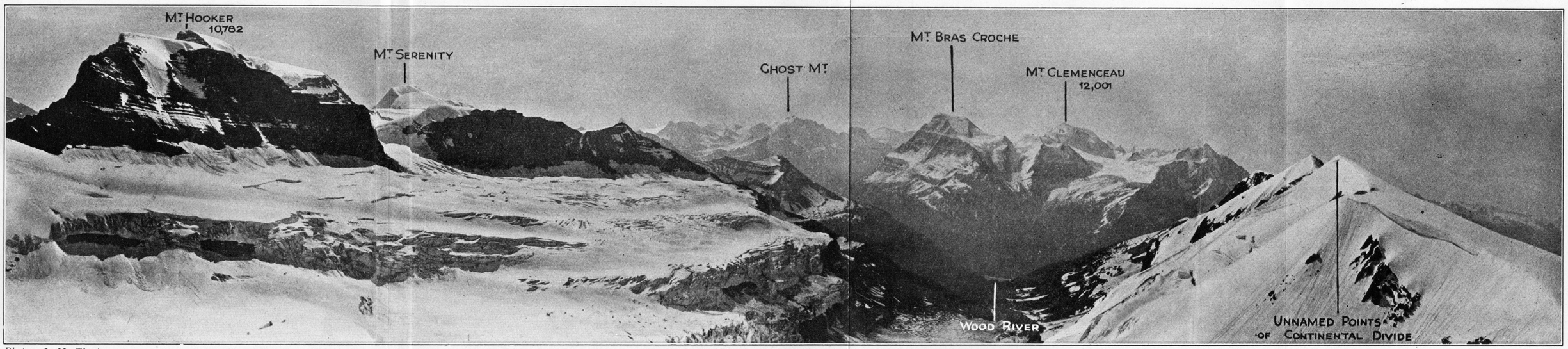
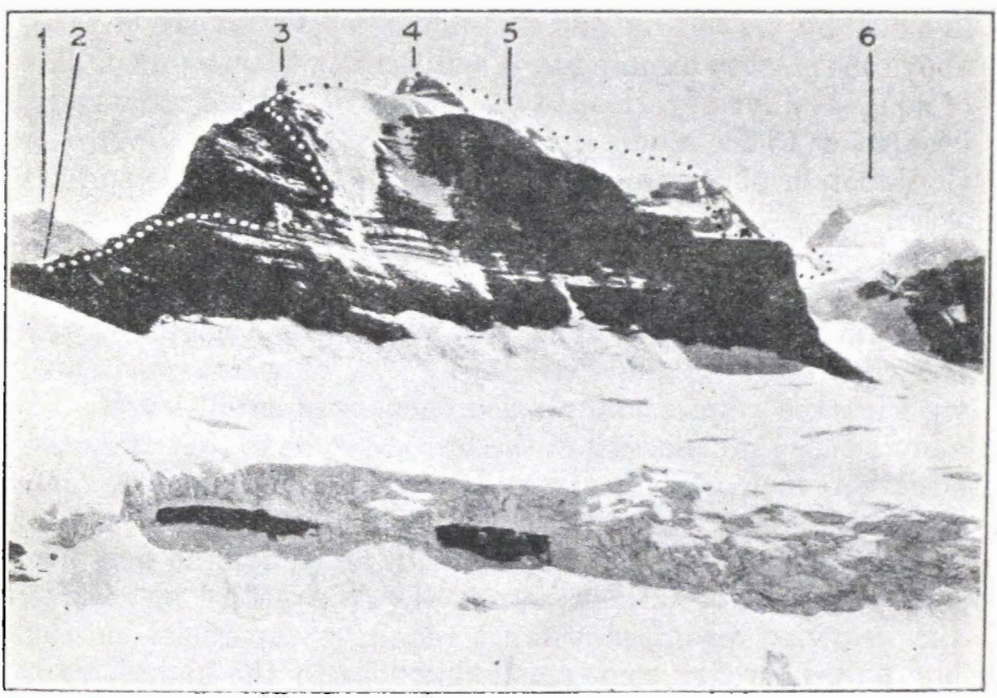


Photo. J. M. Thorington.

PANORAMA FROM CONTINENTAL DIVIDE S.W. OF MT. HOOKER.
Showing Tongues of Hooker Icefield and drainage to Wood River.

move a little to one side,' relieved the tension ; we quickly got out of range, in time to avoid a heavy bombardment of larger boulders that came down over our intended path and would surely have done for us had we persisted. We realised afterwards that in Conrad's cool leadership in emergency we had seen one of the finest things produced by the mountaineering art. So, selecting a new way, we went on ; the ground became increasingly difficult ; in one narrow chimney of 35 ft. the axes



MT. HOOKER FROM THE S.W.

1. Mt. Evans. 2. West Col. 3. West Tower. 4. Highest Rocks. 5. Summit. 6. Mt. Serenity. × × Bivouacs.

and sacks had to be roped up, and the last man, looking up at a wrong moment, got the returning coils full in the face, and rather to the detriment of a treasured incisor. Above the chimney was a short bulge of exposed cliff, and the two formed a little section on which an hour was spent. Easier ledges brought us up to the glacier (11), and we saw that the ice route would after all have been preferable.

We halted twenty minutes for second breakfast. Mt. Hooker was now in front of us, across an extent of threatening séracs, with northern cliffs surmounted by a twisted, corniced arête that makes direct ascent impracticable. The eastern end of the mountain swoops down in a fearful ice-bulge that seems

to overhang, and, even from Mt. Oates, we had not seen a plausible way up. And so we chose the western col, knowing it might give us a long fight; we had seen this side from the Kane Icefield and had found nothing better.

Crossing, not without some windings through the crevasses, we reached a poorly bridged schrund, and thence cut forty-five ice steps to the col—9300 ft. (1.45–2.30); this time spent in crossing schrund and cutting into the col. The sharp buttress and tower rising from the col to the W. arête was avoided by traversing and ascending ledges on the S. face, above the glaciers draining to Wood River. Steepening pitches of no great difficulty, close to the margin of a broad snow-gully, brought us to the mountain's crest below the rocky tower near the junction of the middle and western thirds of the summit arête.

The top of the tower is shaly, but we avoided it entirely and maintained our altitude by crossing a broad snow-shoulder extending southward. Here was a really bad schrund, with flat, thin bridges, and a cornice-lip; all of which we treated with marked respect and crossed cautiously on all-fours. We adapted the slow motions of the breast-stroke to this particular situation, in a way that would have delighted a swimming-instructor.

We now gained height on the main arête, for the first time able to gaze over the northern wall. We pushed on rapidly, the heavy, compact snow-crust requiring superficial cutting, and pulled through some small chimneys to the highest rocks (7.30). From below, we had thought that these last rock-towers might be the highest point, but, arriving, it was plain that the snow-crest beyond culminated in two wave-like points, with the eastern the higher. After making a tiny cairn and leaving a record, we followed along the cornice base to the steep snow of the highest point (8). More than fifteen hours had elapsed since we left camp; had David Douglas been with us he might have thought his estimate of height was not so far wrong! We anchored, and each, separately, had a look over the cornice down the N. wall to the icefield. Smoke had just begun to come in from a distant forest fire in the direction of Canoe River; we gazed back along the line of dripping, curling cornices into a red sun—it was as if one were living in the atmosphere of a Pitschner lithograph of Mont Blanc, so gaudy it was. Our more rational interest, during the few minutes on the actual summit, lay in the fact that we appeared to overtop Mt. Scott by several hundred

feet. We later confirmed this from Mt. Fraser, in the Rampart Group, and have become convinced that Mt. Hooker is the loftiest peak of the group. We would not, however, be understood as placing our eyesight in competition with the work of the Interprovincial Survey; so for the present Mt. Scott must rule supreme.[44]

It was becoming late, and there was quite evidently insufficient time for us to get off the mountain and return by the way we had come. We had no desire to return down the rock-wall in the dark, nor, for that matter, at any time. So we started down a long snow-shoulder, direct from the peak and descending westward of the snow-flats which form an irregular pass between Mts. Hooker and Serenity. As we walked down, close to the edge, about sixty feet of cornice sank silently, its impact far below producing echoing crashes. We came to the southern extremity of the shoulder without seeing any way down until the terminal buttress was reached. Following down the margin of a broad couloir for a little way without trouble, another 600 ft. of ledges would have taken us to the glacier. We stopped for a moment to look at the sunset: the base of the Wood River massif half-hidden in violet mist; the sky tinged with the faint green of arctic twilight, with a tracery of smoke-wisps, grey and red; Clemenceau's pyramid lifted into the heavens, with no apparent foundation, a floating thing, serene, above Bras Croche, with the pearl-pink colouring one associates with Oriental mosques.

Perhaps we were hypnotised: the weather was fine, the view entrancing; we had come down to the respectable level of 9600 ft., and it was too late to get home. We planned a night on the rocks. What more natural than, when we saw a perfectly fine cave close at hand, we should make for it? It was roomy and dry, with doorway rather larger than one would have selected for a permanent habitation, but altogether

[44] A similar and independent conclusion was arrived at by the first party to ascend Mt. Serenity. In a recent letter Mr. Carpe says: '. . . both Palmer and myself were very much surprised when the survey map came out showing Scott to be higher than Hooker. It definitely did not make that impression from Serenity. I should say that it (Mt. Scott) seemed lower than Serenity. On subsequent examination of photographs taken from the Fraser Group the previous year, however, Scott appears to hide Serenity. Owing to the late hour at which we reached the top of Serenity, I did not take instrumental levels on anything. I have no reason to question the Boundary Commission's figures.'

not to be sniffed at. There was a trickle of water only a few feet away, and we consumed most of our remaining provisions and thought little of it.

We spread our things about, crawled near to each other, and for a while slept quite comfortably. And then the trouble began. About midnight there was a rumbling of thunder with flashes of lightning. Rain fell, soon turning to snow. A wind came up, gusty and carrying snow into the cave. We were fairly well protected and kept dry. We got up at 4 A.M., with the first signs of daylight, peering out to find a dense fog which obscured objects more than perhaps fifty feet away. There was a light covering of snow on the ground, and the sleet continued.

Roping, we started downward, thinking to reach the glacier, round eastward to the pass, and get over to the Scott icefall. We got down to the glacier margin without much difficulty, although care was required where the rocks had become icy. The fog was most deceptive, and we had difficulty in distinguishing height and pitch of quite simple bits of cliff. And here we stopped. We had map and compass and knew our direction; but the Wood River slope of the Hooker Icefield is so fearfully put together with different levels of sérac and twisted, insinuated buttress, that we simply could not tell, in the fog, just where the Hooker-Serenity pass might lie. There were several chances of going astray and wandering over farther on the Wood River side; which, away from our base of supplies, might be disastrous. We stamped around in the snow for two hours and attempted to reach the pass by keeping close to the southern buttress of Mt. Hooker. The fog did not break, and the snow kept coming down. So at 10.30 A.M., finding a protected corner, walled in on three sides and roofed over by a gigantic slab, we decided to wait out the storm rather than waste energy in fruitless effort. The wet snow had soaked us; our food was gone except for some bits of chocolate and cheese; we had but a little extra clothing, and no means of making fire. We were at 9300 ft., and the snow kept on.[45] We arranged things as well as possible,

[45] To recapitulate: our reason for the first bivouac was to avoid working through the Scott icefall at a late hour, with the possibility of being halted for the night in an exposed position. We did not retrace our route over the long west arête of Mt. Hooker because we wished to complete the traverse and get off the mountain by a way easier than that of the ascent.

The second bivouac was purely a question of finding shelter in bad weather. We did more on the second day than a descent of

flooring the cavern with slabs, blocking the open side with boulders and filling the chinks with snow. Fog hid everything but near objects. We were wet and cold, beginning to get hungry; all suffered more or less with intermittent cramps in the thigh and abdominal muscles. There was a good deal of shivering, that was hard to conceal, done that night; and quite a bit of gastric burning, not so evident, but none the less painful—luckily we could get water in the cave. There was no way of keeping out the fine blown snow.

Morning came, a cheerless dawn; but we had been watching for it. The snow seemed to be lessening; the fog ebbed and billowed. Just before 4 A.M. the snow ceased; the fog wavered and lifted, so that as we looked out we could see the ground below us and the way toward the pass. We were a stiff lot, but Conrad made a leap for his boots that startled us. It was desperate work getting those boots on, but Conrad was first out, pushing over the snow-crusted boulders in the doorway in his hurry. Uncomfortable as we were, it was impossible not to think of Samson and the pillars of the temple!

Conrad went ahead to break trail; the ground was not difficult, once the way was seen, and the rest of us roped and followed. For a few minutes, as we zigzagged down to the glacier, we could see the lower slopes of Mt. Bras Croche, across Wood River, and Chisel Peak on Fortress Lake. It was only a few hundred feet to the ice below, and we followed Conrad's track; the fog closed down gradually. We found Conrad returning with the good news that he had found the pass and had been nearly to it. He roped with us and we proceeded as fast as possible. It began to snow and blow harder than ever; but we were sure of ourselves. Our faces and clothing became coated with ice, and hands were cramped through holding a frozen rope. For an instant we saw a dark stretch of open water in the lakelet on the pass summit, and everything was hidden again. The wind blew with great violence, making balance on level ground difficult; our tracks were not very straight, but the slope began to be downward, and we knew we had come across into territory that was familiar. Through rifts in the mist we recognised the cliffs of Ermatinger and the eastern ice-bulge of Hooker, and came at last out of the storm to the main icefall. The séracs were all snow-

300 ft. would indicate, trying several lateral routes toward the Hooker-Serenity pass. In fact we finally ascended a little in reaching the bivouac.

covered ; but we would have tackled worse things to get off the mountain. Conrad's never-failing craft brought us down in good order to the unroping place, and we followed the route used for Mt. Oates, down the eastern moraine and the glacier tongue. Camp was reached shortly after 11 o'clock. We had been out a little more than fifty-four hours.

Things had been happening at camp. High on the ice, above the place where we unroped on descending, we noticed tracks of a man. Dave had become worried when we did not appear on the second day, and had gone up in an unsuccessful effort to find us. When we arrived at camp we found that he had left at 2.30 A.M. to ride to Jasper for help. Jack was in camp, mighty glad to see us, and immediately got us a meal —several perhaps, all in a row—which we devoured before turning in. Jack was sent off with instructions to ride as fast as possible and turn back the search-party. We learned later that Dave had ridden the 45 miles from Scott Glacier to Jasper in nine hours, had secured new horses, and, with Phillips, had sent out a really remarkable party, including Mr. V. A. Fynn, A.C., with the guides Alfred Streich and Hans Kohler. If one were in real danger, it would be impossible to conceive of a more efficient life-saving unit ; and the unselfish sportsmanship of Mr. Fynn, who unhesitatingly threw over his own plans on hearing of our supposed difficulties, compels our admiration and remains a cherished memory.

By fast riding, Jack had turned back the search-party at the Whirlpool tie-camp ; and before noon next day he and Dave had come back to us. They needed sleep, and their horses were used up. The climbing party, after a few hours in bed, had recovered sufficiently to do camp work in the absence of Jack and Dave ; and the impression remains that none of us missed a meal. It was July 8.

By the camp-fire that evening Conrad remarked that Mt. Hooker was the most interesting mountain he had climbed in recent years, and that the summit arête reminded him very much of Mt. Cook in New Zealand. There are few Canadian peaks that he finds worthy of such praise.

Mt. Hooker we believe teaches two lessons : first, that it rarely pays to wander over broken glacier or snowfield in fog ; secondly, that a party in good condition can wait out a storm of considerable duration. Of the two things, clothing is more important than food. One night out at the 9000-ft. level is plenty ; the second is bound to be unpleasant. On

MT. SIMON (FRASER GROUP)
from Geikie Camp looking W.

Canadian peaks, however, one is very rarely in a position when timber-line cannot be reached.

To show that our climbing party did not return in a hopeless condition, it may be added that the only damage done was in the shape of superficial frostbite of the hands, acquired on the third day out, as the result of holding with wet mittens a hard-frozen rope. On July 9, with only one day of rest, our time in the area being up, the entire outfit made the 20 miles to the Whirlpool tie-camp, and on the following afternoon were in Jasper.

We were *en route* to the Rampart Group, and had hoped to find a pass through the valley of Simon Creek over to Tonquin Valley. Because of the amount of spring snow this was not possible; but on July 11 we rode from Jasper, by the Miette and Meadow Creek trails, to Tonquin Hill. Camp at the southern end of Amethyst Lakes was reached during the following morning, and Surprise Point was climbed later in the day. On July 13, eight days after the start for Mt. Hooker, we ascended the Fraser Glacier to the Erebus-Fraser col, crossed to Simon Glacier, the head of the 'North Whirlpool,' made the first ascent of Simon Peak, 10,899 ft., the high unclimbed summit of Mt. Fraser and the loftiest of the Rampart Group, and then traversed McDonell Peak, 10,776 ft., back to camp. This is no programme for an exhausted climbing party! Within another week we were climbing in the Robson Group.

The ascent of Mt. Hooker was the fulfilment of a great desire. To see and to climb Mt. Brown and Mt. Hooker will perhaps not be thought of as a remarkable alpine ambition. They are probably not the peaks Douglas named; in fact, we remain in doubt as to precisely what he did, where he went, and what he named during his few hours at Athabaska Pass. The Interprovincial Survey has unquestionably done the best thing possible in perpetuating these classic names by applying them to a lovely peak on either side of the pass. The ambition to stand upon them is a deeper thing than it appears; for the naming of peaks by Douglas, and the over-estimation of altitude—no matter how strange or ludicrous it may seem; no matter who was at fault in figuring—these things first led men in search of great Canadian heights. They came from far corners of the earth, following pioneer trails, seeking beauty. And none there was who returned insensitive to the glory of that mountain vastness.

And so we turned back from Athabaska Pass, on the Whirlpool trail toward the site of Jasper House, feeling that we too

had come under the spell of this overland route of the long-ago, and, on Mt. Hooker at least, had shared a little in its adventure.

The present map is a reduction of Sheets 26 and 27 (scale 1 in. = 1 m.) of the Interprovincial Boundary Survey. They can be obtained on application to the Surveyor-General, Ottawa.

First Ascents of Mt. Barbican, 10,100 ft., and of Mt. Geikie, 10,854 ft. (Canadian Rocky Mountains).

By VAL. A. FYNN.

ON July 9 I met C. G. Wates and M. D. Geddes, both members of the C.A.C., and F. H. Slark at Jasper (Alberta), and we proceeded on the morning train to Geikie Station, some eight miles W. of Jasper, where we joined our pack train of nine horses in charge of W. Digby Harris of Jasper. Leaving the station at about noon, we made the new Ranger's cabin[1] in Tonquin Valley *via* the Meadow Creek trail in about seven hours. The next day took us over the divide into British Columbia and over a pass W. of Barbican to the Geikie Creek on the S. side of the Ramparts. There is no trail over this pass, and considerable time was lost and unnecessary effort expended, as we went too far W. of the divide and crossed the ridge considerably W. of its lowest depression. The camp site[2] was reached in twelve hours at about 11 p.m., with all members of the party dead tired. All slept in the open.

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[1] This is located on a shoulder overlooking Maccarib Creek, slightly W. of the stream which descends from the direction of Rg,[2] and about $\frac{1}{4}''$ E. of apex of A in the word ALBERTA. It is marked 1 on map.

[2] Our Geikie camp was located at about 7150 ft. and just about where that contour line, if shown, would cross the R of BRITISH on map. It is marked 2 on map.

The couloir up which we went is shown on the map N. of the two R's in the word TURRET. The Black Inkwell is shown on map just E. of the N in TURRET MTN. The Blue Inkwell is under the E of TURRET.