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is dedicated to
Elizabeth Parker

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A FOUNDER OF
THE ALPINE CLUB OF CANADA
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SULTANA AND ENTOURAGE SOUTHERN SELKIRKS

BY DOROTHY E. PILLEY RICHARDS

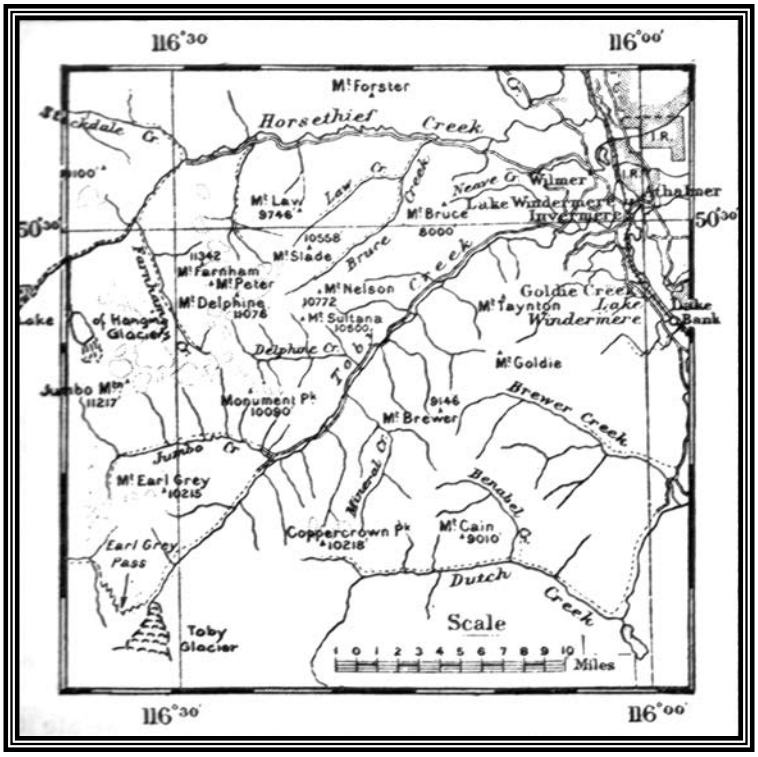
The summer of 1944 is reputed to have been the wettest season in the Rockies since 1916. That made the official description of the Upper Columbia Valley as "a semi-arid region" enticing. It is, in any case, very beautiful; the parallel ramparts of the Rockies and the Purcells enclose a varied band of blue lakes, green savannahs and tawny benches.

Two decades ago all this was humming. Young orchards were blooming, stern-wheelers paddling swan-like through the valley, attractive ranches springing up everywhere, mines opening in the furthest recesses. Most important of all, to the climber's one-track mind, fine roads and well-kept trails led up almost to the summit ridges, going in up Horsethief or Toby Creek forty miles or more from that pleasantest of jumping off points, the Invermere Hotel. In those days it was possible to rush all the way up from Golden, whizz through this lovely region and make camp out of sight of man in the heart of the wilderness, all in one day's travel. So did J. M. Thorington in 1928 and others who went to the 1928 Alpine camp at the Lake of the Hanging Glaciers. So did A. A. McCoubrey the following year with Ferris and Roger Neave. Talking over those days with Dr. Mary Crawford, who lives at Invermere and knows its history, made us realize that the extant literature she showed us reflects a vanished age.

Today all is far otherwise. You approach a picturesque cluster of cabins with high hopes of a home from home. But worse than moth or rust are rain and porcupine, the reek is uncleansable and unquenchable in its pungency. And this is what to expect in most of the deserted properties The mines are closed. Slides have cut the fine roads. Deadfalls make those once smooth trails impassable. Local information accordingly has diminished and, above all, the young men are at the war. The veteran of the valley, Walter Nixon, who guided the Governor-General in 1943, told us that even the trail to the Hanging Glaciers would need days of cutting out before horses could be taken through. The traveller's consolation is that he has excuse for lingering at the Invermere Hotel and sitting on the lawn in the sunlight looking at Lake Windermere, dreaming of David Thompson's first voyage through the valley in 1807 and listening to the breeze in the cottonwoods.

The best way to get a first view of the district is to go up to the Paradice Mine (7,800 feet). It is still in operation and a good road takes you up with your dunnage to about the highest point a motorcar can reach in British Columbia. The little hanging glacier basin where the mine buildings are deserves its name. At the edge of timberline here the flowering tamarack-studded meadows run up into smooth, glistening, violet-purple shale slopes which lift to skylines as clear and sharp as a snow ridge's. Over a westerly hump of these our way lay to Mt. Nelson and its neighbours — hidden from the Paradice Mine which looks out across the Upper Columbia trench to Assiniboine. We were courteously welcomed by Mr. and Mrs. Reger of the Sheep Creek Gold Mining Company and the whole outfit, whose hospitality recalled again to me my first wild British Columbia mining camp days in 1925.

Not as yet knowing the district, I. A. R. and I could make no definite plans. We only knew that there were some long abandoned cabins at the Wild Cat Mine at the head of Bruce Creek (Boulder Creek in the old accounts) and had a hunch they might make a good centre of operations. So we packed up a week's provisions and our sleeping bags, etc., and set off up some thousand feet of shale. From a distance it looked as if it would be as laborious as a sand-dune or as scree. But in fact it was like the best sort of snow and took you up as lightly as it let you run down; you left behind you tracks which were a joy to behold. On the whale back Mt. Nelson presented itself, its noble northern precipices tapering to a flame-like point and looking enormous though far off.



At our feet the glittering debris slopes dipped steeply into a mile-wide cup floored with spring-soaked grass. Where the stream left it, there seemed the faintest hint of an old trail 500 feet below us. Easing down the packs, we wandered off to a neighbouring hump to get a wider view. Across the slope we then looked down, a long, low-hung, badger-colored animal was lolloping. Its gait was peculiar, full of coiled power, and we watched its effortless progress from ledge to ledge spell bound. When it crossed the ridge it turned suddenly into a globule of quick-silver and just flowed away straight down the shale, faster almost than the eye could follow. Once before, in 1940, near Shovel Pass, we had surprised a wolverine near enough for it to give us a nasty look. We gave this one nasty looks in our turn.

Back to the sacks. We trotted down the slope into the cup. At its mouth, by the stream-side, was a charming surprise. Some old prospector, in love with this corner of the mountains, had put his feelings into building a monumental hearthplace. A few decayed poles showed how his tent would have faced it, and a step or two away across smooth sward the riverlet plashed and tinkled. We were strongly tempted to camp then and there to savor these relics and enjoy this haunt to the full. Such temptations are frequent in the region. Strange that a campsite far enough away stirs the

deepest emotions of human companionship while the same sort of thing in a park only makes one's soul ache for unexplored country!

Athwart the grass slopes now, between the tamaracks, ran a tiny path and by its side an irrigation ditch, no deeper or wider than your hat, and riddled with the cracks of ancient drought. The two kept company for half a mile or more and ended on a promontory where, bathed in the evening sunshine, sat the old-timer's cabin of your dreams. But your best imaginings will not come up to its fairy-tale actuality. That its lockless door was stoutly fastened by some secret mechanism to be activated from without gave it the added fascination of a puzzle box. We looked at one another in the goodbye blaze of the sun, now about to drop behind the vast black outline of Mt. Slade. Bruce Creek was filling with mist. We felt we ought to go further, but still — and just how was that door fastened anyway?

It had two separate bolts, but what you pull at to undo them we will not reveal. On the wall within was a Farmer's Almanac of 1935 and all was in good order though the layer of dust suggested years of dereliction. In a trap was a packrat stripped to the bone.

Supper was soon simmering on the stove. As we ate it, our host, however absent in body, certainly had a large share in the conversation. We remembered a story Dave Nixon told us back in 1933, when we were in the Bugaboo, of an old prospector who kept the whole valley of his claims clear of strangers by sitting waiting for them rifle in hand. As something on the roof rattled in the night breezes we wondered what would happen if such an old-timer found us there cosily supping at his table? And it was with considerable interest that we learned later, down in Invermere, that chance had, in fact led us to make ourselves so much at home in that very ogre's den!

Putting all again as we found it but dust free, each bolt in place, its draw re-hidden, and the wood pile replenished, we lingered still to admire the singular beauty of that cabin's position. From its grassy shoulder it commands the scene. The great north precipices of Mt. Nelson frown across to Mt. Slade and between them the trench-like recesses of Bruce Creek lead up alluringly to a rocky pass three or four miles away. But first you have to get down to creek bottom. A mining track winds down past numerous workings to a point where you have a choice of route. You can either follow it a mile eastward through the forest as it descends very gently to its junction with the old wagon road coming up the creek; or you can cut straight down over rough ground and through brush and join the road a mile further up. Whichever you do, you will probably wish you had done the other. While you are walking the two miles, you think, "Why didn't I go that quarter of a mile instead?" Stuck in a bush on the quarter mile, you ask, "Why didn't I stick to a trail while I had one?"

The wagon road when you strike it is a charmer. These old trails in now abandoned country win the heart, not merely through the easement they offer to feet wearied of the untouched wilderness. There is balm and relaxation to the mind as well in the thought of the men who cut them out in vanished days. The mines have added a great flavor to these recesses:

"He breaketh open a shaft away from where men sojourn They are forgotten of the foot that passeth by," as the Book of Job has it. But they are not forgotten by travellers with heavy enough packs on their shoulders.

Away up near the head of the valley, under the shelter of about the last shred of forest, stand the long abandoned cabins of the White Cat Mine — owned by Miss Pitts of the Invermere Hotel. They still stand there —just. A spring avalanche, twisting round the flank of the forest strip, has side-swiped them, knocked a storehouse to spillikens and pushed a pile of saplings up against the bunk-house. But it is still very habitable where the roof does not leak. Through its wide, low window you look down onto a little glacial plain under handsome moraines from which

the glacier hanging down from Sultana, Mt. Nelson's southwesterly neighbour, has only recently receded. (Compare A. A. McCoubrey's photograph, *C. A. J.,* 1929, p. 80, and the panorama from Mt. Nelson, *Appalachia XII,* p. 252, with our ridge. Both show the fantastic shrinkage of the snow.) Here the climbing, with alternating rest days, kept us busy for over a week, until in fact we were counting our raisins.

The only drawback to these ideal quarters is packrats. Those who know these creatures can fill in details for themselves. Those who have not lived with them would not believe any truthful description of their antics or the racket they can raise. They delight in din which they make, like pure artists, for its own sake and they have an industry which Samuel Smiles would have counted beyond price. When carrying, for no reason, all your carefully prepared kindling, stick by stick, from one corner of the cabin to the other, not a split second is wasted. They might be doing it on a bet against a stop watch. Bumperty, bumperty goes the stick across the floor. Whirr — go the packrat's feet back for the next consignment. Turn a flashlight on the animal and he just gazes at you pensively. Hurl everything you have at him and he's back within a minute asking for more. The simplest thing to do, as every wise man's son doth know, is to hang everything you value on wires, tuck your head in your sleeping bag and let him do his worst.

Our first trip was up Mt. Delphine, 11,076 feet, by its northeast ridge over two probably unvisited minor summits. This is an exhilarating expedition which gives you a fine sense of covering territory. You go on up the valley for about three hours, counting botanizing and rest, past a dying glacier. From the rock-rimmed pass at its head you look across the upper grassy, boulder-strewn basin of Delphine Creek to a white tongue of glacier which looks provokingly steep. Actually it gives pleasant walking and leads you onto a wide, smooth glacier shelf tranquilly setting off the abrupt faces of the Delphine peaks. Beyond it in three well-proportioned stages was our ridge. It still looked a long way off, but the intervening obstacles yielded with flattering ease. Sooner than we had expected we were working up the final reach with the superb north glacier- hung face of Delphine dropping away forever, it seemed, beneath the right foot sole. The rocks are good where you want them to be solid and the situation is finely dramatic. The level stretches of the ridge give swift going and the whole trip is one to delight a mountain traveller's heart. Times? We took the day gently, reaching the summit at 4.00 p.m. I remember that it seemed late when we set out for home by our route of ascent, that we had a fine glissade of the plateau and that the flashlight was useful before we got in.

Our next ascent was Mt. Nelson, 10,772 feet, by its southwest ridge. It was first climbed in 1910 by C. D. Ellis, "who certainly could build 'a whale of a cairn,' " as E. W. Harnden says, who went up our ridge in 1911. Early accounts mention snow but there was none up there this September. The walk up to the Nelson-Sultana pass must also have changed much in the last thirty years. You are on moraine or debris instead of snow and ice. Once on the ridge you have a fine commodious staircase until the final coronet of firm, cream-colored rock which guards the summit and gives you a steep and pretty pair of pitches. To come down quickly take the ordinary south ridge for awhile and then swing back to the southwest ridge a little above the pass.

Mt. Nelson, as those who have seen it from the Windermere Valley will realize, is a commanding viewpoint. To the north, Assiniboine dominates the skyline and the best known peaks in the Rockies and Selkirks show themselves from unfamiliar angles. Most surprising however is the number of high snowy summits which fill the south and west. Decades of climbing are displayed to dazzle the speculative eye. The trouble with most of them will be to reach base camp.

Mount Nelson's nearest neighbour to the southwest is Sultana (ca. 10,500 feet). By whom

so named I know not, but the reason is clear enough. She glitters and allures, and tempers her attractions with a certain majesty — from the north at least. The route to take is particularly well seen from Mt. Nelson. A little gendarmed ridge from the Nelson-Sultana pass leads to a levelish snowfield. Above this a wall of mixed rocks (easiest lines to the left) takes you up to a sharp crest some way along which is a bold looking summit. To the southwest of Sultana a mile-long ridge at the 10,000-foot level stretches to Mt. Catharine. It runs parallel to the upper part of Bruce Creek. You see it from the Wild Cat — a good place from which to count its summits. None of them except Mt. Catharine seemed from A Climbers' Guide to have been visited.

Our last expedition took us over them all, rather to our own surprise it must be confessed. We went up again to the Nelson-Sultana Pass, taking a more southerly couloir. It is well to keep in the shelter of one of the retaining walls, for we watched some small stones bound down its middle in a most disengaged and disengaging fashion. The way up Sultana is not without the route-finding puzzles which every mountaineer enjoys. The snowfield half way up is shrinking and has exposed a few yards of unattractive going, but above, the rocks are delightful. The summit itself puts on a bluff, but there are flanking ways which take you up to the coziest crater-like depression — smaller than the one on the Meije — where you can lie at ease and look out over everything. One longs to set up one's tent there. But ours was down at the White Cat Mine, so after building a cairn and leaving a record we reluctantly remembered, about 4.00 o'clock, that the sun has a way of falling out of the sky and night a way of coming on. Countless seemed the number of points to be crossed before we would reach Mt. Catharine and, we hoped, an easy way home to bed. The summit air must have gone to our heads or we would never have embarked in such care-free style on the venture. Up and down, up and down we went. The ridge was always interesting and generally sound in spite of the utmost variety of rock structure. Slatey blue and brittle; green and slabby; creamy, firm and rounded; red and rotten or coal-black and crumbling, band succeeded band, fortunately without offering any serious difficulties to slow our progress.

Now and then we would pass along the crest of one of the little glaciers which hang down into Bruce Creek. None of the ridges between them offered us a safe-looking way off, so on we went in mounting good spirits as Mt. Catharine, our objective, seemed to come nearer by leaps and bounds. About half-way we crossed a pleasant peak higher than all the others rising between Sultana and Catharine. We set up a cairn and ventured to christen her Fatima as a sort of lady-in-waiting or usher to the Sultana. Up we went as the sun sank — over one or two shoulders which deceitfully masqueraded as Catharine — and then at last in indubitable dusk the purple shales of her summit cone were under our feet. Then we took stock anew of the situation.

From this point to the Bruce-Delphine pass (whence we would have had known walking ground back to our Camp) falls a ridge. From a distance it had seemed to promise swift and easy going. We were soon undeceived —its rocks reared up in knife-edged pinnacles looming informidable fashion through the gloaming. It was evidently no ground for night climbing. Nor did the slopes on either side offer comfort. On the right a disintegrating wall plastered with ice ribbons dropped away into the night-filled valley. On the left short scree patches tipped over one flanking precipice after another.

Just as we were wondering what to do there appeared, under one of the pinnacles of the crest, an ideal bivouac site. It was too tempting an offer to ignore. A deep, sheltered cave with a protective, high threshold opened before our eyes. Into this pica's palace we crept in high content. The rocks were still glowing with the day's heat. We settled down to a sardine supper confident that a night a la belle etoile even though we were still at the 9,000-foot level would not be too bad.

Mt. Nelson From Mt. Sultana.
Photo D.E.P. Richards

On The Northeast Ridge Of Mt. Delphine.
Photo D.E.P. Richards

With Mt. Nelson And Mt. Sultana In Background.

A romanticist like myself is hard to convince in such matters. It would be tedious to describe at length the cooling down both of this content and of the rocks or the rising of the breezes or the conversion of our smooth bed of paving-stones into a rack of flint blades or the extraordinary elongation of the post-midnight hours. The beauties of the moonrise and of the dawn were well paid for. All these things — not omitting the strange behavior of our teeth — have been recounted of old by pens of Master Alpinists; but to all they come every time as a fresh experience easier than most to remember. Wonderful though was the immediate effect of taking "Snack Tabs" given me for times of need by Dr. I. B. Hudson. What was satisfactory was to find, when climbing light returned and we crawled back onto the ridge again, that warmth came back at once and that the ridge went well. Long before we reached the pass, however, we realized that its knife-edges, its overhangs, its subtleties of route-finding, needed all the light we could get on them.

Next day our food and time ran out together. We made up sacks which seemed surprisingly empty, said goodbye to our pet packrat and retraced our way to Paradice Mine. Down in Bruce Creek the huckleberry was turning every kind of colour, the cinquefoil was withered away. A thousand feet above it was still blooming — proof of how the frosts bite first in the valley. Our last impression is of the gold and orange of the tamaracks in the highest meadows and the soft glide down over the shale slopes to rejoin our friends in Paradice again. Yes, that is how "Paradise" is spelled in the claim. Truly the mountains of the Upper Columbia Valley have what the heart seeks.

FIRST ASCENT OF MT. TEMPLE 1894

BY WALTER D. WILCOX

The writer has just recently been both surprised and pleased at having received from the Alpine Club of Canada an invitation to write an article on the first ascent of Mt. Temple. In one respect it is rather difficult to re-assemble the details of a story that may have been prepared years ago while under the inspiration and enthusiasm of a new experience. Then there are possibly two objections to the resurrection of some old and half forgotten article. One is that many readers are already acquainted with the original, and another is that the author himself may have forgotten unnumbered details in connection with the story.

Happily neither of these objections carries any weight in the present case. For one thing we have, due to the passage of time, a comparatively new audience to address. Then again, insofar as the author is concerned, details of former adventures in the mountains are even now as vivid in memory as they were the day they took place. Perhaps in imagination they are even more so. In the old days Tom Wilson used to tell me stories of his explorations and seemingly carry me along with him, up some stream or mountain valley that he had seen years before, describing as he went along, every peak or lake, or side valley, in photographic detail. The description of how he rode from the Pipestone Pass to Laggan in a howling blizzard, and how he broke through the ice of a stream and had his feet frozen and nearly lost his life, was always to me a striking example of his well-nigh photographic memory. The true mountaineer or nature lover is always ready to recall past adventures and re-live their charm and interest.

The writer spent almost the entire summer of 1893 at Lake Louise. At that time it was a primitive and almost desolate spot. The scenery was, of course, the same as it is now, but the immediate environment of the tents in which we lived was little more than a muskeg filled with mosquitoes and tree stumps. A new chalet was being built and two or three Indians remained there all summer helping to clear the land. Willoughby Astley, the manager, was a most energetic man and very appreciative of nature's beauty and grandeur. Besides that, he was a wizard with the axe, which was well. Every time we had a heavy wind the road all the way to Laggan was blocked and for several days there was no mail, no baggage, and not much to eat. If it hadn't been for Astley's axe we might well have starved.

And he was an expert boat-builder as well, which was a great help in crossing the lake. The only path around the lake-shore was what is generally known as a "game trail," that is a kind of side-stepping of rocks, stumps and fallen trees and leaving nature as it was before you came along. So it required about half an hour to reach the lake's end and hard work at that. One of Astley's boats was far better.

Astley was likewise a great lover and admirer of nature and was always telling us of the beauty spots in the surrounding region and the best way of reaching them. Amongst others his favorite was the so-called "Saddleback," a kind of high Alpine pass between Mt. Fairview and a low but interesting peak to the east. Trails were being built, mostly by the Indians, to Mirror Lake and Lake Agnes and also to the Saddleback. The latter was only completed about half a mile through the deep woods and then set the hopeful and prospective mountain climber adrift in the midst of the densest willow and pine scrub, bent twisted and flattened by winter snowslides, that the writer has ever encountered.

However patience will usually conquer all difficulties and at length the alert visitor will

be surprised and pleased at seeing the snow-white pyramid of Mt. Temple's highest crest slowly rising above the shrubs and alpine flowers of the Saddle. Crossing to the opposite side of this meadow, which is really a kind of high mountain pass, and then descending a little through lovely larch trees one finds oneself on top of a cliff with all of Paradise Valley with its forests and streams far below. In the center of the picture like an emerald, and sometimes more like a sapphire, Lake Annette rests at the very base of Mt. Temple. Here the cliffs rise 4,000 or 5,000 feet to the great hanging glacier on the mountain's crest which is the highest of all the great mountains in this part of the Rockies.

This view has always impressed me as one of the grandest mountain scenes in the Rockies with the possible exception of Mt. Assiniboine as seen from the north. The writer has made the trip forty or possibly fifty times, in the early days with a 5 by 7 camera, later on with an 8 by 10, and nowadays with an 11 by 14. With the latter type you do not snap right and left and get nothing but you wait till you get just one picture and it has to be a good one.

One day while here, Howard Palmer came along and persuaded me to climb a little pyramidal rock mountain just north of Mt. Fairview (formerly Goat Mountain, so conspicuous from Lake Louise). Palmer was a delightful companion in the wilderness and a slow and careful climber in dangerous places. The climb was easy and very interesting, over great blocks of stone with good hand holds. From the top we had an over-powering view of Mt. Victoria and much to my astonishment I found that we were on the same peak that we had tried to climb from the Lake Louise side in 1894.

It was during the summer of 1893 that I met Sam Allen, or rather renewed an old acquaintanceship made in the Selkirks where we had made the first ascent of Eagle Peak and several other hitherto unclimbed mountains. Allen never required more than one glimpse of a high and imposing mountain before he made up his mind to climb it or at least make an attempt to do so. Mt. Temple had long since caught his eye and so in the summer of 1893 we worked on a plan that seemed to promise success. There followed an adventure that I shall never forget and one that I hope to remember always. We had now some little knowledge of the mountain from almost all sides. Unfortunately, how very little that knowledge turned out to be!

The reader will learn of our plan as he follows the story. First of all, we engaged one of the Indians at the lake, Enoch Wildman, by name, to help us transport a tent and equipment to the north side of Mt. Temple where we planned to spend the first night and make the climb the next day. Everything started off in the most encouraging manner. In order to avoid beating through the virgin forests for the 10 or 12 miles to the mountain's base we went down to Laggan and followed the Bow River southwards. There was a narrow beach at the water's edge due to rise and fall of level in flood time and drouth. Then too the passage of wild game had made this path even better. So we made fast time to the Paradise stream which we crossed and a few miles later we struck due south through the woods towards the base of Temple. Night overtook us as we reached a point about 7,000 feet above sea level and at the very base of our mountain. We were under the northern cliffs of Mt. Temple. Here was a lonely mountain tarn where we planned to camp, though a sudden squall of rain and wind greeted us as we unpacked our poor, tired pony. There was no level ground for a camp except a narrow shore-line covered with rough stones and stranded logs, the last decaying relics of winter avalanches. Night was corning on apace and, at this time of year, the nights were long and cold. The best we could do was to clear partially a small space near the lake and turn our pony loose, to graze on such sparse and inefficient tufts of grass as he might find, as a reward for all his hard day's work. The slope of the lake bank was such that it was necessary

to build a small wall of rocks by the shore to keep us from sliding into the water in our sleep. Of firewood there was an abundance, but most of the logs were far too heavy to lift or carry, so we put our tent where there was the greatest abundance of wood and solved that problem.

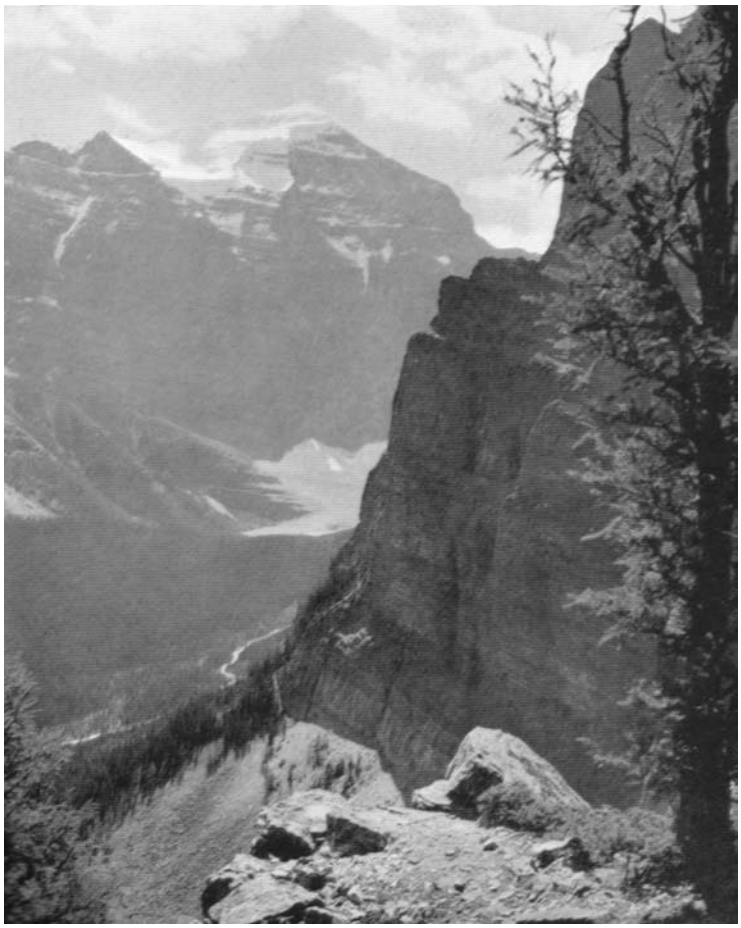
Smoothing out the ground as well as we could, we set up the tent with some half-rotten sticks and poles and laid aside a few for firewood during the night. We started off with a splendid great fire and were able to sleep a few hours, but the violent gusts of wind blowing this way and that soon consumed all our fuel. From that time on, no one of us had the courage or the good heart to get up in his bare feet, and prowl around in the dark to search for logs, most of which were far too heavy to lift, in any case.

Dawn came at long last, and then for the first time we could get a good idea of our surroundings. Across the lake the precipices of Mt. Temple rose vertically to a great height and a waterfall made a great leap from some unknown source and fell not less than 1,000 feet into the lake on whose shores we had spent such an uncomfortable night. Patches of snow here and there left over from last winter indicated our high altitude.

While we had suffered during the night almost to the limit of endurance, poor Enoch's fate had been far worse, with nothing but a horse blanket over him, so he asked our permission to return to Lake Louise for the following night. "No grass for pony here," he said, "too cold me; no like it me." So after he had promised to return on the afternoon of the second day, "sun so high," he said, pointing to where it would be about three o'clock, we gave him permission to return to more comfortable quarters. Meanwhile we rested all day and watched the clouds racing, with intermittent showers, from southwest to northeast, and filling us with forebodings as to the morrow's weather.

Monday morning at 4:00 a.m. we were on foot by the first light of day. The plan of our proposed attempt was as follows. We were to take advantage of the great, so-called "bench," of glacial drift which rises from the valley bottom some 800 or 1,000 feet and rests against the flank of Mt. Temple. This formation was caused by the glacial movement of the Quaternary or Glacial period some 10,000 years ago and is really a lateral moraine of the former glacier. The very top of this moraine where it rests against the cliffs of Mt. Temple, is quite level, thereby forming a natural pathway up the valley. Its height rises as it goes up the valley, as it followed the level of the ancient glaciers, and incidentally gave us an ideal pathway to our destination at the south side of the mountain. Between 6:00 and 7:00 o'clock we were around the southeast corner of our mountain, ready and anxious to scramble up the cliffs now becoming broken into gullies and rock walls. Working slowly and carefully up rocky slopes and narrow gullies where loose rocks were a constant and dangerous menace we reached an altitude of about 10,000 feet by 11:00 o'clock. Here we came point-blank against a vertical wall not less than 400 feet high, a barrier that put a sudden and very certain end to all our hopes. At the base of this forbidding cliff there was a narrow slope of broken limestone and then below this and more to the left another precipice. Utterly defeated by this barrier, I walked along the base of the cliffs into a semi-circular recess in a last, but vain, reconnaissance while Allen was taking photographs.

Quoting from my The Rockies of Canada, "Here I had a few moments of quiet contemplation of a scene that in its awful solitude has left a deep impression on my memory. Some stones, dislodged as I moved, fell with a grinding sound over the edge, toward a narrow chasm, three thousand feet below. A cold wintry wind made a subdued monotone amongst the inequalities of rough stone and the overhanging cliff, and brought up the dust and brimstone odour from the crushing stones. Opposite was a pinnacled mountain stained red and grey, rent into thousands of



Mt. Temple From The Saddleback.
Photo Walter Wilcox, A.R.P.S.

Camp In Paradise Valley. *Walter Wilcox, A.R.P.S.*

narrow gullies or beetling turrets by the wear of ages. It was a vast ruin of nature, a barren mass of tottering walls and cliffs, raising two lofty summits far upwards. Between lay a narrow, secluded valley, so thoroughly enclosed that a small lake in it was still covered by the granular, half-melted ice of last winter."

The nature lover and above all the mountain climber, during the course of perhaps many years contact with the great world of outdoors must eventually collect in his memory certain outstanding scenes that surpass all others. These choicest memories somewhat resemble a collection of rare paintings or art works and they are equally imperishable. In a way we have a duty to renew these wonderful memories from time to time to keep them fresh and virile, just as we might clean up an old painting or dust off a statue in order the better to admire it.

We arrived back at our camp by middle afternoon where we found Enoch had returned, faithful to his word, and in a short time we were on our way back to Lake Louise where we arrived at midnight, after having been 18 hours on our feet. After a good night's rest we talked things over and decided that we were not yet through with Mt. Temple.

That was in 1893. In the spring of 1894 a number of us undergraduates at Yale organized a "Lake Louise Club." We would meet every week and discuss plans for the summer. The members of the Club were George Warrington, later on a distinguished lawyer of Cincinnati, Lewis Frissell, Yandell Henderson, later Professor of Chemistry at Yale, Sam Allen and the writer.

One by one the several members of our party began to arrive at Lake Louise and we immediately started walking and climbing trips in the mountains. Later we essayed snow and ice trips and came near killing poor Lewis Frissell in an ice couloir on Mt. Lefroy which no Swiss guide would venture to enter. Meanwhile we made the first ascent of the Mitre Pass and looked down on a new and very beautiful bit of country which we named Paradise Valley. We thought that this valley might be a new and better approach for the ascent of Mt. Temple. And it was.

Early in August all plans had been made and we moved our camp to the upper part of Paradise Valley where the forest was thin and the trees were for the most part that loveliest of mountain trees, Lyall's larch. Just in front of our tent was a small, icy stream of purest water and on every side an abundance of dead trees for firewood. The whole place was hummocky with rocks half hidden by heather and alpine plants that made them look very beautiful by day but did not sufficiently smooth out the rocks when we were trying to sleep at night.

On August 16 we climbed Mt. Aberdeen, which for some strange reason had never been ascended. It is from a mountaineering standpoint a rather uninteresting climb, little else but scree slopes with no rock work. However from its very reasonable height of 10,370 feet and its central position among such giants as Mts. Victoria, Lefroy, Hungabee, Deltaform and Temple, greatest giants of this part of the Canadian Rockies, the view is surpassingly grand and imposing. There was also something on the very summit that I have never seen before in all my mountain experiences. A small depression right near the summit was completely filled with the cleanest and whitest snow undefiled by anything more than the pure air through which it had descended from heaven. Here in the center was a pool of crystalline water of the most perfect sapphire blue that anyone could expect or hope to see. On the surface and floating as it were in the reflected sky like fairy boats, were the clouds that in reality were sailing over our heads.

The following day, August 17, was a memorable date for all of us for then it was that we made our final attempt to reach the top of Mt. Temple. We were up and about at 4:00 a.m. The waning moon in her last quarter was riding low over the soaring peak of Hungabee. The air was perfumed with the smoke of distant forest fires. Then in the pale, wan light of earliest dawn we

crossed the hummocky and frosty meadows towards the base of Sentinel Pass (so named by Allen for the little pinnacle at the summit resembling a man on guard). We were all of us silent as Indians on the war-path, our minds filled with mingled feelings of hope and wonder and uncertainty. We were approaching the crisis of two years of hard effort and of failure and of an unknown future. On our right were the grim and towering Sentinel towers, one of the marvels of the Canadian Rockies.

Half way up Sentinel Pass we came to a treacherous slope, no doubt never hitherto disturbed by human foot, where the rock and gravel and in fact the entire surface of the mountainside began to move and slide with every footstep, till we feared that we ourselves by our combined weight and movement might be the last straw to start the whole mountainside rushing down in a fatal and destructive avalanche. However moving slowly and with beating hearts, we arrived at length at firmer surface near the top of the pass and at 9:00 o'clock stood on Sentinel Pass where from a height of 9,000 feet we could look out on that weird valley of desolation which we had seen the year before on our fateful but vain attempt to climb Mt. Temple.

After a short rest we roped up, myself leading, Allen last and Frizzell, the least experienced, in the middle. And now before going any further, it is useless and unfair to enlarge on any difficulties in the ascent. The mountain was already ours though we did not realize it at the time. It was now a slow and careful ascent of scree slopes and a few rather steepish rock cliffs where ordinary care was necessary and was used. Of course a virgin peak, or one that has never before been ascended is in a way more dangerous than one over which countless parties scramble from time to time and incidentally knock down all the loose rocks that have been accumulating since the beginning of time. Then as time goes on new routes are discovered, and easier slopes till, at last, one could almost ride a horse up certain peaks that at first seemed formidable.

At 11:00 o'clock we found ourselves near the great western snow slope of the mountain where we cut to the left and walked up the snow to the summit where we arrived at noon after eight hours of climbing. We were told later that people saw us plainly on the summit from Laggan station. The temperature was exactly 32° in the shade. I had asked the people at the Chalet to keep a daily record of noon temperatures. It was 77° on the day of our ascent. Incidentally this is a very high record and would indicate that the climate on the top of Mt. Temple would not be very pleasing in the middle of winter.

Since the date of our first climb the writer has made two more ascents of Mt. Temple, both times with an 11 by 14 camera, possibly the highest point in Canada to which a camera of that size has been carried. One of these climbs was with Chris Hasler with the idea of working down a little below the great hanging glacier and getting a view from the top of the stupendous west wall of the mountain. We had an amusing experience upon arriving at the very edge of the cliff which Chris walked right up to, as all the Swiss guides do, probably smoking a pipe, and seeing me hesitate he said, "Come on, come on, what are you waiting for?" I replied, "Don't you know that just six inches beyond your toes there are 4,500 feet of perpendicular air — and that I don't want to step on it?"

Another time I made a most delightful trip with Rudolph Aemmer by way of Moraine Lake to the summit with the 11 by 14 camera. We took the afternoon bus to the lake where we spent the night. We were up before sunrise and had a delightful walk up the zigzag trail to Larch Valley. Here we had a wonderful view of Mt. Fay in the rosy dawn and also the Desolation or Wenkchemna Range which at one time we had seen in the fury of storm but now was so attractive and peaceful.

After climbing the mountain and taking some pictures with what Rudolph used to call the "Big Bertha" or 11 by 14 camera, we descended by Sentinel Pass to Paradise Valley. There we took the comparatively new trail through the larch trees to Lake Annette, one of the most picturesque walks in all the mountains. This is one of the many examples of Hamilton's skill both an engineer and a lover of nature for every little turn or rise or descent is planned in order to face some new and lovely picture. Hamilton with Basil Gardom's assistance laid out the most complex and beautiful trails in the Lake Louise, Paradise, and Moraine Lake valleys. It is to be hoped that the scenic beauties of these three lovely valleys will be preserved indefinitely by attention to these trails.

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EARLY EXPLORERS OF THE WEST

BY ELIZABETH PARKER

There have come to hand through the courtesy of Miss Jean Parker seventeen chapters dealing with the early explorers of the Canadian Cordillera. These chapters, compiled by Mrs. Parker after long and diligent research, were never published in book form as originally intended.

We purpose publishing them serially, the first three in this issue and the remaining chapters in the four succeeding issues, in the following order:

Alexander MacKenzie
Simon Fraser
Alexander Henry the Younger
Daniel William Harmon
David Thompson
Gabriel Franchere
Ross Cox
Alexander Ross
Sir George Simpson
Father deSmet
Paul Kane
George Palliser
Hector
Earl of Southesk
The Emigrants
Milton and Cheadle
Grant.

Alexander Mackenzie

Sometime about the year 1784 there was founded in Montreal the famous and successful North West Fur Company known as the Nor'Westers, rivals of the Honourable the Hudson's Bay Company of Adventurers, whose Royal Charter of Monopoly dated from 1670. The Nor'Westers were first-foot in the Rocky Mountains. Alexander MacKenzie, a Scotsman of Stornoway, became a trader in the company and found himself in 1789, master of Fort Chipewyan on "Lake of the Hills", now called Lake Athabaska. On June 3 of that year, after the brigade of furs had been sent eastward by inland voyage to the headquarters of "the wintering partners" at Fort William on Lake Superior, MacKenzie set forth on a voyage of discovery north. With four birchbark canoes and a crew of French Canadians and Indians, he crossed the lake, paddled down the Slave River to Slave Lake and thence, skirting its northern shore, entered the great river now bearing his name which carried his expedition to the Arctic Ocean. In the middle of September, he was back at Fort Chipewyan, after an absence of three and a half months. Here he wintered with his cousin Roderick Mackenzie and made plans for more discoveries. He had tasted blood, as they say, and the new adventure was to be across the dividing mountains to the Pacific Ocean west, though it was not until 1793 that his plans matured and the journey was achieved. Meanwhile he made the voyage to Fort William and spent a winter in the Old Country for the sake of learning how to take

accurate astronomical observations.

In 1792 he was again at Fort Chipewyan; and on October 10, his second expedition crossed the lake westward and, by a tributary, entered the Peace River exactly at 7 a.m., October 12, 1792, as it is written in MacKenzie's interesting journal. At noon next day, they came to Peace Point which gave the river its name. At this place two warring tribes, the Knistenaux and the Beaver Indians, had once settled a boundary, and so made peace. A venerable Indian of that country indicated his great age to MacKenzie by recalling the time when the neighbouring hills and plains, then marked with poplar groves, had been covered with moss and when reindeer had been the only game. But later, elk had come from the east, buffalo had followed the elk, and the reindeer had retired to the long range of hills beyond.

On October 13, the expedition reached an abandoned fort on the river, named Old Establishment, though it was only six years since the first trader had paddled up the Peace. They reached it just in time to save it from destruction. Lying there the previous night, as they used to say concerning castles, a party of Nor'Westers bound for the next fort, called New Establishment, had been careless about fires MacKenzie notes the fertility of the soil and the excellent climate in words which, if written today, concerning a remote and fertile region, would bring a rush of settlers, or else a crew of speculators, those vampires which have been the bane of Canada.

In the early morning of October 20, the expedition paddled to the "New Establishment" of 300 souls, who welcomed MacKenzie with guns and shouting, the natives especially rejoicing at the prospect of fire-water. "It was our practice," comments the journal, "not to sell or give rum to natives in summer." Three days later amid volleys of musketry, the explorer left the fort and pushed on to a place about six miles from the mouth of a tributary of the Peace, afterwards named the Parsnip, where two men had been preparing timber and digging the ditch for palisades for a strong fort 120 feet square, in which the expedition was to winter and make ready for an early start in spring. There goes down in MacKenzie's diary a warm tribute to the Nor'Westers' men, a class whose defiance of law and humanity has been emphasized by some writers. He tells how, in May, they had gone east to Rainy Lake in canoes laden with furs, the long voyage and concurring circumstances, a severe trial of patience and perseverance. At Rainy Lake they had discharged one cargo, taken on another, and paddled west again without any time for rest. They had travelled all of every day and most of every night, and had been back at the Parsnip only two months, toiling continuously with nothing but a shed to protect them from cold and snow. "Such is the life these men [of the Company] led, and it is continued with unremitting exertion till their strength is lost in premature old age."

After equipping the Indians for hunting and trapping, MacKenzie set to work to complete the storehouses and dwellings of the fort. He tells of being physician to white men and Indians; and of resorting to empirically desperate remedies, such as liniment of soap and rum, poultices of fir-roots, cleansing lotions of bark-juice; while not neglecting the ancient cure-all of letting blood. He seems to have been popular with natives and company's men alike. On New Year's dawn he was awakened by a volley of musketry and in return for such hearty greetings, treated the fort liberally to spirits.

Early in May, 1793, MacKenzie closed the Company's business for the year, sent a brigade of fur-laden canoes to Fort Chipewyan and had ready a canoe, twenty-five feet long, and light enough for two men to carry over a good trail "for three or four miles without resting." Before the journey was half done, this canoe had, through much mending with bark and gum, so increased in weight that four carriers were necessary, two relieving two every hundred yards.

The crew comprised one, Alexander MacKay, who had gone with MacKenzie to the Arctic,

six French Canadians, two Indians as hunters and interpreters, but no women. MacKay afterwards figured in the Nor'Westers' history on the Columbia and met a violent death. "My people," says MacKenzie, "offered up prayers for our safe return to the fort." They embarked on May 9 and ascended the Parsnip, paddling through a "magnificent theatre of nature" on either side of the river, with vast herds of elk and buffalo in sight. By the eighth day the snow-covered summits of the Rockies were in full view.

MacKenzie's narrative is difficult to follow in regard to places. Unlike our modern explorers in the Rockies, he had no inclination for nomenclature. Day after day the record runs: "South by west for three miles," or "S.W. by S. half a mile," or "W.N.W. half a mile, W.S.W. one and a half miles"; or, "Here I had a meridian altitude." The Parsnip proved a difficult river with much rapid, white water; and the canoe, which often needed repairs, had to be unloaded and portaged to avoid rapids and cascades, or lightened and towed along high banks. Murmuring began early among the crew, but the chief never lost courage. Sent across some mountains to spy out a route, MacKay brought back word of "chasms in the earth emitting heat and smoke which diffused a strong sulphurous stench." But MacKenzie refused to visit and investigate the place, on the ground of insufficient scientific knowledge. Here a portage involved cutting a trail uphill and carrying the canoe and its freight—a heavy job. The first day they reached the summit by 2 p.m., depositing their whole impedimenta; but only three miles were made the second day and the exhausted company camped at 5 p.m. near a stream that "issued from beneath a mass of ice and snow."

On May 25, having passed the cascades and rapids, they embarked again. "Snowy mountains on all sides of us," runs the journal.

On June 5, MacKenzie, MacKay and the hunters ascended a low mountain to reconnoitre but so thick were the woods that MacKenzie climbed a tree to see between a ridge of snowy hills an opening that betokened the course of a river. These few days were days of exertion and of suspense lest his men had turned homeward, but it transpired that the canoe had broken and had to be repaired.

A party of Indians appeared on June 9 from whom MacKenzie secured a guide. They told him about a great river, running toward "the mid-day sun," a branch of which flowed near the river he was now navigating (the Parsnip which MacKenzie still thought was the upper waters of the Peace); and that there were only three small lakes and three portages leading to a small tributary of the great river. It was the river to be named the Fraser, though MacKenzie thought it was the Columbia. This was the first reference to that river in print. The Indians told him about the natives who dwelt in their own houses along the river and were a "numerous and warlike tribe." And this was the first reference in print to the renowned Carrier Indians of Northern British Columbia.

On June 12 the expedition entered a lake, source of the Parsnip, portaged over an old trail to another lake and through it entered the Fraser's troublesome tributary which they named Bad River. It seems to have been all cataracts and rapids. In a cascade the canoe once more came to grief and all jumped out. "The steersman, who had abandoned his place, cried to the men to save themselves," writes MacKenzie. "My commands superseded the effects of his fear, and they all held fast to the wreck," to which holding-fast they owed their rescue. Instead of a least effort to help, the Indians sat down and wept. In spite of the icy cold and his numbed limbs, MacKenzie stood in the water until all the goods were carried ashore.

These increasing perils of flood and fell dampened the courage of the men and the disgruntled guide tried to be thankful for the miracle of their escape; that the experience would teach them how to manage the river; that when engaging them for the expedition he had not belittled the heavy toils

and many dangers. "I also urged the honour of conquering disasters; nor did I fail to mention the courage and resolution of the Northmen and my dependence upon them at that moment to maintain their character." Once more they bent to the business before them, patched up the canoe, loading it with part of the freight and, paddling cannily past rapids and driftwood, made fourteen miles in three hours.

The remaining freight was carried ahead over a trail blazed by themselves. "At the close of the day we assembled around a blazing fire; and the whole party, enlivened with the beverage supplied on these occasions, forgot fatigue and fears and looked forward to a better voyage on the great river beyond." But the next day another hole in the canoe's bottom caused delay and MacKay with two Indians was sent ahead to find an overland route to the big river. They patched up the hole and paddled to the next cascade; unloaded and carried the canoe, now a heavy vessel, as far as the road was blazed, MacKenzie and two men following with the goods on their backs. At 7:00 p.m. they reached the end of the road, the expedition having made but two miles that day. Here MacKay and his men, returning from the big river, met them and reported the lower reaches of their tributary to be full of driftwood and the country to be densely wooded and full of morass. The men were dismayed and discouraged but their dauntless chief took no notice, and gave each man a dram at the campfire. That night the Indian guide escaped.

The unconquerable Scot stuck to his enterprise, keeping up his men's spirits, helping them to carry the canoe and its lading, alternating with a paddle on Bad River, until they reached the unnamed Fraser at 8:00 p.m. on June 17, a dreary, rainy night. Owing to the fatigue of the portage, the men were allowed to sleep longer next morning; but by 8:00 a.m. they were on the broad waters of the Fraser, carried forward by a strong current past wooded islands and under the shadow of high, snowy mountains. On June 19, they saw a party of Carrier Indians, warlike but frightened, who fled as they attempted intercourse.

The next day they came to an empty house, 30 by 20 feet, with a roof and ridge-pole, three doors, three feet high, and three fireplaces—a most ingenious house built of bark and split spruce, held together with fibres of cedar.

Between the timbers were holes to allow discharge of arrows; and inside was a huge machine for salmon fishing. The house, which was in perfect order, was a typical Carrier dwelling which seems to have given that tribe a high reputation among the Indians farther east.

Here they threw away the canoe and built a new one. To insure food for return, ninety pounds of pemmican were buried deep enough to allow a fire above it without injury, the sign of fire being security against Indian suspicion. The next considerable number of the tribe which they met, discharged a volley of arrows on the water, calling out (according to one of the Indians who understood their language) that they would kill any white man who was sent ahead to find an overland route to the big river. They patched up the hole and paddled to the next cascade; unloaded, and carried the canoe, now a heavy vessel, as far landed. But with generalship and tact, including trinkets and sugar, MacKenzie was holding conversations through his interpreter and collecting information. The river, they said was very long and ran towards the mid-day sun; its current was very strong and many falls poured down between high perpendicular rocks; the natives were numerous and as dangerous as the cascades. They warned him against trying to reach the sea on account of these natives who had arms and iron utensils bought from natives farther west who had bought them from people like MacKenzie in "great canoes" (ships). In response to that report, the explorer secured two of these Indians as guides, with an extra canoe, and started next morning. Finding the natives more ferocious down the river, he managed to make a favourable impression

and, as his habit was, told the object of his journey. Here an Indian sketched on bark a diagram of the country south, showing the river encumbered with dangerous falls and rapids, also its many tributaries; showing the portages as very long and passing over high hills and mountains; showing lands of three other tribes speaking different languages. This map sketched what the Indian knew. Beyond that, he had heard of a lake which the natives did not drink! More important information was, however, that the distance across country west to the ocean was short; that the way was not difficult as the travellers could keep to lowlands between mountains, many parts being free from dense timber. A visible trail was lying west along small lakes and rivers, and "six nights" would bring the expedition to the people who bartered iron and brass and copper for dressed leather, beaver, bear, lynx, fox and marten. Those people got the iron and brass from the white men who were "building houses at a distance of three days and two nights," from the place where they met to barter. Questioned closely, they described the tributary, the "Blackwater" by which they left the big river; it was navigable for four days, and thence they slept but two nights to get to their traders of copper and iron who had, they said, big wooden canoes, in which they went down a river to the sea.

These reports, together with diminishing ammunition and provisions, induced MacKenzie to retrace his way up the river and turn westward by the Blackwater. And this day Alexandria marks the site of the Indian village where he turned back. Calling the men together, he praised their fortitude, patience and perseverance, told them of the dangers farther down the river, and gave the reasons for deciding to re-ascend and plunge westward further north. The men responded, willing to follow wherever their chief would go. A guide was engaged from these knowing Carriers, and sent with MacKay and two eastern Indians up the river by land, while the rest of the expedition pulled against the stream. The natives upstream meanwhile turned warlike again, a guide disappeared for four days, and the fickle men showed open signs of rebellion. At the bivouac, watch was kept all night; and the next few days were days of distress and danger. An arrow, accidentally shot from a bow by MacKenzie, struck the house in which some of his men were sleeping and they thought it was an attack by the natives. However, the whole situation was saved by an old, infirm, blind and starving Indian left behind by his people who had meanwhile taken flight. Filled and warmed, he was plied with questions concerning the native change of front; and willy-nilly, was carried into the canoe as he seemed to know the route westward. It was, says the journal, "the first act during my voyage of violent dealing." All that day they passed deserted lodges from which a quantity of dried fish-roe was taken. Reaching an island, the expedition halted for five days and there built a new canoe. At the end of that time, their spirits were revived, partly by the change of task, and partly by their pleasure over the new vessel. The escaped guide returned ; the blind man, by his own request was left on the mainland with a supply of pemmican; and, fortified by a dram each of what Scots call "God's good creature," the men started once more. It was now the second of July, the water had fallen four and a half feet; and MacKenzie, after putting MacKay and two hunters ashore to try the woods for game, contrived a scheme to ascend some rapids past which the head voyager wanted to portage. He gave two men seventy fathoms of rope and a roll of bark, directing them to climb up the shore and go to the head of the first rapid. Once there, they fastened the bark to the end of the rope and threw it into the water when the current carried it down to the canoe. And so they towed it up the rapids.

On July 3, they were at the mouth of the Blackwater where their Carrier guide, who had gone ahead by land, appeared with six Denee Indians speaking the Carrier tongue. By their advice, the canoe and every article not absolutely necessary, was cached further up the stream and the whole party, laden with grub, arms and ammunition, took the Indian trail. They left at noon; it was

a good trail but a rainy day, and they made only twelve miles by 6.30 p.m., when they stopped for the night at an Indian camp. Here they met four men lately returned from trading with natives from the coast, who said that it would be six days' journey for travellers not too heavily laden to reach the country of the trading natives, and two days' march thence to the sea. The four proposed to send two men before them to notify the tribes of their friendly approach. These Indians had European articles, notably a lance like a sergeant's halberd.

Wearied out, the explorer and his men lay down, fell asleep to the sound of Indian singing in plaintive, agreeable tones, somewhat like church music. It was a quite new feeling of security; also a portent for, in the fortnight to follow, which brought the expedition to the sea, there was no more peril but only perseverance by trail and river, and the wonted tact with natives who were industrious and interesting. Fresh guides were engaged at intervals. A woman, wearing bracelets of brass, copper and horn, told them that they were nearing the sea, and a guide assured them that they would soon reach a short river, whose banks were inhabited and whose mouth was a bay where "a great wooden canoe with white people arrives about the time when the leaves begin to grow."

On July 10, having ferried by raft a river, they followed a road under a range of beautiful hills and came to a settlement of Indians "clean and healthy and agreeable" in appearance, who were helping their women in the fishing industry. Five days later they fell in with the Denees, the Coast Indians, described as good-looking and grey-eyed, rather fair, with kempt hair, neatly dressed in leather, and all carrying burdens of beaver, otter, marten, bear, lynx and dressed moose skins. On July 17, they were crossing a mountain range over a pass packed in places with snow. In the valley beyond, at the end of the day they were ceremoniously entertained by a village of fisherman and were told that the river, "the color of asses' milk," ran to the sea. It is now named sometimes Dean, sometimes Salmon River. Here they engaged two canoes and embarked with their much reduced baggage, seven natives accompanying them. MacKenzie's voyageurs, famed as expert canoe-men, wondered at the skill of these Indians. At succeeding stopping-places, villages of comfortable dwellings, marked with monuments (totem-poles), they were hospitably received, one impulsive Indian taking off his handsome robe of sea-otter and putting it on MacKenzie.

And so they came to tidal water; steered along shore to find a good place for the usual scientific observations; had intercourse with warlike natives, and slept on a rock of which MacKenzie took possession as soon as they landed, relays of two keeping watch all night. It was bright moonlight, and cold. A fire was built on the rock to warm them and to cook a very spare supper, the whole daily allowance being only enough for one meal each. But they rested quietly and awoke on a clear and pleasant Sunday morning. The instruments showed latitude N.52° 20' 48", longitude W.1280 2'. With vermilion mixed in melted grease, MacKenzie left on the southeast face of the rock the brief and eloquent inscription: "Alexander MacKenzie from Canada by land, the twenty-second of July, one thousand, seven hundred and ninety-three."

One month later, the gallant explorer was back at his fort on the Parsnip River. No life had been lost, though there had been some sickness. "The toils and dangers, solicitudes and sufferings have not been exaggerated. On the contrary, in many instances, language has failed me in the attempt to describe them. I received, however, the reward of my labours."

Once more at his fort, MacKenzie turned again fur-trader, and in that capacity travelled back to Fort Chipewyan, reaching the post after eleven months' absence. His narrative of each day's journey, both going and returning, holds the reader's interest, the only defect being the lack of place-names. But persons with topographical instinct could this day follow his route.

Simon Fraser

Simon Fraser commenced service in the North West Fur Company at the age of sixteen, in 1792. His father was Captain Fraser, U. E. Loyalist, whose widow took her small son to Upper Canada; and there in the country near Cornwall he grew up. When he had been ten years in the Company's service he became a partner. In 1805 he was sent to the Rockies with instructions to promote the fur trade beyond the Divide. Fort McLeod, in the mountains west, erected by Fraser, was the first permanent fur post in the territory that is now British Columbia. It was built on McLeod Lake, named for a friend, and it is intact to this day. A clerk, under Fraser, had discovered the lake; and while on a second visit had gone farther (so instructed) and discovered Lake Stuart named later by Fraser for another clerk and fellow-explorer. This John Stuart rose to a good position in the Company and, in retirement in his native Scotland, recommended his nephew (who became Lord Strathcona) for apprenticeship in the Hudson's Bay Company after its absorption of the Nor'Westers.

In 1806, Fraser, following for a time McKenzie's route, made a successful trading expedition in the western mountains with Stuart second in command. He left Peace River on May 20 and on June 10 was in sight of the Fraser. The next day he encamped at the confluence of that river and the Nechaco which he ascended as far as Stuart River where his party met thirty Indians arrayed in robes of beaver, lynx and marmot. On June 26, they landed at Stuart Lake and built Fort St. James, which became the depot of New Caledonia district, as Northern British Columbia was named by Fraser. This was the second fur post in the heart of the mountains west; and the third, Fort Fraser, was erected at Fraser Lake some thirty-five miles southwest. All this time the fur-trader was exploring the country round about and getting on friendly terms with the Indians who were peaceful and ready for trade.

The next year, 1807, Fraser was sent to explore for trading purposes that great river to be called by his name, but then believed to be the Columbia. He was to erect a fourth post on the river and thus to extend the chain of forts and secure that northern country for the Nor'Westers' trade. He, therefore, built the fort at the junction of the Fraser and Nechaco Rivers and called it Fort George for George III. In the expedition were two men whose names also remain in the nomenclature of that beautiful mountainous country which one day will be known to the summer tourist. J. Stuart, already mentioned, and J. M. Quesnelle were next to the Commander whose fleet comprised four canoes manned by nineteen voyageurs and two Indians. It was an heroic enterprise, the navigation of that great river with its canyons and cataracts, but it flowed through a country rich in furs. The explorer's journal describes a Fraser canyon: "High and steep banks contracting the channel in places to forty or fifty yards, the immense body of water, making a tremendous noise, had an awful and forbidding appearance." The banks being too steep to allow for a portage, a canoe manned by five men was exploited, but in the boiling canyon they were helpless and would have been lost had they not jumped on a provident rock in the whirlpool. "Seeing our poor fellows safe, we hastened to their assistance.... The bank was extremely high and steep and we had to plunge our daggers at intervals into the ground to check our speed, as otherwise we were exposed to slide into the river. We cut steps in the declivity, fastened a line to the front of the canoe, with which some of the men ascended in order to haul it up, while the others supported it upon their arms. Our situation was precarious; our lives hung upon a thread, as the failure of the line, or a false step of one, might have hurled the whole of us into eternity. We fortunately cleared the bank before dark. As for the road by land, we could scarcely make our way with even only our guns."

In all his experience of travelling in the mountains, Fraser had never seen such country. The

ingenious but dangerous native contrivances along the river are described: "We had to pass where no human being should venture; yet in those places there is a regular footpath impressed, or rather indented upon the very rocks by frequent travelling. Besides this, steps which are formed like a ladder by poles hanging to one another, crossed at certain distances with twigs, the whole suspended from the top, furnish a safe and convenient passage to the natives down these precipices." But Fraser and his company, lacking native dexterity found it perilous going when obliged to use such transit. Though very loath to leave the river at all, by June 11 the rapidly rising water compelled the expedition to start on foot, each man carrying eighty pounds. What could not be carried was cached. At Yale they took to the water again and with canoes provided by natives, Fraser and his company reached the Pacific. He had been forty days from Fort George. Oddly enough, Father Morrice tells, the return journey was made in thirty-three days. Also, he tells that Fraser refused a knighthood on the ground of insufficient means to support the honor.

Alexander Henry The Younger

Alexander Henry, called the Younger to distinguish him from an uncle of the same name who adventured upon the great Saskatchewan plains before the North West Fur Company was born, made expeditions into the Rocky Mountains between the years 1808 and 1811, going but once across the summit range. He had nothing in common with his contemporary Thompson, except a gallant spirit of adventure and a shrewd capacity for barter. On the plains and in the mountains, the Company's business brought them together; and on his long western journeys Henry was, we are told, either "shadowed or foreshadowed by the unique figure of the ubiquitous Thompson."

Henry first arrived at Rocky Mountain House, a gateway to the mountain trails, on October 5, 1810, and there he found the canoes, laden for the Columbia trade, waiting for Thompson and his party. This was the brigade which had been stopped in the mountains by Piegans who forbade transportation of foods, especially arms and munitions to their enemies on the Columbia. Thompson, as it was afterwards found, was below, fitting out his expedition to cross the mountains by the new route which was to outwit the Piegans. To satisfy the Indians, Henry broke open the goods, giving them ammunition, tobacco, and liquor; and he assured them that the canoes were to winter at Rocky Mountain House, that they had gone up the river merely to search for a good place to build. The shrewd chief, Black Bear, replied that there was no place so convenient for the brigade as the old fort, that up the river were Piegan warriors who would send them back. Says Henry, "I gave Black Bear and his band a large keg of liquor as a present and sent him to his camp not far off the south side of the river." The Piegans kept watch, and some Sarcees and Bloods came to the fort to trade beavers for liquor. For some days Henry kept them drinking, even taking some of them inside the fort. During the orgy, his cousin arrived from Thompson's camp in the woods near Boggy Hall, a fort down the west bank of the Saskatchewan River. By applying the fire-water, he was able to dispatch the brigade all unknown to the Indians. "The night was dark with a few drops of rain and thus favourable to our undertaking. As the Piegans were roaring drunk, the canoes got away un-perceived, and my cousin went with them."

He was happy to get clear of them yet he followed in a canoe himself and searched for Thompson's tent in the pines on a hill some 300 feet above the river. It was completely hidden until he was within ten feet of it. He found Thompson starving and waiting for his outfit, afraid to come out for fear of the watching Piegans. The next day, taking one of the hunters, Henry bade him goodbye and returned by land, reaching Rocky Mountain House on the 16th of October. Two

days later a boat of the rival company arrived at the fort. The poor fellows had suffered dreadfully in cold water, snow and ice, having had to track continually. "Their boats are not constructed for pulling up the current as our canoes are," says Henry who seems very friendly. And the Hudson's Bay Company traders went about their parleys with the Indians side by side with the Nor'Westers. They must have had some sort of post there, for Henry says: "White Buffalo was very ill with a cold at H. B. House, Black Bear struck his tent and pitched it at my neighbour's to assist his relatives and others."

Later in the season came other Hudson's Bay Company men, with letters and news, notably of an Act of Parliament prohibiting intoxicants among the Indians. It was extraordinary news to Henry who looked upon spirits as the fur trader's special commodity and had made copious use of it during the years of his service on the prairies. With Pepysian candour his journals record it. Indians who came to trade at the Company's posts were always supplied with liquor and then sent off a little distance to drink their fill and complete their orgy. In the fur trade there were different degrees of dilution, always on a basis of commerce rather than of digestion. Alcohol was called high wine. Indians already debauched would not stand for so much water as fresh tribes would take in exchange for their beaver skins. "A gill or two of alcohol, the rest water," was known as Saulteaux liquor. Henry's method with fire-water and Thompson's were diametrically different as the writing shows:

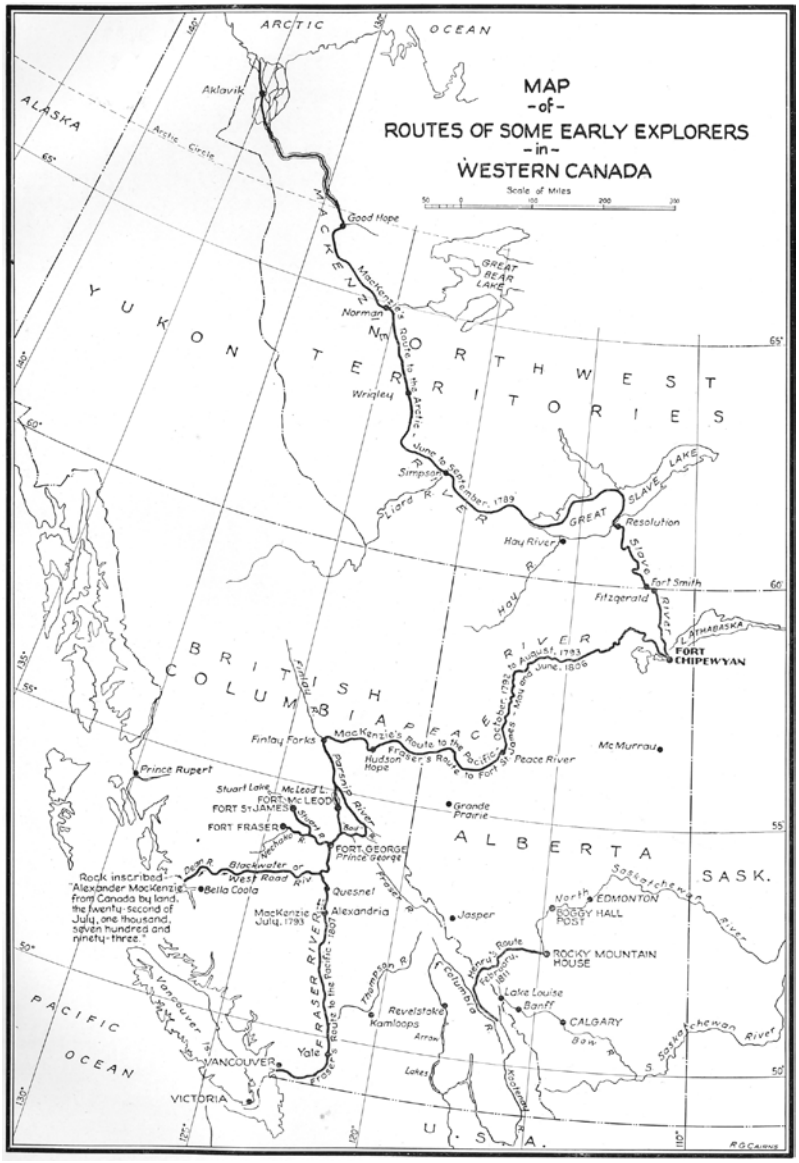
"At twelve o'clock the brigade of eleven canoes arrived. Got all the property into the fort and unpacked the goods. The Indians, like wolves on the scent of a carcass, came hotly after the canoes, attracted by the smell of liquor.. .. Batailleur's wife and others came for liquor. I gave her a nine-gallon keg of rum and sent her off.... We had a dance this evening and all got three drams apiece; fifteen quarts of high wine were drunk."

Sunday, September 23, 1810: "Crees from below arrived ; hunters also camped at the fort; gave them liquor for fresh meat and a drinking match commenced." A parley meant a drinking bout always. The day's doings would include these items incidentally: "Men drank all day and went to sleep. The old women now enjoying their turn." Such entries are a commonplace of Henry's methods: "Seven other Sarcees arrived with beavers to trade. . . . Black Bear came into the house and gave the Sarcee chief a welcome kiss on the mouth, telling him he was happy to see him. I gave them liquor; all the camp got drunk and were troublesome during the night." Or it might be: "After a most turbulent, troublesome day, we had a quiet evening. Only Dumont's wife was drunk."

On November 7, messengers came from Thompson's camp. Thompson had cut his way through a thickly wooded country "over mountains and gloomy muskegs." Game was scarce and his men were starving. Henry says, "their case is pitiful." Worse news was to come seven weeks later when they were worn out with hunger and fatigue after subsisting on an old horse and five dogs.

On November 9, Henry rode along the river for three miles to high ground on the north side where he found inscribed on a pine tree the name, Peter Pangman, 1790. It marked the extent of discovery west before MacKenzie's expedition to the western sea. This appears to have been Henry's first sight of the Rockies. He speaks of a "tolerable view from this hill. The winding course of the river is seen until it enters the gap of the mountains."

On February 1, 1811, Henry made ready to travel to the headwaters of the Saskatchewan and cross the height of land between those waters and the Blaeberry River, the route now well known. He set out from Rocky Mountain House at 5:30 a.m. on February 3, with two men, three sledges and dogs. He told the Piegans who were jealously watching for any movements toward the Great Divide, that he was going to a fur post down the river; and he took that trail for one mile,


MAP
-of-
ROUTES OF SOME EARLY EXPLORERS
-in-
WESTERN CANADA
Scale of Miles
ARCTIC OCEAN
ALASKA
Aklavik
Arctic Circle
MACKENZIE R.
Good Hope
GREAT BEAR LAKE
Norman
Mackenzie's Route to the Arctic
YUKON TERRITORY
NORTHWEST TERRITORIES
Wrigley
Simpson's June to September, 1789
Liard R.
GREAT SLAVE LAKE
Resolution
Hay River
Slave R.
Fort Smith
Fitzgerald
Hay R.
ATHABASKA RIVER
L. ATHABASKA
FORT CHIPEWYAN
August, 1793 to June, 1806
October, 1793 to June, 1806
BRITISH COLUMBIA
Finlay Forks
MacKenzie's Route to the Pacific
Fraser's Route to Fort St. John Peace River
Mc Murray
Hudson Hope
Prince Rupert
Stuart Lake
McLeod L.
FORT Mc LEOD
FORT St JAMES
Parsnip River
Grande Prairie
FORT FRASER
Nechako R.
Stuart L.
FORT GEORGE
Prince George
ALBERTA
SASK.
Blackwater or West Road
Rock inscribed "Alexander MacKenzie from Canada by land, the twenty-second of July, one thousand, seven hundred and ninety-three."
Bella Coola
Quesnel
Fraser R.
Alexandria
MacKenzie July, 1793
Jasper
North Saskatchewan R.
EDMONTON
BOGGY HALL POST
ROCKY MOUNTAIN HOUSE
Thompson R.
Fraser's Route to the Pacific - 1807
Howse's route February, 1811
Columbia R.
Lake Louise
Banff
CALGARY
Revelstoke
Kamloops
Arrow Lakes
Bow R.
South Saskatchewan River
PACIFIC OCEAN
Vancouver I.
VANCOUVER
Yale
VICTORIA
Kootenay R.
U.S.A.
R.G.Cairns

then turned back and made a circuit, through the woods behind the fort. Getting well westward, he drove the dogs briskly and by sunrise had reached the place where the Company's horses were wintering. Jacques Cardinal, the horse-keeper, had collected the band for Henry to see, but the bells, the barking of the dogs, and the cries of the men so frightened them, that all Henry could see was the snow-dust rising from their hoofs. Like wild creatures, they disappeared into the forests. Jacques was given a "hearty dram" for his trouble and was sent off after them while the sledges proceeded up the river on the snow-covered ice. Henry's sledge was a cariole made by stretching wet parchment of moose-skin over a few timbers to which it was fastened with a line. Wrapped in a buffalo robe he travelled "snug and warm." In the mountains they halted at an advance camp of his hunters who had been killing wood buffaloes. Henry had been ill with colic and was quite used up, but he was off again next morning at sunrise and made good progress up the valley. On February 7, he sent out three hunters to kill big-horn, having seen "thirty rams feeding among the rocks." On this day Henry reached the upper end of Kootenay Plains travelling on the river where he found some of the game cached on the ice by his hunters. The journal describes the plains and discourses on the bighorn, the ptarmigan, which he calls white partridges, and the "seven different kinds of pine." He describes Kootenay Plain on the north side of the river as "two hours' walk long and a mile wide, with many spots of meadow and pleasant groves of aspen and small pines." There were only two inches of snow which, in many places, had been entirely eaten up by the wood buffalo. He found the remains of an old Kootenay camp, the poles of tepees still standing. "Formerly the Kootenays frequented the place to make dried provisions of buffalo, sheep, moose, red deer, bears." He saw one flock of a hundred "white partridges" — beautiful birds and delicate, delicious fare.

Henry did not linger even a day. At eleven a.m. on February 8, he was at the Forks of the Saskatchewan where the fur traders laid up their canoes and packed their freight on horses — a notable point on this route across the Great Divide. Here Henry bivouacked in Kootenay Park or as Thompson named it, Kootenay Pound. The "Park" was only a narrow strip of meadow dotted with small trees slanting up the mountainside for a quarter of a mile to a precipice. Over this precipice the Kootenays used to drive the big game after enticing them on the soil. "No animal could avoid being killed by the fall."

The two mountain ranges which Henry crossed thus far are now named the Palliser and Sawback Ranges. The highest mountain he had seen was Mt. Murchison on his left between the Siffleur and the Little Fork of the Saskatchewan. Howse Pass, for which he was heading, is between Mt. Balfour on the left and Mt. Forbes on the right. He was tremendously impressed by the high snowfields and glaciers, and he noticed the marks of avalanches. Thompson had crossed it three years earlier.

On February 9, Henry abandoned his worn-out sledge and set off on snowshoes with one white man and some Indians. A mile and a half from camp they left the wide channel to their right and followed a small winding stream hemmed in by rocks. Soon it opened a little and then ended between two mountains as "does the branch we had left." About half a mile from the head of the stream they turned to the right and entered thick woods through which they travelled for two miles and came to a "small opening where three small streams join to form the Blaeberry torrent." They had reached Howse Pass. The three streams were free of ice and the snow on either side of them looked five feet deep. He was impressed at this place with that beautiful phenomenon of winter on the mountains, the snow mushroom. He measured one of the pines on the Columbian side of the pass—"Twelve feet high, upon the top of which lay a cap of snow coming down to within two feet of the ground." There

were many like it, “elegantly shaped like an inverted bowl as smooth as if done by art.”

Henry despatched five men to Kootenay House on the Upper Columbia and returned to Kootenay Park at the upper end of Kootenay Plains where he found one of his hunters empty-handed, after a futile day on the mountains in pursuit of three goats. Henry gave him dry clothing and went with him to the foot of the mountain when they saw all three on the edge of a precipice looking down upon them calmly. The hunter went climbing after them, for the party had no more food. He climbed till sunset and without a shot, returned to camp exhausted. Next morning he was in great pain from swollen knees, but those were the days of heroic travel in the Rockies and a little thing like that could not matter. At six a.m. they were on the way east and happily found game already killed at their next camp. Their dogs had been fasting for three days. On February 13, Henry was back at Rocky Mountain House down the Saskatchewan. This one journey was his only direct association with the old trails of the Rocky Mountains.

RECONNAISSANCE IN STRATHCONA PARK

BY FERRIS NEAVE

In 1912 the Alpine Club of Canada visited Strathcona Park, climbed Mt. Elkhorn and saluted "the new Alpine fields, as yet unconquered, which lay before us."

A generation has passed since Wheeler wrote this testimonial,[1] but mountaineers have continued to resist the well-hidden attractions of the island ranges. An unbiased appraisal of these mountains, which are of modest height and immoderately hard to reach, may suggest that the neglect has been due as much to common sense as to lack of enterprise. Nevertheless a brief visit to this region in 1942 served to bring home to W. A. "Alex" McCoubrey and myself the truth of the long-standing assertion that here are peaks of real character, presenting an attractive display of technical problems.

On September 11 we drove the rough twenty-one miles from the Island Highway to Upper Campbell Lake and, leaving the car, did an hour's back-packing on the Buttle Lake trail before the voiceless hospitality of an untenanted shack lured us for the night. The next afternoon saw us at the foot of Buttle Lake, in fine weather marred by the smoke of persistent forest fires. Further progress was deferred while first aid was rendered to a dilapidated rowboat whose seams gaped with fright at the prospect of leaving port. Having reached an uneasy agreement with this craft, we set forth on the morning of the 13th and rowed four or five miles along the bold shoreline of the lake to the mouth of Wolf River. This stream threads a deep valley, winding between the high peaks which stand on the west side of Buttle Lake. We located a faint trail on the north bank of the stream and, taking up our burdens, followed its guidance during the afternoon and throughout the working hours of the next day.

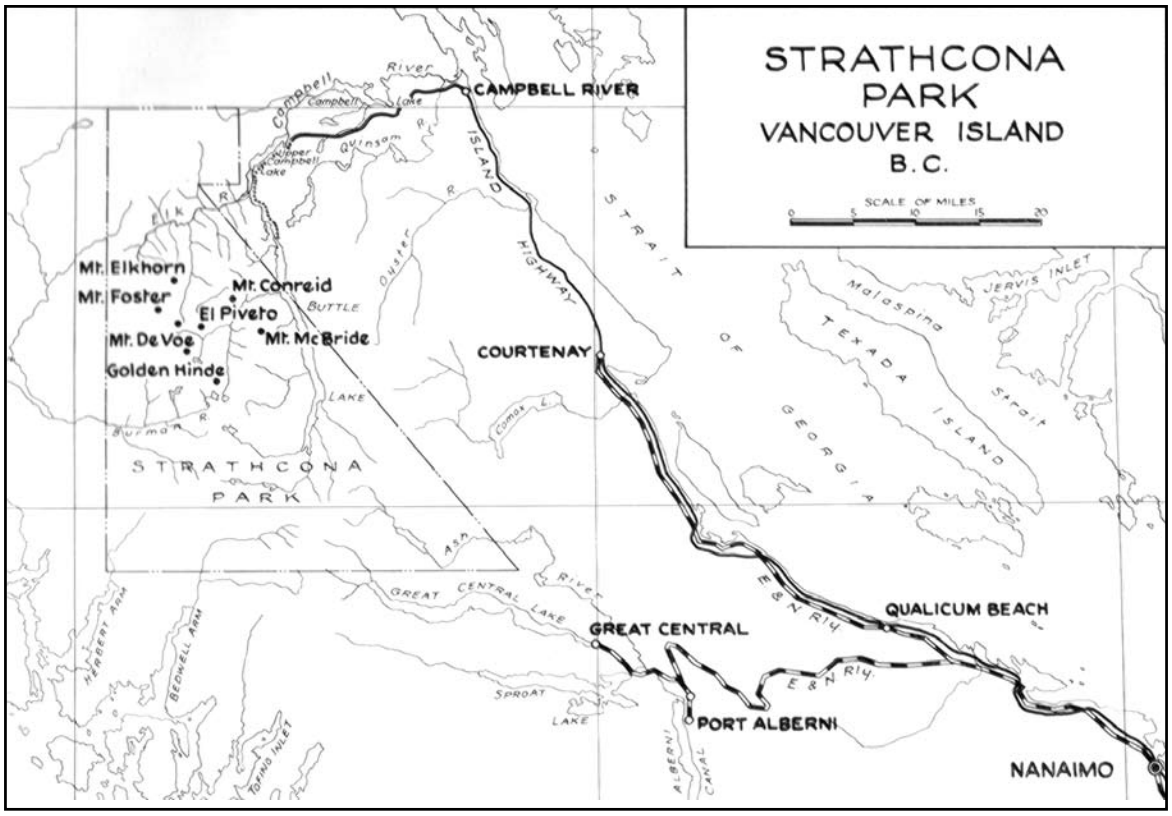
The valley is probably typical of the district, that is to say it is heavily defended by thick bush, fallen timber and high bluffs. As a result of time lost in circumventing such obstacles and in bridging intermittent gaps in the line of blazes, the net gain of our labours was less than nine miles. Our final camp was made at a point where the river bends in a sharp elbow under Mt. Conreid.

This peak, rising from the valley floor in impressive tiers of yellow cliffs, was an irresistible challenge and next morning (September 15) we made a direct attack on its eastern face. The climbing became steep at no great height above the river, our route following in the main a succession of gullies, clefts and chimneys, which conducted us in about four hours to a high look-out just under the northern (lowest) of the three peaks of Mt. Conreid. Traversing around the west side of this eminence we reached the middle peak, the upper seven hundred feet of which is precipitous on the sides within our view. A vigorous rock climb, which became gymnastic on several pitches, brought us to the spacious and untrodden summit in mid-afternoon.

The higher, but less precipitous southern summit of the Conreid series lay beyond our range of action. The one on which we stood, though only just over 5,000 feet in altitude, was some 3,800 feet above our camp. It provided a close up view of a country which seemed to bristle with sharp rock peaks, fantastically turreted and bepinnacled. The Golden Hinde and Mt. Elkhorn, both over 7,000 feet, were prominent and impressive but numerous other peaks to the south and west of us claimed almost equal attention.

Climbing days are short in mid-September and our evacuation of the summit at 4.15 left

1 "The Alpine Club of Canada in Strathcona Park," *C.A.J.,* 1913, 82-95.


STRATHCONA
PARK
VANCOUVER ISLAND
B.C.
SCALE OF MILES
0 5 10 15 20
CAMPBELL RIVER
Campbell River
Campbell Lake
Upper Campbell Lake
Quinsam R.
ISLAND HIGHWAY
STRAIT OF GEORGIA
Oyster R.
Elk R.
Mt. Elkhorn
Mt. Foster
Mt. Conreid
Buttle Lake
El Piveto
Mt. De Vos
Mt. McBride
Golden Hinde
COURTENAY
Comox L.
Salmon R.
STRATHCONA PARK
Malaspina
JERVIS INLET
TEXADA ISLAND
Strait
E & N R'Y
QUALICUM BEACH
GREAT CENTRAL
Great Central Lake
River
Herbert Arm
Bedwell Arm
Sproat Lake
PORT ALBERNI
Alberni Canal
Tofino Inlet
NANAIMO

insufficient time to retrace the intricate and arduous line of our ascent. We gambled on a shortcut down a big couloir and when it brought us at dusk to the inevitable impasse we accepted defeat and resigned ourselves to a night on the rocky floor of the gully. More than eight hours of the following day were expended in retracing our course and descending to camp — a testimonial to the difficulties of travelling on this small mountain.

On September 17 we crossed the river and climbed Mt. McBride (ca. 6,700 feet) which stands in the angle between Wolf River and Buttle Lake. We met no notable technical difficulties, although the vertical interval between camp and summit was considerably greater than is usual in the Rockies and there were of course no guiding marks to show a way through the heavy timber of the lower slopes. Above 5,000 feet the vegetation gave way to a rocky wilderness. Below the summit we crossed a small glacier, devoid of snow and debris and looking like glass which had been melted and poured between the rocks. At the north end of the nearly level summit ridge a towering cairn yielded the record of a survey party who had reached the spot in August, 1937. A quarter of a mile to the south a cairnless eminence rose a few feet higher and we honoured it with a brief visit. The view was much the same as from Conreid but more extensive to the east and north, where Waddington and other high peaks of the Coast Range stood out above a drab smoke ceiling.

We descended to Wolf River in less than three hours — and then spent an exasperating hour in the dense bush fringing its bank before locating the river crossing and our campsite.

We carried home an impression that thirty years had brought little change to Strathcona Park. Its unclimbed peaks still offer rich gifts of graceful line and solid rock to the climber. Its trailless valleys will still test the patience of his soul.

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WESTERN MOUNTAIN FLOWERS[1]

BY DON MUNDAY

An unending battle goes on along the margins of the glaciers and snowfields of the mountains of Western Canada where flowers and trees fight for a footing on areas left bare by the slowly shrinking ice. Here many floral links with Arctic vegetation remind the traveller that much the same climatic changes may be found a few thousand feet above sea-level as by travelling many hundreds of miles towards the pole.

Richness and variety of North American flora result from the fact that the north-south trend of the mountain ranges allowed plants to retreat southward before the advancing ice sheets during the last Ice Age, and also favored their redistribution when the ice melted. Some of the larger present-day glaciers doubtless are direct survivals of that ancient desolation, and from time to time try to regain their vacated conquests.

Arctic Heather *(Cassiope tetragona)*, prized for fuel by Arctic travellers, who find it ten inches high along the Arctic Ocean, becomes a somewhat rare and dainty dwarf two or three inches high at its southward limits in the Canadian mountains — for too much warmth dwarfs some plants just as too much cold retards others. Its delicate white bells doubtless are often mistaken for a smaller form of the familiar white heather. This is not, of course, Scotch heather, but what botanists term heath. The Arctic Willow *(Salix arctica)* also appears as a quaint pigmy with stems an inch or two high, but bearing full-sized catkins.

Close associate of the heathers (red and white) is Alpine Spiraea *(Luetkea pectmata),* a member of the rose family which might be mistaken for a saxifrage with carpeting foliage more finely cut than some of the bigger mosses. Short, thick columns of pale yellow flowers are in keeping with its lovely leaves.

Other spiraeas at lower levels grow much larger, and Goat's Beard *(Aruncus sylvester),* often known as spiraea, may lift its raspberry-like leaves and showy cream "beards" to a height of ten feet in wettish valleys.

Specially memorable is sight of alpine flowers which have bored a passage with their own heat through late-lying snow. Such courage and evidence of an accurate sense of the passage of time (implying memory of other seasons on the part of these perennials) have been cited as some of the many proofs that plants possess a form of consciousness — wiser men of ancient times knew what we sceptical moderns slowly rediscover. Huxley was bold enough to say that every plant is an animal in a wooden box.

Erythroniums, Valerian and Globe-Flowers *(Trollius laxus)* all pierce snowbanks in backward seasons. Because of the close association of white and yellow erythroniums with melting snowbanks, they are often "snow" or "avalanche" lilies to climbers, for avalanche tracks provide the open situations and abundant moisture which so many mountain flowers enjoy during the earlier part of their growing season.

The name of Dog's-Tooth Violet for these fine lilies is partly descriptive, referring to the white bulb; old writers did not limit "violet" solely to Violas, especially if a flower was sweetly scented. Bears relish the bulbs. Small rodents bite into the seed pods. One Indian tribe thought rattlesnakes dangerous only when the snakes were having bad dreams, and, as a safeguard, the Indians washed themselves in a decoction of erythronium bulbs.

1 This article is republished from the Canadian Geographical Journal, May, 1944.

Another fine flower with a name vexatious to the uninformed is Grass of Parnassus, a lovely white saxifrage which is happy with wet feet. But in Biblical times all small herbage was "grass," so the grass-eating Babylonian king may have fared better than the modern word suggests. A tangle of delicate, hair-like fringes decorate edges of the petals of Parnassia fimbriata. Grass of Parnassus remains in bloom a long time, often until first autumnal hues sweep down below timber line.

Western Dogwood *(Cornus Nuttallii)* ranks as the showiest tree in southwestern British Columbia, Occasionally, its snowy petal-like bracts attain a spread of eight inches, but have no "bite" out of their tips as in the eastern form. During the common second blooming in late summer it still wears crimson fruit clusters. A little later the foliage glows a rich red. The name probably derives from "dag," a wooden skewer, for the making of which the bony wood proved most suitable. Nuttall the naturalist cured Indian children of intermittent fever with tea made from dogwood bark.

Stout pioneers are the most notable members of the Willow-herb clan. Ranging all the way to timber line, Fire-weed *(Epilobium augustifolium)* often quickly spreads a magenta cloak across scars of forest fires, while the handsome Water Willow-herb *(E. latifolium)* may be the earliest plant to appear on boulder wastes left by shrinking glaciers or shifting stream channels. Its four-petalled flowers are larger and deeper in color than the Fireweed, and the plant more bushy. It becomes a mass of bloom. *E. luteum,* a smaller lemon-colored form, also thrives in wet soils. Boiled stems and leaves of young fireweed are edible, and dried leaves have been used to adulterate tea.

Mist Maidens *(Romanzoffia sitchensis)* remind us that, "If art is a desire for beauty, a searching after perfect harmony, then the plants are the most artistic creatures in the universe." Round, scalloped leaves provide a perfect setting for yellow-hearted bells with a matchless pearly texture. This is one of the less abundant flowers. Mist Maidens may follow a glacial torrent down almost to sea-level, but quite as often climb above the snow line to delight climbers on the cliffs. Unlike human climbers, Mist Maidens love wet rocks.

A moisture lover of the mountain valleys is Kalmia, a shrubby cousin of the eastern mountain laurel, and with almost as large flowers. Each stamen oddly hooks its tip into a pocket in the flower's rosy pink saucer, ready to flick free and dust pollen on a visiting insect. Some members of the rhododendron family carry much prussic acid in their leaves, and Kalmia leaves are most poisonous, but Kalmia honey appears to be wholesome, though sometimes feared.

Tea rationing revives interest in Labrador Tea[2] Its leaves have been advertised for sale in some parts of Canada. This is a decorative shrub with large clusters of white flowers and evergreen leaves, the latter being thickish, leathery, and with rusty wool below. Both leaves and flowers have a strong aromatic odour. Ledum glandulosuin, the western form, is reputed to be actively poisonous, while tea from L. groenlandicum is credited with a narcotic effect.

Wee flowers, well worth stooping to study, might have inspired a more fanciful name for Gold Thread *(Coptis trifolia)*. Bright yellow, thread-like roots yield a dye. Short branches of its upright flower stalk carry golden flowers with odd column-like petals, designed seemingly for candelabra to light paths for fairies. The three shiny leaves of this dainty woodlander, each cut into three lobes, are deepest green.

Common, yet never commonplace, the choicest of all the small woodland blossoms is the Twinflower *(Linnaea borealis)*. Its delicate fragrance, its pairs of shining evergreen leaves, and its host of pink trumpets, twinned on their stalks, combine in elfin beauty. When once Twinflower

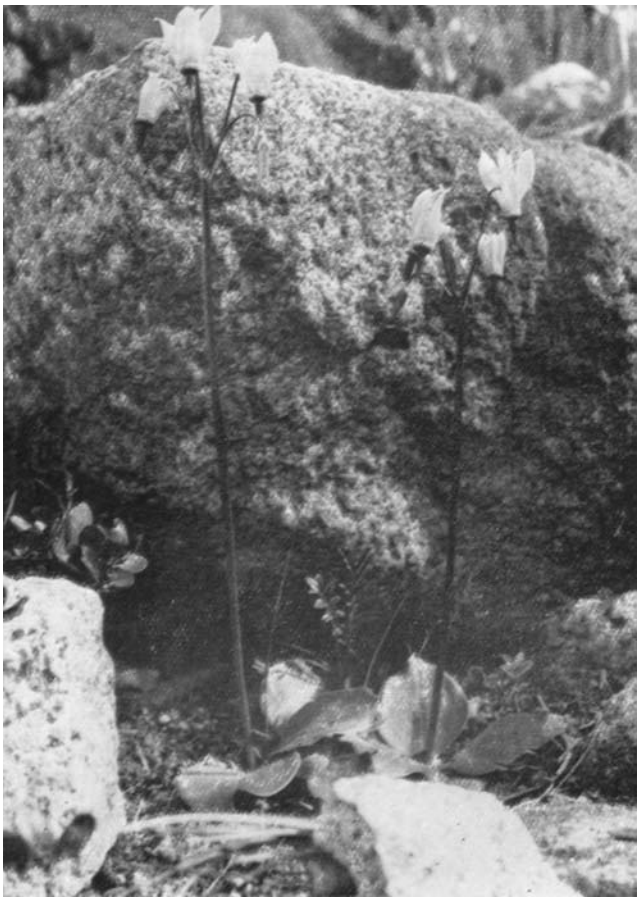
2 Medeger's "Edible Wild Plants" describes *Ledum graenlandicum* as "bitter, astringent, and narcotic," and one is advised not to drink more than one cup of the tea at a time. *L. glandulosum* is said to be poisonous.

Western Labrador Tea *(Ledum Glandulosum).*
Photo Mr. And Mrs. Munday

Courtesy Canadian Geographical Journal.

Alpine Spiraea *(Lutkea Pectinata).*
Photo Mr. And Mrs. Munday

Courtesy Canadian Geographical Journal.



Lover's Dart *(Dodecatheon Pauciflorum). Photo Mr. And Mrs. Munday*.

Courtesy Canadian Geographical Journal.

succeeds in forming a dense mat on the ground, it is likely to persist there for many years, if undisturbed, to beautify forest trails. In drier ranges even more extensive mats of Bearberry *(Arctostaphylos Uva-ursi)* spread with woody branches and glistening leaves, but the heath-like flowers cluster among the leaves shyly. Crimson berries gem this carpet later.

A royally blue berry balanced curiously on a slender stem is the fruit of the Queen Cup *(Clintonia uniflora),* one of the numerous lily tribe dwelling in forest shade. It has a deep graceful bell. "Deer Tongue" is an allusion to the shape of the basal leaves, usually few in number.

Lupin is a name twenty centuries old. Botanists have contended with vigour — and almost venom — about the confusing variations in mountain lupins. Blue is the prevailing hue of a field of lupin, but individual florets may combine shades from purple to white. Acres of lupin sloping up to the intense blue of a mountain sky makes a memory to cherish long. Sir John Lubbock proved blue to be the favorite color of bees, and the lower lip of the lupin is nicely designed to open with the weight of a bee.

David Douglas, the botanist, mentions having "fared scantily" on lupin roots in an Indian camp. Indians classed the seeds as poisonous, and they do poison stock when included in hay.

Larkspurs likewise announce by their glorious blue spikes that they invite pollination by the higher insects, that is by bees and butterflies. Only the student sees in the Larkspur a very specialized form of buttercup. To English, Scandinavian and Teutonic peoples the flower suggests the spur of the lark, but to Italians and Spaniards a horseman's spur. An ancient Greek myth likens the flower bud to a dolphin, hence the name *Delphinium.*

That aristocrat of the buttercup family, the red Columbine *(Aquilegia formosa),* rates as a less highly developed form than the larkspur. The blue European columbines are introduced plants in North America. Significantly, Europe lacks hummingbirds, which love red. The red Columbine plainly favors hummers, but does not scorn long-tongued bees. Although the sweeping statement is made that butterflies lack the strength of leg needed for hanging upside down to suck columbine nectar, the common swallowtail butterfly seems capable of it. Red hoods and yellow throats of Columbines embody carefree gaiety.

"Smookashin" was one Indian name for the sunflower-like Balsam Root *(Balsamorhiza sagittata)* which is known as "Mormon Biscuit" in Utah where pioneer settlers in lean years ate the fleshy root after paring away the oily, resinous rind from which it takes its name. Young stems served as greens, and a nutritious, palatable meal was ground from the seeds. Large silver-grey leaves set off the yellow rays of the large flower head. Old-timers in British Columbia knew this showy flower as tobacco root from the likeness to "nigger head" tobacco, the only kind then traded by the Hudson's ,Bay Company.

Moose may often be surprised with heads submerged in shallow lakes, feeding on roots of the Pond Lily *(Nymphaea polysepala).* The yellow or orange cups, often four inches broad, brighten many a forest-rimmed pond or mountain lake. Indians prepared the seeds for food by roasting by shaking in a basket with live coals, then grinding to meal with a flavor somewhat like popcorn.

"Lover's Dart" has the merit of being romantic as a name for Shooting Star *(Dodecatheon pauciflorum),* but destructive and unromantic little boys sometimes know it as "rooster's head," using it in a game in which they hook the lovely purple heads together and pull to see which will break off first.

One writer on mountain flowers regards the fleshy leaves of the Stonecrops as having an unhealthy and repulsive look. Why more so than a cactus? Both store water for periods of drouth.

Stonecrops are likely to be found on stony ledges, often high above snow line. Sedum stenopetalum is the most common. Starry yellow flowers nearly hide the fat round leaves which often are quite reddish. Any bit broken off a plant will root in any trace of soil where it falls. A botanical specimen pressed for six weeks grew vigorously when then planted. King's Crown, a more upright form with circles of flattish, blue-green leaves, has a terminal cluster of odd little purplish flowers.

Although "terror-stricken cliffs" are not the only places where Mountain Saxifrage *(Saxifraga oppositifolia)* and Moss Campion *(Silene acaulis)* thrive, still some of a climber's most vivid flower memories result from suddenly discovering one or other rooted in some such high abode, with its green cushion of tiny leaves nearly hidden by a host of small rose-purple flowers. Except in habit of growth the two plants have little similarity. Mountain Saxifrage, a true mountaineer, is the despair of most rock gardeners.

Red, white, and yellow Lady Slippers, and the more enchanting Calypso are the choicest and rarest of the many northern orchids. These are rather retiring flowers. Far more numerous, and lovers of the sunshine, are the richly scented flower spikes of the tall White Rein Orchids *(Habenaria dillatata)* lifting waxy tapers amid the fields of mountain flowers. Orchids are the most highly developed and therefore most widely distributed form of flower. They insist on cross-pollination, generally by insects, even by one particular kind, and have elaborate devices to ensure this.

Color photography reveals that inclusion of a bit of yellow, orange or bright red in a landscape seems to brighten the tones of all the other colors. Nature decks comparatively few flowers in scarlet but makes generous amends by scattering Paint Brush *(Castilleja)* so freely in the mountain scene. Less common forms range from purple to cream, but barbaric scarlet is the favorite and prevailing hue. Only Columbine delights hummingbirds more. In later summer the red seed heads of Leptarrhena and False Asphodel also enrich the scene. Less gaudy, but still decorative, are tufted seed clusters of Dryas, Anemones and Cotton Grass.

Wanton cruelty seems to actuate pretty pink bells which cluster so gracefully on Honey-Bloom *(Apocynum androsaemifolium)*. Though lacking all means for absorbing animal matter, the flowers sometimes trap unwelcome insect visitors by tongue or leg in a hinged notch in the centre of the flower, causing them to starve miserably. How the plant benefits remains undiscovered. The plant's sticky juice, said to contain rubber, earns it the name of "Milkweed," but no sound basis exists for calling it "Dogbane."

What is a Forget-me-not? *Lappula floribunda* is labelled "false," and *Myosotis alpestris* as "true." True flower lovers find such distinctions worthless. The name of Stickseed for the former gives a sure clue to the chief difference, its seed being a small burr. It may be of much more vigorous growth, with a height of two to three feet. Both plants demand sunny locations. As a symbol of unwavering devotion the Forget-me-not's sky-blue flowers hold a fixed place in human hearts, and many beautiful legends cling to them in the older lands. A mountain setting heightens their charm.

The sunny pattern of yellow in mountain landscapes owes much to the Arnicas and Potentillas — of the latter more than fifty varieties grow in North America. The Potentillas might be grouped with buttercups by untrained observers. Many are known as Cinquefoils — not always yellow-flowered — but generally with more or less silvery foliage, and flowers designed with the fine simplicity of the rose.

Silverweed *(Potentilla Anserina)* spreads with runners like the strawberry. Silverweed roots are credited with having often supported inhabitants of the Hebrides for months together. When boiled or roasted they are said to taste like parsnips. There is something gnome-like in the

"Mormon Biscuit" *(Balsamorhiza Sagittata).*
Photos Mr. And Mrs. Munday.

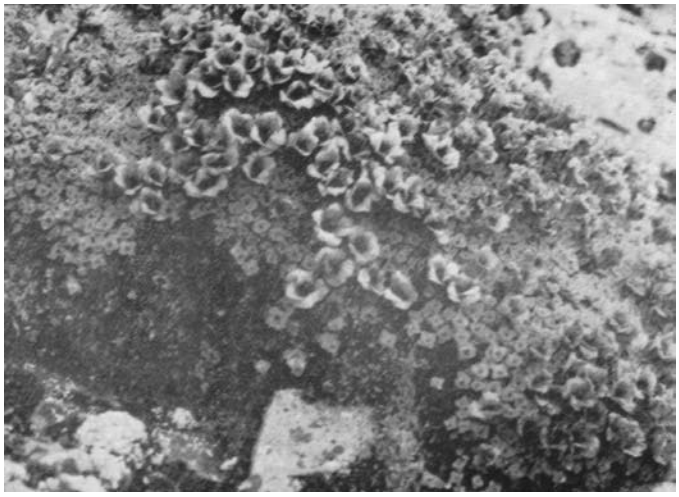
Courtesy Canadian Geographical Journal.

Stonecrop *(Sedum Stenopetalum).*
Photos Mr. And Mrs. Munday.

Courtesy Canadian Geographical Journal.

Bluebells Or Harebells *(Campanula Rotundifolia). Photos Mr. And Mrs. Munday.*

Courtesy Canadian Geographical Journal.



Mountan Saxifrage *(Saxifraga Oppositifolia). Photos Mr. And Mrs. Munday.*

Courtesy Canadian Geographical Journal.

shreddy-barked stems of the Shrubby Cinquefoil *(Potentilla fruticosa)*. Silky, silvery down on its greyish compound leaves suggests rightly that it tolerates dry soils.

Yellow Avens *(Geum strictum)* and G. macrophyllum pique gardeners with roughly vigorous foliage, which they revile as ugly, a rather arbitrary judgment and lacking insight of the deeper kind. The large flowers, rose-like in form, display a pure and brilliant yellow.

The Bluebell or Harebell *(Campanula)* rouses fondest feelings at high altitudes where a single dwarfed stem may lift one full-sized bell just clear of the ground. Such seemingly frail stems seem able to withstand fiercest mountain storms. Somewhat clannish at lower levels, these airy bells are likely to gladden the eye in unexpected nooks, moist or dry. The flowering period is long — too many mountain flowers hurry their seeding — and when Bluebells are brought to sea-level at the West Coast they literally bloom for months.

The great mountain parks of the West will always remain as treasure-houses of beauty. Perhaps Ruskin was merely being profound when he wrote, “Mountains are the beginning and end of all natural scenery”, though no geologist would quarrel with the statement. But to a great degree the mountains form a last stronghold for many flowers by granting their special needs. Some day some discerning poet may suspect that the flowers feel grateful for this, and also that the mountains wear their flowers with all a woman’s delight in jewels and fine raiment. Such a poet might reveal, “The marvel of creation still unspent on sea, on sky, on hill”.

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THE SWISS GUIDES IN CANADA FURTHER NOTES

BY MAJOR F. V. LONGSTAFF

The Swiss Alpine Club, together with the Cantons, controls the examination and conduct of the mountaineering guides. Prospective guides work for a few years as porters, when they carry up to thirty-three pounds, while guides only carry fifteen pounds. On difficult climbs a guide may refuse to carry any baggage, on giving notice beforehand. The examination generally goes on for three weeks and includes the study of the weather, qualities of snow, ice, rocks, the study of patrons, first aid, map reading and languages.

It appears that Rudolf Aemmer was the first of the present Canadian Pacific Railway Swiss Guides to take his examination, namely in 1907, at which time he had to go to Pontresina, the place of examination. He recently told the writer that he would never forget seeing the old guides having to work up First Aid and Map Reading, for their schooling had evidently been very elementary, so that reading was a great effort.

The writer became curious about the names of these old guides, and he has been able to look up the 1909 edition of Baedeker's *Switzerland,* which gives the names of all official guides at each mountaineering centre. He has chosen Pontresina and Sills, as they are located close together in the Engadine. Also as the Canadian Pacific Railway Guides came from Interlaken, he has added that centre, together with Grindlewald (which contains names of guides who have been in the Rocky Mountains). It is noticed that many sons take the Christian names of their fathers.

Official guides at Pontresina were: Martin Schocher, Anton and Andre Andreas Rauch, Josias, Peter and Floren Grass, Edward Kohler, G. Hosang, Christian Mittner, Andreas Cadonan, L. Caflisch, Paul Muller, Martin Baum-gartner, Franz Falla, Dom. Gross, John Gutscher. Those at Sills were: Christian and Peter Zuan, John and Christian Eggenberger, Christian Klucker, Felix Razeth and Oscar Felix. Those at Interlaken were: Christian Haesler (senior), Edward (senior) and Gottlieb Feuz, Jacob Knecht, Jacob Muller and Rudolf Wyss. Those at Grindlewald were: Rudolf Kaufmann (head guide); Ulrich, Hans, Christian, Rudolf and Peter Allmer; Gottfried Bohren; Christian Bohren (four); Peter and Hans Kaufmann; Christian Kaufmann (three); Rudolf, Peter and Christian Inabnit; Hans and Rudolf Baumann; Hans, Peter and Rudolf Bernet; Christian Jossi (father and son); Peter, Ulrich, Fritz and Hans Brawand; Christian, Peter, John and Rudolf Egger; Peter, John and Christian Burgener; John Heimann; Fritz and Emit Steurer (expert ski runner).

On passing the examination each guide is given a large pocket book, with his certificate and set of regulations to control his conduct. There are pages for each patron to write a certificate of service after each trip. In each centre there is a head guide who is in charge of the plans for the roll of guides and their administration and sequence of hiring. Some patrons engage a guide for a single ascent while more experienced patrons will engage two guides for many weeks and work from several climbing centres, and employ the same guides season after season. The guides work in ordinary times at many trades, which are carried on at their homes near to hotels, so that they can start off from home on an ascent and return to it at the conclusion of the same.

Christian Haesler took his examination in 1909 at Meiringen, and the writer has seen a photograph of the group of candidates. Edward Feuz took his examination in 1908 and Ernest took his examination in 1911 but at Grindlewald, after which they also received their large pocket-book and enamelled coat badge.

A few words about the history of climbing in Switzerland may be of interest, so let me quote Baedeker again:

"Switzerland is the classic country for mountaineering, which first found favour as a sport in the mid-19th century, when it was largely pioneered by Englishmen. The ascent of the Wetterhorn by Sir Alfred Wills in 1854 marked the rise of the 'Golden Age of Swiss Mountaineering,' which terminated with that of the Matterhorn by Edward Whymper in 1865. During this period most of the West and Central Alps were opened up, with the help of native guides. The nucleus of these activities was the English Alpine Club, a relatively small body of tried mountaineers (about one hundred members in the first few years and 648 in 1926) which was founded in 1857 at the instigation of W. Mathews and E. S. Kennedy and was followed by the Continental Clubs. Its 'Alpine Journal' and 'Alpine Guide' were the first publications of their kind."

In 1859 the President of the Alpine Club, John Ball, M.R.I.A., F.L.S., edited the first issue of *Peaks, Passes, and Glaciers,* published in London. From 1860 each ascent had its own fee, and guides were not generally paid by the day. In an engagement of several days, the terms were generally fixed by mutual consent. Let us take the Matterhorn, 14,780 feet, as an example of fees. The ascent is not considered one of unusual difficulty or danger (though eighteen lives have been lost) and fixed ropes are found at some places, but it should not be attempted by any but thorough proficients, accompanied by two first-rate guides (130 francs each, porter 95 francs). The ascent takes six hours from the Lower Matterhorn Hut (10,820 feet). At Grindlewald the Bergli Hut (10,499 feet) is the starting point for the difficult ascent of the Gross-Fiescherhorn (13,204 feet, 4 1/2 to 5 1/2 hours) guide, 100 francs. The ascent of the Monch (13,468 feet) from the same hut is 100 francs. In considering these fees it is important to remember that when not mountaineering the guides can be at home working at their trades and so keeping up their income. Further, in Switzerland, the pay of carpenters, masons, painters and plumbers is not so high in proportion as in Canada, therefore the profession of Guiding in Switzerland is more profitable than in Canada.

Since the Guides have settled at Golden they have made trips home to Interlaken as follows: Rudolf went home in 1921; Edward went for the winter of 1911-1912, and Ernest went twice, 1911-1912 and 1924-1925; Christian took a trip home in 1923.

Since 1942 the Chateau at Louise and all the bungalow camps have been closed, with a caretaker in charge at each. Walter Feuz has been at O'Hara, while Rudolf, Edward and Ernest have worked at Louise. Each Guide has two days off each fortnight to go home to Golden. By reason of the fact that the Guides are not now insured for climbing, and are simply on the hotel roll as caretakers, they are not available for ordinary climbing trips.

A few historical notes on the introduction of mountain skiing will be of interest. Rudolf told the writer that at the Club Camp in the Pipestone Valley in 1915, the two guides Ernest Feuz and Christian Jorimann remarked on the fine Swiss-like alpine valleys which would be evidently good for skiing. Up to this time snowshoes had been used by trappers and others in the Rockies. Skoki cabin was first used in 1928. In 1908 the Swiss Guides began to use skis to go to the bungalow camps to shovel snow off the roofs. In 1928 the cabin on Mount Norquay near Banff was built. In 1927 the Marquis N. D'Albizzi opened the bungalow camp at Mount Assiniboine. In 1932 the Skoki cabin was enlarged and the Ptarmigan cabin was built as halfway hut from Louise station. In 1936 Sunshine cabin on Simpson Pass about fifteen miles up Healy Creek was built by Mr. James Brewster and was gradually added to in later years. The road up Healy Creek was completed in 1940. The late Mr. McCoubrey began to use the Stanley Mitchell Hut in the Yoho for spring skiing in 1940. In 1939 Mr. Clifford White started to work Mount Temple Chalet in Corral

Creek, after spending twenty years in scouting on skis for a good location for both winter and summer tourists.

There is one retrospect all the Guides have, namely, the many new roads which follow routes that now enable one to travel by car in a few hours distances which in the old days of the pack-train required many days. Of course the new roads enable climbers to get to the sites of their base camps for climbing in less than half the time that was formerly required, the pack-train being sent ahead several days and the climbers and gear following a few days later in a large car. Of all the roads, that between Louise and Jasper is the one most used by climbers for these combined operations.

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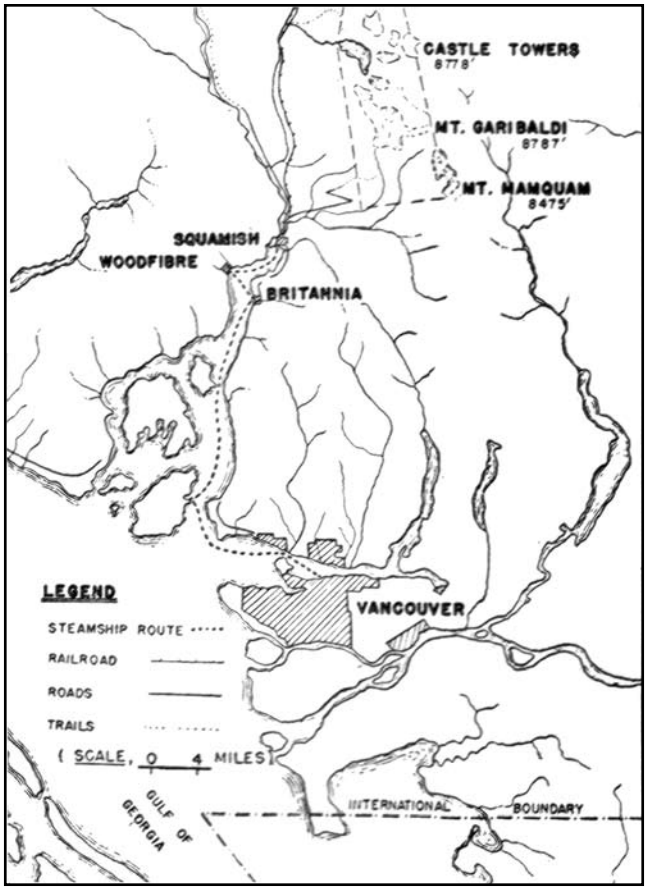
SKI MOUNTAINEERING IN GARIBALDI PARK

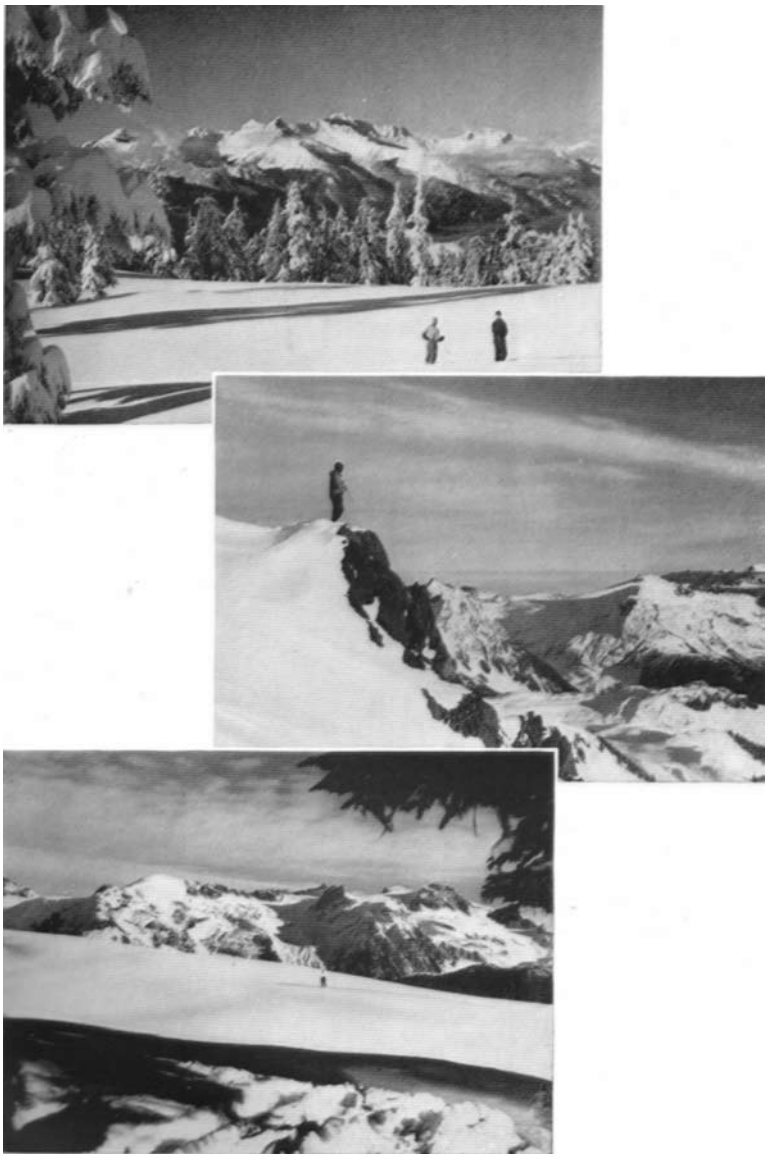
BY V. C. BRINK AND F. E. ROOTS

The mountains immediately accessible from Vancouver, B.C., while excellent for the development of the competitive skier, offer little for the ski-mountaineer interested in extended tours. In days of less restricted travel frequent trips were made by members of the Vancouver Section, the Alpine Club of Canada, and the University of British Columbia Outdoor Club to the extensive ski fields around Mt. Baker and Mt. Rainier across the International Boundary. More recently members of both clubs, seeking new ski-mountaineering area, have been making joint trips into the alplands of the Mt. Garibaldi region some thirty-five miles north of Vancouver.

Prior to 1942, the areas favourable for skiing in Garibaldi Park were difficult of access. Heavy snows had made a pack trip into the Black Tusk meadows section by members of the Outdoor Club around Christmas, 1941, an arduous undertaking. Earlier in 1941, a well-known Vancouver skier, George Woods, and companions had flown into the same area; they had enjoyed



excellent skiing on firn snow but reported the "pack out" as "stiff." Sometime in the early twenties Eric Brooks had covered much of the area on skis before the commencement of the usual climbing season. Then on May 24,1942, the Local Section, led by Bill Mathews, made use of a new logging road to climb Mt. Garibaldi from the southeast. Mr. Jacobsen, Norwegian-Canadian manager for the logging company putting in the new road, had commented on the fine "ski-country, there



Tantalus Range From Paul Ridge.
Photo E.F. Roots.

Garibaldi Névé From Diamond Head.
Photo E.F. Roots.

Mt. Mamquam From Crystal Lakes.
Photo E.F. Roots.

Garibaldi Peak From Columnar - Lava Pass.
Photo E.F. Roots.

Ski Slopes Of Mts. Columnar And Lava.
Photo E.F. Roots.

Ski Slopes Of Mts. Columnar And Lava.
Photo E.F. Roots.

beyond the trees." Those who made the trip quickly realized the value of the new road in making accessible the broad ski fields around the southern and eastern slopes of the old volcanic peak. Since then members of both the aforementioned clubs have bivouacked several times in the area and on one occasion effected a mid-winter ski ascent of Mt. Garibaldi (8,800 feet). Now, tenting on the snows is no longer necessary, for commercial interests are erecting a small ski lodge and shelters.

The most accessible ski grounds are almost entirely within the boundaries of Garibaldi Provincial Park. A steamship run (made at least once daily) will take the ski-mountaineer from Vancouver to Squamish at the head of Howe Sound in about four hours. All the beauties of typical fjord scenery are to be enjoyed on the trip and included are glimpses of British Columbia's basic industry in calls at the Britannia copper mine and the Woodfibre pulp mill. From Squamish a logging truck or taxi takes a narrow road of exceptional scenic beauty to the sawmill at 3,300 feet. From the steep winding road, fjord and glacial valley unfold in detail below; across the main valley the Tantalus Range, 9,000 feet from sea level to summit spire, makes a wild horizon; with a turn in the road the panorama is completed by the jagged peaks of the Sawteeth and the glaciers of the Mamquam Range.

From the sawmill an hour's packing through a magnificent forest and a four-mile traverse over park-like terrain brings the skier to the Crystal Lakes, a natural centre for activities.

With Crystal Lakes as a base, ski areas to suit any taste are available. Ski runs near the campsite can be made on the broad open slopes of Paul Ridge or on the steep basins of Mts. Columnar and Lava. Garibaldi Névé and Diamond Head provide many one-day trips of a different character; from trips over long smooth slopes across expansive snowfields to sérac and crevasse "dodging" on ice-falls. The ascent (and even more the descent) of Garibaldi Peak includes varied ski-mountaineering experience. Somewhat more distant, Mt. Mamquam and other peaks are well worth a ski-climbing attempt. A "passes trip" of several days duration can be made to other regions of the park. Good ski terrain over névé and alpland leads to Garibaldi Lake and the Black Tusk Meadows, another convenient centre for skiing activities and the starting point for an alternative route out of the park.

For the most part skiing is "safe"; crevasse danger and avalanche hazard are at a minimum throughout the main skiing area; at higher elevations, where slopes are steeper, the usual precautions must be taken.

As a rule, the snowfall is quite heavy, and the skiing season, with the exception of the glacier ski-areas, extends from December to early June. Extremes of temperature, experienced in the interior ranges, are unknown in the Garibaldi area. The weather is often unsettled and the snow excessively soft early in the season; but especially later, there are many fine clear days with perfect snow conditions.

While the ski terrain around Garibaldi, as fine as any on the Pacific slope, is now fairly accessible, much can be done yet to improve its approaches. It requires but little vision to see the area, favoured by a vigorous park's policy, as a playground for thousands of skiers and mountaineers from southwestern British Columbia.

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TONQUIN AND ROBSON IN 1944

BY P. L. PUE

There are souls who cannot thrive without heady, perennial draughts of mountain air. Of such a company is Cora Sutter, and when as late as March, the Executive announced that the feasibility and practicability of holding a 1944 A.C.C. Camp was still undetermined, Cora threw herself, with all her famed energy and enthusiasm, into the completion of plans for a holiday deep in the Rockies, willy-nilly! And a fine job she made of it, both for herself and for the fourteen kindred spirits who joined her.

The party, as originally planned, consisted of Cora, and Edna Kelly of Edmonton; Marion Fawdry and the writer, from Calgary. We four had spent a week rambling together in the Temple and Skoki districts, following the O'Hara Camp in 1943, and parted with a pledge to meet again another day, in similar surroundings. But others were eager to join and the limit was finally struck at fifteen. The additions included Mrs. Doris Coo of White Rock, B.C.; Gladyse Hartley, Nellie Buckley, Dr. Silver Keeping, Prof. E. Frank Keeping, Dr. Osman J. Walker and Mrs. Walker, and Dr. Edward Gowan of Edmonton; Violet Walters, Evelyn Kippen and Effie Kidd, of Calgary.

So Cora's task was formidable enough. Choosing the setting! Arranging for supplies and packing! One of the group, who didn't know Cora, said, "Let's have lots of eggs!" and gave an order for twelve dozen to meet us in Jasper. Whoever invented scrambled eggs, anyway? Another said, "Let's be sure we have lots of everything!" and shipped an extra ninety pounds of food et cetera from Calgary.

The centre chosen for our first week's operations was the Memorial Hut in Tonquin Valley. Cabin of memories it is! It's crazy outlines, its situation, its packrat preemption, its disgorged mattresses, its general appearance of having finally abandoned the unequal struggle to maintain form and dignity against the pressure of moving moraine, are all vivid impressions of both our sleeping and waking moments.

We arrived at the cabin at the end of a ten-hour hike from the View Point on Mount Edith Cavell. Where, oh, where are the trail signs to aid those unfamiliar with the region ? Following fresh nail marks, we made a right turn at Astoria Creek, where we should have turned left; blundered up the hill and bushwhacked down again; smashed through virgin bush and forded headlong streams for interminable hours in an effort to effect finally a short cut to our objective. Not all loss, for the first view of the mighty Ramparts burst upon us from Clitheroe Meadows—abundant reward for all extra expenditure of time and energy.

So to the Memorial Hut at last and to our first night in it! How the packrats objected to our appropriation of their hang-out! How they raced over the recumbent forms on the floor in the dead of night, and what a fine pattern of resentment they cut in the seat of the trousers of the dignified professor of chemistry—his only pair! A handy wife with a mending kit is a distinct asset in such circumstances.

The atmosphere of the hut and the orderly processes of housekeeping maintained for the four days and five nights spent in it are a definite tribute both to Cora's generalship and to the holiday spirit of the whole party. Excellent meals were somehow prepared, and eaten, with a minimum of equipment and a maximum of good humor. One broken bench was the only pretence of a seat within thirty miles, but panniers borrowed from Dave, the Indian loaned to us for the week by our packer, Jack Hargreaves, were pressed into service, and twelve at a sitting gathered round

a table less than four feet square. As food supplies diminished, fellowship flourished. But always there were plenty of eggs! Nine dozen unscrambled ones remained on the last evening before departure. "What shall we do with them?" "Boil them hard and give them to Dave!" Dave lives a lonely, bachelor existence, without the luxury of a squaw to boil an egg for him.

Our first morning was spent in tidying up the camp, inside and out, and by noon promise of relative comfort for our sojourn was assured. What a night's rest, a good breakfast, a bright, sunny morning and a little healthy exercise can do to revive and revitalize the spirits of men — and women!

After lunch, keen for exploration, we went to Outpost Lake, an aquamarine gem about half a mile over the ridge from the hut. One could wish that the cabin, if ever rebuilt, will be located here, where Nature has provided so delightful a site.

An effort had been made to secure an experienced guide to lead a rope on Tuesday up Mt. McDonell. We thought we had one, at a quoted price of $25.00 for the day's services. But he looked us over upon our arrival at Jasper and the deal was off! Tuesday, in consequence, was spent in meandering through the Eremite Valley; following clear, swift streams to their birthplace in the glistening glaciers; scrambling over crags and rock heaps; and always, always flailing at the myriads of mosquitoes who obviously mistook us for manna from Heaven. They stuck closer than brothers and were our constant companions day and night.

Before retiring, Cora promised the disappointed McDonell aspirants that at least a reconnoitring trip would be undertaken on Wednesday, and this developed into a happy, riotous conquest of the peak itself, under the competent shepherding of Cora Sutter and Vi Walters. Two of the group thus qualified for A. C. C. membership.

The promise of a fish supper lent speed to our returning feet. The male members of the party had come to camp equipped with all the lures, devices and tackle of the fishing craft.

"A fellow isn't plotting schemes out,
Out fishing;
He's only busy with his dreams,
Out fishing;
The fellowship of rod and line
And sky and stream is always fine;
Man comes real close to God's design
Out fishing."

So suggests Harry Burroughs, and with such sentiments echoing in their hearts, our men gaily left the hut on Wednesday morning, to angle in a stream where the fish were reported to be so thick they could be scooped out with the hands. They fished until evening. The gad flies were vicious, the mosquitoes malicious. They caught one speckled trout. The Indian packer, returning to fetch the fishers and their catch home, with fine contempt, literally picked three nice trout out of the stream with his bare hands! Or so the story goes! A strange fish story, indeed, but vouched for by witnesses whose word none dare doubt. And the triumphant McDonell group of ladies, returning from their thrilling conquest of the 10,776-foot peak,[1] did full justice to a delicious supper of fried trout.

Then followed a day of quiet and easy strolling through flower-strewn meadows and savoring the beauty of peak and crag from Surprise Point, hard by the Ramparts. An evening of

1 See "Lady Climbers in the Tonquin and Mount Robson Region" in this Journal.

song and story, the last to be spent in Memorial Cabin, since we were to commence on Friday morning the first lap of a nineteen-mile hike to Geikie Siding on the main line of the Canadian National Railways.

Perfect weather attended our ramblings throughout the week, and this delightful Friday was spent in traversing the lovely valley dominated by the Ramparts. A halt overnight at the Warden's cabin on Macarrib Creek was made memorable by a visit to the grave, close by, of Mr. William Goodair, a former warden. Mr. Goodair was killed by a grizzly only a short distance from the cabin. A simple stone marks his solitary grave. Our impressions were further deepened by the presence of fresh grizzly tracks in the trail as we proceeded on our way early next morning. The fellow who made them may very well have passed close to our place of shelter in the night.

Four o'clock brought us, without casualties, save for one wavering and protesting knee joint, together with our dunnage — skilfully engineered by Jack Hargreaves and Dave over the Meadow Creek Trail, choked in various places with fallen trees — to Geikie Siding, where arrangements had been made to flag the train to take us to Robson Station. We said good-bye to Jack and Dave at Geikie and also to considerable excess baggage.

How good the gently-flowing Miette River, close to the railway, looked and how eager we were to plunge our smarting feet into it! A train whistle blew! Was this our train, and had we shaved our margin of time so closely? A mad scramble in bare feet and various states of dishevelment over the cinders back to the siding-platform. But the haughty Transcontinental was impervious to our signals—who could blame it?—and we returned to the business of foot-bathing. In due time the Prince Rupert train came along and with fine consideration and discrimination took us aboard a combination coach and baggage car.

After the long day's trek, how good it was to glide effortlessly over fifty longitudinal miles! We were avid for news of the European conflict and quickly buried ourselves in the day-old papers that we were able to secure on the train.

How good to be met at our destination by car; to arrive at the Hargreaves' ranch just at supper time and to be served a supper fit for kings; to get into a real bath tub and to be assigned beds with real springs and full mattresses! A week of sleeping on the floor or the ground quickens one's sensitiveness to the amenities of civilization.

Hargreaves are packers and outfitters for fishing, hunting and mountaineering parties and maintain a summer camp at Berg Lake, eighteen miles by pack trail from the railroad, and the focal point of our second week. No camp site was ever more magnificently located. It is just opposite Tumbling Glacier, which flows from peak to base of Mt. Robson, the most majestic of Canada's mountains.

Twenty-five horses were required to move our party. Saddling and packing was a colorful and exciting performance indeed! Several of the pack-horses had just been brought in from the range and had not carried a pack for a year or more. Neither did they propose to again! One handsome black, most appropriately called Dynamite, kicked everything within reach and laid even her owner prone. Another accepted the packing operations quietly enough, then broke through all restraints and barriers and careened madly around the yard and adjoining field, bucking off his load. He succeeded in shedding everything but one dunnage bag, which defied and taunted him at the end of a thirty-foot lash rope. The wild gallop came to an end only after the rope had wound itself around the horse's hind legs and brought him to earth. Packed once more, the outlaws were turned into a closed corral, where they strove mightily to roll the packs off. Finally, realizing that fate had them in its unrelenting grip, they rolled over on their sides, legs and necks stretched

straight, eyes closed, in a posture which definitely said, "We would like to give up the ghost right here! Better dead than alive to carry packs!"

So the ride to Berg Lake began with nineteen riders, six pack-horses and two colts — a real cavalcade. It was the first time "up" for some of the party. How proudly they sat their mounts as we started off! With what resignation they permitted Isaac, our Indian companion of this expedition, to lift them bodily off at journey's end!

For the first few miles of the trail, wild raspberries, hanging red and luscious, almost succeeded in tempting us to dismount and test their piquant flavor. Then through a cedar forest, past Kinney Lake, through rushing mountain rivers, where we were glad to trust ourselves wholly to the instinct and experience of the horses, who magnificently rewarded our confidence in them. Finally, into the Valley of the Thousand Falls, where countless, tumbling, sparkling streams, on either side of a narrow valley, hurl themselves with reckless abandon over sheer cliffs and fall for thousands of feet. A spectacle, indeed!

At the end of the valley, a long corduroy ramp, built to overcome a sheer rock wall, had to be negotiated. We were instructed to dismount at the foot, a most judicious precaution, for any trouble with the horses could so easily end in disaster.

The footing was excessively slippery and over-the-edge looked particularly uninviting. One of our professors, who loves life and deems discretion the better part of valor, reverted to the posture of primitive man and took the ramp on all fours. He reached the top blowing, but beaming. Then came the roaring, thundering cascade of Emperor Falls, a leaping, billowing outsurge of churning water, froth and foam, whose spray saturates the ground for acres roundabout. Report has it that Emperor Falls, squeezed into a comparatively narrow defile, sends a greater volume of water hurtling into the abyss below than does Niagara. One could readily believe it. It's stupendous!

Rain had caught up with us in the Valley of the Thousand Falls, and teemed down upon us for two hours. How soaked and cramped we were! But within an hour's ride of camp the rain abated, the sun came out and a glorious rainbow arched itself between us and the close-up valley wall. We seemed almost to ride into the rainbow — a vivid and most impressive experience. If memories are given us that we may have roses in December, the rainbow will be one of our choicest blooms. Not one who would not have chosen the wetting all over again, rather than have missed it. Within an hour we were dry and comfortable again, but the rainbow is ours forever.

We reached the cabins of the Hargreaves' Camp at 6.30, where a warm fire, a delicious hot supper, prepared by Ishbel Hargreaves and Verna Bowen, and clean, dry beds awaited us. What a contrast to the Memorial reception!

No camp site was ever more grandly situated. The mighty, majestic Mt. Robson standing guard! Tumbling Glacier, just half a mile across Berg Lake, exactly opposite the cabin door! A magnificent prospect! But would we ever see the mountain's snow-crowned crest ? We had been warned that Robson rarely doffs its head-covering of clouds to reveal its symmetrical upper reaches. But we were highly favored. As sunny day followed sunny day, the apex towered serene and high in the bluest of cloudless skies and the photographers of the party revelled in the favors which Fate so graciously lavished upon them.

There are no words to do justice to the breath-taking beauty and soul-stirring qualities of the Robson setting. Yet here it is, a region set in majestic grandeur, hidden away from all but the few intrepid adventurers who can accomplish an eighteen-mile hike over the roughest and steepest of trails; or who take, perhaps, the first horseback ride in their lives, as some of our party did, which isn't much easier! Here is Nature at its supreme, magnificent best, that cannot possibly

be eclipsed in this or any other country. Surely we may anticipate that at the end of the war, with machinery and manpower again available, the few necessary miles of road will be opened to make it accessible to those others, less hardy, who find healing at Nature's shrine.

So we transported ourselves throughout the sunlit days, according to our various tastes and abilities. Some contented themselves, in the main, with arm-chair mountaineering from the veranda of the cabin, sufficient reward surely, with the mosquitoes left behind in the Tonquin!

Several climbed the surrounding heights, from which they viewed the vast "untrespassed sanctity" of peak after peak and infinite beyond. Six, including one graduating member, carefully guarded by Cora and Gladyse Hartley, scaled the peak of Mt. Mumm, with its tricky, open chimney yawning over Mural Glacier a mile, or nearly, below.

All rode the twelve miles to Moose Pass, where acres upon acres of Alpine flowers grow in infinite profusion, lupin, arnica, mountain aster, buttercup, heather, paintbrush. Lupin predominates, of every shade, blue, mauve, coral, cream, and variegated colors on the same stalk.

Then the ride home, with Mt. Resplendent gleaming in the sunlight in front of us, a shining thing and perfectly named. Resplendent, over 11,000 feet high, completely snow-covered and dwarfed in the region only by the mighty 13,000-foot Robson, four miles to the north.

The dining hall of the cabin provided the opportunity for evening games, and riotous hours were spent. When the supper was cleared away and dishes washed (five volunteer fatigue parties of three each took turns, not excepting the three university professors, who performed handsomely and without benefit of advice) the fun began. Members of the Kamloops Outdoor Club, who were camped at Lake Adolphus two miles beyond, joined in these revelries.

Can you balance on one foot on a tomato can, light a match and ignite a candle? Can you take your turn at passing a playing card, held between the nose and upper lip, down your side of the line without dropping it? Try it, with an uproarious audience looking on.

So the glorious two weeks drew to an end.

The eighteen-mile return ride to the Hargreaves' Ranch was without untoward incident, except for the usual difficulty of keeping the pack-horses among those present. How they love to slide into the bushes out of sight! Two of them pulled it off within a half-hour's ride of home and successfully lost themselves for three hours. Strange, unorthodox costumes appeared at the supper table in consequence, pinch hitting for those still on the truants' backs. Again several of the riders appeared to have no objection to falling off their mounts into the waiting arms of handsome, upstanding Isaac.

Another fine supper at the Hargreaves' Ranch; a grand sing-song of the Alpine favorites round the piano, and two never-to-be-forgotten weeks were ended. Forgiven were the mosquitoes, the thin mattresses, the packrats, the laggard dunnage, the limping feet. Only the irrepressible call of the everlasting hills remained.

"Till we meet again!" said everyone, as we neared Edmonton and the ordinary pattern of everyday things pressed closer and closer.

So was Cora justified of all her company and so she recharged the batteries of her soul's inspiration.

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Snow Cornices On Mt. Ann - Alice.
Photo C. Sutter.

Looking North From Mt. Ann - Alice.
Photo C. Sutter.

LADY CLIMBERS IN THE TONQUIN AND MOUNT ROBSON REGION

BY CORA SUTTER

In the volume of letters which passed between the members of the Calgary and Edmonton party who were planning a two weeks' outing into the Tonquin and Mount Robson region, the theme was, "What shall we climb?" Who ever heard of a party of A. C. C. members camping in the mountains for two weeks and not climbing? But we were comprised mostly of women and not a capable male rope-leader in the party. On arrival at Jasper we learned that Morris Taylor and a Swiss guide were going into the Tonquin in quest of crystals which were reported to be on the summit of Drawbridge Peak. We persuaded them to advance their plans a few days and accompany us. Mr. Taylor entertained us at his home in Jasper where we met out guide and made arrangements to do the famous Simon-McDonell traverse.

The climb was set for Tuesday morning, July 18, and the two gentlemen in question were to pick us up at the A. C. C. cabin at 8.00 a.m. We planned two ropes. Up bright and early, in a state of great expectancy for the day's climb we awaited the arrival of our guide. When nine o'clock came and no one arrived we planned that we would explore the head of the Eremite Glacier and the day proved most worth while and quite enjoyable. That evening we decided to attempt the climb of McDonell ourselves and to leave early in the morning. Seven weary and sleepy members emerged from sleeping bags at 5.00 a.m., much to the disturbance of the other seven who were going on a fishing and riding expedition to Amethyst Lake and the Clitheroe meadows. We filled ourselves with a gargantuan breakfast and left the cabin at 6.30 a.m.

The party consisted of Miss Marion Fawdry, Miss P. L. Pue, Miss Evelyn Kippen, Miss Vi Walters, Mrs. Doris Coo, Dr. Silver Keeping and myself. We followed the trail to the left of Penstock Creek. During the day the creek overflowed the meadow and the trail, but subsided in the evening, and in the early hours of the morning we were able to follow the trail to the rock slide, which we crossed, emerging on the heather alplands, where every step awakened slumbering mosquitoes. We thought they never slept, as at the cabin they worked feverishly on the sleeping occupants all night. At the bottom of the moraine we skirted a small marginal lake, ascended a high ridge and were on the ice of the Fraser Glacier. We kept to the left, ascending along the medial moraine which extends down the glacier. We made good progress in the coolness of the early morning hour and were in the shadow of Outpost Peak. We stopped to admire a very fine icefall between Outpost and Memorial Peaks. On reaching the saddle of the glacier, we were able to view Eremite Cirque and Eremite Glacier, also a fine array of mountains to the south of Simon Creek valley burst into view. We could pick out Mts. Hooker, Scott and some of the old familiar friends of the Icefield group.

After getting around the shoulder of Bennington, we were able to see for the first time our objective peak. It looked most inviting and one member who was sceptical of the climb, decided to try it and make her graduation climb. We turned westward and plodded up the soft snows to the col of McDonell, where we rested and had lunch. Miss Fawdry and Mrs. Coo decided to wait here while we went on and made the climb. Leaving the col at 1.00 p.m. our rope, consisting of Dr. Silver Keeping, Miss Evelyn Kippen, Miss P. L. Pue and Miss Vi Walters as end-woman, plodded up scree and snow slopes and were on the summit at 3.00 p.m. The week previous had been a very rainy one, hence there was much snow on the upper ridges, the peaks around us

avalanching considerably. One short snow ridge caused us considerable worry, but we moved very cautiously and were soon on the ridge leading to the summit. The view from the summit presents a very fine panorama of peaks and glaciers. The day was one on which the ceiling and visibility were unlimited. We were able to view Mounts Robson and Resplendent, which were to be closer companions in the following week. After congratulations to our two graduates, Dr. Silver Keeping and Miss Kippen, we left the summit.

The long ridge connecting us with Simon Peak (10,899 feet), loftiest of the Mt. Fraser group, looked feasible under proper conditions, but now it was heavily corniced and avalanching considerably and we regretfully dismissed it from our thoughts. We reached the col and our other companions at 4.00 p.m. and had a fine time skating down the soft snows of the glacier, arriving at the hut for a dinner of fresh rainbow trout, and the satisfaction of something accomplished and something won, warming the cockles of our hearts.

There still remained one member to make her graduation, and we had promised her we would do a climb in the Robson region — but what? This was entirely new country to most of us. We hoped there might be some experienced climbers at Berg Lake Chalet, but no. The Kamloops Outdoor Club was camping two miles above the chalet. Unfortunately the members were on exploration and not doing much serious climbing. The first morning after our arrival in order to get limbered up after the trail ride we went for a stroll in the basin back of the chalet, having lunch on the flowered meadows. We saw a very fine ridge, which was snow corniced and looked like a good conditioner, so the party broke up, some returning to the chalet, others going on up the rocks. The little peak proved to be Mt. Ann-Alice. Again we left two of our party at the saddle, Miss Fawdry and Miss Edna Kelley, while Miss P. L. Pue, Miss Vi. Walters, Prof. E. S. Keeping and I continued on to the top. The following day two more members of the party essayed the same vantage point, Nellie Buckley remaining at the col, while Gladyse Hartley proceeded to the summit.

We had a splendid view of the surrounding country: to the west Mts. Whitehorn, Phillips and Longstaff; to the north, Mts. Gendarme, Mumm and Palu. Eastward through the gap of Mts. Robson and Resplendent we were able to see the Ramparts and the towering summit of Geikie. We were contemplating a climb of Mt. Mumm (9,718 feet) which from the west presented an awe-inspiring sight. The mountain rose sheer from the Mural Glacier. What impressed me was a band of terra cotta red which extended about twenty feet from the top of the ridge along the whole side of the mountain. Little did we realize that the next time we would view the Mural Glacier, would be through a chimney below the summit, dropping thousands of feet to the ice below. One of the Calgary members coined a description which applies to this chimney, "I stood in a wide-mouthed hollow, where the valley was filled with hush."

Tuesday was the day for the attack on the mountain, not by the regular route, the scree slopes on the south face, but by the northeast ridge which looked like good climbing of both snow and rock. We were doubtful as to whether Mt. Mumm was a graduation climb and not wanting the effort of our novice to be in vain we took the northeast ridge, which proved to be a little stiffer than we had bargained for. We left the chalet at six, all hiking up the trail, one member riding a horse to the timberline above the delta. We plodded up the trail which finally lost itself and we did considerable bushwhacking, at which by this time we were quite adept, and were soon on the ridge. We followed it, passing some very fine gendarmes on which we would liked to have played, but loftier places were calling. One very fine gendarme looked like two ancient figures in the act of kissing.

The rocks were very loose and we had to take great care not to dislodge stones on the other

rope of two, Miss Pue and Miss Kelley, who were following closely on our heels. Our rope was comprised of Mrs. Walker, Prof. E. S. Keeping, Miss Gladyse Hartley and myself. Some of the ledges were choked with ice and we cut some steps. Just before getting on to what we thought was the summit, we encountered a fair-sized chimney. At this point there was a large overhanging cornice, we turned left into the chimney which brought us to the top but no cairn was in sight. We proceeded up the snow ridges to the top to find that Mumm is turretted with about four turrets, these we climbed up and down, finally at the base of the last one we swung right into the chimney which led to the summit. This proved to be the most terrifying moment of my life. I cautiously got around the rocks leading into the chimney and found splendid hand and footholds. Standing on the stop with my back practically on the summit cairn I proceeded to bring up the remaining members of the party. This is done blindly as the only member visible is the one who is actually climbing in the chimney. It took us half an hours to negotiate this spot, and at 5.15 p.m. we were all on the summit. We knew we must not take time to linger, so without even a bit of lunch we proceeded down. In order to save time, we crossed a very steep snow patch which dropped to the cliffs below. Here we had to exercise great care, all the party taking care neither to break the snow steps nor to slip. I belayed the rope around my axe at the point where we got off the snow onto the rocks and Miss Hartley, my very efficient end-woman, belayed the rope around her axe, lodged deeply into the snow, after each member crossed. After our rope got over, there still remained the two ladies, Miss Pue and Miss Kelley. This they did in fine order, and for the first time that day I knew our worries were over. We found the same chimneys and proceeded to get off the mountain as quickly as possible.

I knew that darkness would be on us before we got to camp, and was most anxious to get as far down as possible.

After unroping farther down the mountain, Miss Pue, Miss Kelley and Professor Keeping proceeded on down to camp, the rest of us following slowly. Darkness was on us when we reached timberline, the only landmark being Robson Glacier, which was visible intermittently through the trees. After what seemed hours of slogging, we reached the old camp grounds of the Canadian National Railways' former chalet.

A shout brought a procession of flashlights from the bushes and kindly hands assisted us over the one-log bridges to the camp of the Kamloops Outdoor Club, where we were filled with huge pieces of fruit cake, as well as coffee and chocolate. This club had invited all our members to enjoy their evening bonfire that night, but owing to the lateness of the seven of us in getting off the mountain, and the fears and anxieties of our members at camp, only two made the two-mile hike to their camp, Miss Nellie Buckley and Dr. Ted Gowan. Miss Hargreaves and Miss Bowen, our hostesses at the chalet, also rode down. Mrs. Walker was able to get a ride back to Berg Lake, while Gladyse and I very thankful for the assistance of Nellie's and Ted's flashlights over the one-log bridges of the streams, reached the chalet at midnight. So ended another wearying but glorious day on one of the peaks in the finest region of our continent.

Next to making one's own. graduation climb, I know of no finer thrill than to graduate our friends into the strangest of all fraternities, the fraternity of mountaineers.

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FLOWERS OF THE CANADIAN ROCKIES

DESCRIPTIONS FROM THE ILLUSTRATED PORTFOLIOS OF MARY VAUX WALCOTT.
PLANTS COLLECTED AND PHOTOGRAPHED BY A. 0. BRIGDEN.

Lychnis apetala. Nodding campion grows among the rocks and boulders of old moraines or on alpine summits. Its flowers, turned toward the ground, are inconspicuous. The tiny petals project only a little from the end of the inflated calyx. Though the species has a wide distribution, it is seldom seen by the traveler because the coloring of both leaves and flowers is similar to that of the rocks among which it grows.

Nodding campion is found in both Labrador and Greenland, and extends from Colorado and Utah northward to Alberta, British Columbia, and Alaska. It occurs also in Europe and Asia.

Silene acaulis. Moss campion is one of the most attractive of the alpine plants and one frequently seen by the mountaineer climbing above timberline. Although its blooming season is short, differences in altitude and exposure in its many habitats are responsible for its blooming during a longer period than most alpine plants. It grows from a single woody root anchored deep in rocky soil, and spreads into a flat cushion often a foot or more in diameter. The bright green of the narrow leaves is beautifully contrasted with the pink, or rarely white, flowers, and the plant is always a joy to behold.

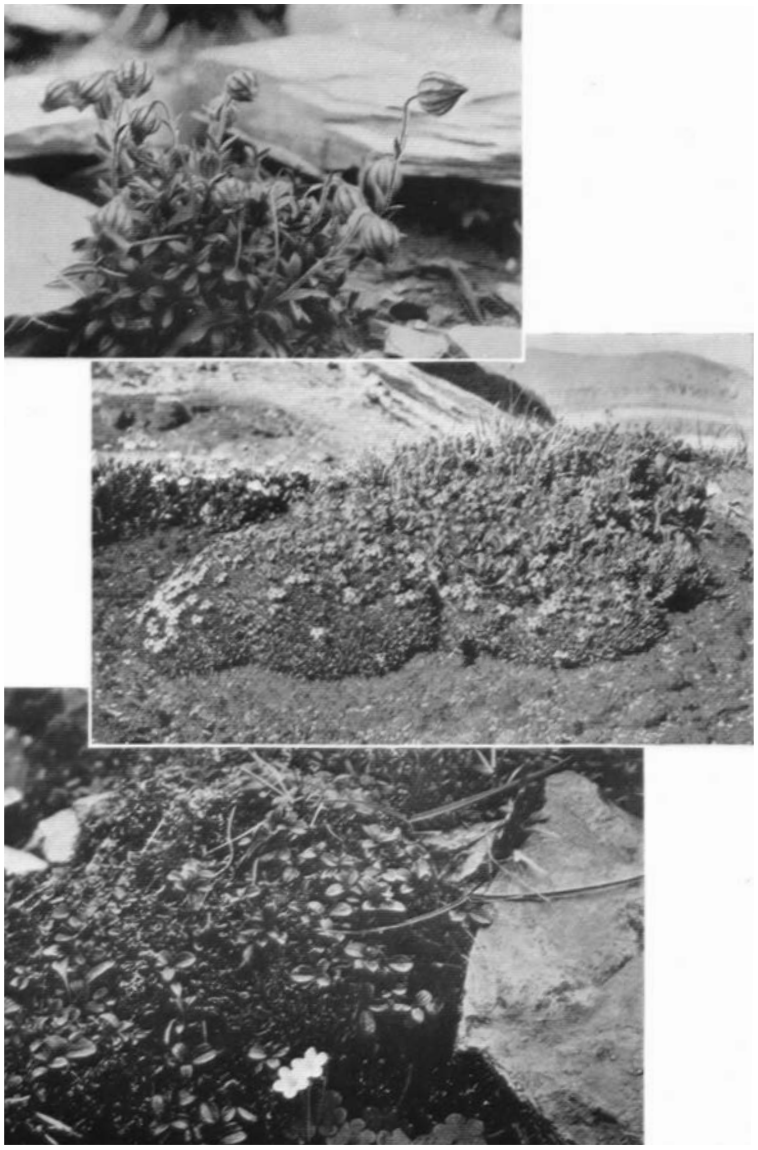
This lovely member of the Pink family is found in arctic or arctic-alpine situations, from New Hampshire to Greenland, across Canada and from the highest mountains of New Mexico to Alaska; also in Europe and Asia.

Salix nivalis. When climbing in the higher altitudes of the Rocky Mountains, just above timberline, one often finds large patches of the ground covered with a low plant about an inch high, bearing spikes of tiny red flowers surrounded by small, dark green leaves. It proves to be the snow willow, one of the smallest of all the large group of willows. Later in the season the flowers are followed by tiny seeds with feathery appendages, by means of which they are carried by the wind to new locations far from the parent plants. The plant is so low that it is not torn by the winds, however violent they may become on the bleak mountain slopes. In winter, also, it is well protected by even the thinnest blanket of snow. Thus has the tiny willow become adapted to its environment.

The species ranges from Montana to Washington, and northward to Alberta and British Columbia.

Romanzoffia sitchensis was described and illustrated in the 1942-43 Journal, page 198.

(The Editor would welcome any additional black and white photographs, or color films from which black and white records could be made, for subsequent issues of the Journal.)



Lychnis Apetala **— Floe Lake.**
Photo A.O. Brigden.

Silene Acaulis **— Kiwetinok Pass.**
Photo A.O. Brigden.

Saliz Nivalis **and** *Romanzoffia Sitchensis* **— Scarab Lake.**
Photo A.O. Brigden.

MOUNTAIN MOSAIC

BY W. A. DON MUNDAY

If the man who invented back-packing had finished the job and then died with the secret he would have merited a very large monument.

I nearly stopped a logging operation the first time I carried a fairly heavy pack (using the now almost forgotten pack-straps). For some reason part of our grub had been shipped in a box very prominently labelled with the name of a famous whisky. I am sure the loggers we passed got a mistaken impression of the delights of mountaineering.

In retrospect, my earlier climbing associates seem to have been very opinionated, and making up a pack became a ritual. But, too often, rough going in British Columbia coastal forest made a load carried in pack-straps look as sad as a burst tube of toothpaste.

The ritual demanded that the packer spread the sleeping bag on the groundsheet like a praying mat, and he knelt on the foot. If merit existed in facing toward Mecca, this may have been withheld from me as an unbeliever who favored stuffing his belongings in a packsack. The packer sank down with elbows out, forearms horizontal, palms down, fingers meeting. Arms were then swept forward to expel air from the sleeping bag, until the body was stretched full length. I inferred this prostration acknowledged that if the mountain won't come to Mohamet, Mohamet must go to the mountain.

The rest of the load was stacked centrally in rectangular form, then sleeping bag and groundsheet folded around them and secured by the pack-straps which had been arranged on the ground under the sheet.

I do not know where pack-straps originated, and have not found mention of them by writers on such subjects. A vertical strap goes round the load, also horizontal ones at shoulder level and near waist level. Uniting all these are shoulder straps differing only from the usual type in that they cross the back diagonally so that the pair form a figure eight. Pack-straps form the lightest and handiest rig for carrying boards, windows, etc., but make access too difficult for personal belongings. A well designed packboard is of more all round use if fitted with a detachable packsack which also has its own shoulder straps.

Although my early associates quoted George Abraham's Complete Mountaineer with more than the author's own finality, they still held no doubt that a climbing boot worthy of the name must flaunt an outside counter of nearly the weight of sole leather. I submitted to their views only to the extent of weighting my boots with clinkers with flanges overlapping.

An early adventure at the base of Mt. Mamquam (Garibaldi Park) confirmed belief in the value of edge nails along the waist of the boot. While hurrying along the brink of the canyon just below the glacier tongue I slipped on scree thinly masking ice-smoothed rock. Just in time one nail bit through, caught a small tooth of firm granite, nearly tore out of the leather, but saved me from the mad river sixty feet below.

Unfortunately Abraham widened the popularity of the now discredited middleman's knot (long since condemned because it can become a fatal slip knot). A simpler way of tying it than the regular one can be discovered, but the most amusing mis-tying of it that I ever saw occurred on a glacier on what was long known as Copper Peak, being the easterly end of the Mt. Castle Towers massif, at the head of Pitt River.

We did not rope until well involved in a small but quite broken icefall — long since melted to extinction. The youngest of the group in a few moments contrived to absorb about thirty feet of rope in a knot never seen before or since.

More exasperation than amusement marked the efforts of those who balanced on thin fins of ice and tried to unsnarl the rope. This same youth startled companions on his first rock climb by wild cries of "Pull my leg!"

"He just wants his knee joint snapped back into place," calmly explained his brother.

The Copper Peak just mentioned lured many prospectors to risk lone crossings of the glaciers to search for mineral. Our party probably carried away all the ore. This consisted of two or three fascinating nodules of fairly pure copper found in otherwise barren-looking granite.

This same man, lightest in the party, was the only one who broke through into crevasses. The commonest cause of breaking away snow steps is rising on the toe. Many climbers persist in taking the usual heel and toe action into the mountains with them. It adds to toil of walking on soft snow, also loose sand, and in general is unsuited to rough ground.

This exploratory trip of the British Columbia Mountaineering Club to Mt. Castle Towers resulted in placing its camp next summer at Garibaldi Lake, which in turn led to the advocacy of creating Garibaldi Park.

Several years later one of our party introduced a bear—sex unstated—into his tale of our Pitt Valley experiences. Still later, three bears made his story still more entertaining.

From our bivouac nine nameless unmapped glaciers shone along the wild valley. Far-off riven ice still stirs something deep within me, although I have not been destined to set foot on many of this gleaming array along the lonely Pitt. Years later I dreamed often of skiing to Mt. Pitt, which I named. The Jenkins brothers climbed it in 1938. (*C.A.J.,* 1938, p. 27).

The name of my earliest instructor in the art of making a balsam bough bed is forgotten. For a quick job one need be handy with an axe. At the head of the bed it is well to pile crosswise a number of thick boughs against which to slant the rest of the boughs at a steepish angle to ensure woody ends being well buried under overlapping tips. No merit exists in sleeping hard when "roughing it" is needless.

Jumping for out-of-reach handholds is rightly condemned. My first misguided jump was upward and sideways for a tough little tree on a ledge. When the tree bent it thrust against my chest a rock weighing close to a hundred pounds which for long exhausting moments forced me to support it because a corner hooked into my belt. I could not drop back to my starting point. Since then I have always worn a belt with some misgivings.

When returning from an October visit alone to Lake Mamquam I headed for the snout of what we then knew as Lava Glacier from Mt. Garibaldi. The snout had not been previously visited by climbers and I wanted a photographic record. (A Post-glacial lava flow from this area extends for over ten miles, and almost to sea level within less than four miles of Howe Sound).

Earliest climbers had discovered a fine marginal lake along this glacier. "Rampart Lake's" overflow had colored Lake Mamquam a glorious jade green until the upper lake suddenly ceased to exist.

The first hundred feet of the eastern lateral moraine above the snout of Lava Glacier was remarkably smooth, and about two inches of snow covered its thatch of grass and other vegetation. Tricouni nails were unknown to me, so I made my way unhappily down the slippery slope until I reached the really steep, hard, clayey section left unsupported by recent ice shrinkage on some scale.

To descend this, almost every step must have been chipped out with my ice-axe. Mindful of three rough lava ridges to cross before the short October day ended, I climbed back to the moraine crest which offered, along with other moraines marking progressive shrinkage of the glacier, a less troublesome descent to the creek.

A strong odour directed my attention to a natural cavern among the boulders. No recent tracks gave a clue as to the kind of beast owning the lair. It seemed a bit early for a bear to be hibernating, but I knew a big grizzly roamed this neighborhood, and had noted his mighty delving for whistlers. Curiosity is easily curbed at times, although I had tracked a grizzly for some distance the previous summer. The brute left the mightiest tracks I have ever seen. I missed meeting him merely by minutes, for his trail crossed mine where I was carrying wood fifty yards to camp. But then I had four companions in camp.

Retreat of the glacier had exposed a water-cut box canyon about fifty feet deep in granitic rock. General belief is against canyon-cutting under glaciers. There is evidence enough now to infer that Coast Range glaciers advanced considerably before their present wasting. So it might be unsafe to assume this canyon formed entirely under the glacier. Although several hundred feet of ice had overlain the canyon, the top of the walls showed no marked rounding, and the walls no scars of ice. The zig-zag course of the gorge suggested exploitation of some marked line of weakness in the rock.

Boyhood practice in throwing stones at a small mark had something to do with my first lesson in the limitations of climbing nails on limestone. Many a meal of grouse resulted from a well-aimed stone. This time the stone was not so well aimed, but the grouse literally stuck its neck out. It leaped spasmodically into the air and sailed down over the edge of a cliff towards Berg Lake. I ran forward to see where it would drop, but made the mistake of treating a big limestone slab like honest granite. Sliding wildly, I still kept my feet. By good luck, thirty feet down, a small heathery shelf intervened at the cliff edge. So I saw the grouse crash head-on against a tree and drop dead.

If permitted to design a mountaineers' heaven I might want to omit moraines, although memory of one experience might make me hesitate to abolish them all. Three of us worked diagonally up a treacherous lava moraine of Roosevelt Glacier on Mt. Baker. What falsely appeared to be the small end of a big rock deeply embedded, came away, giving me a queer toss which I easily turned into a somersault in the air. I certainly wanted to land feet first.

The girl in the party proved equally mindful of the big schrund along the glacier margin. She made a leap which placed her below me. We landed at the same time. Through no choice of stance I found secure footing. But my daring rescuer found none. So it was I who had to save her, but not at the risk she had taken. We were not married then.

Perhaps passage of time now permits telling how a variant of this theme occurred when a large party was descending a mountain overlooking Vancouver. A steepish snow slope was being descended one by one by a sitting glissade in the leader's track. Heels needed to be dug in well at the bottom, for the space to a cliff edge below was too short for any but the fairly skilful to stop. The snow mound at the foot of the slide grew nearly big enough for a small ski jump.

Two or three men wisely stationed themselves below. Near the last came a girl who might have been expected to perform better. She came down with feet well raised, so naturally shot clear into the air off the snow platform. Her fiance stood directly between her and the precipice. He sprang back and let her hurtle by. A man with no personal interest in her did not flinch from her nailed boots, and suffered nothing worse than a dislocated thumb.

The sitting glissade never enthuses me since I hit my spine on the corner of a large hidden rock. The same applies to group glissading, toboggan-fashion, since seeing a girl's knee twisted while descending from the Western Lion (near Vancouver). We roped to assist her down. She just reached a jutting rock in the middle of a gully we were crossing, when a wet snow avalanche came

Mt. Garibaldi From Temporary Marginal Lake.
Photo Don Munday.

Pack-Straps In Use.
Photo Mrs. Don Munday.

down silently.

She could neither advance nor retreat. For perhaps fifteen minutes the slide poured down about knee-deep while we braced her with the rope from either side. I am not sure anyone in the party then possessed enough skill to have handled the situation safely if a greater volume of snow had come down.

Mature forest naturally gives climbers a sense of security against avalanches originating within the wooded area. One may so easily forget that enough snow to bury a climber or carry him over a cliff may be just as deadly as an avalanche which strips a whole mountainside.

On one winter attempt to reach the Lions we struggled up to about 4,000 feet in shoulder-deep powder snow on the steep Howe Sound slope. When we decided to retreat, half a dozen of the party plunged down more or less abreast. They simply took the slope with them, disappearing helplessly in the soundless rush of snow amid the tree trunks.

After running for about 100 feet the front of the growing avalanche sprayed over the brink of a cliff, but the main mass piled on a small flat space above. One by one snowy figures struggled to the surface, some finding themselves practically on the brink. Possibly some of them thereafter recalled the climbing maxim that a single track is least likely to cause an avalanche.

A sudden thaw after heavy snow once snow-balled me all the way down a timbered mountainside. Snow on the ground had reached the perfect stage for making a snowman, and much of the snow dropping from the trees set the slope alive with snowballs, mostly cartwheel in form and up to four feet or more in diameter. Their quiet speed and unpredictable courses made me repent climbing alone on this occasion.

Fortunately climbers rarely practise somnambulism during enforced bivouacs on mountains. For want of a few inches of candle, two women and I sat all night on a ledge. I woke just in time to see one of them going over the edge, still asleep, as calmly as though getting out of bed. Daylight revealed nothing but eternity for the next 800 feet below her heels.

Frank H. Smith, a Vancouver member of the Club, in a manuscript circulated privately, relates an incident at a cabin, on Grouse Mountain, ironically named "Perpendicular Farm." "Most of the fellows were strung out along the floor and through the open doorway, one unfortunate finding it necessary to place his head beneath the stove.

"In the still watches of the night I was awakened by a voice repeating 'Look, look, look!'… Various ejaculations arose from the recumbent forms, while a yell issued from beneath the stove, where the unfortunate being smote his head violently against the iron, and imagined the cabin had collapsed on him.

"At last the h. m's[1] bedfellow realized the situation and thrust him beneath the clothes, and, forgetful of the ladies beyond the curtain, assisted the operation with a few well chosen words. This broke the spell, and the cabin rocked with our laughter."

1 An abbreviated reference to an earlier passage in the MS. "One of the survivors of the old days, a hardened mountaineer, whom neither matrimony nor anything: short of death could stop, since he very wisely married one similarly afflicted."

SKIING IN GARIBALDI PARK

BY W. A. DON MUNDAY

Alpine skiing in Garibaldi Park in the Coast Range is still so distant from Vancouver in terms of time and effort — though a mere fifty miles as no crow could be persuaded to fly — that a week on Black Tusk Meadows perhaps may be rated as a modest "expedition."

The party was the same as had been only fifty per cent successful the previous spring when, on skis, the first ascent of the rather remote Mt. Sir Richard had not included skiing on McBride Glacier, which is one of the largest in the park. (*C.A.J.,* 1936, p. 71.) My companions were my wife and Philip (Pip) H. G. Brock.

We had learned to expect a distinctly higher snow-line and lesser snowfall than on the mountains overlooking Vancouver. Both conditions proved a bit more marked than we had hoped. Perhaps Pip and I got a vague notion that this was earning our skiing the hard way when we climbed with packs up through the marginal zone where ground thawing had undermined the snow so that we often plunged through knee-deep, even waist-deep. These delays, coupled with a very late start, allowed us to reach only about 3,500 feet, where we cached our loads.

Our camp in Cheakamus Valley was about 1,800 feet above sea level, and among the considerable growth of trees which now masks a large part of what the early climbers dubbed "Boulder Meadows." This was the huge outwash fan of Rubble (Stoney) Creek.

Popular belief insists that the cataclysmic bursting of a mountain lake flung the whole mass of debris into the valley, obliterating the ancient forest and forcing the Cheakamus River over to the west side of the valley. This version cannot be accepted in its entirety by anybody who notes trunks of the original forest still standing upright in the young river channel. They were so numerous during construction of the Pacific Great Eastern Railway that the tote road easily crossed the river on a bridge supported wholly on trunks sawn off at a suitable level.

Such trees obviously met, though on larger scale, the same progressive submergence in gravel and boulders that may be seen in countless mountain valleys where streams are overloaded.

The three of us broke camp next day. As we neared the cache we agreed that skis began to pay dividends. Coastal forest changes noticeably in character of trees and their way of growth as one mounts. This is always a joy to us.

We found ski tracks of a previous party, and followed them until convinced that these people had temporarily lost themselves. Making a fresh start, we located a line of winter blazes leading presumably to a cabin built beside Parnassus Creek in connection with a study of the hydroelectric possibilities of Garibaldi Lake. (Fortunately the engineers confirmed what climbers had long contended, that unpredictable underground drainage of the lake made it unsuitable.)

Soon after these kindly blazes failed us, we sighted a corniced mound which proved to be the buried cabin. Permission to use it had not been granted, so we chose not to enter although removal of the lock looked simple.

A space of three feet under the cornice allowed us to slide down eight feet to the earthen veranda floor. Out of discarded sheet metal we readily rigged a sort of stove to keep our fire from eating down into the chips and earth. In addition to cooking, it served well as a shin-heater for our little group.

Pip pitched his tent on a platform of boughs on the snow beside the cabin, and christened his abode "Icicle Hall" next morning when it rattled with ice.

In the forenoon Pip and I skied down for the cache. Man-like, I do not recall the items of the midday meal with which Phyl rewarded our return, but testify it rated better than the average wilderness meal.

Barring the occasional culinary disaster, such as happens even in the home, the eating of ill-prepared campfire food simply confesses lack of skill or indifference, and to that extent marks such persons as still in the cheechako[1] class no matter how experienced — how often experience is mistaken as necessarily implying skill!

The warmth of our fire soon created a real danger by cutting away the massive cornice along the edge of the gable. If it fell it would slide bodily into the veranda. The cornice must be cut away from below. This took a lot of careful shovelling.

Weather remained unsettled during most of our stay. This meant daily or more frequent renewal of powder snow, which otherwise soon perished in uncertain bursts of spring sunshine.

Any hint of sunset glow on sky and snow always sent us on an evening trip at least as far as the high ground overlooking Garibaldi Lake and its mountains and also commanding views beyond Cheakamus and Squamish valleys. Across the latter valley the splendidly bold Tantalus Range rises as much as 8,000 feet above the river, forming an integral part of Garibaldi Park views although outside park boundaries.

Absolute heights of the more frequented Canadian mountain ranges tend to dwarf large sections of the Coast Range, so it may still be appropriate to remind some readers that a zone of glaciation of 4,000 feet is commonplace on 8,000-foot mountains near the coast.

A small flock of whisky jacks added to the lighter side of camp life. As a class, birds are generally said to display little sense of smell. But the raven is an exception, and probably the whisky jack. The boldest of our visitors soon perched confidently on the slab of bacon and removed his own share while Phyl sliced off ours. Her scolding did not convince the bird that he transgressed. His fellows fed only on bacon rind.

Fog plagued us during most of our first visit to Helmet Glacier, and the brighter intervals went to taking photographs of icicle-hung caverns along the glacier margin.

We approached one slope from above. Snowballs thrown down it seemed to reveal a steep, short, innocuous slope. A little demon squats on every ski-tip in the mountains. This one said that running in fog improves one's ability to meet changes in grade and snow conditions. No body seemed willing to lead down it, so we outflanked it by a known route. A shift in the fog proved us wiser than we knew, for a cliff broke the slope we had shied at.

Our objectives remained just about as indefinite as most of the weather. But one promising morning we angled down from the cabin to the outlet of Garibaldi Lake by a trail scarcely meant for skiers. We hoped to ascend Mt. Garibaldi.

Joy in brilliant sunshine on the enclosing peaks banished any threat of monotony in the three and a half miles to the head of the lake. Sentinel Glacier, when we reached it, showed sad progressive wastage over a long period.

Crevasses proved well-bridged as far as the divide at Glacier Pikes (volcanic in origin.) But poorly consolidated snow at this elevation definitely labelled the steeper and loftier snow slopes of Mt. Garibaldi as forbidden zones for the present.

With that shining swoop down the glacier to lake level still awaiting us, we could afford

1 Perhaps "cheechako" is a word falling into disuse, although once widely known through the poems of Robert W. Service. It appears in the title of one of his books, Ballads of a Cheechako." In the days of the Klondike gold rush it implied a person was not trail-wise. The antonym is "sourdough."

On Sphinx Glacier. *Photo Mrs. Don Munday*.

Upper Pitt River Valley, Garibaldi Park. *Photo Don Munday*.

Price (Red) Mountain From Garibaldi Lake.
Photo Don Munday.

On Helmet Glacier.
Photo Mrs. Don Munday.

to be more philosophical about our rebuff than if we had toiled up on foot and had to go down the same way.

In preparation for that downhill run we shifted our lunches from our packs to points nearer to what we hoped to maintain as our centre of gravity. Our ski wax had gripped with pleasant sureness during our ascent, and now revealed ample downhill speed.

It would be most gratifying to be able to record that we ran the glacier straight. In skiing circles perhaps we ought to take refuge behind the claim to be only mountaineers on skis. Be that as it may, we found the generous width of the glacier matched our degree of skill comfortingly.

Increasing thirst prompted looking for water underfoot while campward bound across the lake. We struck it in unlimited quantity four inches below the surface. Such mountain lakes probably carry little true ice, their covering consisting mainly of floating snow. Depths of several high-level lakes near Vancouver were measured one winter by lowering a line through holes made by thrusting long poles through to the water. Garibaldi Lake is 900 feet deep.

The day we climbed Panorama Ridge the mountains pulled caps of fog around their ears. We pulled our caps round our ears and crouched in the lee of a rock till our fortitude wore threadbare. Then we fuddled our way down the far end of the mountain which always looked formidably steep just below us in the obscurity, and never amounted to much. We sailed pleasantly down Helmet Glacier in better visibility.

The small cinder cone beside the glacier rates as about the youngest volcanic vent in the region.[2] The top of the cinder cone is unglaciated and the small crater holds some water.

We skied over matted branches of prostrate caricatures of trees on the cone, and sat down on this matted growth in expectation of favorable lighting for a photograph of the Black Tusk reared against a wildly spectacular storm cloud flaring up out of the northeast.

Instead, we suddenly found ourselves enveloped in the most amazing snowfall we ever experienced. Six inches fell in barely an hour. Skis clogged badly till we did a bit of work on our wax. This storm seemed to exhaust the supply of snow, and nightfall thrilled us with its starry brilliance, and its promise of good weather for our one remaining day.

We wasted little of the cloudless morning sunshine before starting across Garibaldi Lake for Sphinx Glacier. When we emerged on the glaring lake my wife's snow-glasses were missing. She had put them round her beret. So throughout the day she and I wore a pair alternately.

The lake had received a bare two inches of snow in the previous afternoon's storm. The water level had now risen to the base of this layer of frosty snow. Any skier will understand the clogging qualities of such a combination.

But ashore in front of Sphinx Glacier we found excellent conditions. The top of the ice-wall at the far-receded glacier snout revealed a mere six feet of snow on the ice. Early extinction threatens the trunk glacier because the horseshoe of glacier and névé above it is steadily separating into individual glaciers which are losing, or have lost, contact with the trunk.

Gleaming domes of cloud rolled in from the sea, but some kindly dispensation halted them parallel with the coast, leaving our white world unchilled by ashen shadow such as dimmed the snowfields in that direction.

No more effortless form of climbing exists than on good snow with skis efficiently waxed, for most of the weight of the advancing leg remains on the sliding ski, and of course the ski affords firm, flat footing to which to transfer the body weight. Except now and then in cramped quarters,

2 In "Mountain Mosaic" on page 69 of this Journal, mention is made of a big lava flow of Post-glacial age southeast of Mt. Garibaldi.

herring-boning and side-stepping are needless if suitable wax is used. My own preference is for an "all-weather" wax. The quantity is varied for various types of snow. Doubtless such a wax sometimes provides less downhill speed than the real expert desires, but the run-of-mill skier will generally get all the speed he knows how to handle if he has mastered the art of waxing.

Our general course led up the middle of the glacier. We thus kept well clear of the base of the Sphinx and other avalanche sources on our right.

As on Sentinel Glacier, we encountered loose, wet, un-consolidated snow when we mounted toward the Pitt River divide. As a result we dismissed as a possible objective "Copper Peak", the easterly end of the Castle Towers massif.

Beyond this enthralling skyline the mountains stretched away like a white-tented host awaiting the final trumpet of heaven. We could not identify a score of summits as being named or having been trodden by human foot.

A reiterated theme in living's *Romance of Mountaineering* is that this relative unknowness is meaningless, makes no difference to the climber. Yet, inconsistently, he advises trying to win a synthetic sense of pioneering by making no use of a map or other available knowledge of a thoroughly known district. Perhaps some aspects of mountaineering are outside his wide experience.

We relaxed in the sunshine for a time on the crest of an unimportant little peak north of Bookworm Pinnacle, but did not dignify it by leaving a record of our visit. The height was about 8,000 feet, and commanded a comprehensive sweep of the horizon except where blocked by the mass of Castle Towers from north to northwest.

When we started down we ran at cautious angles and made kick turns unashamedly till below the bad snow. From there to lake level we engraved a more graceful record of our joyous descent on the glacier's gleaming scroll — with not too many punctuation marks.

When my companions pushed out across the lake, instead of a trail of water-filled holes such as ski-less feet would have torn, they left lengthening silver ribands to mark their rhythmic easy progress towards the sunset.

As we hungrily topped the last rise to the cabin I picked up the missing snow-glasses, plainly hooked off my wife's cap by the first bough she had stooped under when starting out. Her eyes troubled her for several days. Thanks to good sunburn cream, we started home next morning with our complexions in one piece, though aboriginal in hue. But the fierce light blistered the backs of the hands of one of the party so that bandaging was needed.

Down beside Rubble Creek we paused at the camp of two Vancouver skiers whose ski tracks we had crossed once or twice. Naturally they had got in much less skiing than we, for they had to carry skis a mile or so over the boulders, ascend the Barrier[3] then cross the rugged thinly wooded lava beds, and only this third section was ski-able. Their vacation's high point — in both senses of the word — was the ascent of Price (Red) Mountain, which is an extinct volcano much younger than Mt. Garibaldi. They probably made the first ski ascent of Price Mountain.

We seemed to have got somewhat farther into the park on skis than previous parties, doubtless due only to snow conditions which favored us.

What memories flash to mind when ski tracks glitter in the sun!

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3 The Barrier is the precipitous front of the lava flows from Price Mountain which filled the valley of Rubble Creek. The stream issues from the base of the cliff.

SKIS IN THE YOHO

BY W. A. DON MUNDAY

Do non-skiing climbers realize that there are heights of ecstasy attainable only on skis?

There are those in the Club who felt that to maintain continuity of the ski camps in spite of wartime conditions was a worthwhile tribute to the memory of A. A. McCou-brey, the chief originator of the Club's ski camps. The deadline for registration for the 1944 camp saw only one name in. But fortunately Ken Jones — who as guide, ski-instructor, and cook, is an integral part of camp at the Stanley Mitchell Hut — could make the necessary arrangements for a small party on short and belated notice.

Thus it was that eight members changed (of necessity) from the swift but chilly truck transportation to potentially magic skis at the start of the Yoho road rather late in the forenoon on April 8. Besides Ken, the party consisted of Mr. and Mrs. E. C. B. Macnabb, Miss Dorothy Hartley, Miss Margaret (Peggy) L. Flood, Prof. Edward M. Little, and Mr. and Mrs. Don Munday.

Recent rain had somewhat bedevilled the snow, but skiers are always sure the snow will be better higher up. The Yoho Valley's threat of avalanches caused, of course, some loss of time due to need for widely spaced travel at each avalanche track. Some cloud subdued the sunshine most of the day.

Three of the party chose to spend the night at the warden's cabin. Those who went on soon found that among the trees on steep slopes their skis might suddenly bury in two or three feet of wet snow. But up in the Little Yoho Valley skis did become magical — in spite of tiring limbs — on powder snow, while an alchemic moon pointed long shadows of the trees towards the cabin and the alabaster crest of Mt. McArthur high above it. We felt sorry for the three left behind.

They arrived next day, exulting over us, partly because Elmer Jamieson, park warden, escorted them, but mainly because they had met mountain troops who had come across the glaciers from Peyto Lake. The first wave of mountain troopers stamped hopefully into the warden's cabin, mistaking it for their destination in the dark. "And found me with my hair in a net and a 'horsey' blanket pulled up round my chin!" lamented one of the ladies. Thereafter when parties approached, Barney Macnabb, in somewhat informal attire, met them at the door and shooed them on toward the bungalow camp. Daylight enabled the ladies to refresh some of the troops with water.

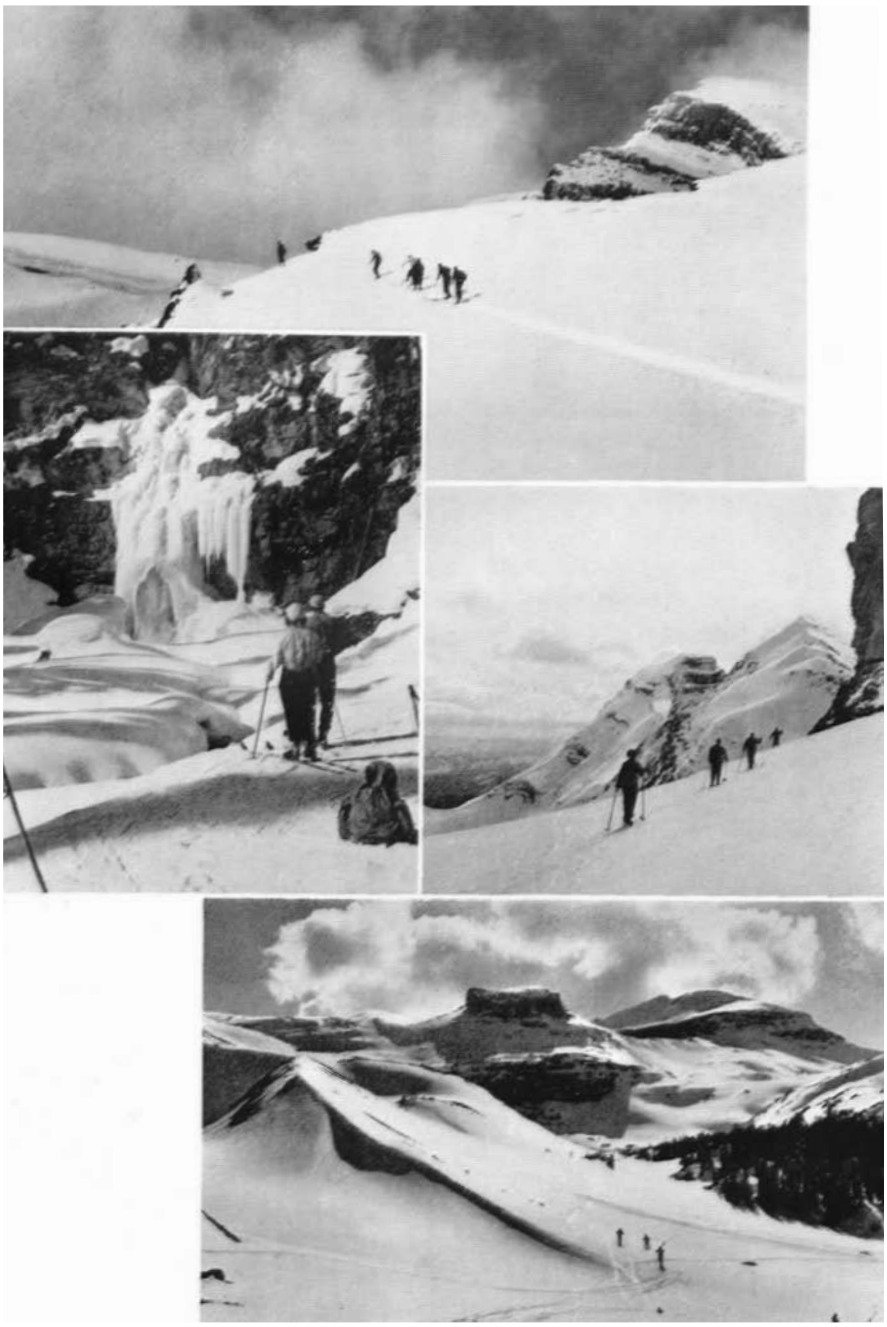
Snow lay about four and a half feet deep around the cabin, and much too loose for practicable travel without skis or snowshoes.

While "hut" seems to be the official term for this building, wisdom of such usage on this continent is open to question owing to the wrong impression it creates in the minds of many people as to the standards of accommodation afforded.

On the first and second day in camp we indulged in skiing on the moraine slopes under the President, but sun-touched slopes crusted unpleasantly, thus stimulating an ascent to Emerald Pass on the third day.

The almost complete disappearance of the once fairly considerable glacier tongue which extended along the northern slope of Mt. Marpole towards the Amiskwi River, amazed my wife who had not seen it since adventuring amid its icefall in an August blizzard nineteen years before.

But our present trip yielded the kind of snow that ski-mountaineers spend most of summer and all of winter dreaming about. We enjoyed some moderately distant views, but encroaching clouds threatened snow eventually.



Kiwetinok Pass. *Photo P. Flood.*

Laughing Falls. *Photo Mrs. Don Munday.*

Emerald Pass. *Photo Mrs. Don Munday.*

Practice Slopes On President Moraine. *Photo E.M. Little.*

Though our fourth day dawned encouragingly bright, the peaks began dissolving in vague snow clouds before we left the cabin. Our planned objective was President Pass, but the snow underfoot rapidly moistened, and part way up the glacier the wet mist properly dissuaded further ascent.

We stayed there for a time, mostly displaying our technical inabilities in snow now become like badly mixed putty. Mist and the snow surface merged in a white blank-ness, so that a skier passing beyond a swell of the glacier seemed to disappear feet-first gradually into, or emerge eerily head-first from, the white nothingness. The ability to side-slip proved useful in the gully occupied by the narrow steep tongue of ice left by the glacier's heavy shrinkage which was observed during the period of the military training camp in 1943.

We had all prayed for new snow to cover the crust. It seems we got individual answers during the following days. It was comforting to know that the big leaning, dead tree no longer menaced the cabin. It had been felled during the previous summer, a bit ticklish job because only a few inches of sound wood remained in its base — only tugging on a climbing rope tied as high as possible up the trunk had prevented its falling across the kitchen roof.

Although the intermittent snowfall greatly limited the areas safe for skiing, much time was spent out of doors. The sometimes despised telemark became essential when the new snow grew knee-deep. The youngest member of the party tangled herself and skis with a small tree when she fell; a man went, presumably, to her rescue, but in the resultant struggle one could not be sure whether or not she declined the assistance of the man and the tree to help her up or if the man and tree took turns at throwing her down as fast as she nearly regained her footing.

Two ladies predicted they could never descend in such snow to the Yoho Valley except by countless kick-turns. They were urged, mischievously perhaps, to practise travelling together on the only pair of snowshoes in the cabin. They finally did achieve a certain measure of mastery of what doubtless is something new in snowshoeing, but in the meantime most of the spectators laughed themselves almost to exhaustion.

We used a short spell of sunshine to reach Kiwetinok Pass, but skiing was a bit heavy. The snow storm ended late Saturday afternoon with an attempt at the dramatic. A sudden rush of wind down the valley almost stripped the trees of their snow burden in a few smothering moments, then a brief, but promissive, beam of sunshine followed at once. A starry night thrust the temperature downward.

Though we tried to assure ourselves that snow at lower levels must be too dry to crust, we made an early start for Field on Sunday morning. Breakable crust compelled great caution and caused many falls during the descent to Laughing Falls.

Possibly the ski camps ought to stress more firmly the requirements of good ski-mountaineering. This is prompted by two things noted on the homeward journey. On the way down to the Falls one member went off on an individual course; not all members recognized that, if risk of avalanche called for travelling in extended order, it also called for those in advance to wait at the first safe place until all had cleared the danger zone. Perhaps the foregoing observation discounts the claim that the admitted risk of avalanches along the Yoho Valley is offset by some training in how to travel in such conditions.

We paused a few moments to admire Laughing Falls, which were just beginning to break through a throat of gleaming ice. Atrocious snow conditions on the hill below Duchesny Lake probably ended our dwindling chances of catching the westbound train. The day continued too cool for the breakable crust to disappear before we reached the waiting truck. We had missed our trains in a big way.

The riddle of "Ken's Mouse" was not solved till Ken said farewell to the westbound contingent on the station platform in the middle of the night. The creature, really a shrew, will be a stock anecdote whenever members of this party meet again. Ken placed it in the kitchen to startle some of the ladies, but with little success. Various unsuccessful tricks were played before it was finally hidden in the thumb of Ken's glove. However, Ken had the odd habit of shaking gloves before putting them on. He showed a masterly sense of humor by keeping everybody wondering for two days how he would retaliate. In reality he had promptly thrown it away.

Such is the magic of skis that the camp was a success despite the weather.

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ON MT. SHUKSAN

BY STEPHEN H. BUSH

The climbing of mountains puts a man in so strange, so unearthly, a setting that all the ordinary paths of thought and feeling and expression become confused and twisted. The eternal loneliness of mountains never becomes a natural, familiar thing. Men themselves change and become almost unrecognizable in the mountains. Nowhere else are there such strange turns from joy to agony, from life to death, such unearthly visions of beauty, or such bleak and ghastly reaches of horror. Nowhere else can one see such lovely flowers, ferns, mosses. Or again, one may suddenly stand, as at Sunset Crater in Arizona, before a hideous world of tortured, razor-sharp, broken, black masses of volcanic rock, worse than anything described in Dante's Hell.

Since climbing must be a lonely business of a small trained party, the great feats are done without witnesses, or nearly so. Our vanity is universal. Who ever stood on a magnificent summit with the Kingdoms of Earth spread beneath his feet in weird, unearthly glory of sky, ice, snow, rock, and, far below, green forests, brilliant lakes and rivers, without feeling a glow of vanity and pride in his accomplishment? We cannot trust ourselves to describe these lonely scenes and almost solitary triumphs, without suspicion of over-statement, without danger of those delicate literary manipulations that serve to raise a man to heroic stature, not to mention the opportunities sometimes, alas, used for the crude and naked lie.

Inevitably, to keep the record straight, mountain climbing accounts become cold, relentless, inhuman bundles of facts. Descriptions have as many perils as have the peaks themselves. People remember too well those early enthusiasms with their rich play of romantic exaggeration and the straining of vocabulary to describe the indescribable.

Without this introduction, I would not venture to write what follows. It is certainly true of the great climbers whom I have seen and known, that they are, in fact, usually the strong, silent type, supreme men of action, little given to expression. When they happen to be talkative, they are not apt to be artists in words. Napoleon did not shine as a literary figure, even though some of his sayings strike like bullets.

Why, then, should not a poor climber for once describe an ordinary climb without glory, interesting only for its half comic aspects and the beauty of the climb itself?

From boyhood, I always loved to climb everything climbable — roofs, chimneys, trees, posts, or anything at hand. I never saw a tower, a steeple, or a mountain, without going up it if I could. But, alas, I had neither time nor money for training, equipment, much less guides. Only at almost fifty-nine years of age in 1937, did I acquire eight pounds of boots and socks, an ice-axe, a bed roll, and a young, competent technical instructor. I am six feet three inches tall, weigh 195 pounds, and am exceptionally strong and more than exceptionally clumsy. As an acrobat, I never counted, in spite of years of earnest youthful effort in gymnasiums. If no one else can, I am always the one to fall off a log. My young instructor and guide, Marion Marts of Seattle, is a finished technical mountaineer already of many years standing. He had done almost everything worth doing in the mountains of the state of Washington. Marion has a delightful wife, Dorys, a little slip of a girl weighing perhaps as much as ninety pounds, but with all the courage anyone could ask. We climbed much together. In August, 1939, I was in fine fettle after walking across the wild Olympic Peninsula alone with a pack. We thought Shuksan would make an ideal week-end trip —140 miles from Seattle.

Mt. Shuksan. Photo Asahel Curtis.

Shuksan stands behind Mt. Baker in one of the wildest, roughest parts of Whatcom County, Washington — an uninhabited region of ancient broken mountains. It is 9,038 feet high, first climbed in 1915 by Asahel Curtis. It is a horn, an erosion remnant mountain, composed largely of metamorphosed crystalline rocks, mostly gneiss and granite. Geologically, Shuksan is much older than the Cascade volcanoes like Rainier, Baker, Adams, Hood, etc. It looks like a very rough, forbidding little Matterhorn. We went zigzagging up the mountain by what are called the Fisher Chimneys for Hap Fisher of Bellingham who discovered them. These so-called chimneys are, in fact, moderately steep gullies. Fisher said he could push his grandmother up them in a wheel chair—but he couldn't push any grandmother, with whom I am acquainted, the rest of the way.

Shuksan is reckoned one of the most difficult popular climbs in the northwest. The mountain is not like other mountains, as we saw it on a hot August day. Snow conditions were bad. We struck incohesive, granular snow over ice which gave way in great patches under us. That same day a party of Bellingham students were crossing a snow-field on Baker. A great mass broke loose carrying six students down crevasses to their deaths. Only two bodies were ever found. Luckily, we were ignorant of this disaster or it might have shaken our nerve. Shuksan was a terrifying spectacle that summer day. The mountain was never silent. All day it rumbled, shook, roared, and thundered with avalanches. There is something indescribably terrible in the loneliness of black cliffs and masses of ice and snow when the whole mountain seems to groan with mysterious motion and life. Once, by accident, we saw a strange sight. An enormous mass of rock, which looked as if it weighed a thousand tons, suddenly sailed off from near the summit into space. It seemed to float as it slowly swept on down like a monstrous bird. Then it struck the glacier far below and burst into a splash of avalanches with a horrible grinding roar like the crushing of men's bones. I never saw or heard anything so sinister, not even on the war front.

Marion, Dorys, and I whisked up past Baker from Seattle. We left the car at Baker Lodge and began a long pack-in. We climbed the end of Shuksan Arm and plunged down a long, deep valley, black with Douglas firs and pines. We threaded a long, green paradise of lovely flowers, trout streams, deep grass, with the weird forms of mountains overhead changing profiles every few yards. Then came a long, tiresome pull up snowfields and rock slopes to our camp. Right below lay Lake Ann, one of those mountain lakes filled with floating ice in August, the last word in icy stillness that a man can imagine, steel blue, motionless, and cruel. A lovely tongue of snow five or six feet high thrust along the ridge where we slept, but beside it stood a mass of sturdy fir trees with rich green foliage. I don't think we slept much that night. First Mt. Baker and then Mt. Shuksan turned bright pink under the sunset. Except at Grindelwald in 1906,1 had never seen such mountain color. This time far up on Shuksan Arm above the sinister lake, Baker before us, Shuksan across the way, in a vast, silent wilderness without perhaps a single human being anywhere except back at the lodge, we felt a thrill that I can never forget. The nearly full moon soon rose; the stars had that unearthly brightness seen only in mountains, the whole world lay in a strange, silent, silver shroud around us while we lay among the black-green firs on that curious point of rock. I think no painter has succeeded in putting such a scene, which all climbers know and love, upon canvas. These things defy art and when one dares write of them, as I do now, he is ashamed of his pitiful little words.

We left camp before five in the morning with the usual morning grouse. Little Dorys marching between her tall husband and me must have looked amusing enough. We went down again into a second deep valley, swarmed up the lower glacier, and at last found these pleasant Fisher Gullies where one has the thrill of climbing high without danger or trouble. Somewhere

before getting there, I have a nasty memory of crawling along a very narrow ledge which failed us at last over a precipice. Then we were forced to get up to another ledge about three feet above, very narrow, along the face of the cliff. I remember how lovely the moss was but how sorry I felt that I had agreed to go to Shuksan! At such moments, it is always annoying that your companions are so cool and unconcerned. The incident was really nothing. It was a sort of hang-over from dangerous climbing in my boyhood when I had unsafe shoes and came to rely wholly upon hand holds. I think many climbers always retain a morbid fear of trusting their feet alone when necessary.

Above the Fisher gullies are snow walls, very beautiful but uncomfortably high. Marion thinks them 250 to 300 feet high, the steepest he ever climbed. They were a great pleasure to me for I was certain that a fall would only be a grand slide. If I had known what snow, rolling up, did on Baker that day, my pleasure would not have been felt. It was a superb experience climbing those great walls, growing steeper at every step. The avalanches kept us very alert above the first wall and we did not dare undertake the narrow but short Hour Glass passage. Instead, we climbed the second snow wall and were again on a snowfield leading to the pyramid that ends the climb. We went up the couloir. I kept thinking, without satisfaction, of a thing which Marion called a "bunny-hug" almost at the top and which he described as technically difficult. Such words are very alarming. Besides, Marion feared that the bunny-hug would be too wet to climb. The snow now got extremely mean. It would break in patches and there was ice beneath. The couloir was steep. To be sure, the summit was right before us. But it was getting late in the afternoon. Dorys was not conditioned for a hard climb and, alas, we had spent hours on the way resting, taking small lunches, and making countless drinks of lemonade from an ample supply of lemons brought for the purpose. Marion looked at the short rotten snow space ahead. He looked at me and animadverted — Shall we go on or not? I said, "No," and was very glad. It was late. The bunny-hug was surely too wet. I was tired and besides I wanted to spare Dorys. One has no right to be selfish in these matters. More and more I am convinced that mountain climbing is not without comic aspects.

We had our troubles returning. Dorys got tired and did not feel that we should go down those snow walls together. Indeed, from above, they looked five times higher than from below. So we went down separately to the end of the rope and then repeated. It took a very long time indeed. A little later, we came close to tragedy.

I was ahead, breaking trail across a very steep snow bank. It was not the usual snow bank. It ran down to a point where a heavy torrent poured from beneath it and disappeared into an ice cave. Further down, this torrent roared over a precipice. As I cautiously proceeded, my weight caused me suddenly and noisily to break through the snow crust. Dorys, behind me, in alarm, anchored vigorously, fearing that I was in trouble. Unluckily, as she anchored, she gave a little twitch to the rope and I fell backwards. I strove furiously to hold with my axe, but failed because both Dorys and Marion were dragging me backwards and away from the dangerous cave. I was catapulted off the snow and went down among the rocks over the side. I felt no fear. In my experience, nobody ever is frightened when so violently occupied. I rolled up into a very large ball in order, if possible, to strike where nature intended to absorb shocks and I succeeded. I found myself in a deep hole but unhurt. It must have been very comic. To reassure Dorys and Marion who, having time to think, must have been paralyzed with fear, I lifted up my tuneful voice and sang a loud song of rejoicing. Then I climbed out of my hole and we "detached ourselves according to plan." For the next month, every step I took reminded me painfully of Mt. Shuksan. We had spent so many hours making excellent lemonade and fooling around snow walls that we only reached our glorious moonlit

and starlit paradise of a camp at 9:45. That made a trip of seventeen and one-half hours where a reasonable nine hours should have taken us through.

Looking back, I think that for variety, interest, reasonable difficulty, and the sheer joy of wonderful climbing views, Shuksan was my most delightful experience. I still think of the incomparable courage of little Dorys, of my galumping about with clumsiness second to none, and of the quiet skill of Marion who has now transferred his activities to the Pacific whence he could only send me a short note on the subject of our glorious failure to reach the bunny-hug of Mt. Shuksan.

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THE 1944 PARADISE VALLEY CAMP

BY E. M. SHERRARD

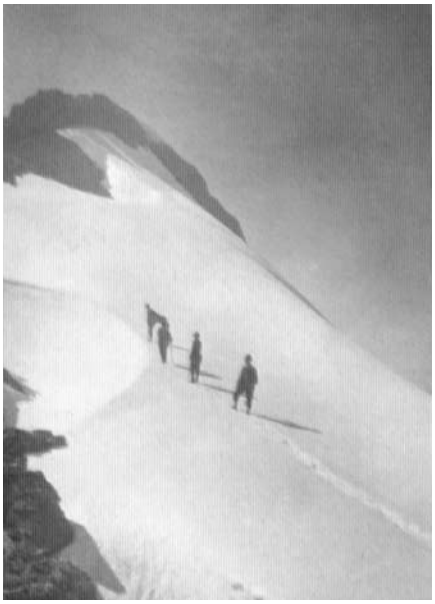
We, of the Eastern Section, had heard a great deal about the A.C.C. camps and of the Rockies from our able and enthusiastic leaders, Elizabeth and John Brett. My husband and I had listened to their tales of climbing in the west with mixed envy and delight never daring to hope that this summer we were to have an opportunity of visiting the camp and seeing for ourselves. Although I had done some climbing on our Laurentian ledges, this was my first trip to the Rockies and my initiation to camping and mountaineering of this kind; consequently, the prospect of camp was, for me, in the nature of a great and strange adventure.

And a very happy adventure it was from the moment when pack-laden, we started up the beautiful trail into Paradise Valley. From that moment the mountains began to weave their magic spell and, sharpening the senses, filled my mind with singing memories that will never be forgotten. Sharp etched are memories of fragrant spruce and dancing glacier streams, of heath and heather and strange whistled notes in the hushed woods, of golden-hearted dryas. And shall one ever forget that moment of infinite wonder and delight on seeing, for the first time, the majestic cirque of towering peaks encircling the valley at the trail's end — Temple, Pinnacle, Eiffel, Hungabee, Ring-rose, Lefroy, Mitre—sun-crowned in the soft light of the fading day ?

We received a warm and smiling welcome from Emmie and Eric Brooks that gave no hint of the many perplexing problems they had encountered in organizing camp this year. But we learned later that tents had been put up in the teeth of a wild snow-storm, that our first week's bread ration — just a year behind schedule — was reposing blithely at Hector Station, that forgetful members had complicated matters by arriving without the precious, specially requested coupons (to this I plead guilty) and that scores of last minute enthusiasts had descended upon camp without advance notification. Actually fifty members were expected but, at the peak weekend, some ninety campers were most comfortably accommodated — a masterpiece of organization. Through all these crises the staff did yeoman's service. Supplies and mail came rolling into camp with faithful regularity thanks to the efforts of Ray Le Gace and his pack-train and Ken Jones, in spite of a painful knee, stood heroically over the seething cauldrons, while his young assistants, Peter, Leonard, Ivan, spruce and trim, tended the tables, anticipating the needs of all. Charlie Richardson, without whom no Club camp is complete, kept cheery charge of the supply of wood for the hungry fires and gave sage counsel and instruction to the uninitiated in all matters pertaining to camp lore and woodcraft.

Once we were settled into camp the weather man was kind to us. We enjoyed two weeks of brilliant sunshine and this almost unbroken succession of clear, fine days contributed greatly to the success of camp. Full advantage was taken of this excellent climbing weather and various trips were made to Aberdeen, Eiffel, Mitre, Temple, Pinnacle, Paradise, as well as to the passes and Lake O'Hara. We are very grateful indeed to those leaders who were good enough to forego what might have been for them more exciting climbs in order to make these expeditions possible. But, en passant, for the record, I must here chronicle the daily, one-man excursions to Lake Louise. Surely a laurel wreath for hardihood should be awarded the intrepid leader of those quotidian marathons which had as their goal the soda-fountain at Deer Lodge!

At night the traditional campfires glowed again and while the moon rode high and soft mists stole into the valley, H. E. Sampson, as master of ceremonies, unfailingly produced from



Top left

Chipmunks. *Photo C. Sutter.*

Bottom left

In Paradise Valley. *Photo S. Bowes.*

Top right

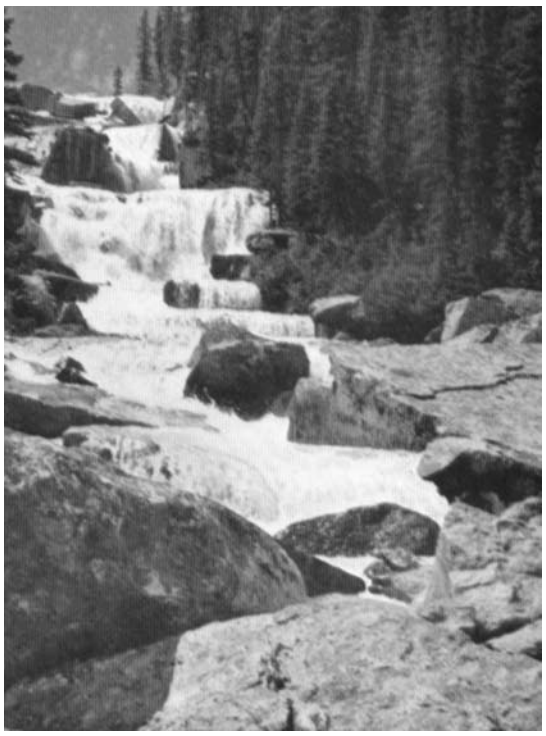
Snowfield On Aberdeen. *Photo Paul Blane.*

Centre right

Part Of Pack-Train. *Photo S. Bowes.*

Bottom right

The Campfire. *Photo M. Finley.*



Giant Steps. *Photo M.P. Hendrix*

Gendarmes On Sentinel Pass. *Photo S. Bowes*

his resourceful bag of tricks some new game or novel programme to beguile the evening hours away. We lingered long beside the dying fires the night when Dr. I. R. Richards told his strange and fascinating tales of China, and that night, too, when Henry Hall described so vividly the epic feats performed in the first ascent on Logan. And, of course, we laughed our fill at Walter Read's amusing jokes, and at Colonel Westmorland's and Dr. Richard's highly colored, yet salutary anecdotes illustrating things "that didn't ought to 'appen while climbing."

But we were not the only ones to show keen interest in our campfire activities. Three moose came several times to investigate! These magnificent animals remained quite close to camp and we had many opportunities of seeing1 them at close range on the trails and feeding every evening in the misty meadows. Another visitor to camp at eventide was a dainty little doe. Intent on procuring what to her was a delectable morsel, she tiptoed to a tent door and absconded, brazenly with the precious soap! Sceptics I'm sure there are unkind enough to believe this story invented by late risers as an excuse for shirking their chillsome morning ablutions, but fortunately for these maligned sleepyheads, I can produce upon request, a snap of the startled miscreant caught in the act! Mr. Chips was delighted to find so many gophers everywhere. He very wisely decided to give all "porkies" a wide berth this season and divided his energies, quite impartially, between pursuing the elusive gopher and cursing the thundering avalanche. Grizzlies, fortunately, kept a respectful distance, but I understand that a climbing party disturbed two playful fellows as they besported themselves in a glacier pool in Desolation Valley. I, for one, can vouch that most impressive tracks were to be seen again this year in the snow on Opabin Pass.

At our first weekend we had the pleasure of a visit from an ever welcome friend of the club, Mr. J. Murray Gibbon, who brought greetings and news of old mountaineering friends and acquaintances.

Many members felt, I think, that the customary Sunday Service was outstanding this year both for the beautiful reading of the texts by Dr. I. R. Richards and for the inspired address given by Dr. Gaebelein. He spoke of the spiritual benefits to be derived from the sense of achievement in mastering a difficult summit and of the inspiration to be gained from intimate contact with the great eternal forces of nature that surpass and transcend self.

Nan McKay's accident cast a shadow over our last night in camp for Nan was a popular member and the news of her misfortune was keenly felt by all of us. We are happy to know, at the time of writing, that she is making satisfactory progress and we send her good wishes for a quick recovery.

The days slipped quickly by and the time to say farewell was all too soon upon us. Our small party from the east regretfully left camp two days before the official closing and our leave-taking presented a scene of considerable bustle—frantic last minute searchings for the missing flashlight, cup or sock, hastily scribbled names in the little black address-book and the restless pack-train, sagging under the load of our bulging kit-bags. We were given a royal send-off by all the good friends we had made during those happy two weeks, and, as we swung down the trail, there came to my mind the lines of an ancient, Chinese poem:

"Who need be craving a world beyond this one?
Here, among men, are the Purple Hills."

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BIRDS AND MAMMALS OF REVELSTOKE NATIONAL PARK

BY I. MCTAGGART COWAN, J. A. MUNRO

Revelstoke National Park, which contains 100 square miles of forested slope, alpine plateaux, and bald mountain summit, is situated on the western extremity of the Selkirk Mountain Range in the angle formed by the juncture of the Illecillewaet and Columbia rivers. The present report on the bird and mammal life of the region is based on field work conducted by Cowan and Mr. Kenneth Racey in 1937 in the interests of the British Columbia Provincial Museum, and by Munro in 1942 and 1943. It includes also information on the occurrence of the larger mammals submitted by Park Warden W. M. Moore and bird records for the Revel-stoke district abstracted from Macoun's *Catalogue of Canadian Birds,* Second Edition, 1909.

Our explorations were restricted chiefly to Mount Revelstoke proper from base level at approximately 1,600 feet altitude along the general direction of the highway and the trails on the south slope to the plateaux at 6,200-6,500 feet altitude north to Eva Lake. From this latter point Cowan visited a section of the Clachnacoodin Range. The region adjacent to Balsam Lake (6,000 feet), situated slightly below the summit of Mount Revelstoke was investigated by Cowan and Racey in 1937, June 30 to July 10, and by Munro, August 19-25, 1942, and August 4-13, 1943. The Eva Lake region was explored by Cowan, July 10-14, and the mountain slopes in the vicinity of Eight Mile on the highway, July 15-25. Munro spent the period of May 25 to June 1,1943, on the lower levels of Mount Revelstoke from the base at 1,600 feet to the 3,000-foot level and part of June 7, 1943, in the same section. The remainder of the park area on the west slope to the Columbia River and between the Clachnacoodin Range and the valley of the Illecillewaet River is unknown zoologically.

Macoun was stationed at Revelstoke in the spring and early summer of 1890 and 1891. It seems reasonable to suppose that some of the species he refers to in his *Catalogue of Canadian Birds* were observed or collected on Mount Revelstoke which is the mountain most easily accessible from Revelstoke. In connection with certain species he records the dates of first or last appearance. These, being of definite historical value, are included here together with such other of his records that concern species not recorded by us but considered as likely to occur in, or close to the boundaries of, the park. Having in mind also the somewhat indefinitely marked boundaries of the park and the fact that these do not coincide with any natural boundary it seems advisable to include within the scope of this paper the narrow strip of territory between the park's southern boundary and the Columbia River which is traversed by a section of the Big Bend Highway. A number of species recorded by Macoun from Revelstoke are known to occur in this territory.

Physiography

The south slope of Mount Revelstoke, except where primitive conditions have been altered by fire, is heavily forested with Douglas fir, *Pseudotsuga Douglasii,* giant cedar, *Thuja plicata,* western white pine, *Pinus monticola,* western hemlock, *Tsuga heterophylla,* grand fir, *Abies grandis,* and Engelmann spruce, *Picea Engelmanni.* Deciduous trees in the many draws and along the small water courses are represented by black cottonwood, *Populus trichocarpa,* trembling aspen, *Populus tremuloides,* Rocky Mountain maple, *Acer glabrum,* western birch, *Betula occidentalis,* mountain birch, *Betula fontinalis,* green alder, *Alnus sitchensis,* wild cherry, *Prunus emarginata,* mountain ash, *Pyrus sitchensis,* red elder, *Sambucus racemosa,* black elder, *Sambucus melanocarpa,* and several species of willow, *Salix.* The underbrush is of huckleberry and blueberry, *Vactinium* sp., salmon berry, *Rubus spectabilis,* devil's club, *Fatsia horrida,* and bracken, *Pteris aquilina.*

Between the 4,000 and 5,000-foot levels this type of forest is succeeded by one of a more open type in which Engelmann spruce and alpine fir, *Abies lasiocarpa,* predominate. Stunted mountain hemlock, *Tsuga Mertensiana,* also occur. Here are open sedge meadows drained by small streams and hillside slopes covered with rhododendron, *Rhododendron albiflorum.*

On the semi-open summit the firs and spruces are mainly of the slim, spire-shaped type (figure 2). The high meadows are channeled by small rills of melted snow. As summer advances and the sources of these rills fail, water persists in isolated pools between stretches of boulder-strewn channels. Other small streams, fed by the abundant rains, have cut deep into the turf and continue flowing until sealed by frost. The grassy slopes remain green all summer and here a series of flowering plants bloom in quick succession through the short season. The first to appear is the clear yellow avalanche lily, *Erythronium montanum.* Later the open slopes are gay with a coloured pattern of scarlet paint-brush, blue lupins and asters, yellow arnica and white valerian, while here and there appears the tall fleshy leaves of Indian hellebore. A number of small, shallow lakes, of which Balsam Lake (fig. 7) is the largest, add variety and charm to this setting but do not appear to be attractive to either birds or mammals.

Fifteen Mile Creek, where trapping was carried on in 1942 and 1943, is at approximately 5,000 feet altitude. It is a small stream with a maximum width of 14 inches that flows over a boulder-strewn bed through spruce woods then cuts across the end of a wet carex-meadow, where it receives a tributary stream, and a short distance farther on enters a small, partly willow-fringed pond (figure 6). This was the highest point at which willows were encountered.

A motor road leads from the Big Bend Highway near Revelstoke to the summit at 6,300 feet, a distance of 19 miles, in a series of switchbacks and loops. From the road's end the "Eva Lake" trail extends northward across alpine meadows, through stands of tall timber and over rockslides along the bend of a glacial basin. Finally the main trail reaches Eva Lake. This picturesque tarn is surrounded on three sides by open forests in which spruce and alpine fir predominate. From the fourth, the east side, rises a steep slope of broken rock, small rock cliffs and narrow tongues of vegetation extending upward to the peak of Mount Harry. This is the most southerly extension of the Clachnacoodin Range.

A preliminary report on the birds and mammals of Glacier National Park[1] attempted to portray a central section of the Selkirk Mountain Range. It was stated that the region was one of high, rugged peaks and glaciers, of gloomy forests with impenetrable tangles of fallen trees and underbrush, that precipitation was the highest for the interior of British Columbia and that animal life was shy and relatively scarce.

Revelstoke National Park is on the western slope of the Selkirk Mountain Range where all these conditions are modified. In general the forests are more open, the precipitation less and, as the base level is some 2,000 feet lower, animal life is more diversified and more abundant. To the west across the Selkirk trench are the massive mountains of the Monashee Range where in many respects forest conditions are complementary to those on the west slope of the Selkirks.

Life Zone Classification

The use of the term biotic area in connection with life zone classification has been explained in our preliminary report on the birds and mammals of Kootenay National Park.[2] In Revelstoke

1 Munro, J. A., 1945. *Canad. Field Nat.,* 59.

2 Munro, J. A. and I. McT. Cowan, 1944. Preliminary report on the birds and mammals of Kootenay National Park, British Columbia. *Canad. Field Nat.,* SS. 34-51.

National Park three biotic areas, namely, Columbia Forest, Sub-alpine Forest and Southern Alplands are represented.

The Columbia Forest biotic area may briefly be defined as an area of rain forest in the Selkirk and Monoshee Mountain ranges altitudinally below the Sub-alpine Forest biotic area. The latter is tentatively delimited as the coniferous forest in the southern part of the province altitudinally above the Columbia Forest and the parkland forest type of the Dry Forest biotic area, and altitudinally below the Southern Alplands biotic area. The last named consists of those parts of the province above timberline south of the Skeena River and Peace River watersheds.

Vertebrate Habitats

Here as in Kootenay National Park the primary vertebrate habitats can be placed in two groups, (1) those in which water in one form or another is a controlling factor in floral development and the establishment of an animal population, and (2) land areas in which water is not a controlling factor. In the first group are forest streams, forest ponds, sedge meadows and swamps. These seem to be essentially the same and are considered together. The small lakes and open-shored ponds have no apparent influence on the vertebrate fauna and do not require separate treatment. In the second group are, roadside thickets, deciduous woodlands, low-level conifer forest, Engelmann spruce forest, parkland forest, rockslide and cliff, and alpine meadow.

Roadside thicket. The term is used to describe an open, brushy area adjacent to the Big Bend Highway along the base of Mount Revelstoke. While it lies for the most part outside the park boundary, it forms an integral part of the park's biota. Here a number of bird species find their altitudinal limit of distribution, amongst them being, kingbird, crow, Macgillivray warbler, Nashville warbler, yellow warbler, catbird, cowbird and Brewer blackbird. The only mammal apparently restricted to this habitat, and to the deciduous woodland habitat, is the wandering shrew, Sorex vagrans.

Deciduous woodland. This consists of the deciduous woodland tracts along the lower levels, chiefly reforestation on old burns, in which trembling aspen and black cot-tonwood are dominant. Birches, mountain ash, wild cherry and elder are present in less numbers but contribute importantly to the food potential of this habitat. Birds more abundant here than elsewhere are red-eyed vireo, warbling vireo, American robin, Wilson thrush and western tanager.

Low-level conifer forest. On the same level as the deciduous woodland and above it to an altitude of approximately 3,000 feet is a coniferous forest in which mountain white pine, western hemlock, Douglas fir and giant cedar predominate. Salmonberry and devil's club are conspicuous elements in the undergrowth which in places forms dense thickets. Birds with centre of abundance in the habitat are ruffed grouse, chestnut-backed chickadee, red-breasted nuthatch and olive-backed thrush. Mammals taken here only were flying squirrel, snowshoe rabbit, mountain weasel; red squirrels were more abundant here than elsewhere.

Engelmann spruce forest. Over a wide area between the low-level forest and the parkland forest above is an area in which Engelmann spruce is dominant. The forest floor is rough with much down timber but little undergrowth; the prostrate, berry-producing teaberries, Gaultheria myrsinites and G. ovatifolia are abundant. Another characteristic plant is bunchberry, Cornus canadensis. Franklin grouse, hudsonian chickadee, golden-crowned kinglet, pine grosbeak, white-winged crossbill are characteristic birds. The marten and red-backed vole have their centre of abundance here and it is the chief winter range for caribou.

Forest streams, forest ponds, swamps and sedge meadow. A riparian growth of forbs, sedges and grasses is common to many small streams and where these enter low, swampy places it is of particular luxuriance. Such are the sedge meadows along Fifteen Mile Creek and elsewhere. There is no distinctive bird life peculiar to the swamps and meadows but a food potential higher than that of the surrounding forest encourages a dense population of forest-birds along their perimeters. On the other hand three mammal species are restricted to, or more abundant in, this habitat. These are Richardson vole, lemming vole and long-tailed vole.

Parkland forest. Near the limit of timber the forest is open and park-like. Here the characteristic trees are Engelmann spruce, alpine fir "balsam," Abies lasiocarpa, mountain hemlock with an occasional white-bark pine, Pinus albicaulis. Where underbrush occurs it consists primarily of mountain rhododendron.

This habitat supports the densest and most varied bird population including as nesting elements blue grouse, red-tailed hawk, olive-sided flycatcher, Canada jay, mountain chickadee, hermit thrush, red crossbill and fox sparrow. In addition many species nesting at lower altitudes congregate here in summer and it is a migration route followed by many species.

We found no mammals restricted to this habitat.

There are no definite boundaries between most of the habitats discussed, the characters of one gradually invading that of another with boundaries indistinct. Along the upper margin of the parkland forest habitat, however, where it meets the alplands, such intermingling is obvious and the boundary is sharply defined.

Alpine meadow. The term alpine meadow as used here refers to open, grass and flower-covered slopes at and above timberline (figure 2) and to slopes dominated by heath, the latter usually intruded by sedge and forbs of numerous species. The bird fauna is that of the habitats immediately adjacent except for white-tailed ptarmigan and pipit which are found nowhere else.

It contains the most densely populated colonies of Columbian ground squirrel, jumping mouse are more common here than elsewhere and at the forested edge of one example we found the only colony of meadow mouse. Other elements of the mammal fauna are concentrated along the streams and these have been discussed. Conspicuous among them is the lemming vole that in peak years overflows into this habitat. It should be mentioned also that most of the mammals inhabiting the rockslides forage on the alpine meadows.

Rockslide and cliff. The importance of this habitat (figure 3) is due in the main to the abundance and the effectiveness of the cover it provides. The habitability of any one unit is conditioned by the food potential of adjacent areas of vegetation. The rosy finch nests on the cliffs and finds much of its food there. The golden eagle, also a cliff nester, hunts the rockslides for marmot. So does the coyote. The hoary marmot, pika and golden-mantled ground squirrel are confined to this habitat and according to our observations it is the chief breeding ground for bushy-tailed wood rat. Chipmunks, white-footed mice and red-backed vole also take advantage of the cover afforded, thus rendering the rockslides a productive hunting ground for short-tailed weasels.

Mammals

It is widely recognized that small mammal populations are cyclic, a fact that was demonstrated by the results of two collecting expeditions in the park five years apart. In 1937 the red-backed vole and white-footed mouse were at or near a peak in numbers, the lemming vole from

1. **Winter Den Of Black Bear In Base Of Cedar. Mile 8 On Mt. Revelstoke Highway.**
2. **Alpine Meadowland In Mt. Revelstoke. Clachnacoodin Range In Background.**
3. **Rockslide Habitat On Mt. Revelstoke**
4. **Golden-Mantled Ground Squirrel.**
5. **Rock Rabbit Or Pika.**
6. **Streamside Meadow At Fifteen Mile On Mt. Revelstoke Highway**
7. **Balsam Lake At 6,000 Feet On Mt. Revelstoke.**
8. **Hoary Marmot Or WhIstler.**

all signs had reached a peak the previous year and the population was declining. On the other hand no shrews, jumping mice or meadow voles were trapped in approximately 2,500 trap nights.

In 1942-43, conditions were entirely different. The catch from 50 traps set in a variety of habitats in the same general territory indicated that in both years small mammals were exceedingly scarce. Extensive vole runways, trapped for several nights with disappointing results, provided evidence that some time previously these animals had been abundant. In 1942 the product of 300 trap nights was 16 specimens and in 1943 the product of 450 trap nights was 17 specimens, the total of species represented being seven. In late May, 1943, a trap-line set at different localities from 1,800 to 2,800 feet altitude produced slightly better results, the product of 400 trap nights being 30 specimens, representing six species.

One very significant difference was that shrews, not taken at all in 1937, were relatively abundant; more precisely, of a total of 63 specimens of small mammals trapped, 28 were long-tailed shrews.

The hoary marmot was another species marked by a pronounced change in numbers. Red squirrel, while fairly common in 1937 and 1942, had decreased in 1943. The chipmunk, Columbian ground squirrel and pika populations were approximately the same in both periods.

It is clear from the above that in order to obtain an adequate picture of animal populations investigations must be conducted for a number of years sufficient to include at least one cyclic period.

The park is not large enough and lacks the winter range necessary to support big game in any numbers. No amount of legal protection can be expected to modify this situation.

Fur-bearing animals appeared to be scarce throughout our investigations and little information as to their status was obtained.

The following list of mammals numbers 37 species. Thirty-two of these were recorded by us and the remaining five are added on the basis of information supplied by Park Warden Moore.

Racial identification has been made only for those species of which specimens are available.

Cinereus shrew. *Sorex: cinereus*.

This was found to be the common small shrew at Balsam Lake in 1943, but only one specimen was taken on the lower levels. The race involved is *S. c. cinereus* Kerr.

Wandering shrew. *Sorex vagrans*.

This was the common small shrew on the lower levels of Mount Revelstoke. None was taken in the sub-alpine forest. Specimens taken are referable to the race *Sorex vagrans monticola* Merriam.

Dusky shrew. *Sorex obscurus.*

Trapped in various types of habitat from base level to the meadows near timberline. *Sorex obscurus obscurus* Merriam is the race inhabiting this region.

Long-legged bat. *Myotis volans.*

Small bats were seen in flight along the roadway near Eight Mile on several occasions in July, 1937. Specimens taken on July 23 and July 24 were of this species and referable to the race *Myotis volans longicrus* (True).

Northern bat. *Nycteris cinerea.*

A very large bat seen near Eight Mile on the evening of July 24,1937, was almost certainly of this species.

Black bear. *Euarctos americanus.*

Found in fair numbers in 1937 from the alpine meadows on Mount Revelstoke to the river-bottom areas near Revelstoke. On July 9 a female with one cub was watched feeding on weeds and grasses that grew along a streamlet near the lookout. Later in the month two were jumped from a berry patch near Eight Mile.

Close to the same place a winter den was discovered in the hollow base of a cedar. Entrance to a chamber some four feet in diameter could be had from either side of the tree. Here the bear had accumulated several bushels of bedding consisting mainly of maple leaves, pine needles, cedar tips and grass (figure 1).

In the summers of 1942 and 1943 black bears were not common within the park area, a condition due perhaps to a scarcity of huckleberries. In 1942 it was reported plentiful, and destructive to stock in the valley bottom outside the park. On June 1, 1943, a female with one cub was seen close to the road at Four Mile.

Several fecal deposits were examined for food content. One, an early spring deposit, consisted of beard moss, *Usnea,* and sedge; one was of ants and balsam needles, one of blueberry pulp and seeds, and another mainly seeds of wild parsnip, *Heracleum* sp.

The black bear of this part of British Columbia is currently referred to the race *Euarctos americanus americanus* Pallas.

Grizzly bear. *Ursus horribilis.*

Signs of grizzly activity were widespread upon the summit of Mount Revelstoke in 1937, large and small excavations revealing where they had dug out hoary marmots and ground squirrels. Several grizzlies are said to range over the Clachnacoodin ridges and occasionally one is seen, or tracks are found, in the meadows along the Eva Lake trail.

Short-tailed weasel. *Mustela cicognanii.*

Abundant at upper limits of the sub-alpine forest in 1937. On June 7 an adult female was taken in a trap near Balsam Lake and in the same trap on each of two succeeding nights an adult male was caught. Another male was captured in a trap set at the base of a rockslide near Eva Lake. The race is *Mustela cicognanii richardsonii* (Bonaparte) .

Long-tailed weasel. *Mustela frenata.*

Not common. A large female taken in a trap set for flying squirrels in a cedar grove near Eight Mile represents the only record. It is representative of the race *Mustela frenata oribasa* Bangs.

Marten. *Martes americana.*

In 1937 Park Warden Moore reported that marten were scarce but that a few remained in the extreme easterly and northerly portions of the park. In the winter of 1936-37 a poacher who set out a line on the lower levels of the park caught what was believed to be the only marten inhabiting the area adjacent to the highway near Mile Eight. The record was established by Mr. Moore who found the animal in the trap.

In 1943 marten were reported to be more numerous but evidence of their presence was not obtained.

Fisher. *Maries pennanti.*

Tracks used to be seen in winter but none has been reported for the past 15 years (Moore).

Wolverine. *Gulo luscus.*

Tracks of one animal observed in each of several recent winters (Moore).

Coyote. *Canis latrans.*

Fairly common in the park, numerous scats being found on the trails and the animals themselves encountered upon four occasions. In 1942 and 1943 it was less common.

On July 10, 1937, on the trail from Balsam Lake to Eva Lake, a hoary marmot was heard to whistle shrilly and then give a series of screaming chirps. Investigation revealed a coyote worrying a large adult while another shrilled its alarm from the top of a nearby boulder. The coyote was a yearling female and had not borne a litter.

Two days later at Eva Lake another coyote was seen as it dashed from the forest toward a marmot feeding on a grass patch that bordered a large rockslide. This time the attack was unsuccessful and the coyote returned to the forest border where it slunk along, emerging from cover every few yards to scan the rockslide.

On July 19,1937, coyote tracks led to a spot where one had vomited the foot and a number of quills of a porcupine.

Nine scats examined in 1937 and 1943 contained the following food items: No. 1, two pieces of leather boot, mouse fur. No. 2, snowshoe rabbit fur, white. No. 3, Columbian ground squirrel. No. 4, hoary marmot, Columbian ground squirrel. No. 5, hoary marmot. No. 6, hoary marmot. No. 7, porcupine. No. 8, grasshopper fragments, huckleberries. No. 9, hoary marmot.

The race represented is *Canis latrans incolatus* Hall.

Cougar. *Felis concolor.*

Moore reports seeing tracks in winter and undoubtedly cougar pass through the park more or less regularly.

Canada lynx. *Lynx canadensis.*

There are no recent records for the park where at one time tracks occasionally were seen (Moore).

Woodchuck. *Marmota monax.*

Apparently scarce in the park. A small brown marmot seen on the road near Three Mile in July, 1937, was believed to be this species. Moore reports seeing it along the highway between Four Mile and Ten Mile. It has been taken several times near Revelstoke, which is the type locality for the race *Marmota monax petrensis* Howell. One was seen on the Big Bend Highway north of the park on May 31, 1943; a specimen was collected east of Taft on August 22, 1932, and another near Revelstoke in October, 1935.

Hoary marmot. *Marmota caligata.*

Quite common in early July, 1937. During the first week of our stay a dozen or more individuals were seen in small rockslides, boulder piles and culverts close to Balsam Lake, but though they were not disturbed other than to photograph them (figure 8) none could be found there by the end of the month. The cause of their disappearance was not determined. As already mentioned coyotes and eagles hunted them continually but that is regarded as the normal predation under which the species evolved and in this case should have made little difference to the population level.

On July 8 a very small young one was found climbing unsteadily across a large rockslide near Balsam Lake; it was collected and found to be near death from malnutrition. It seemed probable that death of the female had forced this kit to forage for itself prematurely.

Specimens were later secured near Eva Lake and on slides on the south and west faces of Mount Revelstoke, remote from the highway. A single animal was seen on the road near Mile Six.

In 1942 hoary marmots were scarce in the area visited; only one was heard in the rockslides along the Eva Lake trail and there appeared to be none on the summit. In 1943, one, or perhaps two, occupied the rockslides near Balsam Lake.

Specimens are typical of the dark race *Marmota caligata okanagana* (King) inhabiting the Gold and Selkirk ranges.

Columbian ground squirrel. *Citellus columbianus.*

Abundant in suitable habitats from the lower levels to the highest points visited on the summit of Mount Harry. Most numerous in the open country near timber-line.

In early July, 1937, when grasses and other plants were just sprouting, these squirrels were observed actively digging up and eating the bulbs of avalanche lilies. Later in the month a wide variety of plants was being consumed.

On July 19, a warm day with brilliant sunshine, it was found that the adult males, as well as many females and yearlings, were active in the morning but in the afternoon only females appeared above ground. There was no further opportunity to re-examine the conclusion suggested by these observations.

At timberline altitudes the period of hibernation is probably nine months and the short summer season is spent in constant activity during all the hours of sunshine. On dull days, however, the animals are less active and in rainy periods it is rare to see or hear one. The absence of males from the surface in the afternoons of bright days was not observed in 1942 or 1943. On August 4, 1943, small young were running about.

The Columbian groundsquirrel of high altitudes in Revelstoke Park does not appear to differ from Citellus columbianus cohimbianus (Ord) of the arid valleys of southern British Columbia.

Golden-mantled ground squirrel. *Citellus lateralis.*

Not common. In 1937 one specimen was taken and another individual seen on an east-facing rockslide on the summit of Mount Revelstoke (figure 4). A small colony of five or six adults inhabited the highest point of Mount Harry east of Eva Lake where they occupied burrows and rockslides. Here they foraged upon the stunted grasses, sedges and forbs that grew, though sparsely, even at this altitude which approximated 8,000 feet.

Specimens are referable to the race Citellus lateralis tescorum (Hollister) of the northern Rocky Mountains.

Chipmunk. *Eutamias amoenus.*

Widely distributed, but not particularly common, throughout the park at any time during our studies. Young about half-grown were active on the summit in early August, 1943.

Eutamias amoenus lutieventris (Allen) is the only chipmunk found in the park.

Red squirrel. *Tamiasciurus hudsonicus.*

In 1937 and 1942 squirrels were fairly common in the subalpine forest; numerous places were noticed where cones of balsam and spruce had been stripped. At timber-line no tree nests were found but at Eight Mile almost every grove of cedars and spruce supported one or more of these loosely-woven masses of leaves and shredded cedar bark. In 1943 only two red squirrels

were seen in the same area. This was a year of cone scarcity in the case of both alpine fir and Engelmann spruce, indeed no trees of the former species bearing cones were noted, and possibly this condition may have been a factor in the scarcity of squirrels. It was observed that old cones of alpine fir had recently been stripped by one of the few squirrels living near Balsam Lake. On the lower levels in late May, 1943, squirrels were more common than on the summit and here they had been feeding on the seeds of mountain white pine. Later in the season it was observed that the cone crop of this species was fairly heavy.

Tamiasciurus hudsonicus streatori (Allen) is the race represented.

Flying squirrel. *Glaucomys sabrinus*.

This nocturnal squirrel was fairly common at Eight Mile in 1937. Several times in the late evening two or more were watched as they volplaned across the road above our heads or chased one another, squeaking, up some tall cedar, their eyes shining reddish in the light of our flashlights. Specimens were trapped in a grove of cedars just below Eight Mile cabin. These are typical of the race *Glaucomys sabrinus latipes* Howell.

White-footed mouse. *Peromyscus maniculatus.*

An abundant species at all elevations in 1937. It was caught in the timber, in rockslides and in the cabins.

Scarce on the summit in 1942 and 1943, a total of eight representing the catch of 750 trap nights. Six of these were taken in cabins. On the lower levels in 1943 it was slightly more common, six being taken from various woodland habitats in 400 trap nights.

Specimens from the higher altitudes in the park proved to represent a distinct and unnamed race described by one of us[3] as *Peromyscus maniculatus alpinus.*

Bushy-tailed wood rat. *Neotoma cinerea.*

Widely distributed at timberline where individuals were taken in rockslides near Balsam Lake and under the cabin at Eva Lake. One female trapped July 6, 1937 contained five large foetuses and another in process of reabsorbtion. Two others contained four and three foetuses respectively.

The wood rats of the Revelstoke Park region appear to be referable to *Neotoma cinerea occidentalis* (Baird) of coastal and central British Columbia rather than to *N. c. drumtnondii* of the Rocky Mountains.

Red backed vole. *Clethrionomys gapperi.*

Very abundant in 1937 near the upper limits of the sub-alpine forest but less so at Mile Eight. Near Balsam Lake it seemed to be equally numerous in both rockslides and timber groves. Of twelve females taken between July 1 and 7, just two were pregnant. One bore five foetuses averaging 12 mm. in crown-rump length, the other contained six in a very early stage of development.

Exceedingly scarce in 1942 and 1943, only one specimen being trapped. This was a young male taken at Balsam Lake, August 23,1942.

Pending a revision of these voles in British Columbia the Revelstoke specimens are referred to *Clethrionomys gapperi saturatus* (Rhoads).

3 Cowan I. McT.,1937 A new race of *Peromysem maniculatus* from British Columbia. Proc. Biol. Soc. Wash., 50: 216-216.

Lemming vole. *Synaptomys borealis*

This small alpine vole was quite abundant in 1937 and signs of its activity were noted here and there all over the alpine meadowland and along the streamlets that conduct fingers of this habitat into the upper limits of the spruce forests.

On July 4, a colony was located in a small sedge meadow not far below Balsam Lake. Here runways threaded the matted sedge and carried along prostrate tree trunks while here and there were little piles of food cuttings and scattered fecal pellets.

The food consisted primarily of grass and sedge stems, leaves of sheep laurel, *Kalmia,* and the saxifrage *Saxifraga nutkana.*

In spite of the abundant sign just four specimens were taken from this colony in some 200 trap nights, these being three males and a female bearing three foetuses.

Along the creek coursing westward from between the two peaks of Mount Revelstoke a series of tributary streamlets spring from the hillside. At the head of each is a small area of meadow composed mainly of the sedge, *Carex nigricans,* and of the cotton grass *Eriophorum angustifolium.* All these meadows bore old or recent *Synaptomys* sign including several surface nests. The nests were on elevations, usually heath covered and dry; they were composed entirely of sedge wound together and lined with finely shredded material from the same plant. Each was domed-shaped and measured six to eight inches in diameter. One was occupied at the time by a single female that contained four foetuses measuring 30 mm. crown-rump length.

At Eva Lake from July 10 to July 12 we found large numbers of old nests and quantities of sign about the borders of the lake and on slopes covered with heath and sedge amongst boulders. Nests were found up to 8,000 feet altitude closely associated with small middens, each containing from half to a whole cupful of brownish winter feces, these indicating the presence of the animal during the previous winter. In this area some 15 nests were examined and all but one consisted exclusively of sedge. The single exception was 50% white heath, 30% sedge and 20% moss. Two females were taken, one with four embryos at about half term.

It was concluded from abundant evidence that 1936 had been a peak year for *Synaptomys* and that its numbers were declining in 1937.

None was found in 1942 but in 1943 an adult male and a female containing five large embryos, were trapped, August 7, August 8, in a runway along the edge of an isolated rock lying at the base of a rockslide near Balsam Lake. This rock and other similar ones were scattered over a narrow slope between the base of the rockslide and the edge of a spruce forest. The upper portion of the slope was covered with heath, *Cassiope* sps., dwarf spirea, *Spirea pectinala,* creeping saxifrage, *Sibbaldia procumbent* and hawk-weed, *Hieracium gracile,* while on the lower portion was a thick vegetation consisting of sedge, *Carex spectabilis,* valerian, *Valeriana sylvatica,* everlasting, *Antennaria lennata,* tow-head baby, *Anemone occidentalis,* paint brush, *Castilleja* sp., wood rush, *Luzula parviflora,* false mitrewort, *Tiarella unifoliata* and tall hair grass, *Deschampsia atropurpurea.*

Other runways at the same place in similar situations were located but continued trapping produced no further specimens and the absence of cuttings or fresh droppings suggested these were unoccupied.

On the night of August 11 three males were trapped on Fifteen Mile Creek and in the meadow through which it flows. One was taken in a trap set on a small log that crossed the creek, the second in a steel trap set in an old runway of Richardson vole and the third in a dry situation under a bank at the edge of the spruce woods. Subsequent trapping for two nights produced no further specimens although one night 64 traps were set.

The meadow, open and boggy, contains about two acres covered chiefly with sedge amongst which stood clumps of rush, *Juncus mertensianus* and patches of moss whitened by the blossoms of Arctic star flower, *Trientalis arctica.* It is drained by a small creek that crosses its lower end and by two smaller tributaries that follow winding courses through the vegetation. Along these were old runways, one of them leading to a globular nest about 14 inches in circumference made entirely of dry sedge. Other runways were alongside old prostrate spruces that had fallen out from the forest edge and besides these also were additional nests probably several years old. Still further runways had been made amongst heath and beside rocks on a narrow, dry peninsula that extended into the meadow. It seemed clear that earlier this area had supported a large population of *Synaptomys*.

The race inhabiting this region is *Synaptomys borealis chapmani* Allen.

Meadow vole. *Microtus pennsyhanicus.*

Taken only at Balsam Lake where on August 24,1942, an adult female carrying five embryos was trapped. Previously four young about one-third grown had been captured in the same territory. This was a patch of sedge and other vegetation beside an old alpine fir stump at the base of which, and in the ground close by, were several burrow entrances. There were no discernible runways even in the sedge where fresh cuttings and droppings were present.

The Revelstoke specimens are indistinguishable from the widely distributed race *Microtus pennsyhanicus drummondi* (Audubon and Bachman).

Long-tailed vole. *Microtus longicaudus.*

Four specimens were taken beside a stream near Eight Mile cabin on July 19, 1937.

A female carrying five small embryos was trapped May 31,1943, beside a small stream at approximately 2,300 feet altitude.

The race is *Microtus longicaudus vellerosus* Allen.

Richardson vole. *Microtus richardsoni.*

This large vole was scarce in 1937 but widely distributed along the upper margin of the sub-alpine forest. After diligent search we found two small colonies, one in the banks of a rushing alpine stream on the west slope below Balsam Lake, the other on the east slope. Three specimens were taken, a female and two males. At the colony sites, burrows, four inches or more in diameter, entered the stream-bank and paralleled its course while well-beaten surface runways led from one branch to another of the same water-course.

Both by observation and inference the strongly aquatic behaviour of this vole was made evident. Early in the morning of July 5 a large male was collected as it came down a stream. This animal kept diving and swimming underwater, passing in and out of bank burrows and overhangs but in general behaving much like a diminutive muskrat.

On July 7 a female, bearing six foetuses, 14 mm. in crown-rump length, was taken in a trap set submerged at the base of a small waterfall. Nearby, under a log, was a cup-shaped, unroofed nest of dry grass, and from it we traced a well-marked runway that led to the stream six feet away, appeared on the opposite side then continued through a willow clump for a distance of 12 feet where it reached another branch of the stream. For a distance of 100 yards downstream there were occasional burrows and fresh food cuttings.

Another nest constructed entirely of sedges and measuring about a foot in diameter had been used during the previous winter.

Food plants identified were the saxifrage, *Leptarrhena pyrolifolia,* a Solomon seal, *Streptopus roseus,* a rein orchid, *Hebanaria viridiflora,* hellebore, *Veratrum viride,* lousewort, *Pedicularis*

bracteosa, avalanche lily, *Erythronium montanum,* heliotrope, *Valeriana Septentrionalis* and an unidentified aster.

In 1943 undoubted runways of this species were found in a wet sedge meadow and along a small stream tributary to Fifteen Mile Creek. None showed indication of recent use and it was evident that the territory had not been occupied during that year.

We follow Anderson and Rand (1943) in assigning the Revelstoke specimens to the Rocky Mountain race *Microtus richardsoni richardsoni* (DeKay).[4]

Rocky Mountain jumping mouse. *Zapus princeps.*

No records for 1937 and scarce in 1942 and 1943. In the former year a young male was taken near Balsam Lake and in 1943 two adult females were trapped on an open slope near the same place. One adult male, May 28, 1943, 2,300 feet altitude, one adult male, June 1, 1943, 2,500 feet altitude, represented the entire catch on the lower levels.

These are *Zapus princeps kootenayensis* Anderson.

Yellow-haired porcupine. *Erethizon epixanthum.*

Abundant in 1937 on the summit of Mount Revelstoke and at Eva Lake. It was encountered frequently on the trails and in scattered timber in both localities. A very large male was collected at Ten Mile on July 20, 1937.

In 1942 evidence of its presence was noted near the summit but none was seen in that year nor the following.

Erethizon epixanthum nigrescens Allen is the race entering the park.

Rocky Mountain pika. *Ochotona princeps.*

Moderately common in 1937 on Mount Revelstoke and near Eva Lake (figure 5). In the second week of July, young of the year were just becoming active and food storage was beginning. On July 12 near Eva Lake little heaps of false hellebore, Veratrum, and globe flower, Trollius, leaves were scattered about on the rockslides. Several other food stores consisted of sedge exclusively while another contained the tips of conifer branches, chiefly alpine fir with a smaller amount of white-bark pine.

On August 24, 1942, pikas frequently were heard in the rockslides along the Eva Lake trail. At one place a food store composed entirely of dwarf spirea, *Spirea pectinata,* was examined. In 1943 the rockslide near Balsam Lake was occupied by a small colony and on August 9 several small young were seen. One of these was captured alive in a mouse trap.

Mount Revelstoke pikas are in some respects intermediate between *Ochotona p. princeps* (Richardson) and *O. p. cuppes* Bangs but on sum of characters are referable to the latter race.

Snowshoe rabbit. Lepus americanus.

Common in 1937 between Mile Eight and Mile Ten where, at dusk or in the early morning, it frequently was seen along the roadway — apparently attracted there by the patches of clover.

Fairly common on the lower slopes of the mountain in 1943 but none was seen in the alpine forest nor were indications of its presence found.

Rabbits taken in the park are typical of the race *Lepus americanus columbiensis* Rhoads.

White-tailed deer. *Odocoileus virginianus.*

No information is available concerning the past history of this animal in the park. In recent years a few have been reported in summer in the lower portions of the park and in June, 1943, two

4 Anderson, R. M. and A. L. Rand, 1943. Status of the Richardson vole *(Microtus richardsonii)* in Canada. *Canad. Field Nat,,* 57: 106-107.

females were seen by Moore. Tracks on the road near the park gates May 26,1943, were identified as of this species.

Mule deer. *Odocoileus hemionus.*

A small population summers on the open slopes near timberline. Tracks of a female and fawn were seen there in August, 1943, and early in the year there were tracks of several on the highway above the park gates. Deer hunting is carried on persistently along the park boundaries adjacent to Revelstoke and it seems likely that the greater part of any increase that may occur is accounted for in this way. It is reported that none winter within the park.

Mountain caribou. *Rangifer montanus.*

Small numbers of caribou were summering on Mount Revelstoke in 1937. On July 8 of that year very fresh tracks of three different sizes were followed through the open meadows between the two peaks of Mount Revelstoke. In places saxifrage had been eaten, elsewhere the animals browsed willows, and in six places young balsams were stripped of branches and bark from a height of thirty inches to five feet or more. Some branches lay on the ground but all the tips had been eaten. At another place were signs where, during the previous autumn, a bull had horned a tree and ripped the bark to shreds. There was evidence also that a larger population had wintered from the summit down at least to Sixteen Mile.

In 1943 Moore reported the chief summer range to be the sub-alpine slopes northeast of the Clachnacoodin Range. He said also that when the Big Bend Highway was opened a relatively large number, presumably part of the park herd, was killed at two crossings of the Columbia River, one 8 miles, the other 40 miles north of Revelstoke. Moore saw one animal on the summit in the winter of 1941-42. In the summer of 1943 one animal and tracks of others were seen in the meadows along the Eva Lake trail.

Mount Revelstoke is the type locality of *Rangifer montanus* Seton.

Mountain goat. *Oreamnos americanus.*

Goat inhabit the Clachnacoodin Range and penetrate occasionally to the summit of Mount Revelstoke. On July 13, 1937, fresh tracks of two were seen on Mount Harry above Eva Lake and three days later another set of fresh tracks was followed in the same region.

The present numerical status of the species in the park is unknown.

The second part of this paper, in which the birds are discussed, will appear in the next issue of the *Canadian Alpine Journal*.

IN MEMORIAM

Elizabeth Parker
1856-1944

The death of Mrs. Elizabeth Parker on October 26, 1944, has caused a loss to the Alpine Club of Canada of one of its earliest and most noted members. Her death will be mourned by all who knew her and appreciated her outstanding literary talents.

Mrs. Parker was born in Colchester County, N.S., and educated at the public schools there and at the Normal School at Truro. She also attended lectures at Dalhousie University. Circumstances directed and developed her interest in all forms of literature. She was married at eighteen and with her husband and family came to Winnipeg to live in 1892. There, she took part in many forms of social activity: as secretary of the Travelers' Aid Society and in organization of the Y.W.C.A., as the founder of the Winnipeg branch of the Women's Canadian Club, also of many other clubs and societies.

Mrs. Parker's connection with the *Winnipeg Free Press* began in 1904 with a report of Miss Edna Sutherland's recitals on Robert Browning—later Miss Sutherland was also a member of the Alpine Club of Canada. This was followed by weekly articles under the heading of "Literary Causerie" which were signed by the letters "M.T.," the initials of her mother's maiden name. From then on she became a regular contributor to the literary columns of the *Free Press* and "A Reader's Notes" was a feature of the editorial page, appearing regularly under the *nom de plume* of "The Bookman," contributions that were known all over the world and delighted those who read them.

Shortly after taking up residence at Winnipeg, owing to ill health, Mrs. Parker and her three children went to Banff to recuperate. She was there for eighteen months and during that period acquired a deep and lasting love for the Canadian Rockies and their unique scenic beauties, which would account for her keen interest in the Alpine Club of Canada.

Mrs. Parker was closely allied to the founding of the Alpine Club. Those who have not read the article in the 1938 issue of the *Canadian Alpine Journal*, entitled "Origin and Founding of the Alpine Club of Canada, 1906," by the writer, and Mrs. Parker's accompanying notes, entitled "The Approach to Organization," may obtain full information by doing so.

Discussion of the subject began with Professor Chas. E. Fay of Tufts College, Massachusetts, U.S.A., in 1901-2, who was then founding an American Alpine Club, and an attempt was made to excite Canadian interest, but without success. Prof. Fay endeavoured to help and suggested calling his new club "The Alpine Club of North America" of which there would be a Canadian branch for a starter. On these lines it was endeavoured to interest the leading Canadian newspapers, among them the *Manitoba Free Press,* now the *Winnipeg Free Press*. Presumably the matter was turned over to Mrs. Parker, for shortly after, I received a copy of that paper with a marked article signed "M.T." It took me roundly to task, declared my actions were unpatriotic, chided my lack of imperialism and generally gave me a pen-lashing in words sharper than a sword.

"M.T." turned out to be Mrs. Parker and the result was that the Editor of the *Free Press,* Mr. J. W. Dafoe, a leading Canadian, opened the columns of his paper to us and became one of our strongest supporters. Mrs. Parker then began a campaign of propaganda. Her cultured and forcible style of writing, her keen sense of vision and invariable accuracy of statement was one of the most helpful factors of the Club's foundation; prominent newspapers and people began to take an interest, but it was not until February 14,1906, that the psychological moment arrived.

Mr. William Whyte, later Sir William, then Second Vice-President of the Canadian Pacific Railway Company, had called a meeting of the high officers of the Western Division for a conference at Mt. Stephen House at Field. Mr. R. Marpole, General Superintendent of the Division, who was much interested in the proposed formation of an Alpine Club, had kindly sent me an invitation to be present and be introduced to Mr. Whyte so that I could lay the matter of forming such a club before him. I was duly introduced to him and made my statement.

He was standing, the centre of a large group of officials, with Mr. Marpole on one side and Mr. C. E. McPherson, Western Passenger Traffic Manager, on the other. I here quote from the Journal article: "As I closed my statement, he asked abruptly, 'What do you want?' I replied, 'I want twenty passes to Winnipeg and return from any part of the Railway, to bring delegates there to found an Alpine Club for Canada similar to the European and other big alpine clubs of the world representing mountain ranges such as the Canadian Cordillera.' He looked astounded, then incredulous, then scornful, as much as to say 'What confounded cheek!' Then he roared, 'Twenty passes to Winnipeg from any part of the Railway!' and, turning to Mr. McPherson, he said in a most sarcastic tone, 'What do you think of that, McPherson ?' Mr. McPherson replied, 'I think it would be a first class idea Mr. Whyte.' 'All right!' Mr. Whyte replied with a broad smile, 'Fix it with him.' "That little episode resulted in a meeting of more than twenty delegates to found the Alpine Club of Canada. They assembled at Winnipeg on March 27, 1906. Winnipeg was selected as a point halfway between the east and west coasts; also as a tribute to Mrs. Parker, for her home lay there. She had made full preparation and due to her interest had made arrangements with the Y.M.C.A., who kindly gave us accommodation for our meetings. Due to her representations the Canadian Club invited a number of the delegates as guests to attend their luncheon on March 28 and the writer as guest-speaker on the subject. This led subsequently to several of the Canadian Club members joining the Alpine Club, among them the Rev. Dr. C. W. Gordon (Ralph Connor).

On the afternoon of March 28 the final organization meeting was held and officers duly elected and thus the Alpine Club of Canada became *de facto,* due largely to the interest and good work of Mrs. Parker. Sir Sandford Fleming was elected Honorary President; Dr. A. P. Coleman, Ph.D., F.R.S. and the Rev. J. C. Herdman, W.D., Vice-Presidents; the writer, President and Mrs. Parker, Honorary Secretary. Six were elected to honorary membership, of whom Mrs. Parker stood at the head of the list. She attended the first annual camp of the Club, held the following July at Yoho Lake, not far from the summit of Yoho Pass, beneath the towering snow-crowned heights of Mt. Wapta. She also attended a number of later camps and, in 1913, the first camp of the Club at Robson Pass.

Mrs. Parker was a contributor to many journals both at home and abroad and notably to early issues of the *Canadian Alpine Journal*, published by the Club. In her literary connections it was her duty to act as critic of the many writings sent to her for comment, especially by the *Free Press.* She possessed in a high degree the attributes of a kindly nature and a charming, sympathetic manner and her criticisms were always marked by these characteristics.

During her early visit to Banff, Mrs. Parker acquired a sincere love of the mountains and of Nature as portrayed by them. When in their midst she seemed deeply impressed by the feeling of being in touch with the Almighty Creator whose presence was inspired by the solemn beauties of the snow-clad heights and flower-strewn valleys all around. She never seemed happier than when seated amidst the camp tents drinking in the thrilling scenes and absorbed in the vitality of life moving about her.

I may safely say that from the date of that momentous letter bearing the initials "M.T." to the beginning of her fatal illness she had the welfare of the Club, now in its 39th year of existence,

always at heart and was one of its most loyal supporters.

We old-timers who knew and loved her in the early days of the Club will mourn the absence of her name from our Honorary Roll, but we shall not forget her and her memory is preserved by the very popular tribute inscribed with her name, the "Elizabeth Parker Hut," maintained in one of the most charming centres of the Canadian Rockies, close by beautiful Lake O'Hara.

—A.O.W.

On one of my early visits to the Canadian Rockies, I was fortunate in meeting a rare individual, accompanied by her daughter, who was fleet of foot and skilful on rock and ice. This person was Mrs. Elizabeth Parker. The acquaintance begun at Lake Louise developed into what was for me a highly valued friendship.

We met quite often at the Canadian Pacific Railway Hotels and at the camps of the Alpine Club, where we usually had animated discussions, the last of such occasions being at the Robson Camp of 1924; but both, after, as well as before this date, I enjoyed on my way from the west the delightful hospitality of her house in Winnipeg, where an interesting group of friends came together. Many letters on affairs of the day and, in particular, on those of the Alpine Club, passed between Mrs. Parker and myself, in which organization she maintained a keen interest until her last illness. Next to her family, her main concerns appeared to centre around literature and the welfare of the Club. Had she been more robust physically she would certainly have participated in many climbs on her beloved mountains. A guideless climb up to within 200 feet of the summit of Cascade Mountain at Banff was the limit of her climbing achievements. Nevertheless, without her intense interest and enthusiasm, the Alpine Club of Canada, of which she was the first Honorary Secretary, and an Honorary Member, would not have been organized when it was. The details are now well known and have been recently mentioned again by Mr. A. 0. Wheeler, who played a major role in the history of the Club, imparting a vitality to it in its early and more difficult years. In 1912 Mrs. Parker collaborated with Mr. Wheeler in the production of *The Selkirk Mountains,* described very modestly as a guide for mountain pilgrims.

Mrs. Parker was fortunate in having the columns of the *Winnipeg Free Press* open to her, and in them for over thirty years she never missed an opportunity of calling attention to the Club and the achievements of its members. Her gifted pen reviewed every issue of the Club's Journal to which she frequently contributed until a few years ago. She must have written hundreds of articles and reviews on mountaineering and literary topics for the Free Press and Canadian magazines, always displaying a discerning capacity for picking out the best things in the books she noticed. A discriminating judge like the late Sir Andrew MacPhail, declared that she excelled as a reviewer of literary works amongst all those that he knew in Canada. Naturally endowed, she had developed her critical judgment through continued contact with the greatest things in English literature. Some years ago she paid a deep and touching tribute in this respect to her step-mother, who had directed her taste when quite young and had led her to an appreciation of good writing.

Mrs. Parker combined in an unusual way idealistic strivings with practicality of outlook. Though her thoughts traversed the heights, both literally and metaphorically, yet her feet were firmly planted on the earth. She was a wise woman. Her able and devoted daughter greatly smoothed the path for the pursuit of her aims, by freeing her mind of the irksome, but unavoidable, details of household economy.

Like many Nova Scotians of her time, Mrs. Parker took a lively interest in the history of Christianity and theological problems, a study of which had imparted vigor to her mind and to

the expression of her thoughts. The writer recalls, in particular, one occasion, when we walked up together on a perfect day from Lake O'Hara to Lake MacArthur, discussing en route some of the most recent investigations into the origins and dates of the Sacred Books. There was much argument, accompanied by mental excitement, which retarded our pace, reducing it almost to a crawl. Eventually we arrived and the glorious environment making us feel the smallness of our differences, calmed our minds. We realized that the enjoyment of superb scenery on a perfect day, far transcended that of even a keen discussion. After some material refreshment, we sank into a happy contemplation of nature, beautiful and benign. Mrs. Parker left my companion and myself, who were to climb Mount Biddle next day, and returned to the lower lake, not, however, before reproving, in a kindly tone, the undersigned for his unfounded and disturbing views. The circle of the Canadian Alpine Club has lost a devoted friend whose cultured mind faced life's problems with courage and serenity.

— J.W.A.H.

Edward Feuz, Sr.[1]

1859 - 1944

In 1899 the Canadian Pacific Railroad brought out its first Swiss guides, Edward Feuz, Sr., and Christian Hasler, Sr., and stationed them at Glacier House. As Charles E. Fay, soon to become first President of the American Alpine Club, said, "No pair of twin brothers were more nearly duplicates in raiment, no two guides ever more supplemented one the other in excellencies."

It was customary for the Swiss guides to return home every winter, but they stayed in Canada more or less permanently after the village of Edelweiss, near Golden, was established in 1912. At this time, Edward, Sr., and his wife decided to remain in Europe.

The chief Canadian climbs made by Edward Feuz, Sr., were on the peaks around Glacier House. He had the unique experience of being a centrist when scarcely any summits of the vicinity had been climbed; there was no need to camp out or explore far afield. His patrons included many of the most competent mountaineers of the day.

In 1899 he climbed Eagle Peak with Bryant and Steele, repeating it, also by a new route, with Fay. He made the first traverse of Mt. Avalanche with Rudolfrich. Leading Cordes and Le Prince-Ringuet on Mt. Sir Donald, he accomplished their devious, unrepeated route from Green's Peak. This mountain thereafter became his specialty. In this season also he ventured further to take Fay and Parker up Mt. Dawson, one summit of which now bears his name.

In 1900 he established the Vaux route on Mt. Sir Donald. Later in the summer he made the first ascent of Mt. Sifton with Michael, and a few days later took him and Spencer up Mt. Swanzy, the latter a solace to Spencer after bad luck on Collie's Bush River expedition.

Feuz was with Wheeler's survey in 1901, when stations were placed on Mt. Sir Donald, as well as on Swiss Peak, which was ascended by a new route from Rogers Glacier. In 1902 he made the first ascent of Mt. Macoun with Herdman; in 1903 they reached the summit of Mt. MacDonald, finding a rusty nail as evidence that they had been preceded during railroad construction days. 1903 was especially noteworthy for Feuz's guidance of Tewes in the conquest of Mt. Sir Donald by the northwest arête.

In 1904 he conducted Herman to the top of Mt. Hermit, and Miss Benham to Fleming Peak, both new ascents. In 1906 the Kitchells went with him up Terminal Peak, while, in 1908, Feuz and

1 Reprinted from *A. A. J.* 1946, with the kind permission of the Editor.

Edward Feuz, Sr.
Interlaken, 1931.
Photo F.V. Longstaffe.

Forde found the new way up Mt. Sir Donald which avoids the stonefalls of the Vaux chimney and became the usual route thereafter.

All of these pioneer ascents were interspersed with many repetitions of the older climbs. Feuz naturally accomplished less in the Rockies, although he led Earle up Mt. Douglas in 1907 and Hickson to the higher Mt. St. Bride in 1910.

Edward Feuz, Sr., died at his home in Interlaken on June 12, 1944. Although 1911 was his last season in Canada, he was not forgotten, and younger members of the American Alpine Club sought his services in the Alps until he retired from climbing as his seventieth birthday approached. His sons, Edward, Jr., Ernest and Walter, have carried on the family tradition amid Canadian peaks.

—J.M.T.

Helen M. Trenholme

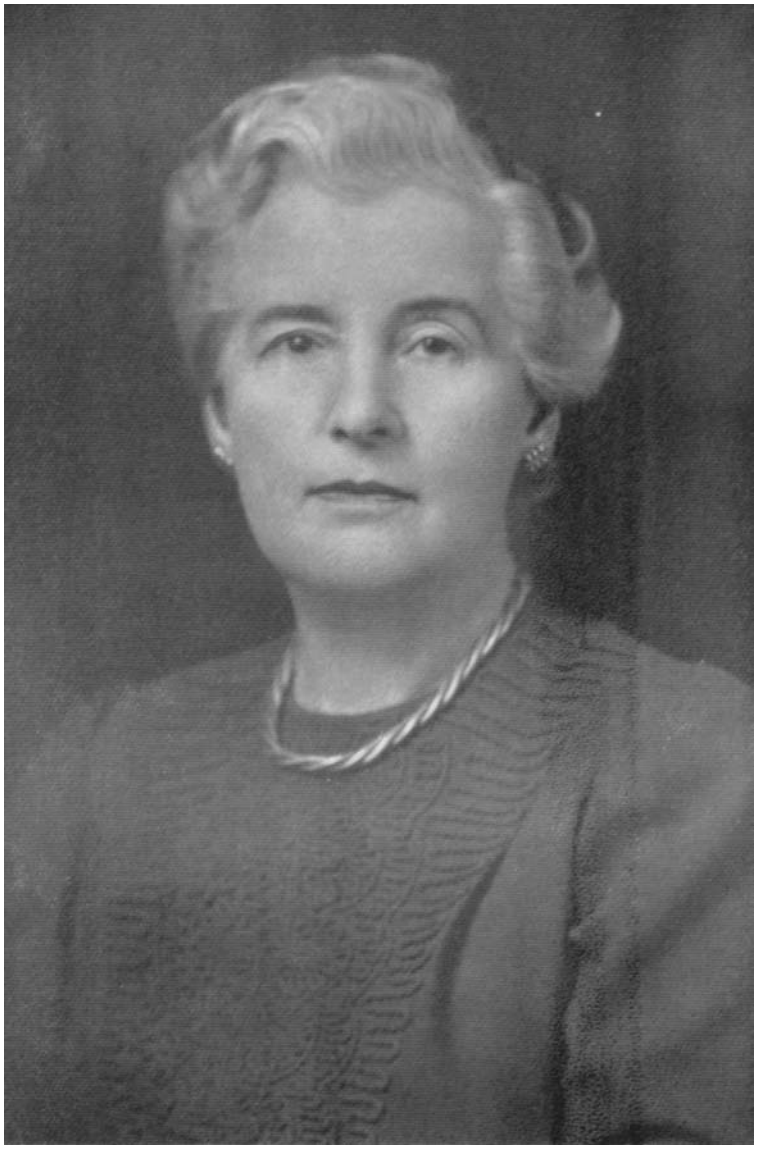
In the passing of Miss Helen M. Trenholme on May 13, 1944, the Alpine Club of Canada lost a staunch, enthusiastic and generous member. Her illness was of about three months and was rendered more serious by the passing of her mother about four months before.

She was a member of an old-time Montreal family, was widely travelled, had a well-stored mind and took a keen interest in all constructive work.

She joined the Club in 1912 and her first Camp was in 1914 in the Little Yoho. It was an outstanding camp and the district made a very lasting impression upon her and was her choice one of the Rockies. She attended many camps and was a frequent visitor at the Club House where she made herself friendly toward all with whom she came in contact. In 1937 she attended the Club camp in the Little Yoho Valley. She was so enamoured of the district and desirous that all members, present and future, of the Club should have the opportunity of spending some time there that she suggested that the Club build a permanent cabin in the Little Yoho. To make this possible she made a generous gift of $1,500.00. She knew that the longtime Secretary, after his heart attack at Banff in 1932, would no longer be able to visit the mountains and she suggested that the cabin be named after him, the "Stanley Mitchell Hut." She took a great interest in the cabin as it was being built and rejoiced in the fact that it was completed in Mr. Mitchell's lifetime and that he saw photographs of it although he himself was not able to visit it. In 1941, with a small party, she spent several days at the cabin and was delighted that her dream had come true.

She loved the mountains and valued the many friendships which she had made there and was the friendliest of the friendly. One of her last wishes as expressed in a written memorandum which she left was that the Club's special hymn, "Unto the hills around do I lift up my longing eyes", which she had heard sung among the glories of the mountains on so many occasions at the Camp's Sunday services, should be sung at her funeral. She also requested that her ice-axe be sent to the Club's eastern vice-president to be taken by him to camp where "I shall like to think of it roving the mountains again."

—E.B. and H.E.S.



Miss Helen Trenholme.
Photo Rice, Montreal

Charles P. Hogeboom

1876 - 1944

With the passing of Charles F. Hogeboom the New York Section has lost one of its most devoted and dependable members and the Club one of its most enthusiastic mountaineers. Although a member of our Club since 1914 he was only occasionally able to attend camp or even to get to the mountains at all and he counted it a great misfortune that his business as an architect kept him especially busy during the climbing season. "Another summer wasted!" he would say, when a season had passed without affording him an opportunity to climb.

Mr. Hogeboom was born, educated and passed most of his professional life in New York City, although his training in architecture was received in Chicago. For many years prior to his retirement, three years ago, he was associated with James Gamble Rogers in New York and in that association took part in the design of the Yale University Library building and was supervising architect in New Haven, Connecticut, during its construction. The building carries a bas-relief sculpture of him, together with similar sculptures of others who had prominent parts in its creation. He was especially interested in hospital design and did much in that line.

An enthusiastic out-of-doors man, he was a long-time member of the Fresh Air Club, New York City's oldest and most strenuous hiking club, and gained much of his early experience in rock scrambling with that club. He was a skillful climber, a competent leader and had a remarkable faculty for route finding on mountains previously unknown to him. He had been a member of the American Alpine Club since 1926.

A devotee of all that is best in literature and music, he was of a modest and retiring disposition and only those who were privileged to know him intimately could fully appreciate his scholarly attainments and his lovable personality. To all such his passing will bring a deep sense of personal bereavement.

—F.N.W.

John Balch

1866 - 1944

John Balch, a member of the Alpine Club of Canada since 1920, had attended camps in the twenties but had not been out in recent years.

He was a member of the Class of '89 at Harvard, and had lived most of his life in Milton, Massachusetts. In business life he had been connected successively with the Holzer-Cabot (electric) Co., Brockton Electric, and was for a time at Dubuque, Iowa, as Receiver for the Dubuque Light and Traction Co. While there he met his future wife, Miss Katherine Talbot. Returning to Boston he became connected with the New England Telephone and Telegraph Co. of which he was later Treasurer for about twenty-five years until his retirement under the company rules at the age of sixty-five.

In Milton he was highly esteemed by his fellow citizens. For many years he was Tree Warden there, and was a frequent visitor to the Arnold Arboretum in Brookline. At home he raised bees and cultivated roses. He excelled as a skater and continued skating at the Boston Skating Club until shortly before his death. He loved music. He wanted to take part in the last war on the entry of the United States, but after attending the Plattsburgh training camp found that his age would prevent active service. He loved the out-of-doors and had made extensive walking trips. For

years he had been on the Board of the Trustees of Public Reservations, a semi-public body which administers special land areas for the public benefit in various parts of Massachusetts.

At the club camps he took easily and quickly to climbing, for a beginner in his fifties, and was soon leading ropes. He was a quiet, reserved but highly friendly man, very much, to use an old phrase, the "salt of the earth" type of person. He was loved by children, but did not have any of his own. He was in many ways a typical New Englander in the best meaning of that term. That he enjoyed his visits to the Canadian mountains and approved of the activities of our club was shown by his remembering it in his will.

— H. S. H., Jr.

Miss L. K. Ernst

1870 - 1943

Miss Lillie R. Ernst, one of our much loved and most enthusiastic members for many years, was born in St. Louis, Missouri, September 14, 1870, received her education and lived there until December 6, 1943.

After graduating from Washington University, where she also received her Master's Degree, and later Washing ton University Phi Beta Kappa, she devoted her life to the educational and social problems of her city. Miss Ernst taught in the St. Louis High Schools, became principal of the Cote Brilliante School, the Blewett High School, and was Assistant Superintendent of the schools of St. Louis for many years.

Miss Ernst was also board member of the St. Louis Children's Hospital and the Urban League of St. Louis; honorary member of the Wednesday Club, The St. Louis Bird Club, The American Ornithologists' Union; co-worker in League of Women Voters, Community School, and a host of other activities. Her thinking was as broad as education and the out-of-doors themselves as evidenced by her membership in the National Education Association, American Association of School Administrators, Association of Childhood Education, Progressive Education Association, National Society for the Study of Education, and her membership in the Alpine Club of Canada.

When "L. R." first came to Canada with Dr. Cora Best and me, and successfully made her graduating club for membership in the Club, she was well past fifty years of age, which accomplishment I felt was remarkable. Her knowledge, her enthusiasm, her rare sense of humor and good sportsmanship, made her a joyous addition to any group activity planned in the club.

I know Miss Ernst's life with us in the out-of-doors of Canada brought added inspiration and strength for her great interest in training and encouraging children to become better citizens and inspiring citizens to greater effort and richer living, an influence reflected world-wide today in the stronger characters of her countless students overseas, and her many friends at home.

—A. F. S.

Miss Ernst was a great friend to many, her thoughts and plans being always for others rather than for herself. Her death has brought to light hundreds of kind deeds which she had never mentioned to anyone.

—E.C.

Miss L.R. Ernst

C. W. Rowley

Mr. C. W. Rowley was manager of the Canadian Bank of Commerce at Calgary when the Alpine Club of Canada was founded in 1906. Though never an enthusiastic climber he was much interested in mountains and enjoyed being in their midst when the opportunity offered, which was not often as he was much tied down by business affairs.

Although he did not travel to Winnipeg with the delegates who met there and founded the Alpine Club of Canada on March 28, 1906, yet he was much interested in its formation and joined the Club as an active member as soon as he had become qualified to do so.

To attain such qualification the writer took him and others on a special climb of Mt. Aberdeen, which then filled the qualification requirements. It is amusing to relate that on that occasion lunch was eaten on the summit of the mountain and Rowley had brought his wrapped in a newspaper that had an outstanding advertisement of the Canadian Bank of Commerce on one of its pages. Those who knew Calgary and vicinity in the old days will not have forgotten the *Eye Opener,* edited and published by the renowned Bob Edwards. Shortly after Rowley's ascent of Mt. Aberdeen an editorial appeared in the *Eye Opener,* extolling Rowley's enterprise as an advertiser of the bank of which he was manager. "Why!" exclaimed the editorial, "He even carries the Bank's advertising to the summits of the Canadian Rockies."

As soon as he became an active member, he accepted the position of Honorary Treasurer and in that position was of much assistance to the Club, especially in the financing of its Club House bonds, so enabling the Club House on Sulphur Mountain at Banff to be built and opened in 1909. As well as being the headquarters and rendezvous for members climbing in the Rockies it is the depository of the Club's library and the home of many outstanding paintings, photographs and other mountain attributes and relics.

Mr. Rowley was Honorary Treasurer for a number of years but did not continue to fill the position after his removal to Toronto, when he was promoted to a high office on the executive of the Bank of Commerce. Later, he filled a very important position in a big Trust Company and until his death continued his membership and interest in the Alpine Club of Canada.

—A.O.W.

Howard Palmer

1883 - 1944

Howard Palmer[1] was born in Norwich, Conn., on November 28, 1883, received his B.A. from Yale in 1905 and an LL.B. from Harvard in 1908, the year in which he was admitted to the Massachusetts bar. He gave up his profession in 1918 to become secretary and director of Palmer Brothers Co., New London, remaining there until he retired in 1928.

He joined the American Alpine Club in 1908, serving two terms as Secretary (1911-13 and 1914-16). He was elected to the Council, 1917-22; became Vice-President, 1923-25; President, 1926-28, and thereafter continued on the Council until his death. He assisted with preparations for the Mt. Logan expedition (1925) and, as second editor of the newly-established *American Alpine Journal,* brought out the four issues of 1930-33. His membership at various times included the

1 Reprinted from the *A.A.J.,* 1945, with the kind permission of the Editor.

Appalachian Mountain Club, the Alpine Club (London), Royal Geographical Society, Harvard Travellers Club, Explorers Club and Fresh Air Club. He was a corresponding member of the Philadelphia Geographical Society, and had also edited various publications of the New London Historical Society.

There are few left who climbed with Palmer in his prime, and in his later years his rotund figure belied the fact that he was once one of that hard-bitten group, led by E. W. D. Holway, whose amazing back-packing journeys through the passes of the Selkirks made mountaineering history just prior to World War I. They would leave Glacier House heavily laden, returning weeks later, their provisions exhausted but with victory on distant peaks. During the period 1908-12 Palmer explored from the Battle Range to Mt. Sir Sanford, whose summit, then thought to be the culmination of the Interior Ranges of British Columbia, was captured after several fruitless attempts. In 1915 his curiosity about the southern Selkirks led him to the little-known area near Trout Lake, where he ascended Nettie L Mountain. The peaks within the loop of the Columbia rise from unfriendly terrain, but they were Howard Palmer's first and last love. Even in later years, when he began (1916) to visit the Rockies recurrently, one of his chief joys was to see in the westward view the peaks on which he had spent so many arduous days. His classic *Mountaineering and Exploration in the Selkirks* (1914), and the peak of that range which bears his name, are his memorials.

Palmer was a complete mountaineer, always clarifying the topography of new areas he visited. In 1915 he and Major R. H. Chapman produced a map of the mountains of the Big Bend of the Columbia, which has not yet been superseded. He was much interested in the history of early surveys for the Canadian Pacific Railroad, particularly the work of Walter Moberley, Major Rogers and Sir Sandford Fleming, and had an unsurpassed library on this phase of western exploration. He was also an authority on Captain Cook's voyages.

In 1916 Palmer and Dr. Gilmour journeyed to the northern Rockies and Mt. Longstaff. In the same season he also made an ascent of Mt. Fox with Dr. McKee, in one day of 19 1/2 hours from Glacier House. In 1919 he joined Major Chapman and Allen Carpé in the first amateur party to visit Tonquin Valley, ascending McDonell Peak. In 1920 he and Carpé went to Fortress Lake, and beyond to Mt. Serenity. In 1922 he accompanied the writer of this notice to the Freshfield Group, the Spartan equipment of the Selkirks still serving despite an outfit of horses prepared for heavier loads. His sole concessions to luxury were several folding chairs (which promptly collapsed), and a quantity of cigars which was the packers' wonder. The glacier was measured and first ascent made of Mt. Barnard, highest summit of the group, a discovery on the newly issued map of the Boundary Survey. In 1923, Palmer and Carpé went to Maligne Lake, which they mapped, and reached the summit of Mt. Brazeau, which had not yet lost the mystery created by Prof. Coleman's attempt in 1902.

In 1920 Carpé and Palmer had made an attempt to ascend Mt. King Edward, at the head of the Athabaska River, and Palmer resolutely returned with Dr. Hickson in 1924 to complete the effort. Two years later these two, then respectively Presidents of the American Alpine Club and the Alpine Club of Canada, made the first ascent of Mt. Fryatt, Palmer's last difficult climb. In 1927, his final season in the mountains, Palmer made a short trip to the Clearwater area, reaching the top of Recondite Peak.

Altogether Palmer made about fifty first ascents, almost evenly divided between the Selkirks and the Rockies. The Geographic Board of Canada confirmed his names for upwards of fifty peaks and glaciers. It is a remarkable record for a climber who had no experience in the Alps. Probably one trained in the Alpine tradition of huts and guides would have accomplished less.

In 1932, following a fire in the Hotel Mohican which destroyed most of his books and mountaineering equipment, Palmer, who was unmarried, left New London to live at Pawcatuck, Conn., near Westerly, R.I. There he indulged his hobby of collecting and repairing antique clocks, of which he possessed more than 100. He was an expert at this, having a fully-equipped workroom and machine-shop, where he turned out boxwood gears and other intricate parts. He was also a skilled photographer, producing many fine enlargements in his darkroom. Being almost midway between Boston and New York, fellow-climbers would stop to see him, and it was equally easy for him to frequent club gatherings.

When the present writer, as a refuge during long illness, prepared (in 1920, with much temerity) *A Climber's Guide to the Rocky Mountains of Canada,* Palmer collaborated in completing the parts covering areas with which he was particularly familiar and saw the book through press: "It pleases me," he wrote of a later edition, "to think of it as man's intellectual conquest of that great range."

In one of his last letters to the Editor (September 21) he sounded a more solemn note. "I believe," he said, "the topic [mountain mysticism] is moribund. After the war, the generation of Englishmen who have been interested in the subjective aspects of alpinism, will be practically extinct, and in the new world of stark realism, which I visualize, there will be no room for such musings. The sporting aspects of mountaineering in the old sense will diminish to the vanishing point. Perhaps they have already. It will become something between an art, a science, and a profession—a good deal like chess, of which the amusement aspect has largely departed."

Howard Palmer had a timeless personality, and younger members of the Council, and of the Club in general, accepted him as one of themselves. They in return received the benefit of his knowledge and advice, given freely in the manner of one who had adventured joyfully and who happily shared adventure's pleasure.

—J.M.T.

Mrs. A. H. MacCarthy

1877 - 1944

To friends in Canada, particularly fellow members of its Alpine Club who knew her as an outstanding athlete, announcement of the death of Mrs. A. H. MacCarthy was not only a great shock but difficult to believe. Very few had knowledge of her serious illness and their recollection was that of an outstanding mountaineer who had shared to the utmost everything associated with Alpine adventure.

Mrs. MacCarthy was a true lover of nature, for whom there was ever a "beckoning peak." Born February 1,1877, at Summit, New Jersey, she belonged to a family noted for its athletic achievement—a brother, William A. Larned, being tennis champion of the United States for seven consecutive years. Many trophies also testified to the skill of Miss Elizabeth Larned, afterwards Mrs. A. H. MacCarthy, at tennis as well as other forms of sport. Her marriage to Albert H. MacCarthy, a graduate of the U. S. Naval Academy at Annapolis, took place on May 30, 1905, at Summit, New Jersey. Lieutenant Commander MacCarthy, U. S. Navy, already a distinguished athlete, later achieved international fame for his mountaineering achievements and exploration.

Mrs. MacCarthy's first visit to the Canadian Rockies was in the summer of 1909, as one of a party led by Professor Hershel Parker and Howard Palmer, whose objective was the ascent

of Mount Sir Sanford. Later in the season she made a graduating climb on Mount Stephen, and attended the Alpine Club Camp at Lake O'Hara. From that camp she was one of a party of four to make the first ascent of Mount Victoria on its southern face. In 1911, with her husband, Mrs. MacCarthy again attended the A.C.C. Camp and from that time never lost interest in the Canadian mountains, this interest being augmented by the purchase, during 1911, of property near Wilmer, in the lovely Upper Columbia Valley. This property was named "Karmax," an abbreviation of their two names, and there the MacCarthys spent many summers and obtained much pleasure in entertaining their friends.

Another side of Mrs. MacCarthy's life, known only to a limited number of friends, was her interest in young people, many of whom were given better opportunities, and are happier today because of her generosity.

With the death of Mrs. MacCarthy, the Alpine Club of Canada has lost an outstanding mountaineer, and, those of its membership privileged to knew her, a friend whose kindness and courage was never known to fail.

—W.W.F.

Albert Burton Gresham

Major Gresham, born in Perth, Western Australia, came to Canada at an early age and was educated in Winnipeg where he married Miss Margaret Marr.

Convinced that another war was inevitable, he joined the militia in 1926 as a private and soon rose to his majority. He was transferred to the Winnipeg Grenadiers in 1939 and lost his life in the gallant defense of Hong Kong.

Major Gresham was not only a soldier of high courage but also a newspaper man. He joined the staff of the *Winnipeg Free Press* in 1925 as cameraman and reporter and pioneered in recording the development of aviation in Manitoba.

He was one of the leading authorities on bird life in Canada, ornithology being his favorite hobby. The North Kildonan Bird Sanctuary is the result of his interest and efforts. An expert woodsman, he was happiest when following geese in their migrations and his photographs of these and other birds are among the finest of their kind. Although known to few members, he made a permanent contribution to the Club in his article on the birds of the O'Hara district, published in the 1938 Journal under the title "Happy Valley."

The Club mourns the loss of Major Gresham, the second of our members to give his life for his country. Our sympathy is extended to his wife and other members of his family.

Arthur Oliver Wheeler

1860 - 1945

It is with great sorrow that we record the sudden death of Mr. A. 0. Wheeler, Honorary-President of the Club, on March 20, 1945, in Banff. He had spent the previous year in .Banff among the mountains he loved so well and he now rests in the Banff cemetery. The Club has lost in Mr. Wheeler an able leader whose influence has been felt in every phase of the Club's activities for the last thirty-eight years.

Born May 1, 1860, in Kilkenny, Ireland, Mr. Wheeler[1] was always proud of his Irish ancestry. He was educated at Ballinasloe College, County Galway, and at Dulwich College, London.

After arriving in Canada with his parents in 1876 he took up the profession of land surveying. While serving his apprenticeship he had the opportunity of exploring and surveying for settlement in the vicinity of the Bruce Mines, spending much of his time in a birch-bark canoe. Later, in 1878, on Indian reserve surveys north of Battleford and Prince Albert, he travelled from Winnipeg to Battleford with Red River carts. He qualified as Ontario Land Surveyor in 1881; as Manitoba and Dominion Land Surveyor in 1882, as British Columbia Land Surveyor in 1891, and as Alberta Land Surveyor in 1911. In 1929 he was elected an Honorary member of the Dominion Land Surveyors' Association, now the Canadian Institute of Surveying.

Mr. Wheeler was at Winnipeg in 1881 and 1882 during the big boom and the year following was employed by the Dominion Government on pioneer surveys in the Northwest Territories, then being opened up for settlement by Sir John A. Macdonald. In 1884 he sub-divided a number of Canadian Pacific Railway townsites along the line of railway construction.

He was appointed a technical officer of the Topographical Surveys Branch of the Department of the Interior in 1885 under Dr. E. Deville, F.R.A.S., Surveyor General of Canada, by whom he was trained in the specialty of photo-topographical surveying then being applied by Dr. Deville to the mapping of the Canadian Rocky Mountains. In this work he collaborated with the Surveyor General for several years.

The same year, 1885, he took part in the suppression of the Riel Rebellion, serving as a lieutenant with the Dominion Land Surveyors' Intelligence Corps under J. S. Dennis, D.T.S. (Captain.) He received the Saskatchewan Medal and Clasp for his services.

From 1890 to 1893 he was in private practice at New Westminster, B.C. In 1893 he returned to the Department of the Interior's Survey Branch and was employed on township subdivision surveys south of Edmonton. He was employed on irrigation and photo-topographical surveys of the foothills in southern Alberta, with headquarters at Calgary from 1895 to 1899. In 1900 he made a photo-topographical survey of and mapped the Crowsnest coal mining areas for the Surveys' Branch and in 1901 and 1902 a photo-topographical survey of the Selkirk Range along the line of the Canadian Pacific Railway. The report and maps of this survey were published by the Department of the Interior in book form under the title of The Selkirk Range by A. O. Wheeler, 1905. From 1903 to 1910 he continued the photo-topographical survey of the main range of the Rockies and during this period was appointed Topographer of the Department of the Interior.

In April of 1903 Mr. Wheeler was sent to Alaska, via Skagway, travelling on the old C.P.R. steamer, Princess May, to investigate a report received from the North West Mounted Police of

1 For more detailed information regarding Mr. Wheeler's life see *C.A.J.,* 1940, pp. 205-212 from which pages excerpts have been reprinted here.

the finding of supposed remains of an old Russian stone house and some boundary monuments thought to have a bearing upon the location of the Alaska-Yukon boundary between Canada and the United States, then being adjudicated in London. He was instructed to make a photo-topographical survey of the terrain involved and report to Ottawa. Maps and report of the survey were prepared and turned over to the Boundary Commission at London, where adjudication was in the hands of Lord Al-verstone, Chief Justice of England.

In September of 1904 he attended the International Geographic Congress, convened at Washington, as delegate from the Department of the Interior, and, while it was in session, visited Washington, New York, Philadelphia, Chicago and the St. Louis World's Fair, then in operation.

He returned to private practice from 1910 to 1913 and, during the period, completed a large contract subdivision survey at Tetachuck Lake some seventy-five miles northeast of Bella Coola, B.C. He was then appointed Commissioner for British Columbia on the survey of the boundary between Alberta and British Columbia, consisting of the watershed line of the main range of the Rocky mountains to its intersection with the 120th meridian of longitude. Mr. Wheeler's share of the survey included photo-topographical map representation of the watershed and adjacent terrain, extending from the United States Boundary at the 49th parallel of latitude to the intersection with the 120th meridian, a distance of some 600 miles of the highest mountains. This work was demonstrated by three large atlases of contoured maps. The survey was carried on from 1913 to 1925. At its close Mr. Wheeler retired from active professional work.

Later, he superintended the construction of a number of topographical relief maps for the Canadian Pacific Railway Company of mountain areas adjacent to the main line of the railway, which are now in use at the Banff Springs Hotel and at Chateau Lake Louise for the guidance of tourists.

Inspired by his mountain surveys, in 1906 he founded the Alpine Club of Canada, assisted by Mrs. H. J. Parker of the *Manitoba Free Press,* Winnipeg, and the Reverend Dr. J. C. Herdman of Calgary. Both the *Manitoba Free Press* and the *Calgary Herald* opened their columns to the Club's organization. Much assistance was also given by Sir William Whyte, Vice-President of the Canadian Pacific Railway Company, through whose good offices practical organization at Winnipeg on March 27-28, 1906, became possible.

Mr. Wheeler was the Club's first President from 1906 to 1910, then Managing Director until 1926, when he retired and a Committee of Management was appointed. He was elected Honorary President and continued in that office until his death.

The year following the founding of the Club, he prepared for publication the first issue of the *Canadian Alpine Journal* and was its Editor until 1927.

In 1907, as President of the Alpine Club of Canada, he attended the Jubilee celebration dinner of The Alpine Club, held at Lincoln's Inn Hall, London. In 1908, proposed by the famous mountaineer and author, Edward Whymper, Mr. Wheeler was elected to Honorary membership in The Alpine Club (England).

The Club's headquarters at Banff, on the eastern slopes of Sulphur Mountain, known as the Alpine Club House, was built in 1909. Mr. Wheeler selected the site, a very beautiful one with outstanding views of the Bow River valley and its enclosing mountains. He designed the building and superintended its construction. It stands out as a prominent feature of the landscape from the main street of the village, a mile and a half distant.

In 1911, as Director of the Club, Mr. Wheeler organized and led an expedition to the Rainbow mountains, of which Mt. Robson is the chief, and mapped the locality by photographic

methods. At that time it was known chiefly to prospectors, trappers and hunters of big game. The Smithsonian Institute of Washington collaborated with the expedition and made collections of the smaller mammals, birds, big game and botanical specimens. During the expedition, a reconnaissance survey was made of Maligne Lake and the mountains surrounding it.

The Allied Congress of Alpinism was held in 1920. Mr. Wheeler then organized the Alpine Club of Canada's representation and exhibit. It was held in the Oceanographic Museum at Monaco, under the patronage of S. A. S. the Prince of Monaco. The Congress was presided over by M. le Baron Gabet, President of the Club Alpin Français, and embraced the great alpine clubs and societies of the Allied nations. The Club's exhibit was outstanding and received very favorable comment. Although unable to attend, owing to press of professional work, the Prince recognized Mr. Wheeler's good work by creating him an Officer of the Order of St. Charles and conferring upon him the Cross of the Order.

The expedition to ascend Mt. Logan, the highest Canadian mountain, 19,850 feet above sea level, of which Mr. Wheeler, the Club's Director, was the instigator and official executive, was made in 1925. The expedition was led by Capt. A. H. MacCarthy with Mr. H. F. Lambert as assistant leader.

Mr. Wheeler named a mountain at the junction of the North Saskatchewan and its tributary Alexandra River, Mt. Amery, a name confirmed by the Geographic Board of Canada. In 1929 Col. Amery came to Canada and, under the auspices of the Canadian Pacific Railway Company, proceeded to make the ascent of his mountain. Unfortunately Mr. Wheeler was unable to make the climb with him. At the Club camp at Roger's Pass, the previous July he had cracked a couple of ribs and was in no condition for strenuous climbing.

Mr. Wheeler was greatly interested in glaciological studies in the Canadian Rockies and for many years carried on scientific observations of a number of the more prominent glaciers. For many years, also, he was the Canadian representative on the International Commission on Glaciers.

Mr. Wheeler was of great energy which he devoted not only to his profession and to the Club but also to his family. His first wife was Clara Macoun, daughter of the eminent Professor John Macoun, Dominion Naturalist and Botanist. They had one son, now Brigadier Sir Oliver Wheeler, Surveyor General of India, and one grandson, John, both enthusiastic mountaineers. He later married Emmeline Savatard whose devotion has been a comfort to his later years. To all members of his family the Club extends sincere sympathy.

The familiar figure in Alpine cape and Tyrolean hat is gone but none who knew him can forget his genuine friendliness or his broad vision and high objectives. His name will be remembered wherever mountaineers are found, be it round the campfire or on mountain summit.

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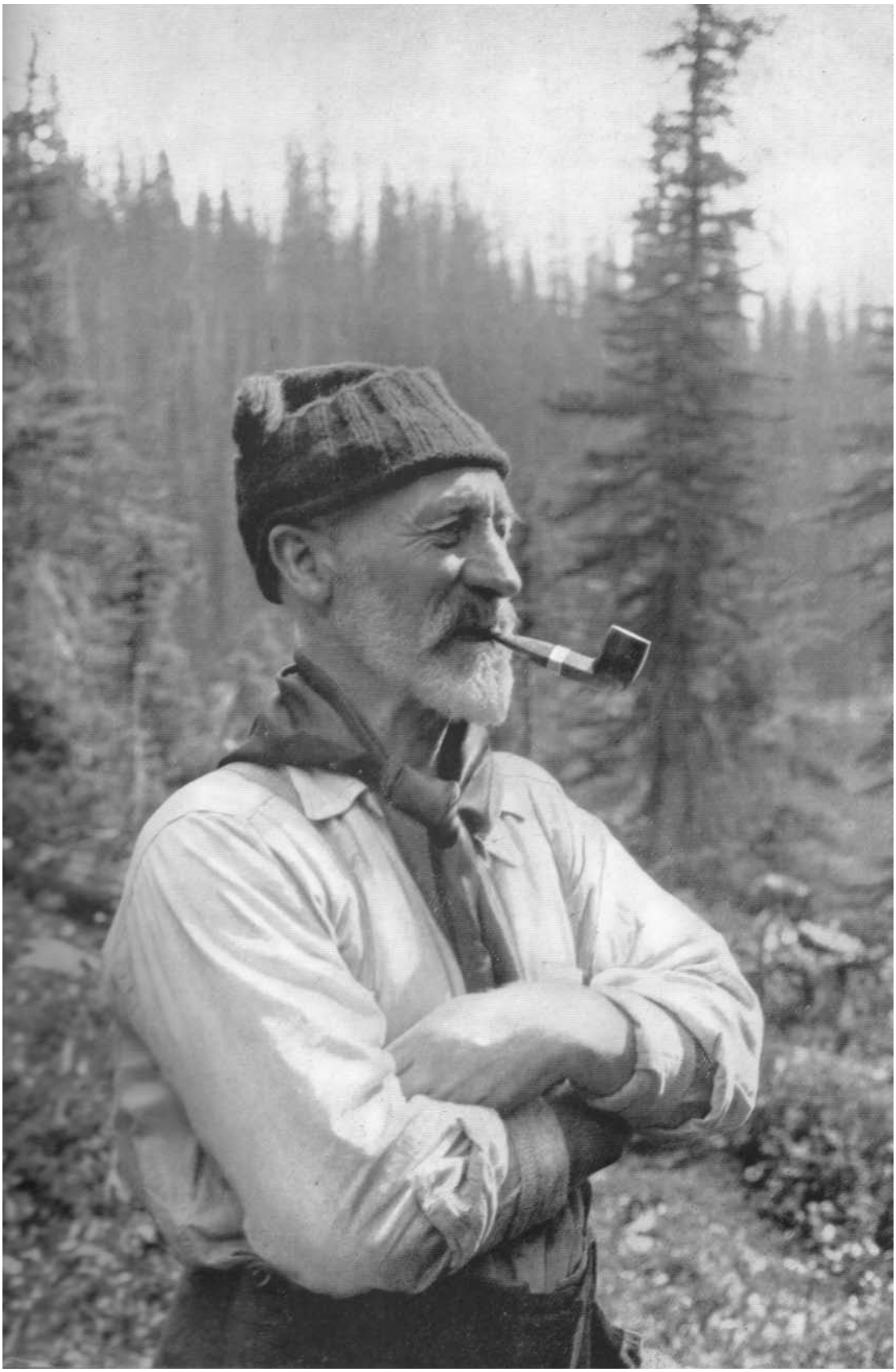
In the death of the founder of our Club, its first president, its Director for many years, and its Honorary President ever since, the Club has suffered an irreparable loss and everyone of us who has enjoyed the privilege of really knowing him, must feel a sense of personal bereavement at the passing of a sincere and sympathetic friend and an inspiring leader. Nor will this sense of loss be confined to mountaineers of Canada and the United States for he was well known to many of the older members of The Alpine Club (London) of which he was an honorary member, as well as to members of the French and Swiss Alpine Clubs, who have honored him in the past.

Those of our members who have joined us during the years since Mr. Wheeler ceased to participate actively in camp activities have missed the associations with him which will be



Arthur O. Wheeler

remembered with so much pleasure by members of longer standing. Many such will remember his cheery early morning call to the day's climb with its comments on the weather and promise of good sport; his roll call of the climbing parties as he sent them off with a wise word of admonition and advice; his restless activity about camp with a friendly greeting for each and, particularly, perhaps, the great contributions which he made to the good fellowship around the campfire.

Mr. Wheeler was a man of great ability, energy and endurance, admirably fitted for the strenuous existence of a mountain surveyor, an occupation to which he devoted so much of his life and in which he made noteworthy contributions to the science of photo-topographical mapping.

Whether it was those many years of intense activity in the mountains that produced in him his great love for them or whether it was inborn, or both, we can never know but it is certain that there was no more compelling motivation in him than his passionate devotion to "the great hills," as he loved to call them, and no one could have been more deeply appreciative of their beauty and grandeur, or more responsive to their inspiring and uplifting influence.

Some years after the death of his first wife, writing to a fellow member, similarly bereaved, he said, "go to the mountains, they are the great comforters. I have been through the experience, I know."

Hardly less dominant was his desire to help others to share his appreciation and to acquire the necessary knowledge and skill to come to that close contact with them which alone can lead to full appreciation.

To found the Alpine Club of Canada and enlist the aid of other mountain lovers in so doing was a wholly natural impulse for him. To make the training of others to go safely among them, and up them', a primary activity of that Club was the surest road to the fulfilment of his keenest desire — to spread the gospel of the mountains.

The most fitting tribute which our Club can render to that distinguished mountaineer, its founder, who has been taken from us, will be to continue in the tradition which he has established, to endeavor to implant in others a true appreciation of the mountains and to teach them how to acquire real intimacy with them.

— F. N. W.

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REVIEWS

Alpine Adventure

by Stanley Snaith, v. + 153 pages, and eight illustrations.
The Percy Press, London, 1944. 7/6.

This little book by the author of *At Grips with Everest* does not contain anything new for experienced mountaineers or for those versed in the history of the sport. For the most part devoid of technicalities, it provides some sound advice for novices, especially in its last chapter on Accidents. The author regards mountaineering mainly from the standpoint of adventure and writes in a lively and graphic fashion of it as such, not without a strain of pawky facetiousness. The small volume on *The Alps* by Arnold Lunn, published thirty years ago, covers much the same ground with the addition of a chapter on the Alps in Literature.

The nine chapters of Mr. Snaith's book deal with the Infancy (very sketchily) and Maturity of the sport, with the conquest of Mont Blanc (The Monarch), the ascents of the Matterhorn, the Meije and the Eigerwand; and there is an enthusiastic one devoted to A. F. Mummery. Of the illustrations, those of the Grepon and Charmoz, the Charmoz Aiguille from the Petit Charmoz, and the Mummery Crack on the Grepon impress one as being the best.

Certain expressions stand out as unusual, even as curious, such as: "pungent jaunts on the cliffs of the Alps"; a "dogmatic beard"; "should something *incurable* happen"; "they *improbably* heaved themselves . . . without damage except . . ."; "a series of bibulous séracs"; "emotional scrambling" on the rocks; "voluptuaries of risk"; "on a mountain he erupted into a sizzling mass of *elan vital.*" Is it appropriate to refer to the Scot's caution of Coolidge, who was an American, and to his "beloved Coolins?" page 89. Or is the name a misprint?

The Hiker's Handbook

Douglas Leechman, 220 pages with 39 illustrations.
W. W. Norton & Co. Inc., New York. Price $2.50.

Woodcraft and trail lore, very well presented for the novice, will also give the more expert the pleasure which arises from finding somebody like-minded.

The author writes understandingly. Seemingly he has hiked much in the "rain forests" of the Pacific slope, so arouses no surprise when he declares, "Lighting a fire in wet woods or even in the rain is not nearly so difficult as it might appear." (Page 85.)

The reviewer recalls seeing a party of young folks trying to maintain a fire in the rain with green conifer boughs — producing much smoke, disfiguring the trees, and making a shower of sparks apt to damage clothing. When mildly chided, they protested, "There is no dry wood around." To a trained eye the log on which they sat looked almost certainly dry, and a flick of an axe revealed dry wood an eighth of an inch below the surface.

I may hereafter quote Leechman to some of my camp associates, for he advises, "Don't lend your axe unless the would-be-borrower is a better axeman than you are, in which case he will probably know better than to ask for it." An axe when purchased rarely is even moderately sharp by an axeman's standards. Few campers maintain the original degree of sharpness.

"Don't hesitate to set out because it looks as if it might rain," is counsel marking the author

as a full-fledged member of the brotherhood of the northwest coast.

Some experienced mountaineers may find, upon reading the chapter on how to walk, that so far as heel and toe action is involved, they have never learned how to walk properly on rough ground.

"Only the greenhorn tries to see how tough he can make things, and still 'take it,' " the author warns.

Discernment is shown in pointing out that suitability of equipment differs much according to the region one is travelling.

Quite fittingly, he implores the girls, if they must wear slacks, to "see that they really are slack where they need to be."

"Shaving is a necessary evil. Don't try this he-man stuff and go unshaven. It's most uncomfortable, it looks and feels dirty, and is enough to lower the morale of the whole party." (Page 41.) (An estimable friend of mine always begs use of my razor before the end of a long trip.)

Leechman, however, believes it "requires hours to collect and arrange" enough bows for a really comfortable bed. His difficulty seems to be in wrong ideas of the type of boughs and how to place them, which is about all there is to this useful bit of woodcraft.

Skunks and porcupines are listed as the only dangerous prowlers at night around camp, but the reader is at once assured that both are "perfect gentlemen, and will leave you alone if you do not assault them." But to find oneself in a small tent with a destructive "porky" which must be ejected warrants some concern. The only thing fast about this slow beast is its fearsome tail. I once had a porky back towards me, lashing out with its tail.

The Hiker's Handbook sharply disagrees with *Hiking, Camping and Mountaineering* (reviewed on page 153) on importance of the difference between magnetic and true north. Leechman warns that a deviation of only five degrees means an error of half a mile at the end of six miles. At few places in Canada and the United States is it as little as five degrees.

Leechman records that Eskimos thought the suggestion of rubbing frostbite must be meant as a practical joke. A publication of the St. John Ambulance Brigade in Canada announces that the next edition of *First Aid to the Injured* will warn against rubbing frostbite even gently.

Discerningly, the book "de-mosses" the moss-grown myth that north may be told by the amount of moss on trees.

The chapter on food for longer trips closely agrees with the reviewer's choice. But mixing salt and pepper sounds like oversimplification. Many people desire salt in items from which they would exclude pepper.

Small round-headed brass screws are suggested as a novel substitute for hobnails, and are to be replaced when worn. Steel screws would wear better. It is gratifying to find the writer demanding leather laces. They should be really good.

Manufacturers and purveyors of "soft drinks" doubtless rate Leechman as their number one enemy. He declares icy, gassy drinks are bad medicine for the hiker.

"Going down a steep slope, you may skin your toes if you let your heels come down with a slap, driving your feet forward in the shoe. Hills should be taken slowly, whether you are going up or down." (Page 18.) But a shoe allowing this definitely is unfit for use in the hills. If by climbing slowly, he means steadily, he is, of course, advising soundly. Ability to descend quickly and safely on steep slopes matters little to the hiker perhaps, but climbers rightly value it more highly.

Mr. Leechman is not only a competent hiker, but also a writer of experience.

—W.A.D.M.

Upon that Mountain

by Eric Shipton. 222 pages, 30 illustrations and 4 maps, with a foreword by Geoffrey Winthrop Young. Hodder and Stoughton Ltd., London. 1943. 12/6.

"Eric Shipton," writes Mr. Young, "stands in the forefront of our present-day explorers." "Happily," he continues, "he is also an illuminating writer, and I have for long placed his Nanda Devi, the first penetration into the sanctuary of that glorious mountain, among the best books of adventure known to me." Such praise from a distinguished mountaineer and brilliant writer excites expectations. They are borne out by the present important volume, the third book by the author, and which contains the history of his very remarkable climbing achievements. The title, which appears to us not to be a happy one, because inadequate, is taken from lines of Shelley on "Mont Blanc."

Mr. Shipton is yet another of the many British climbers who were awakened to the attractions of the mountains by Edward Whymper. It was not, however, his *Scrambles in the Alps,* but his *Great Andes of the Equator,* which the reviewer has always regarded as his *magnum opus,* that supplied the first stimulus to mountain exploration and adventure. The physical approach to the mountains took at first the form of walking tours in Norway and ascents of some of the lesser peaks of the Dauphine, following which there were a few seasons at Zermatt and Chamonix, where the West Ridge of the Dent Blanche, the Zmutt Ridge of the Matterhorn, the Grepon and the traverse of the two Drus were the main climbs accomplished. While "Chamonix itself is a horrible place, it is doubtful that there is any place in the world that can rival it as a climbing centre," declares Mr. Shipton. He left the Alps regretfully, without any inkling of the "big things" that the next dozen years would bring; for the Alps represented his first real contact with great mountains, and in spite of their limitations, sophistication and spoiling, possessed qualities which he has not found in other ranges.

It was a desire for freedom, for a suitable occupation in the open air, which he had once hoped to find in the profession of geology, that led him to leave Cambridge University for East Africa where he settled on a farm from which Mt. Kenya, twenty miles distant, was plainly visible and challenging. Here he met Mr. Wyn Harris, and joining forces they made the first ascent of Nelion, the lower of the twin peaks, and the second ascent of the higher peak, Batian. From the latter summit the highest mountain in Africa, Kilimanjaro, though 250 miles distant, was, owing to the clearness of the atmosphere, plainly visible, and was climbed afterwards by the author and H. W. Tilman, in whom the former found a congenial companion. Together they carried out a traverse of both peaks of Kenya of which a vivid and enthusiastic account is given, and of which the author says that it was one of the most enjoyable climbs he has ever undertaken. "I know of no mountain in the Alps, with the possible exception of Mont Blanc, that presents such a superb complexity of ridges and faces as the twin peaks of Kenya, a complexity that would delight the heart of any mountaineer." Very soon after this exploit, disaster nearly befell the climbers on Midget Peak of which a striking picture and sensational description are contained in Chapter IV. Later Mr. Shipton added the Ruwenzori to his bag of big African peaks.

In 1931 he was brought into contact with the Himalayas by joining Mr. P. S. Smythe's successful expedition to Kamet, the second highest mountain that has been ascended. He was prevented from forming one of the party on the ascent of Nanda Devi, the highest mountain that has been climbed, and the route to which he had opened up. Its conquest, effected by Tilman and N. E. Odell, he characterizes rather enthusiastically as "the finest mountaineering achievement ever performed in the Himalayas"; although he admits that more daring attempts and greater skill may

have been displayed in the Bavarian attempts on Kanchenjunga, p. 172. His Himalayan experiences were greatly increased by being one of the climbers on the Everest Expeditions of 1933,1935, 1936, and 1938, an illuminating summary of which is presented in three chapters, VI, VII and XI. On both the 1924 and 1933 expeditions, an altitude of approximately 28,100 feet was reached, on the former by Colonel Norton, on the latter by F. S. Smythe whom the author accompanied to the highest camp at 27,400 feet.[1] It was to this Camp VI that Wyn Harris and Wager brought back the ice-axe which belonged either to Mallory or Irvine. The majority of Everest climbers believe that where it was found marks the place of a fatal accident.

Mr. Shipton was too unwell to go more than a very short distance with Mr. Smythe, who reached the great Couloir, but finding masses of fresh snow on the rocks decided that it was foolhardy for a solitary climber to advance further. The strain of climbing alone had been intense, and he required to rest that night at Camp VI. In order to give him more room and at the same time relieve the anxiety of those lower down, Mr. Shipton undertook to descend. A sudden storm "characteristic of Everest" demanded all his skill and strength to enable him to reach Camp V; and so exhausted was he on reaching Camp III on the following day that he experienced a mild form of aphasia. After this attempt, the climbers being in poor physical condition, the party retreated from the mountain.

It is well known that the later expeditions to Everest did not get as high as those of 1924 and 1933. The weather in 1936 and 1938 rendered all attempts hopeless; but during the 1935 trip, 26 peaks, all of them over 20,000 feet, were climbed, and of these Tilman and Wigram climbed no fewer than 17. It was on this expedition that the body of the young American, who had attempted to climb the peak alone the year before, was found some 300 yards above Camp III at circa 22,000 feet.

Even on his earliest mountaineering trips the author showed a revulsion from the elaborate and expensive equipment of an older climbing school, and this attitude, intensified by the huge, expensive and ill-balanced Everest Expedition of 1933, has become an important item of his mountaineering creed. He holds the Everest Expeditions responsible for the enormously planned German and French Expeditions to the Himalayas. Finding on his first tours that his knapsack was too heavy, he dispensed with articles, which mountaineers, who are not too soft or luxurious, consider indispensable, such as soap and an extra shirt. As a climbing companion Tilman suited him well, for "he had a remarkable ability to put up with, even a liking for, unpleasant conditions." Not many even among hardy climbers will be inclined to subscribe to such doctrines; few even among inured Himalayan explorers can, and much less will, wish to subsist for weeks on a diet of flour, rice, ghee, chives and wild rhubarb. Mr. Shipton put his austere maxims into practice in the organization of the 1938 Everest Expedition, which however included seven climbers; but the weather prevented a comparison with previous and more elaborately equipped expeditions. He maintains that the best number for an attempt on Everest is two, which is contrary to the opinion of that veteran mountaineer and explorer, the late Mr. Douglas Freshfield. Had there been three climbers in the attempts of 1924 and 1933, a higher point, perhaps even the summit, might have been reached, and Mallory and Irvine might not have perished. The success of the Nanda Devi Expedition afforded a strong argument in favour of a small and more mobile organization; but it was small because of the few porters, the lack of whom was severely felt by the climbers, while the

1 Is it correct to say that Norton did not cross this couloir in 1924? In The Fight for Everest, page 112, Norton writes: "the couloir was filled with powdery snow into which I sank to the knee or even to the waist. . . . Beyond the couloir the going got steadily worse . . ." Norton was alone, his companion Somervell having succumbed to throat trouble.

supply of food appears to have been skimp. And Nanda Devi is 3,400 feet lower than Everest.

The author's powers of descriptions are very considerable, but he writes with restraint. Indeed his style is so modest that readers not versed in mountaineering topics will hardly realize how great his achievements have been. Among the illustrations which are all very fine, there stands out a superb view of Makalu as a frontispiece, while the attractive wrapper shows the author looking out from a peak northwest of Everest. There is unfortunately no index.

—J.W.A.H.

Early American Ascents in the Alps in the Nineteenth Century

by J. Monroe Thorington (President of the American Alpine Club), pp. vii and 83; illustrations and facsimiles. Published by the American Alpine Club, 1943.

"This survey," says the author in the Introduction, "which has occupied moments of my time during the past fifteen years will serve as a reference work for those who are interested in the mountaineering activities of their forerunners who crossed the Atlantic." But on account of the curious items and pictures it presents, which throw light on older methods of climbing, it will interest many who are not Americans. Dr. Thorington's remarkable industry and very considerable knowledge of mountaineering history receive fresh illustration from this publication, which gathers together former articles and first-hand information wherever possible has led to a correction of the list in Stephen d'Arve's *Les Fastes du Mont Blanc,* which together notes in a revised form. The enormous trouble he has taken to obtain with several other volumes, among them C. E. Mathew's *Annals of Mont Blanc* and H. P. Montagnier's "Bibliography of Ascents of Mont Blanc from 1786 to 1853," *(Alpine Journal, 1911)* have supplied both useful and indispensable information. The greater part of the admirably produced book is concerned with climbs around Chamonix and the Monarch of the Alps.

The first American ascent of Mont Blanc was made by Dr. William Howard and Dr. Jeremiah Van Rensselaer, both university men, in 1819; the tenth ascent of the mountain, according to Matthew's *Annals;* and "the narratives they wrote of their ascent, were the first printed description in America of the ascent of an Alpine snow peak." They employed nine guides. There are pictures of the two climbers, a facsimile of part of Howard's neatly written diary, and a quaint sketch by him of the crossing of a crevasse in the Bossons glacier. Twenty years later Dr. Allen Grant of Baltimore Medical College, who attempted the ascent with 18 guides and 16 volunteers made some measurements of the movement of this glacier by a simple arrangement of sighted stones and found it to be 16 inches in 24 hours. He also experimented with some pigeons which he brought up from Chamonix to the rocks of the Grands Mulets in order to observe the effects of high altitudes on these birds.

A notable ascent of the Monarch was that by George Heard, aged 18, accompanied by an Eton boy of 17, in 1855, the first American to have attained the summit twice, the second time with his brother, two years later. An amusing account of this second trip is given on which champagne appears to have been quite common, as it was on many of the earlier Swiss climbs by American and English mountaineers. Interesting sketches by Heard are reproduced, and opposite page 37 there is a picture of himself and his brother with their guides, most of them armed with alpenstocks, and one with an ancient make of ice-axe. Dr. Thorington refers to this as the earliest photograph of American climbers. On the same page is a drawing of a glacier accident on the ascent of 1855.

There are pictures of the celebrated Coolidge (not as a youth), "the young American who climbs with his aunt and his dog," and of his aunt, Miss Brevoort, an outstanding climber of her day and the first woman to ascend Mont Blanc; of the two Wilkinsons with their guides and parents, showing ice-axes almost five feet and alpenstocks over five feet in length, and of a large party who went to the Grands Mulets in 1866, the ladies garbed most unsuitably for mountaineering (page 47). The Ancien Refuge was erected in 1853, before which there appears to have been no proper Alpine Hut on the Grands Mulets.[1] Earlier ascents were made mostly by the Ancien Passage or the Corridor. A most remarkable exploit was that of Sir Francis Campbell (American born) and later Principal of the Royal College for the Blind. Himself blind since four years of age, he climbed the peak in 1860, and later the Matterhorn, Eiger and Jungfrau.

The first solo ascent by an American was made in 1897 by H. A. Riegel whose outline of the route was given. A year later he was killed in an attempt to reach the Dome hut alone. All fatalities on Mont Blanc in which Americans were involved are pronounced by the author to have been avoidable.

The shorter Part II of Dr. Thorington's book contains a list of climbs by Americans in the Western Alps, the Zermatt district and the Bernese Oberland, in which the achievements of Coolidge are conspicuous. He made the first ascent of the Dent Blanche from Zermatt being accompanied by Miss Brevoort, who was the first woman to climb that peak and to traverse the Matterhorn (pages 68 and 73). In concluding the author pays high tribute to Coolidge and Henry F. Montagnier, not among the earliest climbers, both as mountaineers and historical writers. His book, interesting in itself, and containing valuable material for later historical accounts, should be in the library of every Alpine Club.

—J.W.A.H.

Hiking, Camping and Mountaineering

by Roland C. Geist; 304 pages with 44 illustrations.
Harper & Brothers, New York. Price $3.00.

One sentence of this book is reminiscent of opposing views of competent snowcraftsmen and the judges at a certain photographic competition; the judges praised what they thought the artistry of a picture which they claimed showed weariness of a climbing party approaching a peak across a high neve. The party had closed up within a few feet of each other, rope sagging slackly, all off guard for the masked crevasse which ought not to be there but sometimes is. (Three times this reviewer has come upon tracks of large parties who had trudged unsuspectingly lengthwise along big chasms which one more day's thawing made dangerous.) No advice on glacier climbing ought to be soporific, such as, "The safest path along a glacier is close to the edge of an open crevasse." Just for one of several examples of the falsity of this, is a pair of crevasses with overlapping ends, one crevasse being snow covered.

"Hiking is an all-season sport." (Page 70.) But the same paragraph goes on to stress that, "Anyone who hikes in the wilderness out of season endangers not only his own life but also the lives of those who must come to rescue him." Would it not be sounder to counsel those aiming to make climbing and hiking an all-season sport to make sure that their experience leads to competence.

1 It was renewed several times before 1900. In 1927, it was not clean, the food was poor and expensive. Fortunately it is not now so necessary as it was.

Mere experience—as shown by winter disasters in Canadian mountains—is no substitute for sound judgment.

"Climb and hike in daylight," is the warning on page 71. Yet the ability to keep going after dark, even in rough country, is a worthwhile thing, and certainly a climber's training lacks completeness if the mere fact of nightfall roots him down till morning. In the mountains overlooking my home we take it as a matter of course that many people start as late as midnight, winter or summer, in almost any weather.

In the main, Mr. Geist achieves a high degree of success in condensing so much information into a single book. Now and then, like so many books on outdoor topics, the western part of the continent is ignored. Thus, the reader is told, "Magnetic north is true enough for hiking map reading." (Page 79.) A glance at a map showing lines of equal magnetic declination reveals deviations of the compass by 15 to 20 degrees in the Middle West, and increasing northwestward to 25 and 30 in British Columbia.

The book deserves praise for its modern treatment of frostbite—no rubbing.

Faith in the ability of a sky filter to live up to its name belongs to a past generation of photographers.

Although Victoria, B.C., has not disclaimed a bit of English atmosphere, even Victoria would not recognize itself as a "typically English town," the description the author oddly applies to Vancouver. (Page 161.)

'"Nailing diagrams do not show edge nails in the waist of the boot. One so placed once saved the reviewer from a 60-foot plunge into a glacial cataract. Mountain Craft (page 82), favors nailing the whole edge of the sole.

G. W. Young also advises that, "A guide's equipment is the very last to be imitated." After quoting, with seeming significance, preferences of a certain group of guides, Mr. Geist observes, "The principle of the Tricouni nail is that the hard steel will bite into the soft rock, whereas the hard rock bites into the soft iron of the clinker and thus obtains a grip." Then, illogically, adds, "Soft iron nails are recommended for the novice for they can be used on any type of rock." (Page 222.) Relative softness is not the chief factor in gripping rock; more important is being able to use small roughnesses by getting nails into hollows or behind knobs. And why ought the "novice stick to nails to learn proper footwork," before using the special rubber soles which simulate nails?

Possibly guide influence may exist in only the reef (or square) knot being listed for joining two climbing ropes, and the simple overhand knot for middleman. (Page 237.) The reef knot is unreliable, being easily loosened up. The overhand knot may jam badly when wet and frozen, unlike the butterfly knot.

Description of the body belay omits mention of the most vital requirement, that the body be braced well back in line with possible strain on the rope. (Page 239.)

One of Rudyard Kipling's characters affronted youths in an English public school by elevating marbles to the rank of sport, and Mr. Geist says, "An ice axe is to the mountaineer . . . what the bat is to the ballplayer."

Woodcrafters tend to over-emphasize the form of a fire (tepee, criss-cross, etc.) A first class fire can be made without clearly sticking to any one of these classical fads. "Only the most experienced outdoorsman can build a fire in the rain. It is a rare trick and only a few can do it." (Page 99.) It ought not to be, if dry wood may be had and a little common sense is mixed with it before applying a match. But the author does stress value of learning to use an axe.

Packboards are said to be made in only one size, but this ignores some western manufacturers.

No mention is made of the desirability of more or less waterproofing a packsack.

One notes with surprise that discussion of drinking cold water while hiking- or climbing omits counsel to sip it slowly.

The book makes no attempt to deal with skiing as a means of enjoying snow country. In fact (page 252), it remarks that while skis would afford a pleasant way to descend a safe snow slope, "the absence of lifts makes carrying skis impractical." On anything but hard snow or excessively steep snow, the skier, wearing his skis and using the right wax, will climb as fast with less effort as the foot traveller.

Reasonably concise and clear language generally characterizes this book. The section on camping can be especially commended, and includes a "Where to Camp" section, covering much of the United States and Canada. There is also much about hiking organizations, showing how popular the recreation is. There is a considerable bibliography of hiking, camping and mountaineering books, periodicals and booklets.

Hiking and climbing can merge into each other without sharp division, and camping often becomes a part of both, so this book logically links them together in one volume. The climbing end doubtless has necessarily been too condensed, but is a workable summary for all that.

—W.A.D.M.

Special Number of Canadian Alpine Journal, 1912

Price fifty cents. 97 pages, with map of Mt. Robson region, and 23 illustrations.

Do you know what well-known bird in the Rockies fares daintily on flowers of the heather, and which on buds of arnica? Probably many of the present-day members of the Club do not even know of the special edition of the *Canadian Alpine Journal* which contains the answers to these questions.

The volume resulted from the Club expedition, under Mr. Arthur O. Wheeler, to explore Jasper Park, Yellowhead Pass and the Mt. Robson region, including a natural history survey of the country as well. This latter work was undertaken by a small party, organized by the Secretary of the Smithsonian Institute, from the United States National Museum, which was joined by Mr. Charles D. Walcott, Jr., and Mr. H. H. Blagden.

The material collected included mammals, birds, reptiles, batrachians, fishes, invertebrates and plants. Fortunately the writers were not content to make the record merely a list of names and species.

An account of the late "Curly" Phillips cornering six goats against a cornice, will be of more than passing interest to all who knew and loved him during his many years as a member of the Club as well as outfitter for many Club camps.

Believers in "cinnamon" bears being a distinct species will find little more support here than in the "Handbook of the Rocky Mountains Park Museum."

During part of the summer's work the party divided in two while Mr. Wheeler's section did topographic work. A detailed description of this, fully illustrated, will be found in Volume IV, 1912, of the Journal, now priced at fifty cents. This latter volume, of course, also contains articles of general mountaineering interest.

—W.A.D.M.

Canadian Landscape

as pictured by F. H. Brigden, R.C.A., O.S.A., with biographical notes by J. E. Middleton. Pp. 111, 24 colour plates and numerous other illustrations. Designed, printed and bound by Brigdens Limited, Toronto, and published by the Ryerson Press, Toronto.

As I look over the beautiful illustrations in color of this charming book, I am reminded of a day at the Club's camp in 1934 in the Eremite Valley when I strolled out of camp and visited Outpost Lake. There my attention was drawn to a gigantic white umbrella on the other side of the lake and on investigating I found our Club member, Fred Brigden, painting in water-colors a picture of the lake. I wondered at the rapidity of his work and the beauty of the painting as it progressed and at sundown, when he returned to camp, I beheld the painting completed, except for a few finishing touches in the studio.

I was overjoyed at Christmastide when I received a wonderful reproduction of the painting as a Christmas card.

Mr. Brigden has been an artist for some fifty years and has painted Canada as seen by him in the Maritimes, Quebec, Ontario and British Columbia. He is primarily a business man but is one of Canada's outstanding artists and has had the facility through his company of reproducing his paintings in color, his firm having been one of the first in Canada to take up the color process in printing. This gave him the opportunity of reproducing each year one of his outstanding paintings of the year and sending the reproduction to his friends by way of Christmas card. His friends have now prevailed upon him to have these color prints preserved in a more permanent form and as a result — this publication. It is a work of art from every standpoint, and Brigdens Limited and the Ryerson Press are to be congratulated.

The biographical notes, furnished by J. E. Middleton, give the story of Mr. Brigden's life and show how his artistic skill, partly inherited from his father, gradually developed through his native ability and association with other artists from some of whom he received many helpful lessons. He was one of the pioneers in painting the Canadian Scene, particularly in Northern Ontario. Our club members, interested in his work in the Rockies and Selkirks, rejoice that while they for the most part are interested in the physical aspects of the mountains and their own association with them, he has been able to capture the beauty of the mountains and record it in permanent form.

Rheumatism contracted while lost for two days on a sketching expedition in Northern Ontario has handicapped Mr. Brigden in getting around. He still paints with the same zest however and during each of the past two summers spent several weeks painting in the lake districts of southern British Columbia.

Mr. Middleton's notes of the artist's life are splendidly written and show a keen appreciation and a great regard both for the artist's work and for the artist who is a very friendly man and who has done much to help his fellow man, particularly the youth of Toronto where he lives. Truly, of this book it may be said, "A thing of beauty is a joy forever."

— H. E. S.

Brenva

by T. Graham Brown. Pp. xiv and 227, with sketch map and 72 illustrations.
J. M. Dent and Son Ltd., London, 1944. Price 25s.

This book consists mainly of the story of five ascents from the Brenva glacier between 1927 and 1933, three of them first ascents, of the stupendous and magnificent east face of Mont Blanc. "The rock," says the writer, "descends in wild ribs, the intermediate ice hangs in tiers of nearly vertical ice cliffs, and an almost continuous wall of ice crowns the whole face." "When the picture of the Brenva face finally revealed itself to me in its complete form, it did so as a great triptych, a thing scarcely to be matched in its fullness and splendour." (p. 37.) The triptych is composed of three routes, one named by the author, the Sentinelle, because it leads to the highest and French summit of the mountain, one leading direct to the Italian summit, Mont Blanc de Courmayeur, named Via della Pera, so called on account of its pear-shaped buttress, and a middle route named Route Major leading to the pass between the two summits.1 "These three routes make one grand and simple pattern of the Brenva Face." (Illustration 13 is very enlightening as to their relative positions.)

Professor Graham Brown is pre-eminent among climbers for first ascents up difficult rock and ice faces. Outstanding among his many achievements are the first exploration and ascents of both peaks of Mt. Foraker in Alaska. In the Himalayas he played a prominent part in the expedition that conquered Nanda Devi. His imagination was first aroused by the Brenva face through the reading of A. E. W. Mason's *Running Water,* the climbing parts of which were based on A. W. Moore's description of his first ascent of the old Brenva route in 1865, and a later account of its first guideless ascent in 1894; a great route, ascended thirteen times by the late R. W. Lloyd. "Had Mr. Mason not followed Moore's ascent very exactly, this book would not have been written," declares the author. A topographical mistake on his part was the ultimate cause of the climbs on the "Brenva face. It aroused the questions: Why did the old Brenva route lead so indirectly to Mont Blanc? Why had the peak not been climbed more directly from the Brenva glacier? (Chapter 2.)

The author was keen to try the Route Major, but as Mr. F. S. Smythe held that this route was impracticable, they compromised on the Route de la Sentinelle, which followed a twisting rib on the right of the R. M. and led up to a definite gap in the ice cliffs. The climb involved a bivouac. This route,[2] although exposed, is, according to Graham Brown, technically the easiest of the three new routes made by him. It was completed within forty-eight hours of its discovery, which makes it "something of a mountaineering curiosity." It. was not until after this climb that the author learnt that others had entertained similar ambitions on the Brenva face, "the admirable reticence" of which had saved it from becoming a notorious "last great problem of the Alps."

It was about a year later, in August, 1928, that the same two climbers set out from the Torino Hut for an attack on the Route Major which lies to the left of the Route de la Sentinelle. The climbing on it was much more difficult and dangerous. Both rocks and ice were in bad condition, and at one place at the base of the final buttress which the author designated as "the unclimbable corner" (illustration 44), the climbers were involved in a critical situation, Smythe falling and landing on Brown's back half-astride, one of his crampons carrying away the latter's side pocket with pipe and tobacco, the other penetrating his clothing and cutting, but not deeply, into his side. Mr. Smythe

1 These summits are respectively 15,782 and 15,578 feet and about a third of a mile apart, connected by a summit ridge in which there is a slight depression.

2 A first account of which appeared in *The Alpine Journal,* No. 236, pp. 68-76, by F. S. Smythe and T. Graham Brown.

was for abandoning the climb, but Brown could not accept defeat and decided to circumvent the crack, which was covered with *verglas,* by tackling an ice traverse. After three hours of almost continuous and arduous work they had gained only sixty feet—above the unclimbable corner. But this was the crux of the climb (ca. 14,300 ft.) (pp. 60-66). The top of the final buttress (ca. 14,700 ft.) (illustration 45) was reached around 6 p.m. and Col Major just before sunset. It was too late to attempt the pass between the two summits; the lower summit was reached at 7.45 and Mont Blanc at 8.20 p.m., whence a descent was made to the Vallot Hut.[3]

The hope of completing the Col Major persisted in the author's mind, but it was not until 1933 that it was realised. Neither weather nor condition of the Monarch allowed of any renewal of the attempt before, but in the meantime numerous fine climbs had been made in the region, among them the Pic Moore (illustrations 22 and 38) and the old Brenva route on which their employer had occasion to admire the workmanship, the rhythm and smoothness, in general the superb technique of his guides, Alex. Graven and Joseph Knubel (p. 101). (Illustrations 25, 26, 32 to 35.) Graven became Professor Brown's guide in 1929, and eventually led him on the successful assaults on the Col Major and the Pear Route. The latter came to be his dominant aim: it attracted him somewhat in the manner that the ascent of the Matterhorn drew Whymper, between whose situation on the last attempt and his own there are several interesting parallels. (See p. 156.) He thought mistakenly that "the admirable reticence of the Brenva face" had hidden this climb from all eyes but his own and the guides'.

At last in 1933 the quest seemed to be on the verge of accomplishment. In addition to Graven, the author had Alfred Aufdenblatten as second guide. The three left the Torino Hut at the end of July for the attempt. It failed owing to the condition of the route; but they had the satisfaction of a successful climb of the Route Major including the Col with descent to the Sella Hut, after a forced and miserable bivouac and ascent of Mont Blanc. The route was in much better condition than on the first ascent; better time was made, partly owing to the assistance of the guides who called forth the unstinted praise of their employer. It was full of surprises and blended all kinds of mountaineering obstacles "into one matchless whole; slopes of snow or ice, broad snow couloirs and narrow ice couloirs, steep and broken rock arêtes, long and slender snow crests, abrupt precipices, ice chimneys, rock chimneys, a high sérac wall" (p. 147.) (Illustrations 43, 47, 48, 49.) The author had wished at one time that the triptych would be completed by guideless expeditions; later he realised that "this wish was only a surrender to the popular (?) idea that it takes something out of the spirit of adventure if you climb with a guide"; for "the guideless ascent of Route Major in 1928, on which most of the route-finding fell to my lot, left no memory of greater adventure than that of the Via della Pera in 1933 when I was happy to be following in Graven's steps." This took place a week later. In the meantime Professor Brown returned to the Torino Hut in a sombre mood, for Graven had declared that the Pera was finished so far as he was concerned: the route "might go," but he would not, as a well-known guide had said of another climb. His disgruntlement appears to have passed quickly, for when he and his employer were examining the hut book, he agreeably surprised the latter by suggesting that their latest climb be inscribed as that of the Route Major, thus showing that he was anxious to keep secret their attempt on the Pear. But Professor Brown's uneasiness was not over, for a fine Italian climber, Signor Zanetti, who had watched the party on the Brenva face, approached him to inquire why he had repeated his climb of 1928, The answer given was, in order to make the highest pass in the Alps. But Zanetti looked puzzled and sceptical, and inquired whether he had_ tried the route on the left, and gave him a slight shock by

3 The first (brief) account of this climb by F. S. Smythe appeared in the *London Times Literary Supplement* in August, 1928.

producing a picture postcard on which he pointed to the Via della Pera, which he designated not ineptly as the "Clocher." Next day, on their way down to Courmayeur, Graven further disturbed his employer by saying: "They will try it tomorrow," meaning Zanetti and his companions. Some days later, and after the author's successful ascent, Zanetti informed him that he and his companions had slept several nights in 1931 at a bivouac on the Brenva glacier and had made two unsuccessful attempts to reach the foot of the important rib below the Pear buttress.

The author's party left the Torino Hut for a final attempt on this route around midnight, a bright moon rendering the use of lantern unnecessary. Although the first part of the ascent was not difficult, yet the rapid pace was a bit exhausting, and a short rest was taken and crampons removed some 250 feet below the foot of the buttress, which was reached at sunrise. Estimated to be between 800 to 900 feet, "it is set between two great lower ice cliffs which press upon its flanks from either side, the crest of their nearly vertical walls of ice being only a little lower than the top of the main buttress itself. The buttress is really shaped like a pear hanging in its natural position." (p. 165.) (Illustrations 56, 58, 60.) Although not without difficulty, its ascent proved to be unexpectedly easy, but very exposed.

The "neck" of the Pear, and the "curtain" so-called (pp. 166, 167), caused deliberation and concern. (Illustrations 61, 62.) Was the former to be attempted by the southeast or northwest face? The latter, being free from the danger of falling ice, was chosen; further problems presented themselves, which must be left to the reader of the book to follow. The climbing of the "curtain," of a slabby face some 65 feet in height, one of the most difficult bits of the climb and an equally difficult, though shorter bit, higher up, which almost stumped Graven, are described in great detail. Mont Blanc de Courmayeur was reached at 1.20 p.m., and thus was completed the Via della Pera, the third panel of the triptych of the Brenva face. Chapter eleven ends with a glowing description of the magnificent scenery and of the intense experience of "the moment of deliverance." The Pear Route is rated by the author as the grandest and most formidable, the Route Major as the most beautiful of the three, and only slightly less difficult than the Pear.

Professor Brown's book is not easy reading. The Brenva face is immense and complex, and does not lend itself to simple narrative. The climbs are themselves intricate, and_ their great technical difficulties are described meticulously. Sometimes it seems that what the author calls an arête would appear to others as a precipice.

Crammed with interesting and valuable notes and references, this book will be eagerly read and enjoyed by all who have climbed in the Mont Blanc region. It is an indispensable addition to the libraries of Alpine Clubs, and educative for individual mountaineers. There is a detailed account of the history of the Brenva face with a note on its topography. A sketch map of the main features, the peaks, passes and huts, referred to in the book, is most helpful in following the numerous excursions made by the author. There is a comprehensive index. The many illustrations inserted at the end of the book are both informative and very fine. The frontispiece shows the wonderful and apparently insurmountable arrangement of ice, snow and rock of the Brenva face.

> Every great mountain is a map displayed,
> And this great skyline is a sounded coast
> Edging an unknown land—the mighty flank,
> Veiled by its steepness, daring, challenging,
> A vast uncharted wilderness of form. (p. 36.)

— J.W.A.H.

ALPINE NOTES

Mount Hozomeen

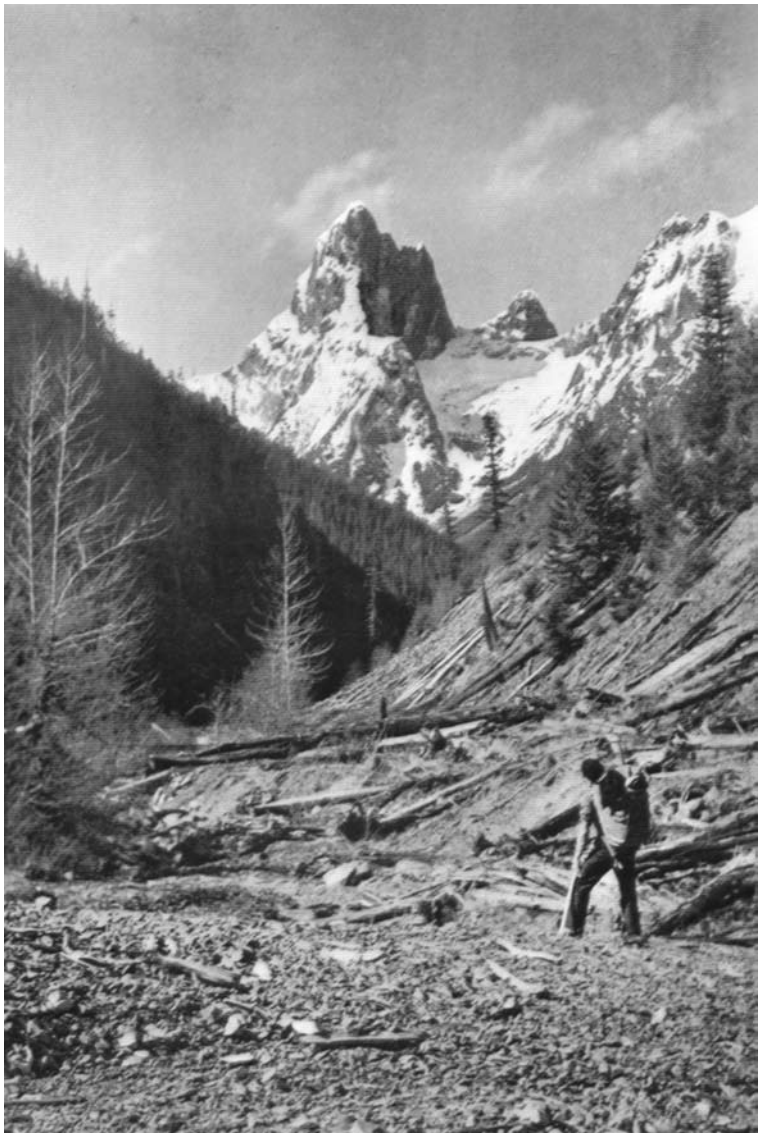
Years ago an isolated reference, in a geological report, to the "nearly or quite inaccessible" summit of the south peak of Mt. Hozomeen (8,020 feet), in the Cascade Range of Northern Washington, attracted our interest, but it was not until May, 1944, that Charlie Ney and I had the opportunity to investigate this claim. We planned the expedition to this mountain at that time knowing full well that it was too early in the season for assurances of the good weather and snow-free slopes necessary for a complete ascent, but no other time was available to us and a mild winter and early spring offered encouragement.

Thus at 4.30 a.m., Sunday, May 7, Charlie and I left the town of Princeton, B.C. (120 airline miles east of Vancouver) by car bound for this imposing peak. By 9.30 the same morning we had driven to a point about 30 miles southwest of the town on the still uncompleted Hope-Princeton highway, had organized our supplies, and were on our way along the Skyline Trail for the 14-mile hike to the mountain.

For about two miles the trail led comfortably along the valley floor, then it climbed abruptly for over 2,000 feet to the crest of the Skyline Ridge. For about seven miles the trail continued along this narrow ridge which links a series of 6,500-foot peaks, till the last rise, Hozomeen Ridge, overlooking the Skagit River, was reached. Over much of this distance the trail was buried by snow and it was not until late on Monday afternoon that we reached a campsite, two miles south of the trail and within striking distance of Mt. Hozomeen.

On the following morning we awoke to find about three inches of fresh snow mantling the surroundings, and more than a sprinkling, which had drifted under our fly, mantling our clothes, our sleeping bags, and us. With some disgust we lay gazing at this beautiful yet uncomfortable spectacle. Our hopes of climbing the south tower, hopes which had been dwindling ever since we had first set eyes on the peak, were now completely shattered. It was with some effort that we struggled with a fire and breakfast and started on a program much less ambitious than our first, on an attempt on the higher but easier north peak of Hozomeen. For much of the morning we broke trail along Hozomeen Ridge, reaching and crossing the International Boundary, and traversing the north slope of the mountain itself to its eastern ridge. There we found the route to the north peak barred by ice-glazed rocks and fresh snow. Great gusts of wind occasionally swept the cliffs above us, forming plumes of driven snow which drifted downwards and enveloped us in a hail of fine, stinging ice particles. Beyond the east ridge we found a chasm filled with a tumultuous curtain of grey fog which was occasionally swept aside to reveal an enormous .and forbidding black wall, the sheer north face of the south tower. With further progress barred in this direction we turned our attentions to the north face of the north peak, and broke a trail up its snowy surface to an elevation of about 7,500 feet, 500 feet below its summit (8,080 feet). Here again we encountered a rib of ice-glazed rocks which could be outflanked only by traversing a steep and none-too-secure snow slope above the precipitous west face. Unwilling to accept the risk, we admitted defeat and returned to our camp. That evening, to evade a new storm sweeping in from the south, we moved down to the valley of Lightning Creek, east of the mountain.

On the following day we completed the journey up Lightning Creek and across a pass to the end of the road, and the drive back to Princeton, leaving behind, still unclimbed, a truly magnificent spire, the south tower of Hozomeen.



Mt. Hozomeen.
Photo W.H. Mathews.

But our efforts were not fruitless. We had investigated one of the approaches to the mountain, and studied two sides of the mountain itself. We found that it is possible to reach the base of the mountain in a day from Princeton, travelling along the bottom of the Lightning Creek valley. But from this point we could see no way to the summit. The south face, which we never saw, remained untried and seemed to offer the only hope. This face could be reached either from Lightning Valley on the east or the Skagit Valley on the west. The latter valley may be approached either from the western part of the Hope-Princeton road in British Columbia, or from the Boss Dam in Washington, and with the completion of this dam and the consequent flooding of the valley, it may shortly be possible to land at the base of the mountain, not after a tedious journey on foot, but after an easy jaunt by boat. With this new incentive surely this peak will not remain long unconquered.

— W.H.Mathews.

Safety Ski Harness

Ski harness which holds the heel down tightly on the ski has admittedly greatly increased skiing accidents, particularly leg injuries.

A harness designed to release the foot entirely from the ski in a forward fall won the prize offered by the Ski Club of Great Britain (*British Ski Year Book,* 1939, page 231.) Simplicity marks the device. A short stud on the sole protector plate fits into an ingenious notch in the toe iron. Only the tension of the heel strap prevents the boot being lifted free of the irons if the heel is raised a few inches. So a strap or cable is attached to pull the heel strap off at a point chosen by the skier. This trip line is not a new idea, of course. It has been used in association with toe straps, but the foot cannot be freed if held down by lugs gripping the sole.

Claims are made that a properly fitted trip line will pull a leather heel strap off. I only succeeded with spring heel straps. With them I could, if I wished, use such light tension (with tightener closed) that hands need not be used to attach the heel strap. Sharp pressure with the heel would spring it into the heel groove. This is handy if one carries a heavy pack.

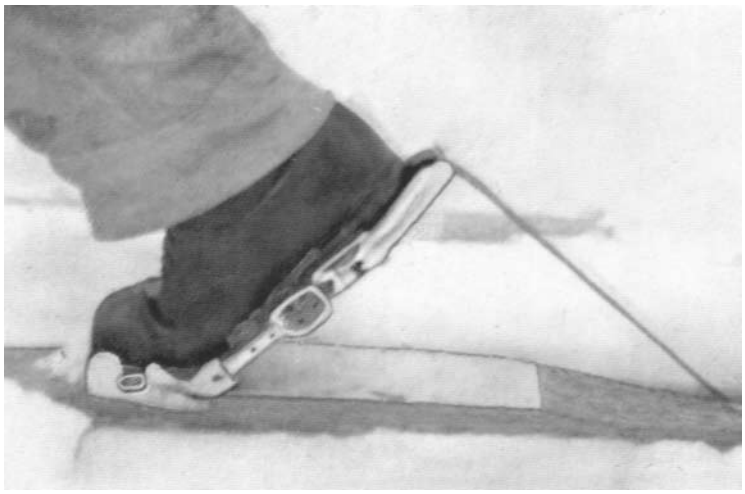
Toe irons must fit snugly against the sole, for the studs prevent the usual wedging action due to pressure of the heel strap. Studs need be only slightly thicker than the toe irons. If slot and studs match properly one may ski without a heel strap at all, provided the heel is not lifted unduly.

This safety harness evidently was meant to be used in conjunction with some degree of down-pull, but I have no experience with it under such circumstances.

Many of the usual types of toe irons may be easily converted to this safety type with no more elaborate tools than hack saw, a drill or two, and an eight- or ten-inch “rat-tail” (round) file. The writer lacks information as to whether or not the device is patented here, but understands nothing prevents making such things for one’s own use.

The trip line shown in the illustration was merely attached experimentally. It was adjusted to allow the heel to be lifted enough to telemark.

—-W.A.D.M.



Ski Safety Harness. *Photos W. A. D. Munday*.

With this safety harness the boot is locked as securely in the toe iron as with the other types. If the heel advances any further the spring heel strap will be jerked off by the trip line, which should be adjustable. The studs on the edge of the soles then lift freely out of their sickets in the irons.

This view of the safety harness shows how the studs on the edges of the soles are free to lift out of their sockets in the toe irons after the trip line, which ought to be adjustable for length, has jerked the heel strap off.

The John Balch Bequest

The late John Balch, of Milton, Massachusetts, an esteemed member and friend of the Club since 1920, has bequeathed to the Club the sum of $1,000.00 in appreciation of the happy days spent at the camps of the Alpine Club of Canada.

The Chant Medal Award

The congratulations of the Club are extended to Cyril G. Wates, winner of the Chant Medal for "outstanding amateur contribution to astronomy in Canada." Mr. Wates, who makes telescopes as a hobby, has recently presented his largest telescope to the University of Alberta. He has published many articles on the theory and technique of telescopes. Few have such broad interests as Mr. Wates who is an active musician, a writer of short stories and a novel, as well as a mountaineer.

East-West Traverse of the Mitre

Eric Brooks and Peter Vallance made the usual ascent of the Mitre from the Paradise Valley Camp on July 19, 1944, in 2 hours, 55 minutes.

Their route of descent lay to the south down a large couloir. Below this a 50-foot cliff formed by a brown band of rock proved difficult, the lower 20 feet being an overhang. As no belay for rappelling could be found, Vallance was lowered and Brooks jumped 20 feet onto the snow-covered scree slope below. A series of rock ledges led to the 500-foot cliffs skirting the base of the mountain from the east face to the Lefroy-Mitre col. Here the most feasible route seemed to be a very steep rock couloir to the southwest. Holds were small but adequate and owing to the steepness there was little loose rock. Two difficult overhangs were descended, Vallance climbing to the length of the rope and Brooks following. The traverse ended at the tip of the east lateral moraine of the Horseshoe Glacier after a descent of 5 hours, 30 minutes.

Mr. Brooks advises that such an exacting climb should not be attempted by a party of more than two climbers. Danger of falling rock and lack of suitable places for belaying make it slow and exacting.

Yandell Henderson, 1874 - 1944

Dr. Henderson was a member of Walter Wilcox's historic party at Lake Louise in the summer of 1894, and wrote an engaging account of it for *C.A.J.,* xxii, 133. He was not a mountaineer, but joined the group because of his interest in hunting and a particular desire to bring down a goat. He was, however, in the couloir of Mt. Lefroy when his companion Frissell, whose death we have lately recorded, met with an injury from rock-fall. He joined Wilcox in making what was probably the first ascent of Castle Crags, visited Mitre Pass, and took part in the discovery of Paradise and Ten Peak Valleys, crossing Sentinel Pass to the latter and returning by Wastach Pass. His enthusiasm for hunting diverted him from first ascents of Mts. Aberdeen and Temple.

After receiving an A.B. degree from Yale in 1895, Henderson studied physiologic chemistry under Chittenden, gaining a Ph.D. in 1898. During the next two years he studied at Marburg and

Munich, becoming instructor in physiology at Yale medical school in 1900 and advancing to the professorship by 1911. He was an ensign during the Spanish-American war, served on the U.S.S. Yale in Cuban waters and on the first expedition to Puerto Rico.

During the first World War, Henderson was chief of the medical section of war gas investigation, and developed improvements in the army gas mask. He was an authority on the physiology of respiration and circulation, and on the pharmacology and toxicology of gases. He organized the medical board of the aviation section, Signal Corps, 1917-1918, and devised the tests for determining the ceiling of individual aviators. In 1938, he became Professor Emeritus of Physiology at Yale. One of his most notable appearances before a Congressional Committee was in 1932, when he testified before the House Ways and Means Committee that four per cent beer was virtually non-intoxicating. Dr. Henderson and his associates also devised the standard of ventilation for the Holland tunnel under the Hudson River.

—J.M.T.

The Freshfield and Lyell Glaciers[1]

The Freshfield and Lyell Glaciers were remeasured on July 27 and 31, 1944, by Mr. and Mrs. D. Measuroll, J. M. Thorington and *E. Feuz, Jr.,* earlier reports on which will be found in *A. A. J.*, i, 410; iii, 220 and *C. A. J.,* xxv, 116; xx, 138.

The Freshfield Glacier has retreated 2,100 feet since 1922. In that time the great boulder on the ice has advanced 1,723 feet, being now 1,478 feet from the terminus. The line of numbered stones set out in 1922 is entirely off the ice. The stream from Coronation Mtn. now cuts across the snout of the glacier and forms a large lake, the main river emerging from the extreme eastern angle.

The Lyell Glacier has retreated 2,500 feet from Lake Moraine Station, with the rocks of which it was connected by an ice bridge in 1926. The terminal ice is now directly below the grassy gully leading to the bivouac from which the ascents of Mt. Forbes were made in 1939. The tongue now ends in a lake 300 feet long, containing large stranded icebergs. It is believed that this lake will be a permanent feature. A cairn was built close to the stream on the North lateral moraine in the line of the terminal ice.

From the southeast angle of this lake, Glacier River emerges and shortly enters a second lake, shallow and 1,050 feet in length, the middle of its south side receiving the stream from Mons Glacier. The latter tongue has retreated far up into its canyon.

The tongues of both Freshfield and Lyell Glaciers, in addition to their retreat, show correspondingly great lateral contraction and subsidence. This disappearance of ice is making the approaches to peaks of the region more difficult and less attractive than was the case a quarter of a century earlier.

—J.M.T.

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1 Reprinted from *A. A. J.,* 1946, with the kind permission of the Editor.

Stairway and Aries Peaks —1944[1]

First ascents by Mr. and Mrs. D. Measuroll, J. M. Thorington, E. Feuz, Jr. From Howse Pass, camp was established at timberline in the North fork of Ebon Creek, this stream being the true source of Blaeberry River. Stairway Peak was ascended in four hours, following which a descent into the South fork of the creek led to the ascent of Aries Peak. Total time from camp, 13 hours. Owing to improved trails it is now possible to take horses from the Saskatchewan forks to Howse Pass in six hours.

The six peaks of the watershed between Mt. Breaker and Howse Peak have been referred to (*A. A. J.,* iv, 495), Aries Peak (9,900 feet) being the highest. The canoe route there described is now thought to be inadvisable, since the ascent from Mistaya Lake will be best, bring one to the Breaker-Ebon col, from which a considerable descent and a long round are necessary to reach the remaining summits.

Aiguille Peak appears to be the most difficult of the group and may require artificial aids. From Ebon Creek a grand and evident new route can be made on Howse Peak.

Ebon Peak, Midway Peak and Mt. Synge are not attractive objectives, having ugly shale slopes on the western sides, although rising boldly above the main eastern escarpment.

The summits ascended are splendid viewpoints, the watershed from Columbia to Assiniboine being visible, the Clearwater peaks, Bugaboos and southern Selkirks being included in the panorama. The Freshfield and Forbes-Lyell areas are seen to particular advantage, while the eastern precipice above Cirque and Chephren Lakes is spectacular.

—J.M.T.

Fatal Avalanche at Lake Louise

On March 26, 1945, about 5:00 p.m., nine skiers from the East, including Hermann Gadner, formerly of Obergurgl, Austria, and more recently ski instructor at St. Jovite, Quebec, were skiing on the northeast slope of the long southeast ridge of Mt. Richardson near Lake Louise, when a large avalanche engulfed most of the party and completely buried two. One of these, Mrs. Newman, had fortunately held up a ski pole. A small segment of the pole's basket visible above the snow was discovered in about ten minutes and shortly after we succeeded in uncovering her head. She soon recovered consciousness and was removed from the snow unhurt.

An hour of systematic probing with the longest available poles failed to locate Gadner and it was only after reworking the most likely area with pole plus full arm length, a slow and difficult proceeding, that we finally found him in an almost upright position with head six feet below the surface. Digging with skis and hands, we uncovered his head within about eighty minutes of burial. He had every appearance of being dead. For over an hour, Royal Little blew air into his lungs, while the rest of us tunneled to reach and release his feet from his skis, which were buried twelve feet deep. Color was gradually returning, but he did not resume breathing.

Immediately after the accident, Mrs. Cabot skied to Mt. Temple Chalet for help. The first of the rescue party arrived about 7:45, just before Gadner was pulled from the snow. Toboggan and blankets came more than an hour later. In the meantime, Gadner, who was lightly clothed, was wrapped in available clothing and great effort was made to restore him to life; but it was all to no avail.

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1 Reprinted from *A. A. J.,* 1946, with the kind permission of the Editor.

The slope on which the avalanche occurred was 25 to 30 degrees and 400 to 500 feet high. The snow on this northeast exposure was settled powder over unconsolidated granular and averaged about three feet deep. Recognizing the hazard in the wide snow bowl flanking the ridge, the party was descending close to the rocky point at its eastern end and all were within a few yards of the edge of the avalanche, which slid simultaneously throughout a total width of more than half a mile.

— Thomas D. Cabot.

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CLUB PROCEEDINGS

Paradise Valley Camp

July 16 to July 29, 1944

The thirty-ninth annual camp, held at the head of Paradise Valley, in the meadows just below Sentinel Pass, will always be remembered by those attending as a delightful experience. The camp site was beautifully situated — a more inspiring and inviting setting could hardly be imagined. For here one was encompassed by some of the finest peaks in the Rockies both for sheer beauty and challenge to the climber; while the sunny, tree-fringed meadow with the streams meandering through it lent an atmosphere of friendliness which was enchanting.

The camp, scheduled to start on Sunday, July 16, did not officially open until July 17. This delay was unavoidable owing to the difficulty in obtaining help. That a very great deal of praise is due Charles Richardson and his crew will be realized when it is known that none of the crew arrived in Paradise Valley until Saturday afternoon. The day before camp was to open! By Monday noon, however, the cook tent, dining-fly, bell tents had been erected, and all the camp paraphernalia was ready for occupation. Members and guests began to arrive Monday afternoon and by nightfall seventy-eight, including ten crew, had been fed and comfortably housed.

It would be difficult to imagine a more friendly and co-operative spirit than that pervading camp. Everyone did his utmost to make it enjoyable and all contributed in their various ways to the common good. The ladies helped with the cooking, serving meals, and the dish-washing; while the men felled trees, sawed and split the wood. One hesitates to mention names where so many are deserving, but all agree that our cook, Ken Jones, is worthy of special praise. Ken came prepared to cook for fifty persons, but for more than a week he catered to eighty or over. How he managed to cope with this hungry crowd with the limited supplies available during some of the time will always remain a mystery. Everyone not only had all he could eat, but agreed that the meals were of high standard.

The climbing program was complete and enjoyable — with the exception of one rainy day, climbs were carried out as scheduled. Thanks are especially due to the volunteer guides, through whose kindness and unselfish assistance such an ambitious and varied programme was made possible. The guides, all members, were: Misses M. Finley, L. Gest; Messrs. Beattie, Brett, Brooks, Gaebelein, Hall, Hunter, Kingman, Kramer, Marston, Richards, Richardson, Westmorland.

Most of the graduating climbs were made on Mt. Temple — and in all forty-two members and friends reached its summit during camp. All parties were very fortunate in the weather and they agreed that the view from the summit was superb. Henry Hall mentions in his account, "visibility was so clear that the Rockies could be seen from Mt. Assiniboine in the south to Mt. Columbia in the north; while the Selkirks' view extended from Sir Sandford to the Bugaboos and beyond."

The first climb of the Mitre, the best rock climb in the vicinity, was made by Eric Brooks and Peter Vallance, who completed the first east-west traverse of it. In all, six parties climbed the Mitre by the usual routes and it was voted the most enjoyable climb in the district.

Other peaks climbed from camp were: Paradise, Pinnacle, Eiffel, Aberdeen, and Haddo.

Many picnic and photographic excursions were made to the numerous beauty spots within easy reach of camp — to the Giant Steps, Lake Annette, Mitre Pass, Sentinel Pass, Wastach Pass, Larch Valley; and two large parties made the trip to O'Hara and back via the passes. One party remained at the Elizabeth Parker Hut an extra day in order to climb Mt. Odaray.

One unfortunate accident marred what was otherwise a perfect camp. Nan McKay, while picnicking at Lake Annette, sustained a severe back injury which necessitated her immediate removal to hospital. The camp was fortunate in having Dr. Hudson and Dr. Zillmer in attendance and with their assistance and direction Nan was enabled to reach Banff Hospital with the least amount of discomfort and harm. Subsequent X-ray revealed fractured ribs and vertebrae.

Nan is still in hospital, but we sincerely hope she will make a speedy and complete recovery.

An interesting feature of the camp was the presence of so many visitors from the Services. The Army was ably represented by Colonel Westmorland, and Sergeant "Betty" Stevens; while the R.A.F. maintained its record of high achievement in the exploits of Flight Lieutenant Burns and Flight Lieutenant Crichton who each climbed six peaks during their seven-day stay in camp. Sergeant Hussey, who hailed from Edinburgh, climbed Mt. Temple and Pinnacle during his brief stay with us. We wish them the best of luck and look forward to meeting them all again soon.

Other visitors included Mrs. Westmorland, who will be remembered for her exquisite wild-flower arrangements and miniature "gardens"; Miss M. Kohler of the Swiss Legation in Montreal; Mr. J. Murray Gibbon of the Canadian Pacific Railway; Mr. Woodworth, park warden. Mention must also be made of Mr. Witty from Boston who arrived in camp sans climbing boots, sans ice-axe, sans sleeping bag, sans rucksack, but amply compensating for these minor(!) deficiencies in a mountaineering camp by his appeal to the ladies. Seventeen ladies accompanied him up Paradise Peak and found him not only witty but a good climber. We were also very pleased to have as our guests Mr. and Mrs. Anderson of the Seattle Mountaineers.

The camp fires as usual were both interesting and informative. Talks of previous climbing expeditions and experiences were given by Messrs. Hall, Richards, Richardson, Westmorland. A very memorable evening was organized by Mr. Sampson which took the form of a "quiz" on the Paradise Valley area. Many historical and geographical incidents were brought to light as we had in camp such oldtimers as "Jimmy" Wilson, Alex Calhoun, N. B. Sanson, Charles Richardson, and Fred Green. Dr. F. Gaebelein, a new member of the Club, very kindly conducted the Sunday service.

The following passed the test for Active membership:

Mt. Aberdeen:

Dr. Gaebelein, Miss E. Hamilton, Mr. E. Sherrard, Mrs. E. Sherrard, Mr. Peter Scherk.

Mt. Temple:

Miss E. Allan, Miss G. Lewis, Miss M. Lewis, Mrs. S. Bowes, Miss R. Rouse.

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ANNUAL CAMP VISITORS

Visitors were drawn from:

CANADA

Alberta — Banff, Calgary, Pincher Creek.
British Columbia — Capilano, Chilliwack, Golden, New Westminster, Vancouver, Victoria.
Manitoba — Winnipeg.
Quebec — Montreal, Westmount.
Saskatchewan — Regina, Saskatoon.

GREAT BRITAIN

Edinburgh, London, Oxford, Manchester.

UNITED STATES

Illinois — Highland Park.
Massachusetts—Cambridge, Boston.
Minnesota —Minneapolis. New York —
New York, Long Island.
Oregon—Portland.
Pennsylvania — Conschohocken, Merion.
Washington — Seattle.

SWITZERLAND

Zurich.

Altogether ninety-three (with crew) were placed under canvas, representatives attending from the Alpine Clubs of England, America, Switzerland, France, New Zealand, The Royal (Geographical Society, The Appalachian Mountain Club, The Harvard Mountaineering' Club, The Mountaineers, B.C. Mountaineers, Philadelphia Trail Club.

Post-War Development Of National Parks

Submission by
THE ALPINE CLUB OF CANADA

Published below are the recommendations of the Club regarding the post-war development of parks, submitted to the Department of Mines and Resources.

Mr. R. A. Gibson's acknowledgment of the submission is appended.

In the memorandum entitled "Post-War Planning for Tourist Travel in Canada" prepared and already submitted to your Department by the Canadian Pacific Railway, the suggestion is made that the time is ripe for the Canadian Government to do more to provide facilities for healthy outdoor recreation in its National Parks. We are fully in accord with this view and also with the methods suggested by the Canadian Pacific Railway for implementing them.

This submission should be considered in conjunction with the above-mentioned report as it supplements the suggestions therein contained by making *definite* recommendations for the development and greater utilization of the National Parks of Canada by the general public. Inasmuch as two of the objects of the Alpine Club of Canada as stated in the Constitution are: "*(a)* The promotion of scientific study and exploration of Canadian alpine and glacial regions" and "*(d)* The encouragement of mountain craft and the opening of new regions as national playgrounds," and inasmuch as we have held forty consecutive annual camps in the various mountain regions of Canada to further these objectives, we feel especially qualified to submit the recommendations attached hereto.

Since the first concern of our Club is with mountaineering, it should not be construed that the recommendations concern only greater facilities for climbing, such as the opening or reconditioning of trails leading to good climbing areas, and the erection of huts or shelters at strategic points. We recognize the desirability of making more readily accessible many fine beauty

spots, recreational and fishing areas in our National Parks, *to tourists in general.* Heretofore, many such areas have been accessible only to those able to afford expensive pack-pony trips, or to those physically fit to endure back-packing excursions of the most strenuous character. The potentialities of the inner recesses of the Parks should be shared by a larger number of our citizens, and those from other countries. To achieve this greater accessibility is necessary.

The recreational value of our parks cannot be too greatly stressed, for to people who spend the greater portion of their lives in cities and towns, they afford opportunities for exercise, rest and refreshment to both body and mind. But unless they are made readily accessible and the public is encouraged to make use of them, their value is lost.

Furthermore, opportunities for occupational activity are also presented by such development, for whenever tourist travel is encouraged, services of various kinds will be required, and people will always be found who are ready to provide such services in a greater or lesser degree, and benefits will derive therefrom both to the individual and to the country at large.

We would further point out that co-operation between the Dominion Parks Board and the Provinces is essential in that the approach to an outstanding section of a Dominion Park is often from a point outside the Park, and the connecting trail or road is frequently in such poor condition that the difficulties of approach are greatly increased. These improvements outside the Parks we have incorporated in our report.

RECOMMENDATIONS

Mt. Robson Park

A.
1. Improvement of road from Mt. Robson station to Kinney Lake.
2. Improvement and bridging, where necessary, of the trail from Kinney Lake by Emperor Falls to Berg Lake and Lake Adolphus.
3. Erection of shelter at Kinney Lake.
4. Erection of Hut at Lake Adolphus.

Value: To tourist by motor or horseback, fisherman, hiker, mountaineer. The whole of this majestic region, containing the highest mountains in the Canadian Rockies, could be visited by unlimited numbers of tourists and travelers.

Jasper Park

A. Whirlpool Group and Athabaska Pass Area:
1. Improvement of the trail and necessary bridging of the "Voyageur's Route" from the junction of the Athabaska River with the Whirlpool River following up the Whirlpool to Athabaska Pass and down to Boat Encampment on the Columbia at the Big Bend.
2. Improvement of trail from Sunwapta Falls up the Chaba River to Fortress Lake involving the bridging of the Athabaska above the junction with the Chaba.
3. Improvement of the trail along Fortress Lake and the continuance of it down the Wood River to its point of contact with the "Voyageur's Route" to Boat Encampment.
4. Huts or shelters at Athabaska Pass near the junction of Wood River with Alnus Creek.

Value: Of intense historical interest as the route followed by the early traders from Astoria at the mouth of the Columbia to Hudson's Bay. For the climber the splendid climbing areas of the whole Whirlpool group including the Scott Glacier, the Hooker Icefields with the many fine peaks would be made more accessible from the Whirlpool trail, while easier access to

the Clemenceau and many other groups would be attainable by way of the improved Chaba trail. The Wood River trail would link all these areas, and the whole scheme of trails would join up in a circuit from two points on the Jasper-Lake Louise Highway with the Big Bend Highway. Of inestimable scenic value. Fishing, Walking Tours.

B. Tonquin Valley

1. Extension of the highway up the Astoria River to Chrome Lake.
2. Erection of a hut at Geikie Meadows.
3. Erection of foot-bridge across Astoria River in vicinity of A. C. C. Memorial Hut thus linking up trails on left and right bank of the Astoria River.

Value: A magnificent area of unsurpassed beauty where summer travel is easy and walking tourists can enjoy the surroundings of lakes, meadows, etc. A region where winter sports of every description merely await development. The highway would open up the whole extremely fine area to the general alpine lover, as well as making it more readily accessible to climber and skier.

It is noted that the A. C. C's. Memorial Hut is placed below Outpost Lake; a hut at Geikie Meadows would greatly increase the facilities at the more westerly side of the Ramparts. Of great value to the fisherman.

C. Elysium Pass

1. Trail from Geikie on the Canadian National Railways to be put in to Elysium Pass.
2. Erection of a hut at Elysium Pass.

Value: This is in line with "the opening of new regions as national playgrounds." It is very desirable as a skiing area. Of value to walking tourist and hiker.

D. Snake Indian River

1. If the road up Snake Indian River to Willow Creek is built, construction of a trail from a point above Deer Creek to the Mt. Stornoway area.
2. Bridging of the Snake Indian River in the vicinity of Snake Indian Falls and construction of a trail to Sassenach area.

Value: Opening up of new territory to tourists in general.

E. Verdant Creek

1. Trail up Verdant Creek to Buttress and Beryl Lakes. To join the Astoria River trail about three miles from Edith Cavell Motor Road.

Value: Opening up of very beautiful scenic area to hiker and tourist.

Banff Park

A. Castleguard Meadows

1. Improvement of trail on the Alexandra River including few small bridges chiefly on the Castleguard River, and bridging of Alexandra River at Castleguard mouth.
2. Shelter on shoulder of Mt. Castleguard above Castleguard Meadows.

Value: To the walking tourist, hiker and mountaineer.

B. Glacier Lake and Howse River Area

1. Bridge across the North Saskatchewan at a point above Howse River.
2. Trail from the bridge to the east end of Glacier Lake put in good condition, and the trail

continued on the north side of the lake and Glacier River with a footbridge placed across Glacier River to the south side leading to the site of the 1940 A. C. C. camp.

3. Erection of a hut on the site of the A. C. C. camp approximately two or three miles west of the head of Glacier Lake in a meadow just off the gravel.

Value: To the hiker.

To the climber in making access to the Lyells, Mt. Forbes, and close approach to the Freshfields.

C. Howse Pass and Blaeberry River

1. Though recognizing that the Blaeberry River is without the Park, the suggestion is put forward that due to historic interest and for greater accessibility to the Mummery group and the Freshfields, the Blaeberry trail be reconditioned. The trail on Howse River should be cut on the east side of Howse Pass to avoid the river.
2. Bridge over Conway Creek at mouth to reach Freshfield group.
3. Hut on Blaeberry side of Howse Pass, timberline in valley of Ebon creek.

Value: To huntsman — one of the finest hunting areas. To hiker and mountaineer.

D. Paradise Valley

1. Hut in Paradise Valley at a point below Sentinel Pass at timberline.
2. Rebuilding of pony trail over Sentinel Pass.

Value: Due to its relative accessibility and the great beauty of Paradise Valley, this hut is highly recommended. The pony trail would make a beautiful round-trip trail ride from Paradise to Larch Valley and Moraine Lake. To the trail-rider, hiker, photographer, and climber.

E. Wenkchemna Pass (Banff, and Kootenay National Parks)

1. Reconditioning of the trail over Wenkchemna Pass and the extension of the trail down to Prospectors Valley thus linking up the existing trail down Tokumm Creek to the Kootenay Highway.

Value: To walking tourist and hiker, climber.

Making possible a walking trip through superb alpine country, from Kootenay Highway to Moraine Lake.

F. Hector Lake

1. Bridge over the Bow River at Hector Lake that the Waputik Range may be reached from the east side.

Value: To the hiker and climber.

Yoho and Kootenay Parks

A. Yoho Valley

1. Erection of a foot-bridge across the Yoho River to make the mountains on the east side, i.e., Balfour, Daly, etc., more accessible.

Value: To the climber.

B. Ice River Valley

1. Hut in Ice River Valley at the junction of Ice River with Martin's Creek or the approximate site of the 1939 A. C. C. camp.

Value: To the fisherman, hiker, and mountaineer.

C. Marble Canyon to Lake O'Hara via existing trails from Vermilion Creek up Ochre Creek, Tumbling Creek, Wolverine Pass, Helmet Creek beneath Mt. Sharp, Goodsir Creek, Ottertail River, McArthur Creek and McArthur Pass:

1. Hut on Goodsir Creek.
2. Shelter at Helmet Creek or its vicinity.

Value: This is a superbly beautiful area of great potential appeal to the hiker and walking tourist provided some shelter accommodation as outlined above were made available. The shelters would also provide accommodation for climbers and others crossing from Ice River Valley Hut up Zinc Valley through the Ottertail Range en route to Lake O'Hara.

D. Duchesnay Pass to Lake O'Hara

1. Trail from O'Hara meadows to Duchesnay Pass.

Value: To the hiker and mountaineer. This would provide a very scenic trip from Lake O'Hara. It would also stimulate the use of the Duchesnay-Dennis Pass route to Field.

E. Trail and shelter system—Moraine Lake, Consolation Pass, Boom Lake, Boom Pass, Vermilion Pass, Twin Lakes, Shadow Lake, Haiduk Lake, Egypt Lake, Simpson Pass, and either Healy Creek or Sunshine Cabin route to Banff.

Glacier National Park (Selkirk Range)

1. Foot-bridges on the Sir Donald and Asulkan Pass trails.
2. Rebuilding of the Hermit Hut. ;
3. Improvement of the Baloo Pass trail.

Value: The Selkirks have an appeal all their own. If the existing trails were reconditioned it would add much to its value to the hiker, photographer, and climber.

Purcell Range

We recommend that the region north of Horsethief Creek, from the Lake of the Hanging Glaciers and including the Bugaboo and Bobby Burns mountain groups be set aside as a park area, or incorporated into Glacier National Park.

Value: This area has little or no commercial value, but it contains some of the finest scenery and mountaineering problems in the Canadian Rockies.

SUGGESTIONS RELATING TO IMPLEMENTATION OF ABOVE RECOMMENDATIONS

1. Park Staff

   If any program of extension to the present park trail systems is embarked upon it will be necessary to make adequate additions to the present park staffs in order to give the tourist trail service. The maintenance of trails and inspection of park shelters, etc., is essential.

2. Trail Marking

   All existing trails and all trails proposed above should be liberally marked with sign-posts, and those in charge of these projects endeavour to picture the problems not as they, with a thorough knowledge of the country would see them, but as the tenderfoot

on the trail would see them.

Sign posts should be kept in first class condition at all times. (Some of the existing ones are useless as the lettering is all but obliterated.)

3. Telephone Communication

   If the parks are used as much as we anticipate after the war a great extension of telephone line will be necessary, for use in event of accident, illness, depletion of supplies by reason of storm, inexperienced parties, etc.

4. Type of Hut

   The type of hut recommended is that of the old Swiss Guides' hut at Lake O'Hara, i.e., a log building of approximately 10 x 12 feet with projecting roof in front; within, a platform raised some six feet from the floor and projecting six feet forward from the back of the hut, this and the space beneath to be used for sleeping quarters; in the remaining space a stove is placed at one side and a table at the other.

5. Type of Shelter

   The type of shelter recommended is that employed in the Olympic Range, Washington State Park, i.e., a three-walled erection with place for fire before the open side. It is pointed out that such an erection must be placed where there is no fire hazard.

6. Maps

   That as soon as a trail system has been established in the National Parks a set of strip maps be made, similar to those issued by the U.S. Department of Agriculture, Forestry Service, showing the trail, location of shelters, points of interest, etc.

Respectfully submitted by

December 30, 1944. The Alpine Club of Canada.

DEPARTMENT OF MINES AND RESOURCES
OTTAWA

January 10, 1945.

Dear Mr. Brooks:

I beg to acknowledge the receipt of your letter of the 30th ultimo and to thank you for the suggestion which you have made concerning improvements which the Alpine Club believe should be undertaken in the various National Parks of Canada.

This information is very useful to us at the present time when we are considering plans for post-war development. The Club's recommendations have been forwarded to the various Park Superintendents for consideration. You will be glad to know that many of the ideas are in line with the suggestions which the Park Superintendents have made themselves.

Yours very truly,

(Signed) R. A. GIBSON, Director.

E. C. Brooks, Esq.,
The Alpine Club of Canada,
3592 Quesnelle Drive,
Vancouver, B.C.

MEMBERS ON WAR SERVICE

Anderson, Miss E. V.		A.R.P.
Antenbring, S. V.	P/O	R.C.A.F.
Arbuckle, D.S	F/O	R.C.A.F.
Asther, Wm.	Lieut.	R.C.N.V.R.
Baird, P. D.	Major	R.C.A.
Baker, A.J.	Cpl.	R.C.A.F.
Bastin, Miss S. A.		R.C.A.F., W.D.
Bell, F. C.	District Chief M.O.	Dept. Pensions
Booth, R. E.	Lieut.	U.S.N.R.
Brock, P. H. G.	Lieut.	Seaforth Highlanders
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Cleghom, J. D.	Major	Royal Highlanders
Cleveland, W. H.	Lt. Cmdr.	U.S.N.R. Medical
Colville, J. H.	Lieut.	Royal Engineers
Conant, J. B.	Chairman	Nat. Def. Research
Crawford, Miss C.		American Red Cross
Crosby, H. S.	Capt.	U.S., A.C.
Curry, B.	Capt.	R.C.A.M.C.
Field, W. 0.	Capt.	U.S. Signal (Photo)
Foster, W. W.	Major Gen. D.S.O.	N.W. Can. Defence
Freeze, H.		
Fritz, Victor R.	Lieut.	U.S.N.R.
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Gardiner, Miss K.		R.C. Civil Nursing
Gaskell, I. M.	Cpl.	R.C.A.S.C.
Genshorek, W. H.	Pte.	Canadian Infantry
Gibson, E. R.	Major, M.C.	R.C.A.
Gibson, Miss E. S.		F.A.N.Y.
Gibson, J. S. T.	F/Lt.	R.A.F.
Gill, W. B.	F/O	R.C.A.F.
Gore, R. S.	Pte.	R.C.O.C.
Graham, Duncan		R.C.A.M.C.
Green, J. W.	Lieut.	R.C.N.V.R.
Green, J. W. A.	Sgt.	R.C.A.F.
Gresham, A. B.*	Major	Winnipeg Grenadiers
Groff, D.C.	Major	Canadian Infantry
Gunning, A. H.	Capt.	C.D.C.
Hale, G. F.	Pte.	South Sask. Reg.
Henderson, A. K.	Lieut.	U.S.N.
Hind, R.	Lieut.	R.C.N.V.R.
Holmes, F. D.	Sq./Ldr.	R.A.F.
Hunter, R. F.	F/Lt.	R.A.F.

* Killed in Action at Hong Kong

Hussey, J. M.	Cpl.	R.A.F.
Ingham, J. L.	P/O	R.A.F.
Kothe, H. J.		U.S. Coast Artillery
Leighton, R. F. †	Sgt.	R.C.A.F.
Lindley, A. D.	Lt. Cmdr.	U.S.N.A.F.
Little, E. M.		U.S. Ordnance
Longaker, E. D.	Lieut., M.C.	U.S.N.R.
Longaker, P. R.		U.S. 87th Mtn. Inf.
Long-staff, T. G.	Lieut.	K.R.R.C.
Martin, Mrs. W. E.		St. John's Ambulance
Maurice, F. G.	Sgt.	R.C.A.
Mitchell, W. E. M.	Lt.Co1.	R.A.M.C.
Montgomery, Miss F.K.	Capt.	C.W.A.C.
Muirhead, J. L.	Lieut.	16th Can. Scottish
MacGregor, E. S.	Capt.	Can. Army Basic
MacPherson, A. D.	Lt. Col.	12th Lt. Field Amb.
Newall, Miss A. B.		U.S., W.A.C.
Odell, N. E.	Major	Royal Engineers
Park, H. G.	Sgt.	P. of Wales Rangers
Perkins, Miss F. S.	Sgt.	A.A.F., W.A.C.
Prescott, Miss P.		American Red Cross
Riley, G.		87th Mtn. Inf., U.S.
Ross, Carlton W.	Cpl.	U.S. Army
St. John, Miss Claire	Lieut.	R.C.A.M.C.
Schreiber, E.	Sgt.	Canadian Infantry
Scrivener, J. V.	F/O	R.C.A.F.
Sharpe, P. E.	2/Lieut.	U.S. Ordnance Dept.
Sherlock, J.		R.C.A.F.
Tarrant, J. F.	L/Cpl.	R.C.A.M.C.
Taylor, J. S.	T/Sgt.	U.S. Army
Thompson, B.	Lieut.	U.S. Army
Thornton, J. J.		R.C.A.F.
VanBuskirk, F.W.	Lieut.	R.C.A.
Vatcher, S. G.		Aux. War Services
Vaux, G.		U.S. Naval Service
Waller, T. A.	F/O	R.A.F.
Wates, Mrs. Helen B.	Lieut.	W.R.C.N.S.
Wedgwood, Miss F. E.		F.A.N.Y.
Wheeler, Sir E. 0.	Brig. Gen. M.C.	Surv. General, India
Whellams, L. J.	Sgt.	Canadian Infantry
Whittle, G.	F/L	R.A.F.
Whitney, R.	Major	American Red Cross
Wiggan, G. A.	Capt.	R.C.O.C.
Williams, Ian H.	Lieut.	R.C.N.V.R.
Wright, T. L.	Major	R.G.A.
Wynne-Edwards, V. C.	Lt. Comdr.	R.C.N.V.R.
Young, Miss Ruth	Nursing Sister	R.C.N.

† Killed in Action

N.B.-Not included in the above are several members who have given considerable time informally as consultants, advisors, instructors, etc., in matters pertaining to mountain warfare, nor any in civilian defence or other voluntary part-time war activities.

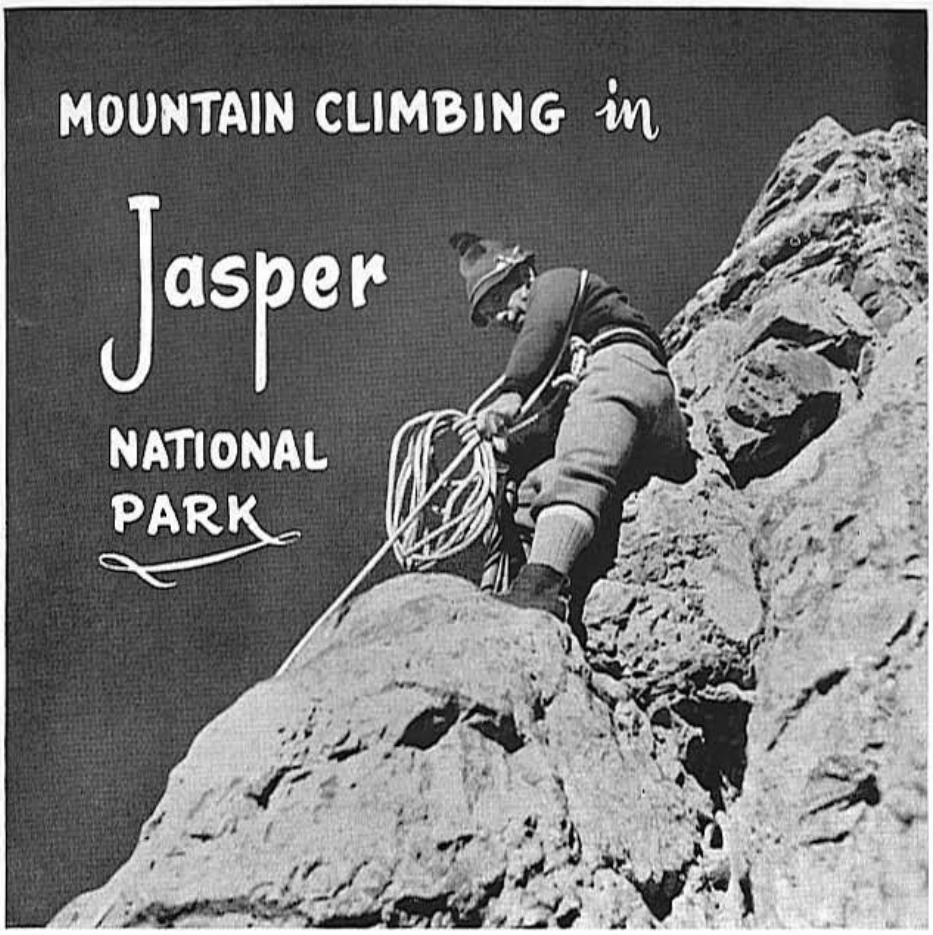
THE
ALPINE CLUBHOUSE AT BANFF

The Clubhouse will open July 1; members and friends are invited.

The Clubhouse is situated on the Upper Hot Springs Road. Motorists who drive direct will find ample parking space provided.

The charge for members is $3.50 a day, non-members $4.00 a day, children twelve years and under $2.50 a day. A reduction of ten per cent will be allowed to those staying a week or more. These charges include meals.

While we expect to be able to take care of all members and their friends who will come to the Clubhouse, it will assist the Committee if advance notification is given by letter or telegram stating date and time of arrival. Before June 30 please send reservations to the Manager, House Committee, Herald Building, Calgary, and after July 1 to the Manager, Alpine Clubhouse, Banff, Alberta.



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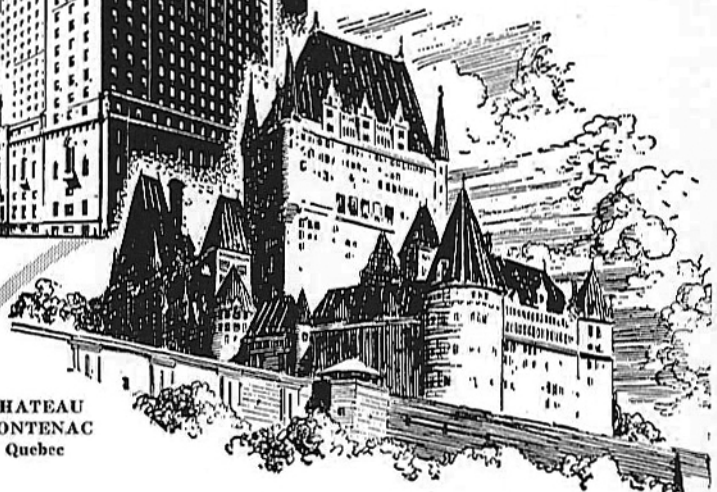

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Hotel Palliser	Calgary, Alta.
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