

**The
Canadian
Alpine
Journal**

**PUBLISHED BY
THE ALPINE CLUB OF CANADA**

1919

**HEADQUARTERS
BANFF, ALBERTA**

VOLUME X

THE
CANADIAN
ALPINE JOURNAL

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1919

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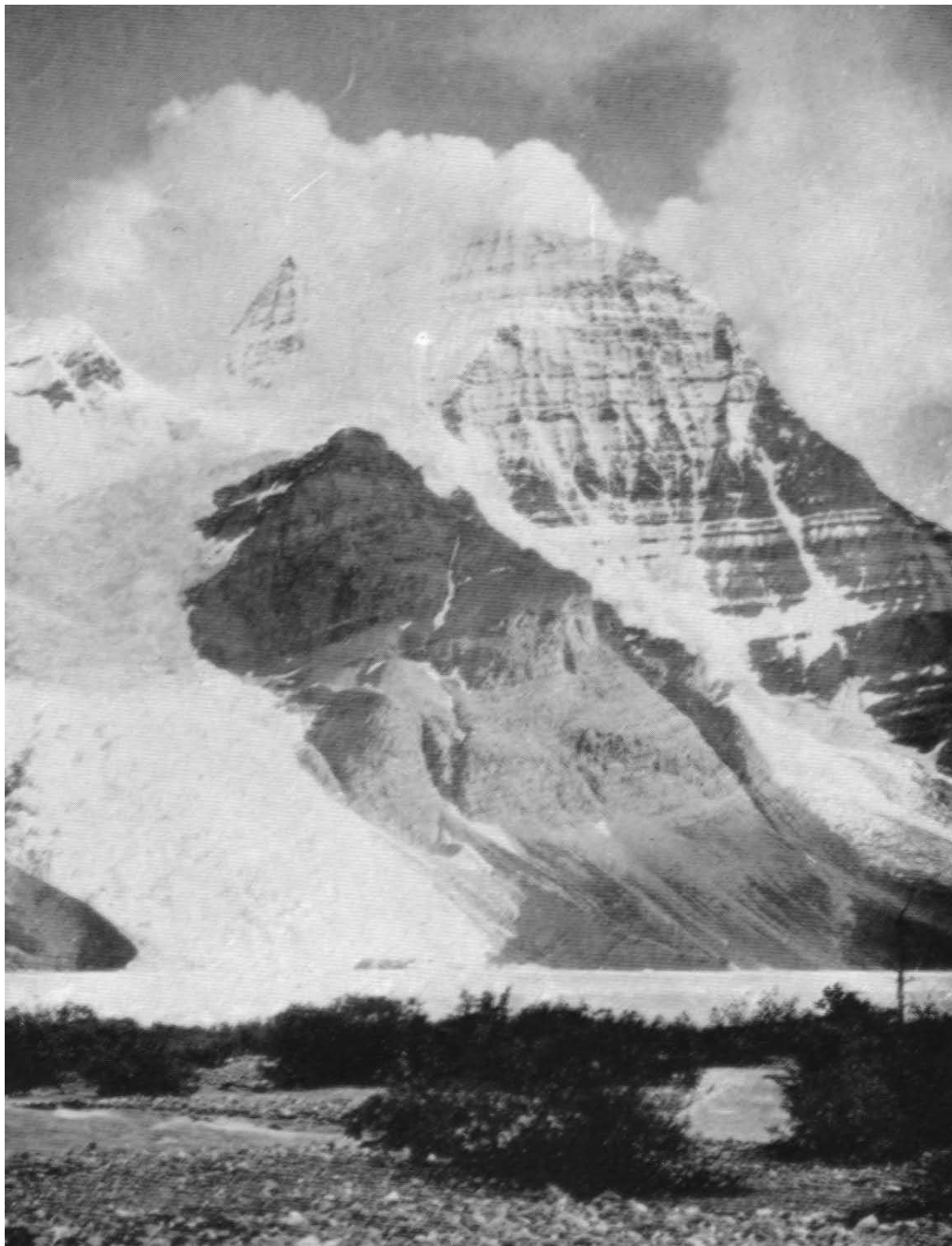
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Mt. Robson - 13,068 Feet Looking South. Photo, H.E. Bulyea

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Vol. X

Members On Imperial And American War Service

L. S. Amery	14th Royal Warwickshire
(Captain, General)	
W. A. Alldritt	90th Regiment
(Sergeant, prisoner, escaped)	
W. H. K. Anderson	13th Canadian Field Ambulance
(Lieut.-Col., D.S.O., Croix de Guerre)	
Mrs. W. H. K. Anderson	Nurse
R. G. Annand	50th Battalion
(Sergeant, wounded)	
I. N. Austin	104th Field Ambulance
W. R. Ball, C.F.	49th Battalion
(Captain, wounded)	
F. C. Bell	Asst. Director of Medical Service
(Lieut.-Col., C.M.G., wounded, twice mentioned in despatches)	
H. Bennett	Divisional Signallers
(Lieutenant)	
P. R. Brecken	Y.M.C.A.
M. Bright	Royal Engineers
(Lieutenant, wounded)	
W. E. L. Broad	137th Battalion
(Lieutenant, killed in action)	
E.W. Bickle	48th Highlanders
(Captain, wounded)	
F. C. Brown	1st Canadian Reserve Battalion
(Lieutenant, wounded)	
W. C. Bruce	Canadian Engineers
E. M. Burwash	
(Captain, C.F.)	
G. Cameron	R.A.F.
(Lieutenant)	
K. C. Campbell	43rd Battalion
(Major)	
R. J. Casement	Canadian Engineers
(Lieutenant, D.C.M.)	
J. A. Clark	
(Brigadier-General, C.M.G., D.S.O. and 2 bars)	
R. P. Clark	
(Brigadier-General, C.M.G., D.S.O., M.C., wounded)	

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C. G. Chinneck.....	13th Mounted Rifles (Sergeant)
J. H. Collville.....	R.A.F. (Captain, wounded)
J. H. Cuntz.....	Signal Corps, U.S.A. (Captain, wounded)
G. Darling	9th Battalion Tank Corps (Lieutenant)
W. R. Dyer	Alberta Regiment
A. Eastham.....	
J. E. C. Eaton.....	Artists Rifles (Captain)
W. F. O'N Fisher	 (Captain, C.F.)
C. E. Fortin.....	Lord Strathcona Horse (Major, M.O.)
H. W. A. Foster.....	20th Battalion (Major, D.S.O., M.C. and bar, 3 times wounded)
W. W. Foster.....	52nd Battalion (Lieut.-Col., D.S.O. and 2 bars, Belgian Croix de Guerre, French Croix de Guerre (gold star), 1914-15 star, wounded, 5 times mentioned in despatches, A.D.C. Governor-General)
T. Fitzsimon	R.A.F.
A. Gillies Wilken	C.M.R. (Captain, C.F., prisoner exchanged)
A. M. Gordon.....	4th Canadian Division (Major, C.F., D.S.O., M.C.)
C. W. Gray.....	Headquarters Staff (wounded)
W. F. Guild	52nd Canadian Infantry (Major, died of wounds, mentioned in despatches)
J. A. Gunn	No. 1 Canadian General Hospital (Lieut.-Col., M.C.)
J. N. Gunn	8th Canadian Field Ambulance (Lieut.-Col., D.S.O.)
G. L. Haggan.....	Oxford and Bucks L.I. Pioneer (Captain)
H. S. Hall, Jr.....	Infantry R.C., U.S.A. (Lieutenant)
Mrs. J. W. Henshaw	 (Hon. Captain, French Croix de Guerre (gold star), French Ruban Blesses de Guerre, 2 bars, twice mentioned in despatches)
J. A. Hesketh	11th Battalion Canadian Railway Troops (Lieut.-Col., C.M.G., D.S.O., mentioned in despatches)
G. E. Howard	Artists Rifles (Quartermaster-Sergeant)



Lieut. T.J. Taylor, M.C. Trench Mortar Killed In Action

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P. M. Humme	Canadian Machine Gun Corps
(Lieutenant, Reconnaissance Officer)	
J. R. N. Irvén	3rd Battalion Rifle Brigade
(Captain and Adjutant, wounded)	
H. M. Johnson	General Staff, U.S.A.
(Lieutenant)	
A. C. C. Johnston	5th Battalion
(Captain, M.O., M.C.)	
S. L. Jones	P.P.C.L.I.
(Major, prisoner, died of wounds)	
Mrs. S. L. Jones	Nurse, French Red Cross
(Lieutenant)	
Miss H. M. Kilmer	Nurse
W. S. Ladd	Med. Reserve Corps, U.S.A.
C. G. Lathrop	Air Service, U.S.A.
(Captain)	
F. V. Longstaff	5th Battalion East Surrey Regiment
(Major)	
T. G. Longstaff	7th Hampshire Regiment
(Captain)	
A. J. Milborne	3rd Field Ambulance
(Captain, mentioned in despatches)	
C. H. Mitchell	
(Brigadier-General, G.B., C.M.G., D.S.O., Order of Leopold, Crown of Italy, Legion of Honour, Croix de Guerre Belgium, Croce di Guerra Italy, 7 times mentioned in despatches)	
Miss J. Monk	Nurse
(disabled)	
A. B. Morkill	7th Battalion
(Captain, M.C., wounded)	
A.H. MacCarthy	U.S.N., R.F.
(Lieutenant-Commander)	
R. C. Morrison	
(Sergeant, killed in action)	
K. D. McClelland	O.R.C., U.S.A.
(Lieutenant)	
J. C. McHutcheon	Sherwood Foresters
(Lieutenant, died of wounds)	
W. C. McNaught	84th Battalion
(Captain)	
J. G. McDougal	202nd Battalion
(Lieutenant)	
Miss E. McPhedran	Nurse
E. S. MacGregor	187th Battalion
G. L. Oliphant	C.F.A.
(Corporal)	

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Sir James Outram.....	
(Major)	
J. C. Oxborough.....	12th C.M.R.
(Corporal, killed in action)	
W. Oxborough.....	12th C.M.R.
(wounded)	
R. E. Patterson.....	Fort Garry Horse
(Lieutenant)	
W. F. M. Pearce.....	1st Montreal Regiment
(Major, M.C., mentioned in despatches, wounded)	
Donald Phillips.....	78th Battery
Mrs. E. M. Phillips.....	V.A.D.
E. F. Pilkington.....	Manchester Regiment
(Major)	
J. M. Poucher.....	51st Battalion
Rev. C. S. Provis.....	Attached 15th Machine Gun Co.
(Captain, C.F.)	
R. I. Raiman.....	Y.M.C.A.
C. B. Reilly.....	69th Battalion
(Captain, wounded)	
C. B. Reynolds.....	9th C.M.R.
(wounded)	
E. G. Ritchie.....	
A. E. Robertson.....	5th G.A.
(Captain)	
F. A. Robertson.....	47th Battalion
(Major, D.S.O., wounded)	
J. W. Ross.....	
(Captain, M.O.)	
C. F. Savage.....	Northumberland Fusiliers
(Lieutenant, wounded)	
Miss J. T. Scott.....	Nurse
G. M. Smith.....	P.P.C.L.I.
(Captain, M.C.)	
R. H. Smith.....	4th Field Ambulance
(died of wounds)	
G. R. Street.....	3rd Field Ambulance
(Corporal)	
E. L. T. Taylor.....	R.A.
(Lieutenant)	
T. J. Taylor.....	Trench Mortar Battery
(Lieutenant, M.C., killed in action)	
J. E. Tilleard.....	
A. Tomlinson.....	230th Canadian Forestry Battalion



Lieut. J.C. Tyler, Croix De Guerre Aviation Service, U.S.A. Killed In Action

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F. Trant	14th Battalion
(wounded)	
A. Tyler	U.S. Naval Aviation
J. Tyler.....	U.S. Aviation Service
(Lieutenant, Croix de Guerre, killed in action)	
S. J. Unwin.....	Canadian Artillery
(Sergeant, died of wounds)	
J. H. Vincent.....	201st Field Artillery, U.S.A.
(Lieutenant)	
Miss H. Walcott.....	Nurse
P. A. W. Wallace	Divisional Signallers
Rev. T. G. Wallace.....	
(Major, Senior Chaplain)	
Miss K. Walker	Nurse
H. Watts.....	
(Captain)	
A. W. Wakefield	
(Captain, M.O.)	
O. Q. Warren	C.M.R.
(Lieutenant)	
A. F. Wedgwood.....	5th Battalion North Staffordshire Regiment
(Captain, killed in action)	
H. Westmorland	C.M.R.
(Captain)	
E. O. Wheeler.....	King George's Own Sappers and Miners
(Brevet-Major, R.E., M.C., Cross, Legion of Honour, mentioned four times in despatches)	
Rev. G. D. Whitaker.....	
(Captain, C.F.)	
E. N. White.....	1st Battalion Middlesex Regiment
(Captain, killed in action)	
K. H. White	M.T. Service
(Captain)	
Rev. H. B. Winser	
(Captain, C.F., wounded)	
K. D. Woodsworth	Yacht Patrol
(Lieutenant)	
J. R. Young.....	H.B.M.G.C.
(Lieutenant)	

MOUNTAINEERING SECTION

Around Lake Louise In 1918

By Val. A. Fynn

Arriving July 3rd, I went out alone the next day and strolled to the top of St. Piran, descending to Goat Pass between St. Piran and Niblock. The little lake¹ on the north side of this Pass is so beautifully located that I determined to pay it a visit. The snow slope leading into the little gorge opening on to the Bow Valley is quite steep but easily negotiated, and I was soon enjoying a beautiful and unusual view of Niblock from the shores of the little lake. It is possible to descend into Bow Valley by following the overflow of the lake more or less closely and thus reach the trail from Lake Louise to the Great Divide, but I preferred to traverse east, rising slowly along the western and northern slopes of St. Piran and the Little Beehive. The slopes are steep but the view is beautiful all the way. This little trip is well worth taking.

On July 6th, Rudolph Aemmer and I took Mr. Tom Corby, of Detroit, a young man about to enter the army, up Mitre. Leaving the Chateau at 8.05, we made the eastern Mitre Pass at 11.40. After an hour's rest, we reached the summit in one hour and thirty minutes, remaining half an hour. We were back on the Pass at 6 p.m. and at the hotel at 8.10. It was Mr. Corby's first real climb and he seemed to enjoy it greatly.

On July 8th, Rudolph and I left the Chateau at 4 a.m., reached the breakfast place at the foot of the upper Victoria Glacier at 7, and the col between the north peak of Victoria and Collier at 11. After an hour's rest, turned northeast and, following the arête, reached Mt. Collier in one hour. Continuing along the arête reached the lowest depression between Collier and the southern peak of Mt. Pope at 4.20. An easy descent along the southeastern face of the ridge brought us back to the upper Victoria Glacier and to the hotel at 6.15.

On July 12th, Mr. B. Gardom, Mr. J. C. L. Bennett, official photographer to the C.P.R., Rudolph Aemmer, Edward Feuz and myself started for O'Hara, groaning under an immense load of photographic paraphernalia carried by ponies as far as the glacier, and from there on by Rudolph and Edward. We had hardly reached Victoria Glacier when it started to rain heavily, but we trudged on bravely. By the time we reached Abbot Pass it was snowing. Here we deposited one of the large cameras, covering it with newspapers and stones, and proceeded on our way. Lake O'Hara was reached in due course and there we found more cameras and some food which had been packed in by trail. We made ourselves as comfortable as possible in the rather dilapidated and dirty "Wiwaxy Lodge." The next day proved ideal for photographic purposes, so we loaded a huge panoramic camera on one of the ponies and conveyed the same to McArthur Lake. Two loads were now made up and we took turns at carrying same to the top of Mt. Schaffer. Several eight and ten-foot panoramas were taken that day and turned out extremely well—the cloud effects are splendid.

On the 14th, which proved to be bright and clear, we walked back to the hotel over Abbot Pass, where the camera which had been left behind came into play with great success.

On July 16th, Rudolph and I left the hotel at 3.55 a.m., reached the breakfast place at the foot of the upper Victoria Glacier at 6.35, and continuing at 7.05 made the lowest point of the ridge between Collier and Mt. Pope at 9.35 and the southern peak of Mt. Pope at 10.20. Resting until 11.25 and following the arête we reached the main summit of Mt. Pope at 12.15. After an hour's

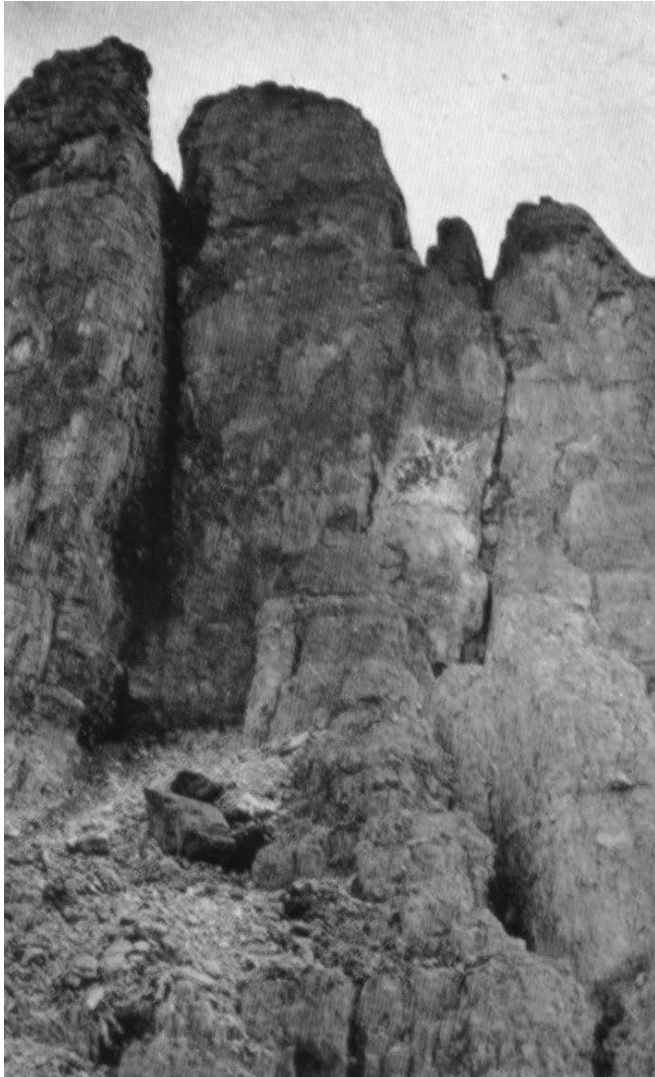
¹ Lake Minewakun.—Ed.

rest and still following the ridge without serious difficulty, we came to the very steep and broken rock wall immediately above the steep ice slope leading down to the col at the head of the valley of the six glaciers. This wall is well seen from the C.P.R. line near the Great Divide and requires careful handling; the passage from rock to ice is not at all easy. At the spot where we struck the slope there was nothing but hard, steep ice, but a little on our right (south) and closer to the col we spied a little snow, so cut across in the hope of reducing the step cutting process. The snow proved very hard but serviceable, and we descended slowly, facing the slope. The col was reached in one hour and ten minutes, two hours and ten minutes after leaving the summit. Some time was spent in retrieving Rudolph's goggles, which had fallen out of his pocket when manoeuvring to reach the ice, and in consuming the rest of our provisions. At 4.15 we started down the couloir leading to the plain of six glaciers and reached the hotel at 7 p.m.

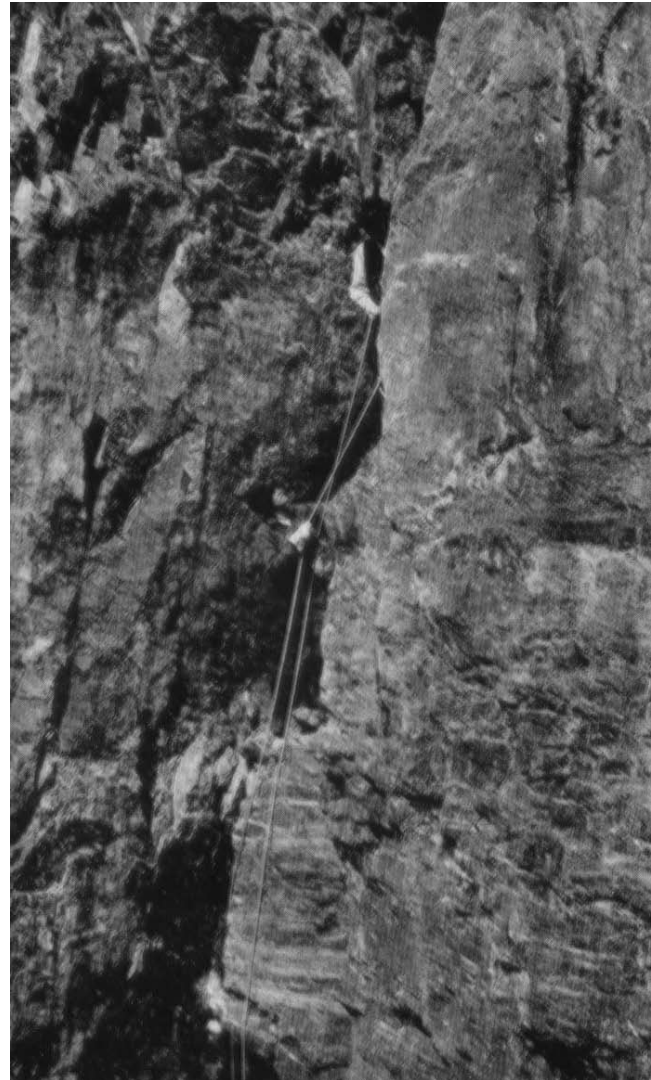
On July 17th, Mrs. Fynn, Rudolph and I drove to Moraine Lake Chalet, where we spent the night. Leaving at 4.30 a.m. on the 18th, we reached the col west of the main peak of Mt. Pinnacle at 9. The mosquitoes had pestered us all the way and we could not get rid of them now, they followed us all the way to the summit. Rudolph and I put on our climbing shoes, but Mrs. Fynn continued in her hobnailed boots. Leaving the col at 10.15 we reached the summit at 1.55, Mrs. Fynn accomplishing the climb without the assistance of the rope except as a safety appliance in case of a slip. This is the first time Mt. Pinnacle has been climbed by a woman. Leaving the summit at 3 p.m. we reached the col at 5.50 and Moraine camp two hours later. Rudolph and I were very agreeably surprised to see how composedly Mrs. Fynn, though very tired, faced the descent of the two steep pitches.

Second Ascent And First Traverse Of Glacier Peak

On July 21st, Rudolph and I walked to the Canadian Alpine Club Camp in Paradise Valley where I had the pleasure of meeting a number of old friends. Mr. Mitchell added to my indebtedness to him by allowing me to spend the night in his tent, while Rudolph bunked with Edward and Christian. We left Camp on the 22nd at 4.35 before anyone else was astir; following the trail, we soon trod the ice of Horseshoe Glacier and at 6.35 stood at the foot of an immense wall which encloses it on the west, just where some steep couloirs come down between Ringrose and Glacier Peak. The weather seemed somewhat uncertain, although bright enough at the time, so we set-to without loss of time. Perpendicularly below the two summits of Ringrose is a well defined cone of snow and ice fed by two large and one small and subsidiary couloir lying between the two others. The couloir on the left begins in the face of Ringrose under the northern peak of that mountain, widens out as it descends and is easily over-looked. The one on the right runs down from the col between Ringrose and Glacier Peak, slants in the direction of Mt. Wastach, is wide near the top, but narrows rapidly and is nothing but a deep groove just before it discharges on to the cone referred to. Between the two is a steep rib of rock divided into nearly equal parts by a small snow-filled gully, which also separates the upper part of the rib from the Ringrose wall. The bergschrund presented no difficulties and the steep slope above soon led to the lower part of the rib of rock south of the couloir in which we were interested, i.e., the one descending from the col. The rocks proved steep in places but afforded excellent holds and ample protection from stone, had any fallen. We followed this rib, crossed the gully separating it from its upper part and shortly afterwards crossed the main couloir to the Glacier Peak wall. We were obliged to use the rope to accomplish this crossing because of the deep and iced groove cut in the middle of the snow couloir. Reaching the rocks on the other side, we discarded the rope and ascended rapidly, keeping close



The Last Chimney On Mt. Pinnacle. Photo, Val. A. Fynn



In Last Chimney On Mt. Pinnacle. Photo, Val. A. Fynn

to the couloir. Coming upon a cave in the rock, we stopped for breakfast from 9.20 to 10.10. We were now well above the rib of rock and within sight of the col. Leaving the cave, we soon turned away from the couloir perceiving that we could save time by striking the ridge somewhat north of the col. So far, we had been climbing in yellow and dark brown rock, but now we struck the black rock which crops out on nearly every summit in this district, and the climbing became more difficult. The ridge was reached at 10.45, and one hour later we stopped ten minutes below the summit of Glacier Peak for a lunch and a rest in a wind sheltered spot. The day was bitterly cold, the wind very high, and the lighting effect most extraordinary. A dense bank of clouds hung at about 11,000 feet and extended as far as the eye could see. The sun broke through here and there and the colouring of the visible valleys and peaks was quite unusual and extremely vivid. The whole scene reminded us of the Foehn effects we had so often seen in Switzerland and we felt sure that a snow storm was due. We could see a large party of Alpine Club members nearing the summit of Mt. Temple and wondered how cold they were. A little later we paid a visit to the Stoneman and thus accomplished the second ascent of Glacier Peak, the first from Paradise Valley.

At 12.30 we started cutting down the north ridge towards Lefroy, but found so much hard ice that we turned back, deeming it impossible to accomplish the task of cutting down the northwest face before a serious break in the weather. Passing over the top again we bore down toward the couloir on the west side between Ringrose and our peak which I had used on the occasion of the first ascent of Glacier Peak. When we looked down into this couloir we found it filled with shining ice and therefore attempted to get down the rocks north of it. We succeeded in reaching a point a little below that at which I had taken to the rocks some eight years ago, but were then forced into the couloir and found that we had gone to a great deal of trouble for nothing, since the north side of the couloir, the one we could not see from above, was sufficiently well lined with good snow. This snow only reached part of the way down, but helped us past the very steep rocks. Where the couloir widens the sun could easily reach this snow and had caused it to slide off, but here the rocks on the right were climbable and we soon were out of all difficulties and well on the way to Lake Oesa. We reached the Wiwaxy Lodge at 7.30, just as our packer was arriving with the ponies. Our arrival disturbed a huge grizzly bear, who sat on his haunches some 150 yards away and looked us over thoroughly before he decided to amble off towards Cathedral.

When we awoke on July 23rd, there were several inches of snow on the ground, but we were not in the least put out. The packer had brought material for certain badly needed repairs to the cabin and the three of us spent all day at the task, repairing the floor and putting in a new door and new windows. Part of the 24th was spent in the same manner because climbing was out of the question. Leaving a little after 2 p.m. we easily caught the 5 p.m. to Lake Louise at Hector.

After a few days spent in Banff, waiting for weather good enough to do a little climbing around Mt. Edith, I came back to Louise, to storm and snow.

On July 29th, and just to keep in trim, walked up Niblock alone and got some photos.

The Victoria Ridge

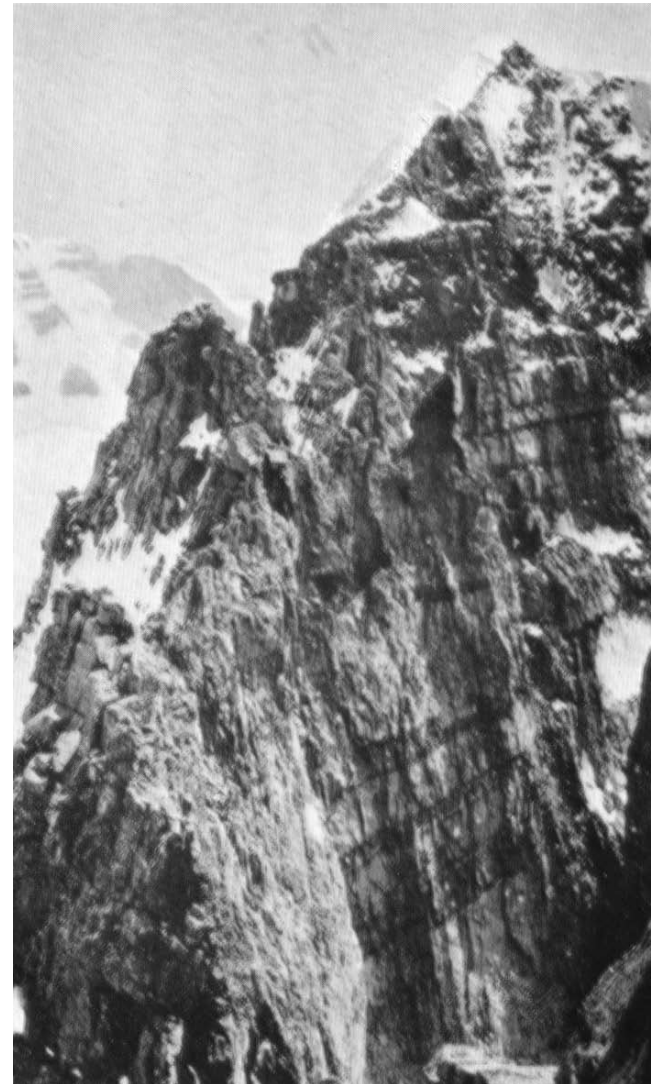
Rudolph and I left the hotel at 1.30 a.m. on July 31st, "made the plain of six glaciers in two hours and reached the breakfast place at the foot of the Upper Victoria Glacier at 4.30, stopped for fifteen minutes, and at 6.45 were at the foot of the col between Collier and the North Peak of Mt. Victoria. Continuing at 7.20, reached the col itself at 8 and the summit of the North Peak at 9.50. So far we had trodden over well known ground, but the ridge uniting this peak to the main summit of Mt. Victoria, which now stretched in front of us, had been climbed only once before and that

some ten years ago. At 10.15 I led off at a brisk pace and we were soon at grips with the treacherous rocks which form this ridge. As seen from the North Peak, the first half of the distance to the main peak looks harmless enough, but the climber is speedily disabused — suddenly one comes upon a perpendicular drop some fifteen feet high and the fun begins. Here, as on most ridges, it very seldom pays to traverse and we lost a little time on several occasions because the rocks on the Louise side looked a little less loose than those on the crest of the ridge. With very few exceptions, all traverses are made on the Louise side. After the fifteen foot drop the ridge narrows to about two feet and runs horizontally, being interrupted by deep cracks over which it is possible to step, then comes a gendarme which must be climbed. On its far side there is a high, nearly vertical drop with good holds which leads to a deep gap. The high black wall ahead can be readily circumvented and upon again landing on the arête one enjoys a stretch of good rock and some snow. The highest point between North and Main peaks now comes into view, but another deep gap with very rotten rock must be crossed before reaching it. At 12.00 we rested on this summit until 12.30. From this point the climb becomes more difficult and the character of the ridge changes entirely soon after this summit is passed. An hour's climb up and down the many, but here not deep, gaps in the ridge and one emerges on a small platform overlooking Lake Louise and poised above a sixty foot drop down to a part of the ridge which is less than a foot wide. On the Cataract Creek side the ridge now falls sheer for a distance varying from 1,000 to 1,500 feet—any progress on that side is quite out of the question. The gendarmes become more and more formidable and, although the distance to the lowest point on the ridge, soon after which all difficulties disappear, is not very great, the tired muscles induce one to think that the day is not long enough to allow one to cover it. On this little terrace we rested and lunched from 1.30 to 2.10 and then prepared to rope down the sheer wall. The sling used for this purpose by our predecessors was still in place and in good shape, so we used it. It required a good deal of careful maneuvering, but finally both of us sat side by side on the narrow ridge, ready to resume the journey. The next gendarme had to be turned and this required some awkward step cutting on steep, thin ice. This was followed by a long easy bit on the ridge itself right to the top of the next obstruction. A direct descent did not look inviting so a traverse was resorted to—this finally led to a very deep gap. A steep wall, a level bit of ridge, an easy gendarme, another gap, and we stood at the foot of the last serious obstacle, a huge yellow and red tower which appears to, and probably does overhang on at least three sides. Here, again, we traversed on the Louise side and although very steep and, perhaps, trying because of the extreme rottenness of the rock, this passage did not prove as difficult as expected. This obstacle behind us, we found it expedient to continue the traverse a little further. Rudolph now took the lead and soon brought us back to the ridge. The rock here is firm and the perpendicular drop on the Cataract side is replaced by a comparatively gentle slope, not exceeding 65 or 70 degrees. Climbing along the dividing line between snow and rock, we gained height rapidly and at 5.46 were shaking hands on the Main summit. Knowing the length of the ridge to Abbot Pass, we proceeded at 6 p.m., making good time over comparatively easy ground, and at 8.30 topped the Southern peak of the ridge. From here on we were a little slow, but managed to make Abbot Pass at 9.50 and hit the glacier trail at 11.10. The walk to the hotel was somewhat trying, but we got there at last exactly twenty-four hours after our departure. We were amazed to find that a hot dinner and smiling faces were awaiting us as usual.

We were lucky to strike a cool and clear day; the view all along this exposed ridge is wonderful and the work most interesting, but dangerous in places because of the very rotten rock. This trip will be more interesting in the opposite direction and if a hut is ever built on Abbot Pass, it will not be abnormally long.



**Main Peak Of Mt. Victoria And Intermediate Peak
From North Peak. Photo, Val. A. Fynn**



**Victoria Ridge, North Of The Main Peak Note
Steepness Of West Face. Photo, Val. A. Fynn**

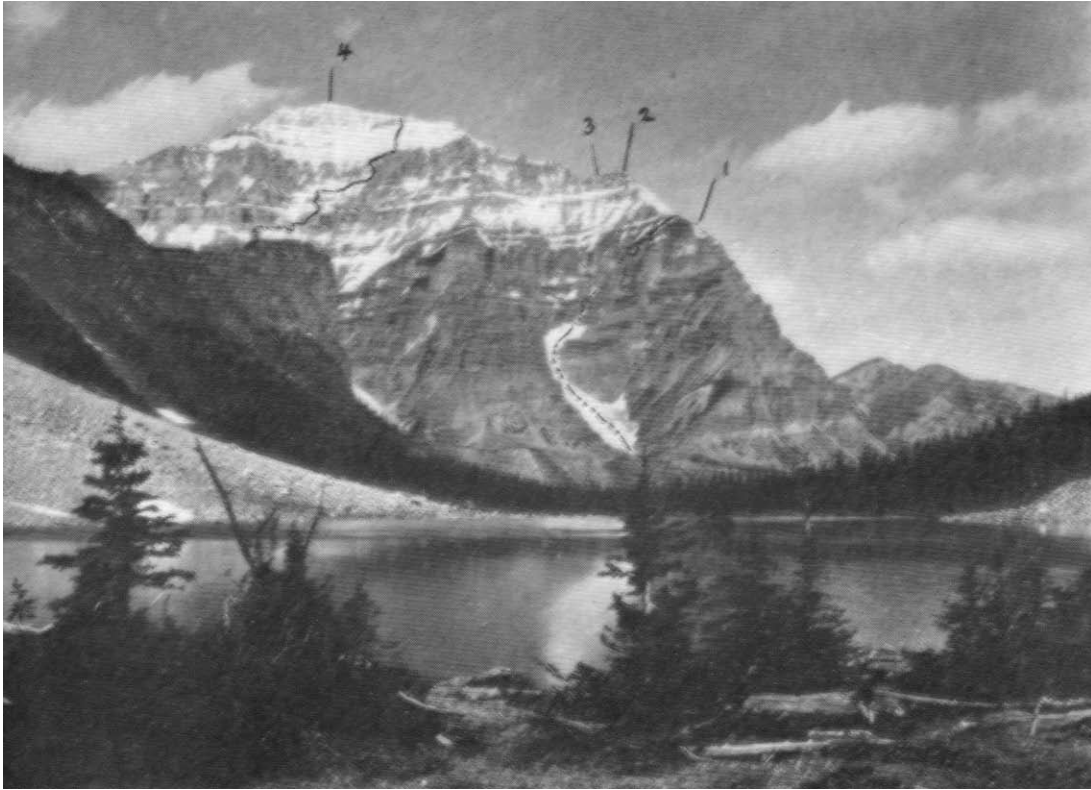
New Routes Up Mt. Temple

Although I had often been in this district, yet I had never been able to summon enough courage to climb the highest peak of the neighbourhood, much as I wanted to do so. I finally decided to try and discover a route which would offer a little more attraction than the usual one from Sentinel Pass. The prospects from the Lake Annette side did not look entirely hopeless, so after several consultations with Rudolph and Edward, the former and myself left the hotel on the afternoon of August 5th and reached the shore of Lake Annette in two hours, overhauling our friend Reno and his ponies. Deciding that we could not take the horses to the col north of Mt. Temple, we made camp on the north shore of the lake. Rain drove us into our tent just as the dinner gong sounded, but the shower did not last long and we had hopes for the morrow.

A long, steep snow couloir, well seen from Paradise Valley and from Saddle Back Pass, descends from a saddle high up on the northeast ridge and runs out on the col referred to. It was our intention to mount by the rocks east of the couloir to the snow saddle (1) at its head, cross the latter and then follow the rock ridge to where it runs into the glacier covering the upper portion of the north side of the peak. From the saddle the ridge rises in an easy slope to the secondary summit (2), then dips and becomes very serrated before rising very abruptly to the summit glacier. We expected our difficulty in the dip so well provided with formidable looking gendarmes. Looking at the mountain from Consolation Valley, it was found that an easy looking horizontal ledge runs below and past this broken part of the ridge offering a way of circumventing the difficulty. If this ledge is followed the ridge must be regained by means of one of a number of rather nasty looking couloirs. All of the difficult looking part of this ridge is in the black rock zone, whereby matters are made considerably worse, as any one familiar with the district will readily recognize.

Leaving camp on August 6th at 5.10 we reached the col at 6.45 in somewhat uncertain weather. After a fifteen minutes rest, we attacked the rocks on the left of the snow couloir. We had not advanced very far when we heard an ominous but familiar sound which caused us speedily to work away from the snow. We worked east until all traces of falling stones had disappeared, then continued the ascent. About two-thirds of the way up we were forced up to the snow in the couloir because of a perpendicular wall, but were, of course, protected by it and worked back east as soon as this obstacle had been circumvented. Some short ice slopes led to a shoulder on the northeast arête and we faced the last and obviously difficult part of the ascent to the snow saddle. Very brittle and steep rocks of most peculiar formation and colour led to a steep ice slope which ended in a perpendicular chimney. Half way up, this chimney is blocked by two huge stones which I found far from secure. It became necessary to traverse out to the ridge on the left, along a very narrow ledge and then follow the ridge itself to the broad saddle (1), which we reached at 11.10—some two hours behind our schedule.

After a fifty minutes rest and some discussion, we made our second mistake. We had started too late and now we elected to adhere to our original programme and follow the ridge instead of turning the secondary summit and making for the horizontal ledge at the south foot of the black teeth. Everything went well until we struck the band of that hard, smooth and yet brittle black rock. Had we brought our climbing shoes we could have saved much time, but with hob-nailed boots, great care was necessary and we progressed but slowly. Erecting a stoneman on the secondary summit, we began the descent to the gap and by 2 p.m. were quite close to the big gendarme (3), so well seen from Saddle Back. We both agreed that even if we could pass the several gendarmes standing in this gap, we could not overcome the final pitch in the ridge, but opinions were divided as to the possibility of reaching the horizontal ledge on the south from where we stood. We finally



Mt. Temple From Consolation Lake Showing Routes Of Ascent. Photo, Byron Harmon



Mt. Temple From Saddleback Showing Northeast Ridge. Photo, Val. A. Fynn

decided to turn back, I urging this course strongly because of the fact that we did not think it advisable to go back to Lake Annette, and did not know of any other way down. Turning back at 2.30, we reached the snow saddle at 4.30 and stopped fifteen minutes for refreshments and deliberation.

The snow saddle on which we sat is at the apex of two ridges. We had utilized one of these on our way up from Lake Annette, the other descends in a direction at right angles to the Bow Valley. The continuation of these two ridges forms the sky line as seen from Saddle Back. From the subsidiary summit on this ridge, now crowned by a stoneman, a ridge falls southeast towards the Valley of the Ten Peaks and blocks the view south. Our immediate choice was one of these ridges. We knew all about the first, had seen enough of the second on the way up, and could now see a large portion of the third. Neither was attractive, but we did know that the further south we could get, the less would be the difference in height to be overcome before reaching easy ground. We decided to traverse south. An easy ledge led us in fifteen minutes to the ridge which runs southeast. The southeast face came into view and we saw at once that from here we could have reached the ledge below the difficult gendarmes on the main ridge without difficulty, and in a very short time. We even thought of spending the night on the spot and making another attempt over this promising route the next day, but finally decided to try and reach the motor car waiting for us at Moraine Lake. Below us, and between our ridge and the next one further south, was a huge amphitheatre, the lower walls of which appeared to be perpendicular. Yet a number of indications led us to believe that somewhere in a protected place in the back of the circus we would find a snow filled couloir. Striking straight down in the direction of Moraine Lake we soon came to extremely steep pitches, but the rock was sound and the prospects grew so much better at almost every step that we took out the rope and clambered down. At the foot of the second pitch we felt almost certain of success, the rope came off and we moved down and to the west at a great pace. At 6.45 we had reached the head of a hidden couloir full of very hard snow and considered our troubles were over. A half hour's rest and down the snow we went to be very soon pulled up short because of an overhang not covered by snow. We had to use the doubled rope and left a sling behind. A little further a similar but much higher pitch proved a serious obstacle. We could not rope off, so traversed out of the couloir to the right and finally found some flaws in a high, straight wall which enabled us to get back to the snow not far from the place where the couloir, which so far was headed southwest, turns in a southeasterly direction and runs down into a little cove not far above the old Moraine Lake trail. This cove we reached at 8.45, the trail ten minutes later, and twenty more minutes saw us knocking at the door of Moraine Lake Chalet, to be welcomed by Miss Danks and to find that the car which we had ordered from Lake Louise had left an hour ago because it had no lights and could therefore not be operated after dark.

After this experience, we each had several good looks at the southeast face of the mountain and worked out two ways of reaching the horizontal ledge below the bad black towers. The one up the amphitheatre we had used on our way down to the point where we had thought of spending the night, the other, up the well defined rib which limits a second and less pronounced amphitheatre on the west. This second amphitheatre is immediately west of the first, and separated therefrom by a huge buttress. The rib in question loses itself at the foot of a nearly perpendicular wall a little southwest of the summit, but gives access to a series of superimposed and nearly horizontal ledges along which we intended to traverse to the foot of the chimney near the black towers which was to lead us to the snow ridge. This long traverse was obviously undesirable and in seeking a more direct route, we finally decided that the break in the wall above the horizontal ledges and just below

the summit would afford a means of reaching the snow ridge not very far east of the summit.

We turned up at Moraine Lake on the 16th, it rained on the 17th. We turned out early on the 18th, but rain and then snow forced us back long before we reached the big wall.

We were back again on the 19th because of a promising change in the weather, and were off to a fair start at 5.05 on August 20th. The day proved to be the most perfect of the season. Following the trail to Lake Louise as far as the first striking and deep water course, now dry, we struck straight upwards in the direction of the rib we had selected and at 7.30 were at the foot of the big wall just south of the summit. Here we had breakfast and decided to take the more direct route as being the more natural one. Traversing northeast along the foot of the wall, we came to an easily recognizable snow and ice filled couloir, followed the rocks on its near side, traversed to the opposite side at the first opportunity, and bearing away from the couloir, found a steep but safe rock rib which led us to the second steep pitch in the break at a point immediately below the summit. Here again it was necessary to traverse northeast until near the east side of the break where the second pitch seemed easiest. Strong fingers and long arms came in very handy right here for the wall is very steep and the holds small and far between. Only a short distance now separated us from an ice filled couloir leading to the easy ground above the big wall, but iced rocks intervened so we had to unpack the rope. The couloir was reached and proved cold but easy, and very soon we were plodding up the easy rocks just below the ridge. The latter was reached at 11.40 and disclosed a magnificent view of Paradise Valley. The ridge itself is heavily corniced and looks very imposing—the ice cliffs on the north being particularly beautiful.

Twenty minutes for photography and thirty-five minutes later, at 12.35, we were on the summit and enjoying a most perfect view.

We lolled around until 1.50 and then turned to descent by the usual route. We reached Sentinel Pass at 2.55 and Moraine Lake Chalet at 4 p.m. highly pleased with our trip. I can warmly recommend this route as not very difficult, not longer and incomparably more interesting than the usual one from Sentinel Pass.

There was no holding Mrs. Fynn after her success on Mt. Pinnacle and nothing but a snow mountain would now do. It was to be Lefroy, but we finally compromised on the North Peak of Mt. Victoria and sat watching our opportunity. It took some close watching, too, for our time was nearly up and the weather most uncertain. Finally, we thought we saw a chance and turned in early on August 24th. The next morning Mrs. Fynn, Rudolph and I left the hotel at 3.17. The moon was shining but there were some clouds and we were not dead sure of a good day. As we worked up towards the upper Victoria Glacier, the dawn began to break and we presently witnessed the most glorious sunrise either of us had ever seen. At that time there were many well shaped clouds about, and our first intimation of the unusual display was the appearance of a dirty terra cotta colour on Lefroy and the huge face of Victoria. Part of each cloud was similarly tinted and as they were much broken, the effect was very beautiful. The presence of mists about Lefroy and the Victoria ridge added to the weirdness of the scene. Presently the colour cleared, then gradually changed to a most brilliant cherry red. The under part of the clouds was of this same colour, while the sky in the east was purple, blue, green and yellow. Gradually the red faded as the sun appeared, but the purples, blues, greens and yellows were intensified. After the sun was up, things assumed their normal colouring, but Rudolph and I knew that our time was limited and that a snow storm was due. Reaching the breakfast place at 6.40, we continued at 7.15, making the col between Collier and the North Peak at 11.12. After an hour's rest, the summit was reached at 2.10 in somewhat cold, but most beautiful weather, giving no indication of what was to come. So fine was the weather that

it almost fooled us into believing that our fears of the morning were unjustified. It was, however, nothing but a lucky and temporary change in the wind. Leaving the top at 3.06 we were back at the col at 4.30, rested half an hour, passed the breakfast place at 7, reached the plane of six glaciers at 7.45, and a dead tired but game woman entered the hotel at 9.30 p.m.

The next morning we had snow right down to the hotel. A few days later, when we entered the train which was to take us way south, the mountains were still covered with deep, fresh snow.

A Trip To Mount Robson

By H. E. Bulyea

“Gone to the mountains.” This sign first hung outside my office door in July, 1917, when, as a “Graduating Member” of the Alpine Club, I made the trip to the Cathedral Camp. When it next appeared—greatly to my regret—it was too late to join the Paradise Camp of 1918, and the evening of July 31st found two “Active Members” waiting for the west-bound G.T.P. at Edmonton with tickets in their pockets reading “Mount Robson and return.” The word “return” did not impress us so much at this stage for, full of anticipations and memories of the mountains, it seemed sufficient to think only of the two weeks ahead which we had set aside for our vacations.

The train was late, and the hour or so we had to wait seemed long; but it passed eventually, as did the night, and the early morning light revealed in the west that familiar purple line of hills that we knew to be the promise of greater things ahead — the grand old mountains.

I need not describe the rest of the trip to our destination on the railroad. Anyone who has travelled through the mountains is not unmindful of their grandeur and appreciates to some extent the charm of these great hills; but to live among them, if it be only for two short weeks, is to appreciate them as one can in no other way, and it is of this I wish to tell.

I see I have omitted my companion’s name. Lest some of the readers of the Alpine Journal might think it was “Martha,” I will hasten to inform them that it was William Johnstone, artist, also of Edmonton.

On reaching Mt. Robson Station we had confirmed a rumour, heard on the way, that there were no packers in that part of the mountains. “Curly” Phillips had gone to the war, so we decided to act as our own packers—sort of voyageurs of the mountains. In regard to crossing the Fraser we heard conflicting opinions—some not very encouraging—but one bit of information sounded good and proved to be genuine: that a cook car stood on the track just ahead and to this car we hastened, where we put its reputation for hospitality to the test, as well as our capacities. Here was more good luck. We found the conductor of the work train had taken our contemplated trip the year before and gave us much valuable information that we had been unable to obtain before leaving home. The crossing of the river, that from previous accounts looked like a very hazardous undertaking, he made to look quite simple when he pointed out a spot about a mile and a half ahead where a log-jam formed a natural bridge. To this spot we repaired when next the work train moved westward, and an ideal camping ground was located, where that night we were lulled to sleep by the roar of a nearby waterfall.

Next morning we set up our main tent, built a fireplace and generally prepared what was to be our base of supplies. We did another notable thing. We decided who was to be the cook, and the choice fell upon the only candidate for the position, Mr. Johnstone. When I learned that his artistic taste was not all confined to the brush and pencil, it was arranged that the election was to

be by acclamation. This did not quite end our difficulties, however, for although Mr. Johnstone had come from the land famed for its porridge, he could not recollect the exact proportions of its recipe; but of one part he was quite sure and that was that the old Scotch woman used a handful of meal to the person, and while this rule should never be departed from, the rest of the ingredients might reasonably be left to guess work.

Results proved that his guess as to water was not far out, but I shall always have a suspicion, which I formed at the breakfast table, that the rule intended for the measurement of the meal he had absent - mindedly applied to the salt. The cook was duly reprimanded for being wasteful of an article which had gone up in price during the war, and signs of retrenchment in this particular were evident at the next morning repast—in everything but the water; this we managed later. On the start our appetites were a little critical, but later on I will show you, dear reader, where this latter characteristic of the epicure had occasion to keep itself in the background.

On the third morning after our arrival, we made ready for the first stage of our trip. After crossing the log-jam we made our way up the north bank of the Fraser until we struck the old Foley trail, then we faced westward towards the Grand Fork River. We had travelled but a short distance when, to our surprise, we saw standing right on the road a few yards ahead a huge brown bear. I believe this was a new experience for both of us. At least the writer can testify that previously he had never been frightened by anything more tangible than the fresh tracks of this animal, and that nearly thirty years ago. I had often wondered since then how I would really feel if I were to meet the beast himself and now, all unprepared, I was given the opportunity. I shall not say that I did anything heroic. The bear did not give me the chance. We both sent messages to headquarters asking for instructions, and the bear's answer came back first, which read: "Yes, run"; and he acted on the advice before mine came.

The trip up the Grand Fork was strenuous, but the glory of the scenery was wonderful and our heavy packs often seemed to lose their weight as some new scene of beauty burst upon our sight. After fording a small, icy stream about half a mile after leaving the Foley trail, which we took to be a tributary of the Grand Fork, we pulled off our boots and socks and while these were drying we feasted our eyes on the object of our trip, Mt. Robson. We had seen it from the distance before, but now we were at comparatively short range and the sight was grand. The customary clouds hung about the peak and we decided to wait awhile, hoping that, as each cloud passed, the blue sky behind it would reveal the top. Here we sat, the artist sketching and the camera fiend snapping; but after hours of waiting we decided that Mt. Robson had ways of its own and these ways were stubborn ways, for not a glimpse of the real peak did we get. Then we pulled on our dry clothing and pushed ahead, only to find that what we had supposed to be a stream emptying into the Grand Fork was really an overflow of its banks, and we had to recross it several times. After a few more similar experiences we learned to dry our footwear only when the need of fording was past. The weather had been very warm previous to our arrival and this accounted for our difficulties in having to cross so much water on what seemed to be ordinarily a dry trail.

The rest of our difficulties for the day consisted in climbing hills, fighting mosquitoes and keeping on the trail. This last was not due to a poorly marked trail, but to side attractions furnished by the small fruit which seems to grow very abundantly in the region. There were saskatoons to the right, raspberries to the left and huckleberries in front, so how could we make progress?

We were not out to break records that day — one seldom does on the first day's tramp in the mountains— but, had we been so inclined, these constantly recurring berry patches would certainly have upset our plans. We reached Lake Kinney at last, and it was camping time. After looking along

the shore of the lake for a suitable place to pitch our tent and finding the ground everywhere damp from recent showers, we at length discovered, at the lower end of the lake, a log camp that we had passed without seeing. To this we returned with thankful hearts. But other visitors had preceded us, for we saw that porcupines had recently frequented the place; their teeth marks were on everything that looked good to a porcupine. We decided to become usurpers, however, and after hanging our wet clothing over the fire and our other goods out of the way of small animals, we retired for the night; but not to sleep, for just as the author of these few lines was about to enter into that happy state, he was aroused by his companion's half whispered exclamation: "I think he is about." In this hazy state of mind one is apt to connect things up wrong, so my first thought was of the bear of our recent acquaintance, and I arose expecting to see his form at the open door. It was too dark to see, so I said: "What's about?" Mr. Johnstone replied: "I think it is the porcupine." I was quite awake by this time, so I decided to satisfy myself on this point and, jumping out of bed, I grasped two brands from the fire and rushed toward the door, expecting to hear hurrying feet beyond. But I was doomed to disappointment, so I shut the door and went back to bed. I had begun to think that perhaps Mr. Johnstone had been mistaken and after all there was no porcupine (or bear or wild cat or ——) when, "No chance," our unwelcome visitor said again, and this time he said it from the roof. We could see him now, faintly against the sky, as he peered down through the smoke hole into our dimly lighted abode.

Vigorous prodding with a stick upon the under side of the roof caused him to depart, but not for good, for the next time he signalled it was on the outside of the logs near our heads and with his teeth he tried to lull us to sleep. His harmony was so fascinating that we listened all night, but when we sought him next morning to pay him for his trouble, greatly to our disappointment, he had gone. In the morning we discovered that while we had "packed" our heavy tent "fly," which we did not need, and an ample supply of cooking utensils, we had brought very little to cook, so we made another trip back to the base for more food. The day was nearly spent when we reached again Lake Kinney. Mr. Porcupine paid us another visit that night, but we had anticipated him by shutting the door and, knowing who he was, we did not waste much time listening to his entertainment.

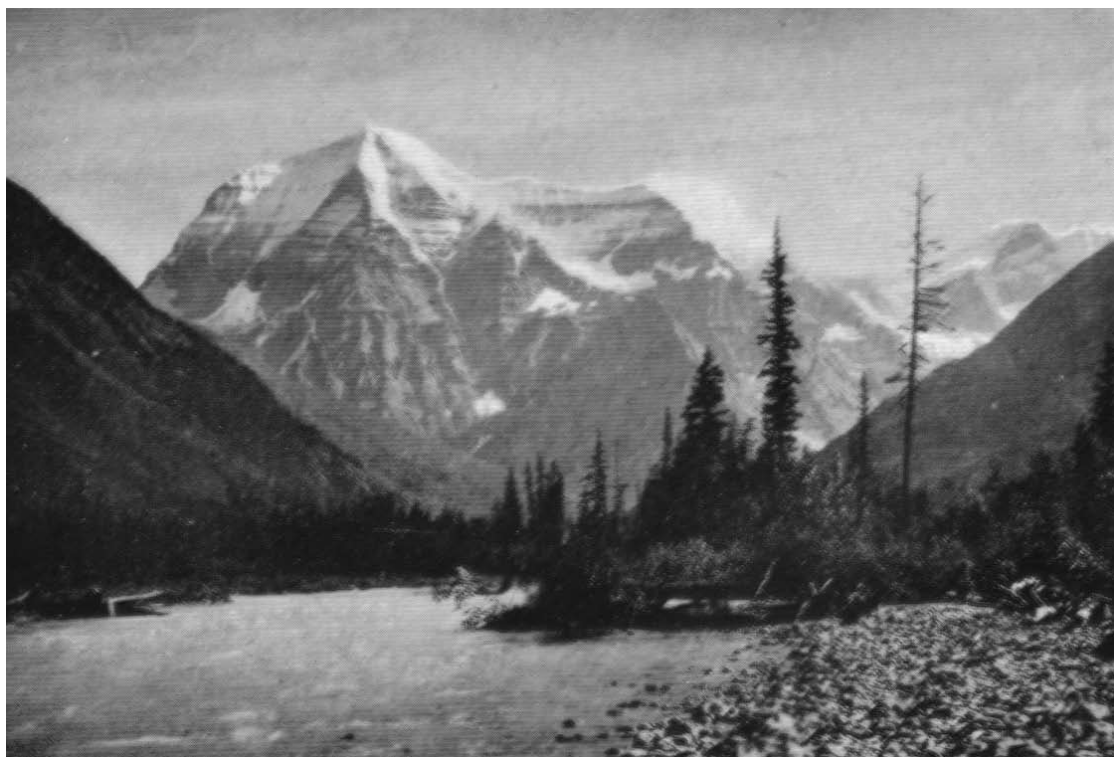
Early next day we started on the second stage—this time with less baggage. From the appearance of our map we decided we could make the trip to Berg Lake and back in one day, but the map did not show the difficulties of the trail. At the upper end of Lake Kinney, we crossed the stream that flows in at this point and followed a well beaten trail which wound its way up over the shale at the foot of the mountain on the west side. Here we turned round to take in the view, and Lake Kinney in the morning peaceful light looked very enchanting from our elevated position.

But more wonderful scenes lay ahead and after a short rest, a sketch and a snapshot or two, we turned toward the Valley of the Thousand Falls—not a thousand by number, but their myriad voices, echoing and re-echoing across the valley, would lead one to believe there were as many, if one were to judge by sound alone. Here we met the first great difficulty on our trip, for that which made the beauty and charm of this delightful valley—the falling water—had gathered into a very formidable mountain torrent as it approached the main stream.

After searching in vain for a better crossing further up we decided the best place to ford was near the lower end. Before making the attempt, however, Mr. Johnstone discovered another difficulty for, on account of our misconception of the trip, only enough grub had been brought to make two hungry men one good, square meal. By being frugal we managed to save out enough to make another light repast, then we forded the torrent and began the ascent of the other side. It seemed more like real climbing, for this part of the Robson Pass winds back and forth over places



Our Camp On The Fraser River And The Log-Jam. Photo, H.E. Bulyea



Mt. Robson From The Grand Fork Of The Fraser. Photo, H.E. Bulyea

which look from below like no place for a tenderfoot. But once on the way it was not difficult and the views as we went were more than ample reward for all the toil. Along the trail glimpses of most wonderful waterfalls often met our eyes and once we crept round the rocks to discover the cause of a vast amount of spray that rose from the gorge between us and Mt. Robson. Such a wonderful sight! It was as if some vast caldron had its abode in this awe inspiring spot, and one could not but wonder at the mighty, irresistible force that Nature had put into this rushing, tumbling body of water. How helpless one feels when gazing upon such a scene! Man's power, in which he glories, becomes in the face of such wrath a puny thing, and he wonders how he ever had anything but contempt for his small ability.

Once more we take the trail and, that we might conserve our frugal store, we indulged in berries on the way. With frequent rests and still more frequent meals we at length reach the summit of the pass only to find that, on account of the altitude, the small fruits we had hoped would help out our scanty supplies had recently ceased to exist, but the strawberries we had eaten had satisfied us for the time and we decided to save the remnants of our last meal for the next day that we might have something to sustain us on our return journey. So on we went, passing Emperor Falls, up the pass and beside the rushing stream until we found ourselves at the foot of Berg Lake. Here another torrent had to be crossed and this proved to be the most formidable of all. After several vain attempts at bridge building, a final effort was crowned with success and the author proudly crossed that dancing, swaying pole with a step that might pass for the cake walk. Mr. Johnstone followed with the Highland fling.

This undertaking past we pushed on round the north side of the lake toward the upper end, where we had heard the Alpine Club camped in 1913, and we hoped there to find something that would make a bed for the night. The lake was high and the old trail in places was under water, so for a considerable distance our travelling was rendered difficult by the thick underbrush higher up. The trails, when found, were very faint and easily lost. Once, when we thought we had a good one running in the right direction, we discovered after following it for quite a distance that it had been made by mountain goats and, from its ever-increasing upward tendency, it must have been developed by "Active Members" of the species. It was discouraging work, but about sundown, on turning a point, the framework of the old camp burst upon our sight and a cheer broke from the throats of two weary travellers; for, twenty miles from civilization, even the signs of where mankind had been, looked like home. From that moment our cares vanished and when we found inside an old store, which stood where the cook's tent had been, a tin of rice, a can of milk and part of a can of Wagstaffe's jam, all in good condition, our happiness was complete. An old tent hanging on a pole was our next important discovery, and when we had made our bed that night under some lofty spruces, after a well earned though stolen meal, we needed no rocking to sleep. In the middle of the night we had to get up and replenish our fire; for the nights up the glaciers do get cold. It was a beautiful clear, starlight night and the great snow-capped peak of Robson, silhouetted against the sky, was a sight I shall never forget; and the great stillness, broken only by the occasional roar of falling-ice or rock, filled one with a sort of delicious sense of awe.

Next day we explored the foot of Robson Glacier, visited the cave and the source of the Smoky River, and about noon began our homeward journey. This was, for the most part, the reverse of the upward trip, and in more ways than one. "We went with lighter hearts but heavier grub baskets, and for once we were thankful for an added burden. We crossed the same streams and passed over the same rocks, but once having had the experience they did not seem so formidable. Near night we reached Lake Kinney, where we found our irrepressible friend had paid his respects

to a pair of boots I had left hanging over the fire to dry. I had been reserving these to wear back to Edmonton in order to look somewhat respectable, but Mr. Porky had decided my pride needed a fall, so he set to work with that in view. I think he left quite satisfied that he had accomplished his task. I know I should have been had I been able to make as many holes in his skin as he made in my boots.

On the fifth day of our trip Mr. Johnstone wished to do some sketching about this beautiful lake and, to lighten the burden of our ultimate move, I decided to carry down to our base some of our outfit. On reaching a point on the Foley trail where our camp first came in view I saw a great smoke rising right beside it. I made my way in record time across the log-jam and up the other side to find that a smudge we had started, the night of our arrival, had followed a root of an old stump and, after smouldering for about a week, had suddenly been fanned to life by a sudden gust of wind. After a strenuous hour's work it was practically subdued, but not too soon, for had I been a few minutes later our tent and supplies would have gone up in smoke. I afterwards learned that the fire ranger had discovered it at about the same time and had visited the scene when I was at the height of my struggle, but he did not make himself acquainted and decided to leave the stage to the chief actor who, in this case, was the villain of the play. That night I rejoined Mr. Johnstone at Kinney Lake and the next day we moved the balance of our packs down to camp number one.

Here good luck came again. Imagine our satisfaction after travelling on short rations, doing our own cooking and working up appetites fit for lumberjacks, when Charlie Nelson, a cook of no mean repute amongst mountaineers, stepped in and announced that he would exchange his services for the shelter of our tent. A bargain and a good one it proved to be for us. I had but one doubting moment, and that was when he announced next morning, that he was going to give Mr. Johnstone a "Mulligan." That seemed a strange dish to feed a Scotchman and I remonstrated with Charlie on those grounds. He replied that it was composed chiefly of stewed huckleberries, and that if it would make it any more palatable to anyone, he would call it a "Wee Macgregor." So then he was given a free hand. No one seemed to worry much about its name after all had taken a sample and, when the cook thoughtfully let slip its old name, even Mr. Johnstone, like Oliver Twist, asked for more.

After another week of fishing, berry picking, sketching and photographing, we very reluctantly said good-bye to those delightful surroundings. On reaching home the sign still hung outside my office door, but with a different significance. Gone to the mountains were my stomach troubles and my other troubles, where I had left them, and should any reader need a cure, I would prescribe a trip to Mount Robson — the dose to be repeated when necessary.

SCIENTIFIC SECTION

Notes On Mountain Nomenclature

Coming Of Age Of The Geographic Board Of Canada

By R. Douglas

On the 18th of December, 1918, the Geographic Board of Canada came of age, having been brought into being in 1897. One reason for the creation of the Board was to secure uniformity of nomenclature. To quote the Order - in - Council establishing it, "Discrepancies are frequently found in the geographic names which appear in the publications of the Dominion Government and

particularly upon the maps issued by the various Departments of the Service.”

Another reason was to avoid duplication of names. “As the country is being explored, new names are given which are often duplicates of existing names or which are otherwise objectionable. Sometimes two or three names are applied to the same feature and with the difference in the orthography are the causes of considerable confusion.”

A third reason was that “the revision of the geographic nomenclature of Canada should not be left in the hands of foreign body.” It was pointed out that “the United States Board has been dealing not only with the names in the United States, but also with those in Canada, deciding by what names the rivers and mountains of Canada shall be known.”

The extent of the Board’s authority is given in the following sentence: “All questions concerning geographic names in the Dominion which arise in the Departments of the public service [are to] be referred to the Board; . . . all Departments [are to] be directed to accept and use in their publications the names and orthography adopted by the Board.” As the Dominion Government is the main publisher of maps, and such maps are the base of other maps, it is evident that any name which does not meet with the approval of the Board will have a short life.

The authority of the Board was strengthened two years later when provision was made for the appointment of representatives of the several provinces, which, at the same time, bound themselves to abide by the Board’s decisions. In practice every name is submitted to the representatives of the province concerned before it is dealt with by the Board, so that the Board’s rulings are backed by the support of both Dominion and Provincial publications. Slightly over 1,000 names have been approved by the Board since its formation. Of these, 63 per cent, are personal or proper names, 28 per cent, are descriptive names, and 9 per cent, are of Indian origin. The latter are, in the main, descriptive.

The majority of the Indian names were not applied by the Indians themselves to the peaks, but were given originally to other features, such as rivers, that had more influence on their daily life. The transference of the name of a river to that of a peak is in consonance with natural principles. Martonne, in his investigation of names in the Southern Carpathians, found that while we are accustomed to base nomenclature on the summits, the peasants bestow names on the first instance on the valleys. A mountain crest had, as a rule, different names in the valleys which it separates. It is quite a good practice, then, to extend the use of a name to an entirely different feature related to it, to call, for example, a mountain by such river names as Saskatchewan, which means “swift flowing,” or Athabaska, which means “Where there are reeds,” or Maligne, which means “wicked.” It also obviates the multiplication of names.

The hills of the prairies figured in the Indians’ daily life and were given specific names. The majority of these are maintained in English translation ; for example : Clear, Devil’s Head, Dried Meat, Hand, Knee, Medicine-lodge, Peace, Thickwood, Touchwood. No Indian names seem to have been retained in the Rocky Mountains, but there are two well known ones in translation, Rocky Mountains itself, and Crowsnest Mountain. Peaks named after Indians include Kananaskis, Peechee, Tekarra and Tzuhalem.

A number of Indian dictionary words have been applied to mountain peaks by modern travellers. The Indian practice, however, is more to describe a physical feature by a sentence than by a word. Such artificial names include the following: Chetang (hawk), Hungabee (chieftain), Kiwetinok (on the north side), Maskwa (bear), Naiset (sunset), Nikanassin (first rocks), Odaray (brushy), Tatei (windy), Titkana (bird), Waputik (white goat), Wenkchemna (ten), Wiwaxy (windy), Yoho (Cree Indian exclamation of surprise), and Yukness (sharpened).

An appropriate descriptive name that has not been duplicated becomes every day more difficult to find. Most simple designations referring to trees, plants and animals have been used. There are: Birch, Larch, Pine-Spruce, Tamarack and Wood Mountains, as well as Forget-me-not, Lichen and Lychnis Mountains. Named after animals are: Antler, Beaver, Badger, Bear, Bee, Caribou, Camelhump, Catamount, Chak, Chetamon, Cougar, Deer, Dragon, Dromedary, Eagle, Elk, Goat, Greywolf, Grizzly, Groundhog, Lynx, Marmot, Moose, Panther, Porcupine, Ptarmigan, Sealion, Sheep, Terrapin, Trout, Turtle, Whistlers and Wolf Mountains.

The colouring of mountains as they strike the eye has given the names: Argentine, Black, Blackhorn, Blue, Burnt, Copper, Coppercrown, Crystal, Ebon, Emerald, Grassy, Olive, Purity, Red, Redtop, Silver, Silvertip, Snow, Snowcap, Snowdrift, Snowy, Striped, White, Whitecap and Whitehorn.

Warfare has given the names : Bastion, Citadel, Field-Marshal, Fortress, Gendarme, Guardsman, Helmet, Lookout, Observation, Rampart, Ravelin, Rearguard, Redan, Redoubt, Sentinel, Sentry, Sergeant, Signal, Tent, Vidette and Poilus, the latter commemorative of the French soldier in the Great War.

The general outline or some prominent feature of the mountain has given rise to the names: Anchor, Anvil, Bald, Beehive, Cairn, Castle, Cathedral, Cliff, Cornice, Double, Flat, Flattop, Gothics, Hump, Island, Minaret, Monument, Needle, Pinnacle, Pyramid (including Chephren and Cheops), Roundtop, Sawback, Scarped, Sharp, Spire, Steeples, Smooth, Sugarloaf, Table and Wall.

Aspects of the weather when a peak was visited are commemorated by Mounts Aeolus, Airy, Blustry, Misty, Stormy, Thunder and Windy.

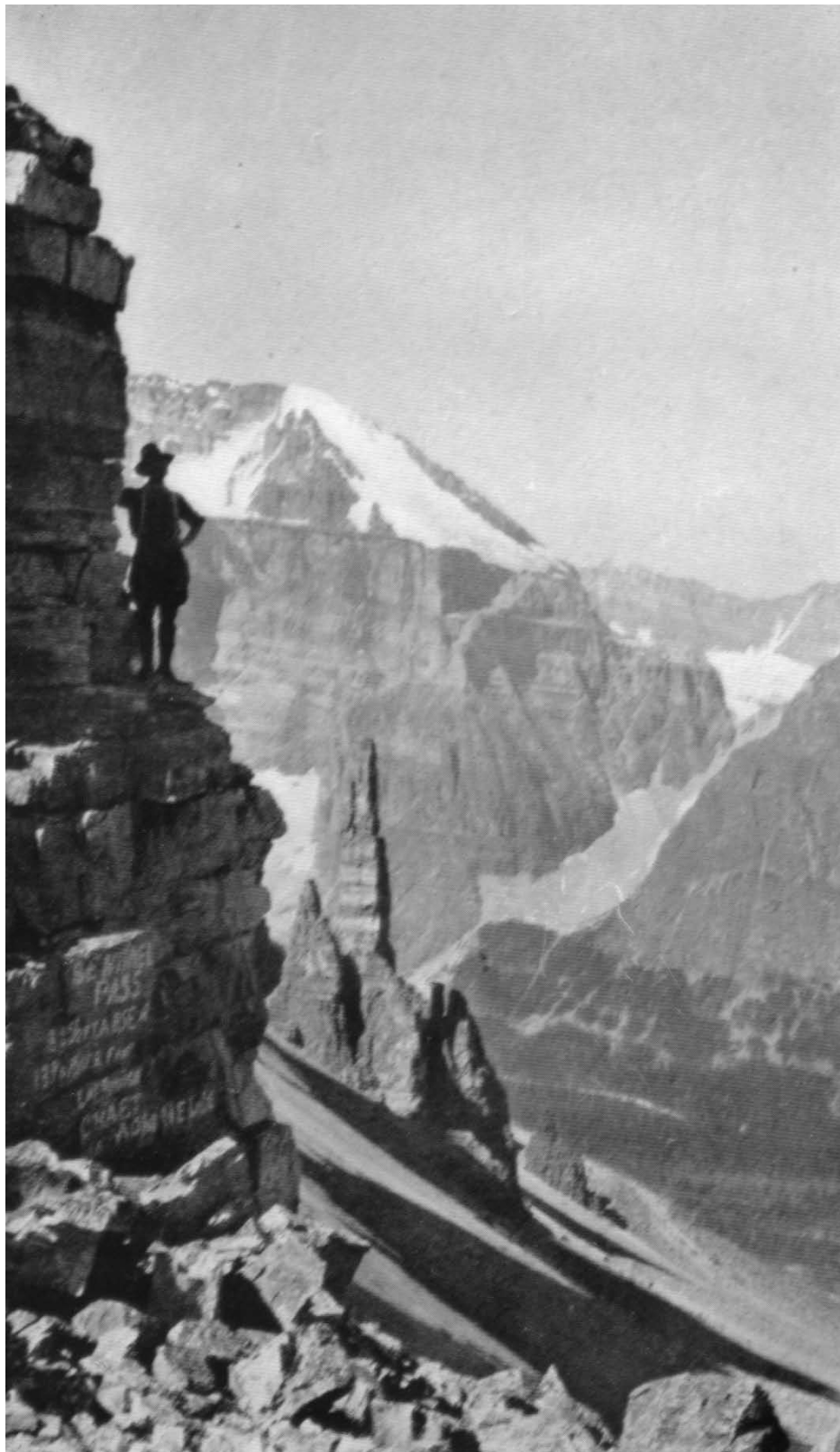
Geological characteristics or peculiarities of peaks have suggested such names as Andesite, Anticline, Coal, Conglomerate, Copper, Crater, Fossil, Granite, Iron, Lodestone, Mica, Porphyry, Sandy, Slate, Sulphur, Syncline, Talus, Trachyte, Trap and Zinc.

It has ever been the custom of British explorers to bestow personal names upon features discovered. Mt. Nelson was named by David Thompson, over a hundred years ago, after the victor of Trafalgar. To-day the names of the great allied leaders have been similarly bestowed on peaks. If features had never been named after dead men mountain nomenclature would have been much poorer.

Rupert Brooke, the young English poet-soldier who died at Gallipoli, wrote, after travelling through the Rockies, that he had found them windswept and empty. The ghosts of the past did not haunt them. The dead did not return. This feeling is bound to be left in the mind of any tourist who visits a country without making himself acquainted with its past history, but it can be mitigated if the features are named after pioneers who have traded and explored in the region.

This policy of entwining the history of the country in its place features is pursued, wherever possible, by the Geographic Board. The early furtraders and travellers are thus commemorated by such mountain names as Blakiston, Douglas, Franchere, Hector, Henry, Howse, Sir Alexander Mackenzie, Moberly, Palliser, Rae and Simpson. The Selkirk Mountains commemorate Lord Selkirk, the founder of Winnipeg. The Canadian Pacific Railway route explorers of the '70's, who succeeded the furtraders, are similarly commemorated.

It has been mentioned that the name Rocky Mountains is a literal translation of the Cree Indian name "Assiniwati." Legardeur de St. Pierre, whose Journal, 1752, tells of the founding of Fort Lajonquiere on the North or South Saskatchewan in 1751, speaks of the mountains as Montagues des Roches. The French usage survives to-day in the names of such individual peaks



Sentinel Pass Looking Towards Mt. Lefroy. Photo, Val. A. Fynn

as roche Bonhomme, roche a Bosche, Boule roche, roche Carcajou, roche de Smet, roche Jacques, roche Miette and roche Ronde.

Not all the names mentioned above have been dealt with by the Geographic Board, partly for the reason that the peaks are in regions that have yet to be mapped. It is undesirable, however, that any of them should be repeated.

Sometimes several parties of travellers narrate adventures met in an un-mapped region, each with its own set of names. The result is confusion. As many as half a dozen names have been bestowed in recent years on some peaks in the Windermere region of the Selkirks. Such an undesirable state of affairs would be avoided if climbers before publishing names would take up the question of their fitness with the Geographic Board directly or through the officials of the Alpine Club.

Note.—At the request of the Canadian Alpine Journal, Mr. R. Douglas, Secretary of the Geographic Board of Canada, has graciously written the above concise and useful article on mountain nomenclature. The object of the Journal in requesting Mr. Douglas to write such an article is to give those of our members who explore and climb in new or little known parts of the Canadian Rockies some guidance in the selection of names to commemorate their activities and to define the feature described or mapped in their publications.

All such explorers or climbers desire to confer names and, as Mr. Douglas has pointed out, duplication can be avoided and permanency insured by consulting with the Secretary of the Board before publishing.

From time to time the Board publishes a Report (fifteen have already been published) which gives a full list of all names authorized. I do not know, but I think it likely that a copy of the latest report could be obtained from Mr. Douglas on application by a person or party making an extensive practice of exploration in the Canadian Rockies and of publishing the results. Such an assistance would obviate all duplication and probably lead to acceptance by the Board of the majority of the names conferred. For correspondence, address E. Douglas, Esq., Secretary, Geographic Board of Canada, Department of the Interior, Ottawa, Canada.—Editor.

Snow In The Rocky Mountains Park

By N. B. Sanson

Snow

When one has, in an enthusiastic moment, consented to write something on snow, he finds on mature deliberation that he has been very rash, for he has many enemies, so many knowing practically more about snow than the writer.

How beautiful is the snow in alpine regions, its sharp line cutting the clear blue sky, beautiful as it spreads away many a mile over the trackless plateau, where no footmark betokens the presence of intruder on the lofty solitudes, save, perchance, the narrow track left by the little feet of Mountain Goats on their pilgrimage from pasture to pasture — beautiful as it hangs in massive cornices over the edge of some dizzy precipice, or bends looking down into the awful depths of some mysterious crevasse!

Beautiful is the snow in the act of falling! How gentle is its motion ! How the flakes hover and waver and wander and dance to and fro in their descent, and how quietly and softly each lies down at length in its appointed place to do its humble but important work!

How little is a snowflake! How light and airy, hovering to and fro as if its weight was not enough to bring it to the earth, and yet when one little flake lies upon another, and hour after hour and day after day the process goes on, how vast and formidable the accumulation. See along the mountain slope the thundering avalanche! How insensibly it has been forming, flake by flake, but what a power of destruction has been organized. And now there is a little increased action of the sun, and a little loosening of the hold of the under surface, and some little motion of the atmosphere, and the vast mass is set in motion. Slowly, very slowly at first, but soon with ever accelerating speed it rushes down the slope, and dashes past the cataract, and overleaps the chasm, and outstrips the swift Mountain Goat, and thunders down the glen, and overwhelms the accidental traveller, railway - worker or train. Yet that destructive avalanche is made up of tiny influences, single flakes of snow.

The first snow to remain on the mountains about Banff is that which may fall about the 15th of October, and from then on to the end of May or the beginning of June. Any rain which may fall in the valley will mostly fall as snow on the mountains.

By the beginning of June this year the six hundredth trip, in over sixteen years, will have been made to the top of Sulphur Mountain. For some years the trip was made weekly and then fortnightly, in all weathers. Some interesting information has been collected. We have some years' records of wind, years of temperatures and barometer, and general conditions and phenomena.

While at this meteorological work the museum has been benefited by collections of all classes of insects, spiders and various other material. Nights spent in the building² have mostly been used in making up Mountain Returns.

The writer has recollections of some few winters of exceptionally heavy work, when wind and fresh snow would require a new trail being broken each week through a long winter, and again, of a very few winters in which the trail after being broken once or twice has remained in good shape nearly all winter. May is usually the worst month for Sulphur Mountain, being both poor snowshoeing and walking.

On May 30th, 1916, after the snow had been going very well, and the Prairie Anemone (*Pulsatilla Hirsutissima*) was in flower along the top of the mountain (here it is of deeper purple than below and may be found in flower long after it has disappeared from the valley) and one could almost get along without snowshoes, lo, and behold! it was necessary to make the trip through nearly two feet of fresh snow. At this time there were fifty-three inches of snow on the trail near the top, six hours' tramping from Hot Spring to hut, sinking two feet with snowshoes and bad going till after June 15th. Usually one can take a horse to the top by June 15th at least.

The maximum winter's depth of snow, measured near the top of the trail on Sulphur Mountain, occurred in 1910 when, on March 7th, it was between seven and eight feet. The minimum depth was on March 25th, 1912, twenty-three inches.

Snow varies in density and 1917-18 was one of the few winters of good snowshoeing, the snow packing well. This past winter — 1918-19 — was a poor one for snow-shoeing. The condition of the snow was peculiarly different than for many years past. The mild weather of December and January gave the snow a slippery foundation and its interior was of granulated particles or icy spicules, through which one's snowshoes would drop to the bottom and often catch a crusty surface on the withdrawal.

Some large snowslides have occurred in the mountains of the Rocky Mountain Park years

2 Meteorological Observatory on crest of Sulphur Mountain.

ago, clearing out an extensive area of timber. These slides may, perhaps, never reach as large proportions again or at least for some or many years.

Occasionally one has experienced extra trying trips, even on Mount Sulphur. Just one example or so. On December 11th, 1917, snowshoeing heavy, a N.E. blizzard along top, twenty-seven degrees below zero, snowing heavily and quite dark, snow much drifted, over an hour going along top—distance about 2,000 feet. On another occasion my long-haired collie, accustomed to follow me on the mountains, contracted the worst possible case of pneumonia.

The best winter conditions occurred in 1905, when snowshoes were only necessary for six trips — from January 3rd to February 6th The quickest winter trip for snowshoes, March 6th, 1905. From Museum to building on top of mountain, 2 hours and 25 minutes (when firewood was carried up also). Return trip 1 hour and 25 minutes, a total of 3 hours and 40 minutes; and one trip from top of the mountain to town in 1 hour and 5 minutes. The longest trip took 7 hours and 15 minutes to top from town. Return 3 hours and 20 minutes, a total of 10 hours and 35 minutes, heavy going, November 17th, 1913.

In the year 1908 twenty-four snowshoe trips were made and in 1909 twenty-two trips. These are maxima.

Heavy Snowfalls

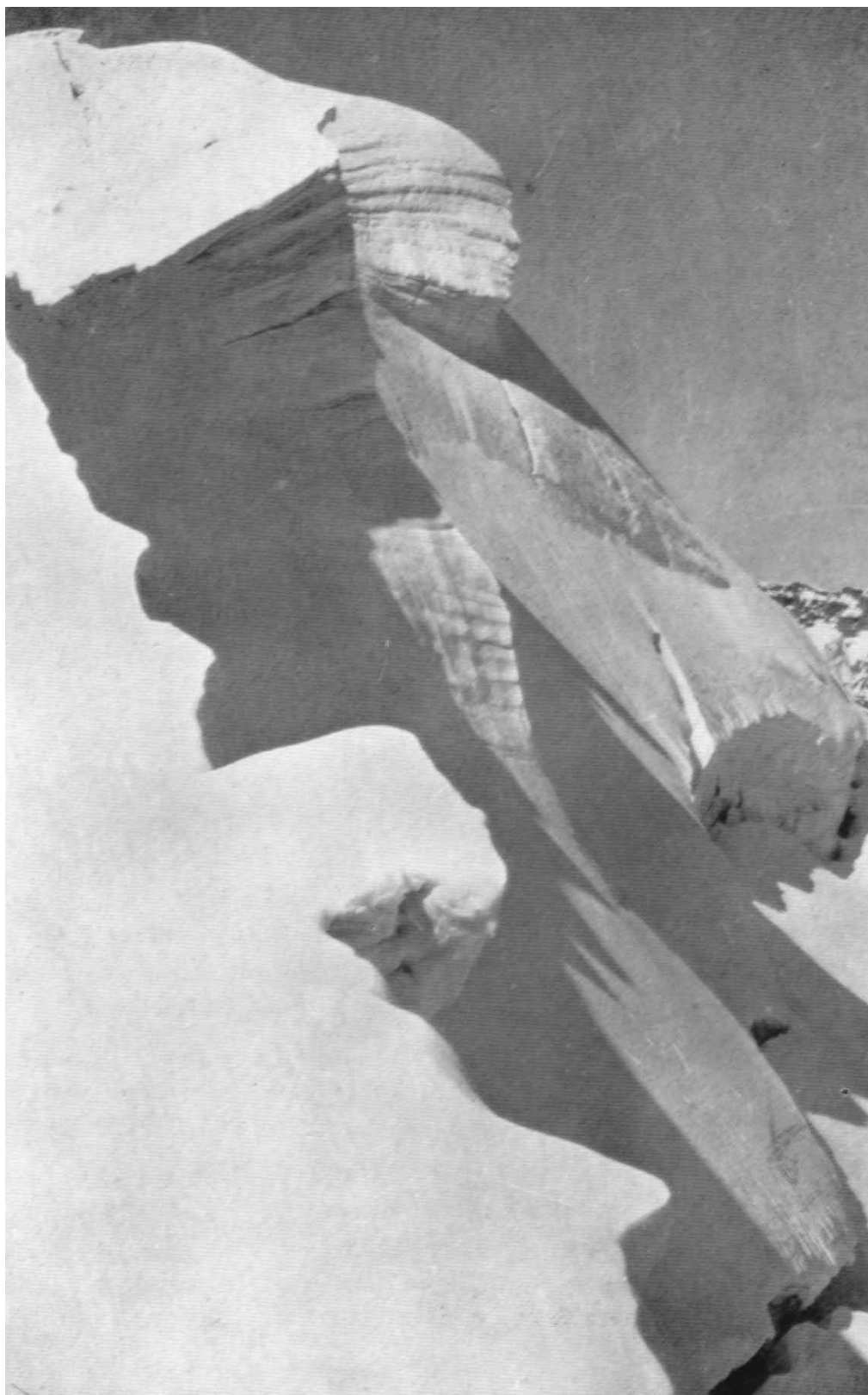
October has seen a foot of snow on the mountains. On the morning of November 13th, 1896, it began snowing heavily at Banff and only close on the evening of the 15th, when about four feet of snow lay on the ground. A fresh N.E. wind drifted the snow somewhat at times. With temperatures averaging 30 deg. below zero, for six days after the storm, Lake Minnewanka did not freeze over till the seventh day, when the minimum temperature was only zero and it did not appear to be in anyway very windy. Some winters ago Banff only had three weeks' sleighing and that indifferent. Considerable snow fell, but three distinct Chinooks followed shortly after good snowfalls. Inverse temperatures sometimes occur on Sulphur Mountain during extremes of cold in winter. Here is a particularly noticeable example.

Started from town under exceedingly cold conditions, northeast wind, 30 deg. below zero, frozen toe by arrival at Hot Springs—two miles. As one rose higher, the air became noticeably warmer till, on reaching the building, the temperature was four degrees above zero and quite pleasant, very light southwest wind. On the return the air became bitterly cold not very far above the Hot Springs.

For the past three years a snow survey has been carried on in the vicinity of Lake Louise about the end of May. At certain heights on a few mountains the weight of undrifted snow is taken and its water equivalent calculated. When an average is struck, and by comparison with previous years and making allowance for likely weather conditions, a very fair idea can be got as to what effect this mountain snow when melted will have on the streams' height, etc.

Photographs are taken each year from stated points. Any change in the lay of the snow, etc., is thus arrived at. The lay of the snow in the winter of 1917-18 was different than usual. December weather had much to do with this, and in consequence the water contents of the snow found some different or older channels than usual, which was at least in part the cause of a marked lowness of all rivers, creeks and temporary streams flowing into the Bow River from Lake Louise and east to the prairie. The water which flooded the Bow Flats near Banff Town I believe came from the west of Lake Louise.

In consequence of the different lay of the snow on most mountains, new snowslide routes



Showing Snow Accumulation On East Ridge Of Mt. Temple Near Summit. Photo, Val. A. Fynn

were created and many old snowslides were very much less than their usual size or failed to materialize at all. Many new routes were seen in the Rocky Mountains Park. Some snowdrifts in exposed places become hard enough to walk on as a rule in February, and they give good snowshoeing often before February, the sinkage being unappreciable. February is almost undoubtedly our usual best snowshoeing month.

As to snowshoes for mountain work, the strong hunting snowshoes are the best. The toes are uncurved and therefore grip the snow.

Red Snow (*Sphaerella Nivalis*)

I have not yet seen this Red Snow plant anywhere on the mountains about Banff to my recollection, but it may be seen on the mountains west. My notes give Monarch and Cathedral Mountains; when these algae are ripening and ripe they assume a blood red colour, the early form being pinky, which appears more plainly when one makes impressions on the snow.

I would consider that this would be one of the reasons for not eating snow. What with pollens, etc., and even minute insects, everyone as a rule knows that it is best always to boil snow water.

In early Arctic expeditions it was apparently not known what the colour of the snow was caused by. In fact I am led to think it was at one time put down to swarms of butterflies coming out of their chrysalis state, when, as is known, they leave a few drops of blood behind.

Animal Life On The Snow

Insects—Snow Fly

In mild weather in winter some curious insects appear on the snow on the mountains and less commonly on the valley snow; what looks like a sort of spider is really a fly and belongs to the Tipulidae or Crane-fly family. This funny looking, long legged insect is a wingless sort of Crane-fly, only having the balancers (for these balancers take the place of what in other flies are a second pair of wings). These curious flies (*Chionea Volga*, Harris and *Chionea Nivicola*, Doane) go dead like spiders when alarmed. They come out of moss, etc., and from under and above the snow, and are mostly found quite a long way from anything but snow, living on very minute material.

Snow Flea

The Snow Flea (*Achorutes Nivicola*) I once saw in countless thousands on Sulphur Mountain trail, which was black with them from near the Hot Springs to about three-quarters of the way up the mountain. They live on still more minute material than the snow fly. Sometimes a yellow mass like pollen is seen on snow and ice in the spring. These may be the larvae of the insect. How they live under such conditions is a wonder.

Boreus Brumalis, Fitch

Another hopper is small and metallic blue-green, having a curious beak and the males with an egg boring appendage. These go dead and are very fierce, pugnacious looking creatures, and quite dolled up, as one might say. The beak is for piercing their more minute neighbours and sucking their blood. These are often common.

I found my first *Grylloblatta campodeiformis* (see Canadian Alpine Journal, 1917, p. 12, for description) on the snow in the fall, on Sulphur Mountain some years ago. These live under rocks on the mountain in summer.

One is able to collect some good material on the snow, as everything is then more easily seen and must fall from the trees, etc., during snowfalls in mild weather in the fall and spring. In this manner the writer has collected spiders, flies, beetles, etc., while on some of the Alpine Club's climbs the following insects have been seen on the snow on glaciers and mountain top slopes: Dragon flies, flies, bugs, etc. I presume these creatures have been delightfully flying over the snow in the warmth of the long summer day and taking too long to pass over the snow area, have been chilled, and falling on the snow, remain perhaps to be devoured by some other living creature.

Birds On And In The Snow

First of all, the prime mover in the art of living under snow is the grouse; with us the Richardson's grouse, *Dendragapus Richardsoni* (a fine, large bird), allied to the Blue or Dusky Grouse. These birds fly from some tree into the deep snow and sometimes remain under the snow for days, especially during stormy weather. They take this cover after feeding up as well as possible. The writer has been fortunate in seeing them under all degrees of emerging from under the snow and on one moonlight night saw over a dozen fly up, and these all within a few feet of each other on Sulphur Mountain. These birds preferably go under the soft snow on the trail up Sulphur Mountain, mostly at from 6,000 to 7,000 feet, and to have one fly up when least expected and feel its wings almost touch your face is not altogether rare. A friend of mine and at one time a member of the Alpine Club, who has distinguished himself in the Flying Corps during the war, had one of these birds suddenly fly up during a delayed trip down from Sulphur Mountain one winter night and cautiously interviewed me about it next day. He was not quite sure whether or not the sulphur springs were the abode of evil spirits and one was taking a stroll or flying exercise. Very occasionally the dive is made in crusty snow by mistake and then one gets a specimen for mounting.

Leucosticte

In June these birds go up on the mountains and feed on the spring spiders, etc., which come out to sun on the snow. They are then, as nearly always, very tame like.

Nuthatches and Chickadees are only seen or heard occasionally in winter on the mountains, preferring the valley. White winged and the American Crossbills are only very occasionally seen on the mountains, being more often found on the summit of passes where the temperature seems to be milder than the more exposed mountain tops.

Grosbeaks, Waxwings, are also only occasionally seen. Whitetailed Ptarmigan, Clarke's Nutcracker and Canada Jay are often seen in the spring on the mountains.

Four Footed Animals

The Mountain Rat, Bush Rat or Pack Rat (*Neotoma Cinerea*) exercises himself on the snow of the mountains, chasing mice, and becomes altogether too familiar and malodorous when occupying a building, attic or cellar. The white footed mice are common on all mountains, they do more scraping than gnawing, have lovely, large glowing eyes and easily become quite tame. The snowshoe rabbit (*Lepus Americanus*) is not so common as it was ten years ago. By a spread of the large hind feet they can skim along the snow like a flash of lightning when alarmed. In very fresh snow they sink from four to five inches. It is a simple fact known to most people that the hind footprints in the snow are foremost. The hind legs are thrown forwards as it jumps, so some can be excused if they follow the rabbit the opposite way to which he is going or has gone. This hare (as he does not burrow but lives under brush, etc.) commences to change to white in October and

commences to change back to dark gray in April and May.

The Lynx (*Lynx Canadensis*) is the hare's arch enemy. Oh, how he does spring on his poor, weak prey from some eminence! One always, when seen, gives the rabbit a good scare to save its life. Lynx also spread out the feet to act as snowshoes and go along as softly on the mountain snow as does the domestic cat on our carpets at home. They are extremely supple and their cry on a winter's night is weird. They sink five to six inches in fresh snow. A year of many rabbits means a year of many lynx, and vice versa. They travel a long way up and down the mountains. Grouse, of course, are also food for them, and they often spring on the ever wary grouse as he emerges from the snow. The grouse try to escape the lynx's chance of following on their trail by making a sudden break in their footprints in the snow and then fly some distance and enter the snow with as little evidence as possible.

The Black Bear (*Ursus Americanus*) hibernates, at least occasionally, on the upper slopes of Sulphur Mountain. I think it was one of our late Alpine cellar bears that I saw the huge tracks of in the snow in November or December going up the slopes of Sulphur Mountain, late in hibernating, no doubt from feeding on the flesh pots of kind friends.

The Red Pine Squirrel (*Sciurus Hudsonicus richardsoni*) is seen most of the winter on some mountains. He makes tunnels through the snow and uses strong language when one comes on him unexpectedly.

The Says Chipmunk and the smallest chipmunk (*Eutamias Lateralis* and *Eutamias Quadrivittatus*) hibernate sometime in October and come out again in May.

The Porcupine does not always hibernate and has been seen in the coldest weather under deep snow conditions high up on Sulphur Mountain, sticking to a group of white barked pine trees for several days, where he got his daily food.

The Shrew Mice — insect - eating forms of mice— emerge from the snow in winter, as also the red backed Vole. The former can stand extreme temperature. They have a very thick, downy fur. The writer has seen them in water swimming about after an insect or so when it has been well below zero. The shrew mice have long snouts and very tiny eyes. Their teeth are very beautiful in form and arrangement, and the smallest shrew mouse is the smallest mammal in the world, but they are extremely fierce. Watch them hunt and see the dash they go at and the pounce they make on their prey. Three of these very small shrews were put in a glass tumbler and they fought till only one was left, the others being devoured by the conqueror.

Annual Snowfall for Banff, Alberta

Year	Snowfall	Year	Snowfall
1895*	94.2	1907	93.3
1896	97.5	1908	78.0
1897	68.8	1909	128.7
1898	75.5	1910	73.7
1899	100.6	1911	91.7
1900	72.4	1912	55.1
1901	71.8	1913	80.0
1902	111.0	1914	82.6
1903	87.2	1915	49.5
1904	76.6	1916	130.0
1905	34.1	1917	79.0
1906	47.0	1918	100.5
Total 1884.6 inches			

Average annual snowfall, 81.9 inches, or 6 ft. 9 3/4 in.

1916 maximum annual snowfall, 130 inches, or 10 ft. 10 in.

1905 minimum annual snowfall, 34.1 inches, or 2 ft 10 in.

*Not included in total. Incomplete; April, 7 days no record; May, only 10 days' record.

Snowfall for the winter period

November, December, January, February, March and April

Year	Inches	Maximum fall
1890-91	24.8 (2 ft. 0 8/10 in.)	Dec. 9.0 in.
1891-92	78.5 (6 ft. 6 5/10 in.)	Dec. 35.5 in.
1893-94	54.0 (4 ft. 6 in.)	Nov. 13.5 in.
1895-96	66.9 (5 ft. 6 9/10 in.)	Dec. 24.7 in.
1896-97	82.7 (6 ft. 10 7/10 in.)	Nov. 48.6 in.
1897-98	73.3 (6 ft. 1 3/10 in.)	Nov. 26.5 in.
1898-99	60.0 (5 ft.)	Jan. 18.8 in.
1899-00	64.6 (5 ft. 4 6/10 in.)	Mar. 16.9 in. (Nov. next)
1900-01	58.6 (4 ft. 10 6/10 in.)	April 14.3 in.
1901-02	62.3 (5 ft. 2 3/10 in.)	Jan. 17.5 in.
1902-03	89.4 (7 ft. 5 4/10 in.)	Mar. 38.7 in.
1903-04	68.6 (5 ft. 8 6/10 in.)	Feb. 17.3 in.
1904-05	37.4 (3 ft. 1 4/10 in.)	Dec. 12.8 in.
1905-06	23.8 (1 ft. 11 8/10 in.)	Jan. 7.7 in.
1906-07	70.0 (5 ft. 10 in.)	Jan. 16.4 in.
1907-08	65.7 (5 ft. 5 7/10 in.)	Mar. 15.9 in.
1908-09	93.7 (7 ft. 9 7/10 in.)	Jan. 41.1 in.
1909-10	96.9 (8 ft. 9/10 in.)	Nov. 37.6 in.
1910-11	67.9 (5 ft. 7 9/10 in.)	Jan. 31.2 in.
1911-12	48.2 (4 ft. 2/10 in.)	Nov. 16.1 in.
1912-13	61.0 (5 ft. 1 in.)	April 14.5 in. (Mar. 14.2 in.)
1913-14	61.3 (5 ft. 4 3/10 in.)	Nov. 20.1 in.
1914-15	49.3 (4 ft. 1 3/10 in.)	Nov. 24.7 in.
1915-16	92.8 (7 ft. 8 8/10 in.)	Jan. 28.5 in.
1916-17	44.6 (3 ft. 5 6/10 in.)	Mar. 14.3 in.
1917-18	74.9 (6 ft. 2 9/10 in.)	Dec. 31.5 in.
1918-19	86.2 (7 ft. 2 2/10 in.)	Nov. 27.6 in.

— — —
Total 1757.4 inches

Yearly average 65.1 inches, or 5 ft. 5 in.

Winter of maximum snowfall, 1909-10 - 8 ft. 9 in.

Winter of minimum snowfall, 1905-06 - 1 ft. 9 5/6 in.

In twenty-seven years the maximum fall of snow for a winter has taken place oftenest in November (8 or very nearly 9 times), January being next with 7 times. It only occurred once in February.

Notes On Some Of The More Common Animals And Birds Of The Canadian Rockies

By William Spreadborough

Note.—Mr. William Spreadborough has for many years been field assistant to the following scientists: Mr. James McEvoy, late of the Geological Survey of Canada, Professor John Macoun, Dominion Naturalist, and Mr. James Macoun, Dominion Biologist. Mr. Spreadborough is a skilled collector and as a hunter and trapper cannot be surpassed. He has kindly contributed the following notes for the Journal.—Ed.

Grizzly Bear

Ursus Horribilis Horribilis, Ord.

In 1898 I was attached to Mr. McEvoy's party when on a Geological Survey Expedition through the Yellowhead Pass. I was to do some Natural History work and also to collect what plants I could.

We saw very few signs of big game all the way through the pass to Tête Jaune Cache. We crossed the Fraser River at the Cache and travelled south to the Canoe River, where we camped for a few weeks. From here we made several trips up into the mountains and saw signs of big game: Caribou, Mountain Goat and Grizzly Bear.

One morning, Mr. McEvoy, myself and Sam, our cook, rolled our blankets and, with food enough for two days, started up the mountain on the east side of Canoe River. We crossed over a ridge that was well above tree line, with plenty of snow in large patches. We only stayed out one night and on our way back to camp had to cross the ridge where we crossed it the day before. Just before we reached the summit I heard a loud snort and Mr. McEvoy said: "Oh, look at the big grizzly!" Well, before I could get from behind Mac, she had disappeared over the ridge and left her three cubs. When we reached the top of the ridge, they had all gone out of sight. The young ones were not far away; we could hear them calling, "Baugh, baugh, baugh."

Now, a few hundred feet below where we stood, was a good sized patch of snow and across that a string of large tracks, which proved later to be the tracks of the old bear. If anyone had told me that a grizzly could travel that distance in so short a time I should never have believed him.

In a little while the cubs came from under a cliff into full view. They appeared to be able to follow their mother's tracks until they reached the snow, when they seemed to lose the scent and appeared to be lost. They all sat up on their haunches and started cuffing each other with their fore paws.

Now Sam begins to talk. He says: "We can get those little bears. We will call them back, but we shall have to get out of sight." Now it's Mac's turn to do some talking, and this is what he said: "What are you going to do if the old bear comes back as well as the young ones." Sam answered and said: "Keep her down with rocks." Then Sam says to me: "Call them back." As I never heard an old bear calling her young ones I knew nothing about it and had to ask Sam what kind of a noise to make, and he said: "Like a calf." I am not very good at imitating calls of animals but did the best I could. At the first call, those little bears cocked their ears; they were still sitting on the snow. At the second call, they dropped on all fours and started back up the hill as fast as they could, calling "Baugh, baugh," as fast as they could utter it.

The only firearm in the party was a small revolver that Mac carried in his hip pocket—not

much of a gun to kill grizzlies with.

The little bears did not see us until they were about twenty-five feet from us. You should have seen them get up on their hind feet in a hurry and show fight, and they certainly did some yelling and snorting. Just then I was thinking: "Now for the old bear," and I was looking for some nice handy rocks to roll down the mountain side. ,

By this time Mac had got his artillery at work. The first shot struck one of the cubs in the head, but too low down to enter the brain. It fell and Sam struck it in the ribs with a rock about the size of a man's fist, which made the dust fly from its jacket. It then got up again.

The second shot struck another in the shoulder and passed through its lungs. By this time, they thought it about time to leave and all started down the hill. As we had to go the same way we shouldered our packs and followed them. We soon overtook the one that was shot through the shoulder and Sam finished it with a geological hammer. I packed it down to the snow, and then it was that we found out that the large tracks we had seen from the top of the ridge were the footmarks of the old bear.

We stopped on the patch of snow and skinned the cub, and while doing it the other two cubs were close by. Sam wanted to kill them with rocks, but Mr. McEvoy did not approve of it. He wanted to know what we were going to do if the old bear was to come back. I think, myself, that we should have been in a pretty bad fix.

I don't want people to think that all grizzlies will do the same as this one, for more often they stay and protect their young.

I saw no signs of grizzlies in Jasper Park the two summers that I was there.

Hoary Marmot—Whistler, Siffleur

Marmota Sibila Hollister

The Hoary Marmot is chiefly to be found abundant about tree line in rock-slides, but is found much lower down. I have seen them in rock-slides in Jasper Park at an altitude of 4,000 feet, well down in the timber. They are also found fairly common in the alpine meadows, where they burrow beneath large boulders. They were very abundant along the border of a large meadow just over the Shovel Pass (Jasper Park) in a rock-slide that is about half a mile wide. One could hear their long, shrill whistle everywhere. It was a common thing to see two or more on one large rock.

The long, shrill whistle seems to be a warning, for when one whistles all within hearing are seen making for the rocks. When badly frightened they utter short, sharp whistles in such quick succession that one would have some trouble to count them. They also utter a low-sounding whistle that one could scarcely believe came from the same animal.

I can't say how many young they have at a birth. I have killed four half-grown ones at the mouth of one burrow, but whether they have more I do not know.

They were common in the rocks along the face of the glacier at the foot of Mt. Edith Cavell (Jasper Park), also in a large alpine meadow east of Mt. Edith Cavell. They were also very abundant at the west fork of McGillivray Creek in the Lillooet country.

The length of an adult is about two feet six inches; colour, grey, head and feet blackish; food, grass and plants.

Parry's Marmot—Columbian Ground Squirrel

Citellus Columbianus (Ord.)

I have found these in several of the alpine meadows in the Rockies and as far west as Mt.

Quest, B.C.; this or another variety were very abundant at Midway, B.C., where they were nearly as great a pest to the farmers as the gophers are on the prairies.

A number of years ago I was on Mt. Forgetmenot, south of Calgary, and there I saw a number of them and secured several.

I was with Mr. J. M. Macoun in Jasper Park, in 1917, and, while camped by the lake at the foot of Mt. Edith Cavell, I climbed the mountain east of Mt. Edith Cavell. After getting above tree line one comes to a wide alpine meadow and in the meadow, just over the ridge, comes upon a large colony of these little animals. As soon as they see you, they make for their burrows, where they sit up on their hind legs and as one approaches they utter a short, sharp whistle and disappear into their burrows. It was near the end of August that I was on the mountain and the young were about half grown at that time.

In 1918 I was again with Mr. Macoun in Jasper Park and, in August, we were camped well up in Shovel Pass on the west side of the summit not far from tree line. Quite close to where we were camped there was a colony on the hillside, facing the south. Although I often heard their sharp little whistle I never could see any of them, as the plants were too tall, so one day I took five steel traps with me and set them in the mouth of the burrow that I found, and in one day I caught three. I opened the stomach of one and found it filled with the grouse berries — *Vaccinium scoparium* — which grew in great abundance along the hillside. Their food consists principally of plants and grass. They are not seen much on cloudy or rainy days, but when the sun is shining they are to be seen running about feeding or making for their burrows as one approaches.

Just over the summit of Shovel Pass there is a large alpine meadow and in all the drier parts of the meadow one finds them in abundance. One can hardly make any mistake in them, as they are greyish on the back and reddish on the under side, and are easily recognized by their short, sharp whistle. When sitting on their hind legs they look more like stakes than anything else.

I have never seen any of them putting up anything for the winter, so I suppose they must hibernate.

Little Chief Hare—Rocky Mt. Pika, Haymaker

Ochotona Princeps (Richardson)

They are to be found from the Rockies to the Coast Range At the head of Shuswap Lake I have seen them in the rock-fills along the C.P. Rwy. and in rock-slides along the west shore of Mara Lake. This is the nearest to sea level that I have found them.

The reason that they are seen more above tree line is because there is very little to hide them. They are much more abundant along the border of the tree line than they are above it. At our camp, last summer, in Shovel Pass there is a large rock-slide and in it they were very plentiful. I had a number of steel traps set for marten and weasels, all baited with meat, and I had to go round every night just before dark and take the little hares out and reset the traps, as I nearly always found one in each trap.

The adults are the size of small Guinea Pigs and, with their rounded ears, look very like them. In colour they are greyish and so near the colour of the rocks that it is very hard for one to see them unless they should happen to move. They very often, when one is approaching them, utter a squeak that is something like this: "Ske-e-eke." I have often walked over a rock-slide and not one in sight, but after walking over I would hear them behind me giving their little squeak.

Their food above tree line is chiefly grass, which they cut and put into piles to dry. When it is dry they place it under a rock where the water cannot reach it; this they use for food during the



Hoary Marmot Or Whistler In Jasper Park. Photo, J.M. Macoun



Young Hoary Marmot. Photo, M.P. Bridgland

long winter. Along timber line their food consists of almost anything in the shape of plants, and if one was to take the trouble to look over one of their stacks of food he would likely find twenty or more species of plants.

I know nothing of their breeding habits as I am usually not in the mountains until July or August. The young then are nearly as large as the adults. They are easy to recognize as there are no other animals in the mountains like them and their squeak is like no other animal's.

Bushy Tailed Wood Rat—Mountain Rat, Pack Rat

Neotoma Cinerea Drummondi (Richardson)

I have seen them from Banff to within ten miles of Chilliwack and in 1894 I saw signs that I am almost sure were theirs in the cutbank of Seven Persons' Creek, a short distance east of Medicine Hat; in the bank there was a large pile of bones, horse manure and cactus, which I am almost certain was carried there by the bush rat. In 1891 they were fairly common at Banff. There is a small cave in the side of the mountain on the south side of the railroad, a short distance from the station. When I was in it one day I saw several and shot one; the others disappeared in the rocks.

At Devils Lake (Lake Minnewanka) there are some pillars of conglomerate. On the side of one I saw a stack of sticks and leaves; as it was out of reach I cut a stick and gave it a poke, when, to my surprise, a large rat ran out of it and climbed up the side of the pillar as easily as a squirrel.

In the woods around Rossland there are a large number of miner's cabins that have been abandoned, and in some of them one sees in the bunks, where the men slept, great piles of rubbish, such as tin cans, sticks and bones, in fact almost anything that the rats can lay their teeth on.

A short distance below Hazelton, on the Skeena River, there are a number of cabins that no one is living in. The first night we camped there in 1917 I killed three with a stick and afterwards caught several in steel traps. They are very easy to trap; any kind of bait will do. In one of the cabins on the Skeena there was a huge nest composed of all sorts of things.

At Lillooet in 1916 I caught them in every rock-slide that I set traps in. I also saw them in a miner's cabin. When one enters a cabin they leave the nest and climb up the side of the cabin, and sit on a log and strike it with their hind feet, just as a tame rabbit does in its hutch.

In Jasper Park, in 1917 and 1918, they were common. I caught them in all the rock-slides that I had traps in. I only saw one nest in the park; that was in rock-slide near the waggon bridge that crosses the Athabaska River, under a large rock.

I think this is the most handsome of all the rats, with its buffy-grey back and sides, and the under part pure white from its chin to the tip of its tail; all the feet are pure white. In all my experience I have never, never known them to pack anything from our tents.

Mantled Ground Squirrel

Northern Mantled Spermophile

Callospermophilus Lateralis Tescorum Hollister

It is easily distinguished from the Chipmunk by its large size and different marking. It has one whitish stripe on each side reaching from its shoulders to its hips, bordered by two blackish stripes; head and shoulders bright brown or chestnut; middle of back, grey; tail blackish, the long hairs along the sides tipped with buff; chin white; belly light grey.

The first one that I saw was in the mountains north of Griffin Lake in 1889. Our hunter had shot some goats the day before and I went with him to help bring some of the meat down to

camp. The dead goats were lying on a patch of snow and, as we approached, I saw one of the little animals running away from one of the goats. When we reached it we discovered that it had been eating one of the goat's ears.

They were common in Jasper Park in 1917 and 1918. Like the Chipmunk, they lay up a goodly supply of food for the winter. I shot one last August that had fully half a teacupful of roots and seeds in its pouches. Not content with what it had in the pouches, it also had its mouth full of dry grass for its winter's nest. A few days later I saw one with its mouth full of the cottony heads of the cotton grass that grew in great abundance along the stream flowing down Shovel Pass.

They are to be found quite low down, but are more frequently seen on rocky ridges above tree line. I caught a number of them in steel traps that I had set in rock-slides for weasels and marten. The traps were all baited with meat.

Chipmunk—Canadian Mountain Chipmunk

Eutamias Ludibundus Hollister

This is easily distinguished from the above by its small size and markings. It has five blackish and four whitish stripes along its sides and back with a whitish stripe reaching from the tip of the nose to behind each ear. They lay up a large store of food for the winter.

I shot one in Jasper Park that had its pouches filled with timothy seed. It is wonderful to think of the time it must take them to collect such small seeds and store them for the winter. I have also seen them collecting the wild grass seed along the railroad in the Park, and also the seeds of berries.

The Chipmunk in Ontario goes into winter quarters fairly early in the fall and comes out about the end of March. They lay up a great deal more food for the winter than they require, and I have dug out from a nest a large quantity of beechnuts in the spring that had not been eaten during the winter. In one case, in the fall, I took from a nest about fourteen quarts of clean grain, chiefly wheat and oats. I think the habits of the western forms are much the same as those of the eastern species.

Flying Squirrel—Mountain Flying Squirrel

Sciuropterus Alpinus Alpinus (Richardson)

Flying Squirrels, I should judge, are fairly common in Jasper Park, as I caught ten on the hillside about a mile west of Jasper, where a spring flows down a small valley. My line of traps were only one hundred yards long, and only five of them.

I can't say what their habits are as they are nocturnal and are seldom seen in daylight unless disturbed. In Ontario I have seen a number when I have been felling trees, when sometimes as many as ten or a dozen would come out of one hollow tree. I have seen them on bright moonlight nights sailing from tree to tree. They climb up and then sail down at an angle of fifty degrees, and I have never seen one miss the tree that it wished to reach. The only sound I have heard them utter is a squeak, very similar to a mouse. In the daytime they roll themselves into a complete ball, their broad tails wrapped over their heads. I have seen several of their nests in hollow trees, but never found any food in them.

While collecting at Edmonton, some years ago, I found two nests, one in a crow's nest. The nest, proper, was made of the inner bark of the poplar tree, torn into fine strips. It contained four young ones; I saw nothing of the old ones. A few days later I found the other nest, where a flicker (Golden Winged Woodpecker) had had its nest. It also contained young ones and I secured the old

one. I hardly think that they hibernate, as I have seen a number of their tracks in the snow during winter time in Ontario.

I can't say whether their habits at Jasper are the same or not. I opened the stomachs of some that I caught at Jasper. They were full of fruit of some kind, I think the high bush cranberry.

Hudson Bay Red Squirrel

Sciurus Hudsonicus Hudsonicus Erxleben

They are abundant in Jasper Park, and in August are busy cutting the cones from the spruce trees, which they gather and place in large heaps usually in a damp place beneath a pile of brush or in rotten wood. They also cut the cones from other trees such as jack pine, Douglas fir and balsam. Their nest is usually placed near the food supply, in the branches of a tree that has very thick foliage, and is about the size of a bucket. It is made of fine dry grass sometimes mixed with the inner bark fibre of the balsam poplar and the poplar. In winter, squirrels will eat frozen beef, and I have caught numbers of them in steel traps that were baited with meat for weasels and marten. Their call note is a long vibrant cherrrrrrr, and in the spring time and late summer is heard throughout the woods.

On one occasion, when in the woods, I saw two of them fighting in the top of a tall tree. They clinched and rolled up like a ball, the consequence being that they both fell from the branch. After falling some fifteen or twenty feet they let go of each other, and one managed to seize a branch; the other fell about a hundred feet and was unhurt, for no sooner did he hit the ground than he made for the tree again and climbed to the top to finish the fight.

On another occasion, in the winter, a number of us were working on a stream some distance from camp, so had to take a lunch basket with us, and in it were some cookies. After we had been working some time I happened to look up and, to my surprise, I saw a squirrel making off with a cookie. I then placed my coat over the basket thinking that would keep it away but it did not, for in a short time I saw it running away with another cookie; it had crawled under the coat.

There are a number of fungi that they eat. Some are eaten fresh, while others are placed in the bark and branches of trees where they dry, but whether the squirrel ever goes after them again is a question. I have never seen any signs of where a squirrel has eaten any dried fungi in the winter, but I have seen where they have dug through three feet of snow and brought up seeds that they had buried in the leaves three months before. They eat various kinds of berries, and sometimes the tender shoots of fine trees.

They are easily tamed, and are interesting pets. We had one in a cage and my brother used to tickle it with a straw. It would roll and tumble and play like a young kitten, but only with my brother as the others were strangers to it.

Golden Eagle

Aquila Chrysaetos (Linnaeus)

They are not common. I have not seen more than half a dozen, and only three in the mountains. One day in July, 1906, I was up a mountain above tree line and had just started to return when I heard a great rustling noise up in the air. At first I thought it must be a meteor, but, on looking up, I saw a large Golden Eagle, with its wings more than half closed, swooping down on something. I was sorry that I was not on top of the ridge as I should have liked very much to have seen what its victim was, but the eagle disappeared over the ridge, so I failed to see what it was after.

I saw one on the west branch of McGillivray Creek in the Lillooet country in 1916. I also saw one in Jasper Park in August, 1917. All that I have seen in the mountains were above tree line.

The only place that I have seen them breeding was in a high, rocky cliff on the Labrador Peninsula, when I crossed from Richmond Gulf to Ungava Bay with Mr. A. P. Low, of the Geological Survey of Canada.

Richardson's Grouse

Dendragapus Obscurus Richardsoni (Douglas)

The two months that I was in Jasper Park in 1917 I only saw two coveys, one near the mouth of the Miette River and the other near the waggon bridge that crosses the Athabaska River. In one covey were five young ones and in the other, three.

The following summer I was in the Park again and again saw two coveys; both contained five young ones. The first was near the bridge, the other about two miles south of Jasper. They seem to prefer the more open country.

One day, while hunting along the dry hillsides I came upon a big male with his tail spread over his back and all his feathers ruffled, making him look twice his natural size. His wings were trailing on the ground and he was strutting about like a turkey gobbler. This was the only male I saw during the two summers I was in the Park.

In the breeding season the males give a loud hoot at short intervals. Unlike the Sooty Grouse of the Coast Range they do most of their hooting on the ground, while the other is usually found hooting in some tall tree; otherwise their habits are about the same.

In colour they are much the same. The males are dark slate above and several shades lighter on the breast. The tail of Richardson's Grouse is black to the end; the Sooty Grouse has a grey band on the tip of its tail rather more than half an inch in width. The females of both species are greyish and rather smaller than the males. I have never found but one nest. It was under a charred log in an open place and contained five eggs.

Richardson's and the Sooty Grouse are the next largest of our grouse to the Sage Grouse, and very few of the last species are to be found in Canada.

Grey Ruffed Grouse

Bonasa Umbellus Umbelloides (Douglas)

The two months that I was in Jasper Park in 1917 I saw no signs of them, but the next summer they were fairly plentiful. I saw three coveys; one on the shore of Horseshoe Lake, one on Beaver Dam Creek and another on the Miette River, near its mouth; I also saw single birds in different parts of the Park.

On the 13th July, Mr. Macoun and I camped on Cabin Lake Creek about a mile west of Jasper, where the waggon road crosses the stream. We were there two weeks and every night a grouse used to drum on a big balsam-poplar tree that had fallen in a willow thicket, not more than fifty yards from my tent. It started to drum about nine o'clock. I used to fall asleep before it quit, so I can't say how long it kept it up into the night. We moved camp and were gone for two weeks and then returned to our old camp and, believe me, that old fellow was still drumming on the same log — but not every night. I went out one night, just before dark, and saw him sitting on the log, but he would not drum while I was looking at him.

One day I was within ten feet of one that was drumming on a log in a thicket. I stood and

watched him drum several times. They make the drumming-noise by striking their wings together in front. When I was a boy in Ontario my brother and I were in the sugar bush making sugar. A Ruffed Grouse used to drum on a rock quite close to camp. We would pelt him with snow-balls and he would fly away a short distance, but as soon as we were gone he came back to the same rock although in full view of us.

The females on leaving the nest cover the eggs with leaves unless one comes upon her suddenly, in which case she has not time and leaves them uncovered.

The Ruffed Grouse are found mostly in thickets along streams and wet places. They may be very plentiful, but without a dog to flush them they are not easy to see.

Franklin's Grouse—Fool-Hen

Canachites Franklini (Douglas)

They are a western form of the Spruce Partridge of the east. The difference in them is so slight that an ordinary person would not notice it. The two summers that I was in Jasper Park I only saw three, in the thick woods just east of Mt. Edith Cavell. I secured all three —two young and an adult female.

All through British Columbia they are called fool-hens. The reason is that when bushed they fly into the nearest tree and are so tame, it is said they can be snared with wire or piece of twine fastened to a pole. I believe the Indians do it, but I have never done it myself.

They are one of our smallest grouse. The male is very dark, almost black, and has a bare patch over each eye that is bright red, The female is not nearly so dark in colour as the male and is easily recognized by the small size.

White-Tailed Ptarmigan

Lagopus Leucurus Leucurus (Swainson)

Willow Ptarmigan

Lagopus Lagopus Albus (Gmelin)

I have found the White-tailed Ptarmigan on all the mountain ranges from the Rockies to the Coast Range. I have nearly always found them high up, and usually where there are plenty of large rocks. I think that they stay near the rocks on account of birds of prey, as there is no other protection for them above tree line. I have seen females with tiny young ones on the border of the tree line, so I think that they likely make nests beneath the scrubby balsam trees. All that I saw in Jasper Park, except females with young, were on the tops, of the mountains, and always near broken rocks. When high up the food of the White-tailed Ptarmigan consists chiefly of the leaves of the smallest of the willow family. While camped in Shovel Pass I climbed a mountain north of the Pass, which by the map is about 8,014 feet, and on the top I came upon six. I secured the lot and they proved to be all adult males. They were amongst broken rocks. A few days later, on the south side of the Pass just over the summit, where there is a large alpine meadow, I was keeping to the border of the meadow on the look-out for more Ptarmigan, thinking it a good place for them. Here there are great masses of sandstone that have fallen from the high cliff's above and, sure enough, I had not travelled far before I came upon a female with six or seven young ones. They were out in the meadow, but, as soon as they saw me, they ran for the rock-slide. I managed to secure the old one, but the young took to the high cliffs and, although I could hear them calling, I could not see any of them. As I had already collected nine, and ten was the limit, I did not look much for them,

but continued walking along the border of the meadow. In a short time I came upon a male on the rocks by a patch of snow. I secured him and that finished the White-tails.

As it was still early in the day I thought that I would look for something else, so left the rocks and walked down into the meadow. I had not gone far, and was getting near some patches of scrubby balsam, when I saw the wing feathers of a Ptarmigan that made me wake up. A little further on, to my surprise, up got five Ptarmigan that I had never met in the mountains before.³ I was rather handicapped, as I was carrying a butterfly net at the time, but was able to secure two with the first shot. I followed them from one bunch of balsams to another and succeeded in killing two more; the other disappeared in the scrub and I was unable to flush it again.

After walking about a mile through the meadow, which was very wet, with deep moss growing in it, I came to scrubby balsams that grew in dense masses. Here I found plenty of Ptarmigan signs: paths in the grass and white feathers. It was not long before I flushed three. I secured one, but they got wise and took to the scrub, and without a dog it was impossible to flush them again. I think that there were a number of them in the scrub as I saw plenty of signs.

When flying they utter a loud "cuk-cuk" in rapid succession. I named them Willow Ptarmigan, but they appear to me to be much brighter in colour than the ones I killed in the north. In their stomachs were seeds and willow leaves. When I was in the Lillooet country Mr. Williams, a miner, told me that he had shot Willow Ptarmigan at the head of the east fork of McGillivray Creek, at the foot of Mt. McGillivray.

Note.—In 1911, The Alpine Club of Canada organized and carried out an expedition to the Mt. Robson region via Yellowhead Pass, in charge of the Director, A. O. Wheeler; and made a photographic survey, which resulted in the first detailed topographical map of the great mountain—the highest of the Main Range—and its vicinity. The map covered an area which embraces the largest part of the present Mt. Robson Park, and the expedition had much to do with the reservation of that Park. The expedition also visited the Athabaska Valley and Maligne Lake, within what now constitutes the Jasper National Park. A full account, with map of Mt. Robson region, will be found in the 1912 issue of the Canadian Alpine Journal, Vol. IV.

In collaboration with the expedition was a party from the Smithsonian Institution of Washington, D.C. This party collected specimens of the mammals, birds and plants of the region. The results were published by the Alpine Club of Canada in a special separate issue, with map of Mt. Robson region, which accompanies Vol. IV. In it the collection of mammals is described in an article by N. Hollister, the birds are described by J. H. Riley and the plants by Paul C. Standley, all three, specialists of the Smithsonian Institution. Both issues are well illustrated.

All the mammals and birds referred to in the foregoing notes by Mr. William Spreadborough are dealt with scientifically, and many others. While not complete lists, the collections of all three subjects were full ones for the short time—little more than two months—at the disposal of the collectors.

Both issues can be obtained from the Secretary-Treasurer of the Club, Mr. S. H. Mitchell, Sidney, Vancouver Island, B.C., Canada, on application.

Price of Vol. IV., Canadian Alpine Journal \$2.00

Price of Special Number accompanying Vol. IV.. . \$1.00

3 Specimens of the Willow Ptarmigan, *Lagopus lagopus albus* (Gmelin), were secured by J. H. Riley, of the Smithsonian Institution, in Moose Tags, when attached to the Alpine Club Expedition to the Mt. Robson region in 1911. As Jasper Park adjoins Moose Pass it is likely the Ptarmigan referred to above are the same species.—Ed.

Addition To List Of Mammals Of Jasper Park, Alberta

By Rudolph Martin Anderson

(Published by permission of the Geological Survey of Canada)

In looking over the mammal collection of the Geological Survey of Canada recently, I found a male specimen of the Least Weasel, *Mustela rixosa rixosa* (Bangs), taken on the Miette River, Alberta, July 11th, 1898, by William Spreadborough (No. 633, Victoria Memorial Museum, Ottawa).

This specimen of the smallest species of the North American carnivores measured (from the dry skin): Total length, 175 mm. (about 6 7/8 inches); tail, 29 mm.; hindfoot, 20 mm. This species, like most of the northern weasels, is in summer brownish above and whitish below, but turns completely white in winter, differing from the other weasels in having the tail much shorter in proportion and with no black tip to the tail at any season.

The Least Weasel was not found among the mammals taken by the Alpine Club Expedition to the Mount Robson Region (Hollister, Canadian Alpine Journal, 1912), nor among the specimens taken by Mr. Spreadborough in Jasper Park during his work there in 1917 and 1918 (Canadian Alpine Journal, 1918), and should be noted as one of the very interesting mammals found in Jasper Park.

MISCELLANEOUS SECTION

Jasper Park

By M. P. Bridgland

Jasper Park comprises an area of slightly over four thousand square miles and consists principally of that portion of the drainage basin of Athabaska River lying within the mountains. It was in 1907 that a small area was first set apart for public use, but in 1914 this was enlarged to its present dimensions. Prior to 1914 it was of little value to the public as its remoteness rendered it inaccessible to any save those few who could afford to engage a pack train and spend a prolonged holiday in the mountains, but the completion of the Grand Trunk Pacific and Canadian Northern Railways placed the park within easy reach of any travellers who might wish to visit it.

The valley of Athabaska River is one of the oldest known sections of the mountains. It was through this valley that David Thompson, one of the partners in the North West Company, travelled in the winter of 1810-11, enduring great hardships in his effort to discover a route to the Pacific Coast. Following in his footsteps came many other well known explorers and traders, among whom were Franchere, 1814; Ross Cox, 1817; Alexander Ross and Sir George Simpson, 1825; David Douglas, 1827; Pere De Smet, 1846; Sir James Hector, 1859; and Milton and Cheadle in 1863. During 1871 and the next few years, the Athabaska Valley and the Yellowhead Pass were the scene of exploration surveys for a transcontinental railway, but in 1880 the proposed route through here was suddenly abandoned and a new one selected, passing through the Kicking Horse Pass, one hundred and fifty miles farther south.

Throughout the park the general direction of the Athabaska Valley is north and south. At the narrow gateway facing northward stand two high rocky peaks, Roche a Perdrix (7,000 ft.) on the east side and Boule Roche (7,230 ft.) on the west, rising abruptly above the timbered foothills.

Above Pocahontas that square massive rock, Roche Miette (7,599 ft.), towers four thousand feet above the river while Roche Ronde (7,014 ft.) lies on the opposite side. While these peaks and many others in the vicinity do not offer any great difficulty, they are interesting climbs and present splendid views of Athabaska River and some of its tributaries. Further up the valley are a number of other peaks 8,000 to 8,500 ft. above sea-level, which may be reached from points along the railroad.

Among the most attractive features of the park are the many little lakes to be seen throughout. These are particularly numerous near the town of Jasper, along the Athabaska Valley and on the benches above. Seen from any of the peaks above, these lakes, with their various shades of green and blue, and their variety of settings, cannot fail to delight the observer. Among these lakes the ones most worthy of notice are Beauvert, Annette, Edith, Pyramid and Patricia. Many beautiful canyons and waterfalls may be found throughout the park, and, doubtless, many still unknown will yet be discovered. Among those already known, Punchbowl Falls, Ogre Canyon and the three canyons of Fiddle Creek, near Pocahontas, are worthy of notice; and about eleven miles from the same place, reached by a good trail, there are a number of fine hot sulphur springs, rivalling those of Banff. A little further up there is a very fine waterfall on the Snake Indian River, about fifteen miles from the railroad and on the opposite side of Athabaska River, the canyon of the Rocky River. Maligne Canyon, near Jasper, is considered one of the finest canyons to be found any place in the mountains, while the Falls of the Athabaska, about thirty miles above, have excited the admiration of all travellers who have seen them.

To the mountaineer the first impressions of Jasper and vicinity may be a little disappointing. The valley at this point is wide and the mountains are not nearly so rough and rugged as those in some of the higher ranges. Still, beautiful views may be obtained from any of them and, as the bed of the river is only 3,400 feet above sea level, the climbs even to the lower peaks are not to be considered too lightly. Among the points most easy to reach are "The Whistlers" (8,085 ft.) and Signal Mt. (7,397 ft.), well built horse trails leading to the summit of both. Signal Mt. lies at the north end of the Maligne Range and, if two or more days are available, horses may be taken along the open slopes above timber line, thus coming within easy reach of several peaks near the north end of the range. Chief among these are Mt. Tekarra (8,818 ft.), Excelsior Mt. (9,100 ft.) and the Watchtower (9,157 ft.), the two last mentioned overlooking Medicine Lake and the Maligne Valley. Among other peaks which may be reached in one day from Jasper are Pyramid Mt. (9,076 ft.), Mt. Cairngorm (8,564 ft.) and Roche Bonhomme (8,185 ft.).

One of the most attractive expeditions from Jasper, either from a mountaineering standpoint or otherwise, is the trip to the Tonquin Valley and Amethyst Lakes. This trip requires at least four days and offers many inducements for a longer visit. Four miles above Jasper, an old Indian trail leaves the main trail up the Athabaska and turns in towards Whistlers Creek. Crossing the creek near the base of the mountains it climbs up steeply through the brule on the west side, and entering the green timber above, winds on to the head of the valley. This trip requires about six hours from Jasper. Good camp grounds and plenty of feed for horses may be found here, although the upper part of the valley is very rocky, forming ideal homes for the many whistlers from which it derives its name. From a camp here, Indian Ridge and The Whistlers on the north, and Marmot Mt. (8,557 ft.) on the south, may be easily reached in two hours. Manx Mt. (9,987 ft.) at the head of the valley, with its jagged ridges, glaciers and rockslides is more difficult and would probably offer an interesting climb, although from Circus Valley it may be reached by a long shale slope.

From the head of this valley, the trail leads over Marmot Pass, 7,500 feet above sea-level,



Mt. Geikie, Tonquin Pass And Tonquin Valley From Mt. Clitheroe. Photo, M.P. Bridgland.
Continuation Of Photo Below



The Ramparts And Amethyst Lakes From Mt. Clitheroe. Photo, M.P. Bridgland.
Continuation Of Photo Above

and winds down brule-covered slopes to Portal Creek, 1,500 feet below. Just above the junction of Portal and Circus Valleys stands Portal Peak (8,700 ft.), a rugged mass of black rock rising 2,800 feet above the valley while, on the opposite side, stands Lectern Peak (9,095 ft.). Three miles further up, near timber line, the valley widens out and offers splendid facilities for camping. This point may be reached by horses in eleven hours from Jasper, but is rather too long a trip for one day.

Of several mountains which may be reached from such a camp, the highest is Mt. Majestic (10,125 ft.), a snow capped mountain lying a short distance to the northwest. The peak overlooks Circus Valley, Crescent Valley, and also parts of Meadow Creek and the Tonquin Valley. On a fine day, that giant of the Rockies, Mt. Robson, may be seen far to the west, towering high above all others, its snowy summit glistening in the sunlight or more frequently lost in clouds, while to the north Roche Miette and other peaks along the entrance to the mountains may be readily identified. The mountain most easily reached is Mt. Maccarib (8,707 ft.) and, although not very high, it forms an excellent point from which to see the surrounding country and to form plans for future trips. The view from it is one of exceptional beauty and cannot fail to please either the artist or the mountaineer. The higher point to the west overlooks the Tonquin Valley and Amethyst Lakes, and the head of Astoria River with its many glaciers, snowfields and lofty peaks. Chief among these is Mt. Geikie (10,854 ft.), lying almost due west, and the long escarpment above the lakes extending southwest along the divide between Alberta and British Columbia, one of the finest escarpments to be found in the mountains. At the head of Astoria River, Mt. Fraser (10,726 ft.) and Mr. Erebus (10,234 ft.) cannot fail to attract attention, both dark rock peaks rising above glistening snowfields. Nearby and to the southeast, above its precipitous rock walls, stands the sharp pinnacle of Oldhorn Mt. (9,779 ft), beyond on its right the black pointed summit of Mt. Blackhorn (9,800 ft.) and on its left the great massif of Mt. Edith Cavell (11,033 ft.), rising high above all nearby peaks.

At the head of Portal Valley there are two passes, Maccarib Pass on the west and Astoria Pass on the east. The latter leads to Astoria River opposite the mouth of a creek flowing from the west side of Mt. Edith Cavell. It is reported that horses may be taken over this pass and down to the river, and, if so, it is quite probable that they could be taken up the opposite valley to the broad grassy slopes above. It was from a camp in these meadows that the mountain was first climbed in 1915 by Prof. E. D. Holway and Dr. Gilmour. On the west side of the valley, Throne Mt. (10,144 ft.), Mt. Blackhorn and Mt. Chevron (9,300 ft.) would be within reach, and also Campus Pass and the lakes in the valley below.

On the west side, Maccarib Pass leads to the open valley of a small creek of the same name, tributary to Meadow Creek. Horses may be taken down the valley and around the shoulder of Mt. Clitheroe into Tonquin Valley without difficulty. This valley, with its beautifully coloured lakes, its wide meadows and park-like forests, and its majestic peaks, is one of the most beautiful spots of the mountains. Near the south end of the valley a sheet of water, three miles long and a mile wide, divided into two parts by a rocky promontory, has been named Amethyst Lakes. On the east side of the lake, a strip of open spruce and balsam divides the meadows by the lake from the open grassy slopes above timber line, just below Mt. Clitheroe and Mt. Maccarib. On the west the valley is shut in by the rock-slides and steep moraines pushed down by the glaciers clinging to the massive cliffs of the escarpment extending southeasterly from Mt. Geikie. Along this escarpment the dominating peak is Mt. Geikie (10,854 ft), but other peaks worthy of mention are Barbican (9,000 ft.), Turret

(9,700 ft.), Bastion (9,500 ft.), Redoubt (9,700 ft.) and Dungeon (9,700 ft.). Unless recently, none of these peaks have been climbed and from the side next to the valley they offer problems worthy of the most enthusiastic mountaineer.

Ideal camp grounds may be found in the open timber along the meadows at the south end of the lakes. This appears to be the most favourable location from which to attempt the ascent of Oldhorn Mt., the summit of which is only three miles distant. It is also conveniently situated with regard to some of the peaks at the head of Astoria Valley, although for these a camp in the valley itself, about 500 feet lower, would be preferable. Around Chrome Lake, near the head of the valley, there are wide open meadows and good camp grounds may be found in the open timber around them. A camp here would be the most convenient point from which to reach Mt. Fraser or Mt. Erebus, or to explore the Fraser or Eremite Glaciers. A number of other peaks could be reached from this camp.

An attractive region of which little is yet known is that lying at the head of the south fork of Snaring River. Here open summits and wide meadows at the extreme edge of timber line give easy access to several fine snowcapped mountains, which rise to an elevation of about 9,500 feet above sea-level. Chief among these are Monarch Mt. (9,500 feet), Mt. Consort (9,460 ft.) and Diadem Peak (9,615 ft). The lower part of the valley and also that of the main stream below the forks is very narrow and heavily timbered along the lower slopes. Huge rock buttresses projecting from the mountains above overhang the valley in a most imposing manner and small lakes nestle in the cirques thus formed. In the basins below Mt. Henry and Mt. Cairngorm, which drain into the south fork through narrow gaps between rugged mountains, there are several small lakes.

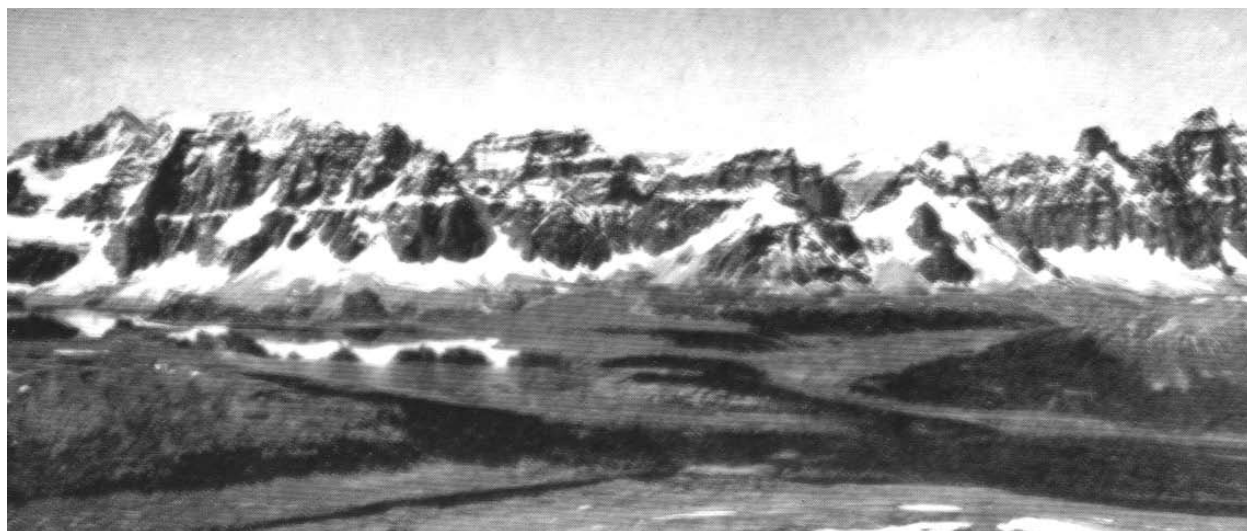
Access to this region is rather difficult, either from the valley of Miette River on the south, or by way of Snaring River. Above the railroad, Elysium Pass, an open grassy pass between Emigrant Mt. and Mt. Elysium, is passable for horses, but the long stretches of rolling brule-covered benches above the railroad are almost impassable. On the other side it is hard to say what obstructions might be encountered in an attempt to enter by way of Snaring River. Some day, no doubt, a trail will be constructed leading from Jasper, past some of the many lakes on the benches above, to Elysium Pass and then down the stream to the mouth of Snaring River and back to Jasper. When this is done, the trip will be one of the most attractive in the vicinity, but at present the region awaits exploration.

Among other sections in the park that are well worthy of special mention are the Maligne Lake district and that at the headwaters of the Athabaska and Whirlpool Rivers. Articles dealing with these are to be found in many of the books descriptive of the mountains. Mrs. Chas. Schaffer in "Old Indian Trails" gives a description of Maligne Lake and the surrounding mountains,⁴ while articles dealing with not only the Athabaska and Whirlpool Valleys but also with the Yellowhead Pass are contained in Professor A. P. Coleman's book, "The Canadian Rockies," and in Mr. Stanly Washburn's, entitled "Trails, Trappers and Tenderfeet."⁵

All game throughout the park is protected and is consequently very tame, so that excellent opportunities are afforded for observing wild animals in their native haunts. Rocky mountain sheep are numerous and often allow the traveller to approach within a few yards. Deer and beaver may be seen frequently in the main valleys, and in the more remote parts, caribou and mountain goats. Fish are abundant in many of the lakes and some of the tributaries of Athabaska River.

4 See also Canadian Alpine Journal, Vol. IV., 1912.

5 See also Canadian Alpine Journal, Vol. IV., 1912.



Tonquin Valley And Amethyst Lakes From Mt. Majestic. Photo, M.P. Bridgland



Beauvert Lake, Near Jasper. Photo, M.P. Bridgland

The Byways Of Banff

By Mary S. Warren

Where, O where is one to begin on such a subject when the writer knows nearly every crack and cranny within ten miles of that beautiful spot and loves them all? One must wander in a sea of general information trusting to the patience of the reader, hoping thus to impart a little enthusiasm here and there.

The end of June brings the first of the stereotyped tourists to Banff, where he and his prototypes remain till exactly the middle of September, when they all depart as they came—smug and self-satisfied over their meagre achievements.

To those who really know Banff there is a sense of pity for these butterflies of travel. They have flown so far and have scarce rested themselves before they are on the wing again, taking with them the barest knowledge of one of the fairest recreation grounds of the world. They come with the idea that there is but one hotel in the region to receive them and that its doors will bang on their heels or they be locked in a frozen land unless they scurry away while the sunshafts are still warm. They go with such an aggravating air of complacency, and all because they have obtained their information from hundreds of miles away. If one, who has faced all the “rigors” with which our tourist is primed, undertakes to enlighten him, he receives but a knowing smile and it always seems wisest to let him pass on with his far-gained knowledge of the surroundings he is leaving.

Now that he cannot “talk back” or look superciliously into the eyes of his would-be informant, let us correct a few of these notions which have endured since Banff was Banff.

First, there are several hostelrys within our environment, some of which remain open all winter. Second, if you want to see the wild flowers at their festal gathering, do not wait until the end of June for you will miss some of the choicest blossoms of the forest and meadow: the little androsace, the purple-pink wind flower, the shy little orchid (calypso), which hides always in the deep thick moss beneath the pines, and, to a trained botanist, many a rare flower which is gone if he ties himself to Banff by the aforesaid schedule.

Usually about the end of August there is a snowstorm, a great feathery blanket which strikes terror to the heart of the uninitiated but which flees before the first rays of the sun; and we, who know the climate, know it to be a forerunner of days of brightness with crisp, cool nights. Another snow and off goes the well-posted (?) traveller—to him winter has come. We watch him depart knowing full well the weeks and weeks of bright autumn days to follow—the very cream of all the year—but he listens not to those who have tested the vagaries of old Banff. He only hears the voices miles and miles away of those who have never smelled the camp-fire smoke on a frosty morning or sniffed the odours of the dying poplars. “It is time to move on for winter is coming.” So he “moves.” The golfing goes on into late October, the riding is finer than ever, the roads better for motoring than all summer—no flies, no mosquitoes. The trails are gay with brilliant autumn colours, the deer wander down from the distant hills, the wild sheep come from the silent valleys far away and can be seen within a short distance of the village, counted not in tens and twenties, but by the hundred. Their favorite haunts are along the government road leading toward Lake Louise, thirty-eight miles to the west. By this time the large percentage of tourists has gone; but the few brave spirits who remain, first stare aghast and then gasp: “Why have we not known what we would be missing by leaving so soon?”

Though Banff is ideal for the summer months, it is the long, long autumn bringing the wild animals to our doors and the short, brilliant spring which bounds from snowbanks into flowers and

soft winds, which so few who come among us, can comprehend. They who were instrumental in building the home of the Alpine Club of Canada in Banff, knew the possibilities and that they were building for the future, not the mere present.

The Club House dominates the wonderful valleys of the Spray and Bow Rivers, the quiet homes in the village below, and makes access easy to so many places where walking carries you farthest, where ponies are next in usefulness, where even a motor car may now be called upon in case walking and ponies are impossible.

The incoming stranger has often been heard to say: "I think I can do Banff in three days." He counts upon one little climb, one pony trip and one motor drive, and he can just about "do" it in that time. But he has not seen Banff. He has a whole summer's enjoyment ahead if, perchance, someone who loves Banff, and who knows her hidden secrets, takes him in hand.

Sulphur Mountain stands forth as a good educator for the beginner. On this mountain and passing the various sulphur springs, he gets his first glimpse of the mossy mountain slopes and the first spring flowers. He leaves the attractive Club House behind him and with mountains and rivers all about him, saunters slowly to the Upper Hot Springs. From there, by easy stages, he soon climbs to the summit of the mountain and the Government Observatory. From thence he gazes to every point of the compass, with its endless roll of snowcapped peaks, and he wonders: "Which shall I choose for my next climb?" Well may he ask the question for it is an army of hills, which rise all about him, and he starts the descent with a bewildered sense of the immensity of it all. But passing the Hot Springs, he has a plunge in the hot waters which rests body and mind and leaves him feeling he can attack any proposition. On his walk he has seen roads branching here and there, fascinating and almost obliterated trails, which he would like to follow to their source, and, if he has already breathed of the spirit of the hills, these trails will call him.

Let me hint that he stand by Sulphur Mountain yet another day, and with muscles slowly training, he may then take a light pack (a little food and a blanket) and, following the well-known Spray River road, he saunters along hour by hour over an old tote-road—to his right rears the comb of Sulphur Mountain, to his left the long, serrated Mount Rundle. Flowers are all about him; sometimes the trail hangs above the river, sometimes he walks besides its gurgling waters, sometimes he may look aloft at Rundle and, if sharp of eye, see the wild goat slowly browsing over most impossible places with most impossible nonchalance. If muscles are still untrained the hour comes when he casts loose his pack, finds a mossy rest, lights his fire, dines with a ravenous appetite in such a banquet hall as even kings have never owned; the sleep which follows is certainly not vouchsafed to many kings of to-day. As the sun rises the next morning and he hears the birds and waters calling, he brews his cup of tea, fries his bacon, carefully extinguishes his little camp-fire and is off again on exploration bent. O, be careful, ye who send forth the newcomer to our hills! Warn him beyond all else that one match, one neglected camp-fire destroys what no human hand can build.

Perhaps by this time he has reached an old deserted lumber camp (about seven miles from Banff) where it will pay him to turn to the right for half an hour, climb a few steep benches when he will be rewarded by the sight of a very fine gorge through which the Spray River rights its way to a more open passage. At the lumber camp he crosses an old bridge which leads toward White Man Pass. About eight miles further he reaches an open draw on his left and three miles down the slopes before him lies the mining town of Canmore. Do not mistake this draw for White Man Pass, which is many miles farther to the southwest. Reaching Canmore, he has now had a tramp of eighteen miles and the westbound train in the evening which takes him back to Banff, is a welcome sight.

For the next day let him try some walk which is not too strenuous—say a walk to Healy Creek. To be sure Healy Creek is only the door to Wide Adventure but just to stroll up there is “temptating,” as the child said, and he gains some original ideas for future desires. With a lunch in his pocket he starts up the Cave and Basin road, passes a bathing pool where the Government has placed very fine bath houses, follows the road toward Sundance canyon and turns to the right where a kindly guide-post bids him enter upon an almost undistinguishable trail. Once upon it, where the pine trees lock their boughs above his head, he is now in the spaces of solitude and freedom. Only a scurrying rabbit, a shy chipmunk, a timid deer will he see; but the trail is good, easy, comparatively level and he has another perfect day in the hills. At Healy Creek he gazes ahead and wonders what possibilities lie behind the encircling hills. And what are they? Weeks and weeks of trailing. He may go over the Simpson Pass down to Mount Assiniboine, back by the way of Spray Lakes, then down the Spray River to Banff, a distance of seventy-six miles; or he may cross from Simpson Pass (6,914 ft.) to the Vermilion summit, go due north to Castle Mountain, standing guard over the now-familiar Bow River, thence down the motor road on the river’s left or take a trail on the south side of the river to Banff. This trip is approximately sixty-two miles. One must perforce take a horse on these two trips to carry tent, bedding and food, but if walking is desired it is perfectly feasible as the trails are all in good condition.

A fairly easy trip which does not necessitate a pack-horse is to take a motor-car to Lake Minnewanka. A mile and a half from Banff the elk pasture is seen, well stocked with fine specimens, then the mining town of Bankhead is passed and our traveller reaches the outlet of Lake Minnewanka after a nine mile drive. Here will be found a comfortable chalet and, should the fishing tempt him, he may tarry for days in comfort, climb Mount Aylmer (10,335 ft.) and many another lower peak if the whim takes him.

Two ways present themselves for the homeward journey: either take the old Indian trail round the north side of the lake and come south via Carrot Creek to the main highway to Calgary, a distance of twelve miles, and walk ten miles into Banff on the regular motor road, or go by the little boat which plies the lake every afternoon and be left off at a landing opposite a draw in the hills over which you pass; then follow the creek and the motor-road as mentioned previously.

I nearly forgot to mention a most delightful walking trip for our mountaineer while he is still hovering round Vermilion summit. Instead of going due north to Castle mountain as previously described, he may turn his face westward, drop down to Boom Lake, go on to Consolation Lakes and Moraine Lake and walk into Lake Louise over a perfect driving road. Here he will find a fine hotel, a genial welcome, and—a bath-tub. For days and days he may dally at Louise but if Banff still claims him, he takes the tram or his own two legs three miles to the station and is back at Banff after a thirty-eight mile run over the steel rails.

As for mountains to ascend, if such be our tourist’s taste, where may one draw the line? There are weeks ahead of him for that. Mount Aylmer, previously mentioned as near Lake Minnewanka, is the highest peak in the vicinity of Banff, while close to the village itself is Mount Rundle (with a horse trail part way up it), Cascade Mt., Mt. Edith and back of each and all, and trending west, are mountains everywhere.

To really go into the science of climbing, to describe those beautiful (?) spots where one clings by a toe or a finger to this earthly sphere, seems not wise for one who has no experience in that direction to enlarge upon. I have listened by the hour to enthusiasts holding forth on the charms of ascending Cascade Mountain on its south face (when it’s a hundred per cent, easier to go round to the west and north sides) and that Mount Norquay, just beyond the Stony Squaw, presents

most excellent opportunities to study real climbing. I prefer to pass over the subject gently owing both to ignorance and lack of enthusiasm along that line. Anyone who wants such information may obtain it at first hand and with far better understanding from the Alpine Club direct. I stand aside and wish him "Good luck."

There are plenty who come among us to whom all this is very like hard work and they say: "But I cannot do that," or "I despise climbing." Can you then sit one of our mountain ponies and trust him? It all depends on the trusting. He is not bothering his head about your neck of course, but his own, and I have never seen a pony bred to the trail that could not be trusted. He can cling to the merest foothold with absolute calm and it is the rider's fault if he does not do his job well. He can carry a baby to the summit of Sulphur Mountain and bring it back safely. It is a beautiful horse trail, though I have heard its dangers expounded many a time. The trail up Rundle is equally harmless and easy. You may take a horse and a lunch and spend hours at the top of Tunnel Mountain searching for flowers, while your pony nibbles the succulent grasses; look off into the valley of the Spray and at Goat Mountain beyond; gaze down, down into the Bow Valley where the golfers faithfully trudge back and forth across the links like so many busy ants. It is a splendid view all around and an easy trip.

Then we come to those to whom even a mountain pony seems a great fatigue, so here, too, we have that world-wide remedy—the ever-present Ford. We may smile all we like at the jokes on that little car, but it is as useful in these mountain districts as the native pony. Cars, heavy and light, may be had at any time and trips are plentiful. Personally, I consider the highway from Calgary to Banff gives to the new-comer the best conception of the whole region that can be had.

On the season depends the trip. In a good touring car and under average conditions, the run may be made in a little over three hours. But here, again, I suggest the thermos bottle and a few sandwiches or a kettle to boil tea by the wayside. It is such a land of picnics and one misses so much by tearing madly through any section. If the day be bright the traveller sees a line of tempting snow-capped peaks from the moment he leaves Calgary. The first twenty miles pass through a rich ranching country with stock in every direction, while he follows along a white line of road, topping one hill after another till, reaching the highest of all, the little hamlet of Cochrane appears nestling in the deep -valley below. In the meantime the mountains seem to be slipping closer and are fascinatingly blue in the haze of atmosphere. Wind-flowers and buttercups nod in the ceaselessly blowing wind and the tawny little gophers sit upright in every direction till they think the last moment of safety has arrived, then cluck with a shrill squeak and wiggling tails into their holes.

The car slides down the long hill into Cochrane, slips past the primitive stores and post office and is off again, up hill and down dale with the mountains ever nearer.

Always one specially marked peak stands forth, bleak, bare and sullen against the blue sky—The Devils' Head (9,175 ft.).

The Indian reserve, set aside for the Stoney Indians, is traversed from east to west. One still sees there the abandoned homes of the first missionaries and an old Indian orphanage on the north side going to decay; a mile distant on the south side are the Government buildings—school, church, the home of the Indian agent, etc., and beyond that group of buildings the very small railroad station of Morley. One usually passes a few Indians jogging along on horse-back (no cars as yet for them) and perchance a wood-chopper's tepee in the far distance with children and dogs playing about it. There are any number of places to stop for a rest and to demolish the lunch carried from Calgary, though Ghost River or old Bowfort Creek are the two favorite spots, both beautifully situated.

At the west end of the Indian reserve the Boundary of the Rocky Mountains Park is crossed. The road becomes smooth and gravelly, the mountains close sharply in; the Devil's Head, which has been watched so many miles, is lost behind the nearer hills and is not again visible. You pass quickly through the Gap, Exshaw (the cement centre), Canmore (the mining town), Anthracite, a town in name only, for the mine there is worked out and only dandelions flourish where once were many homes. Then winding, turning and twisting up Anthracite hill, topping the last rise, a glorious comprehensive view of the country about Banff lies before you. It is really the true introduction to the first play-ground of the Rockies. A three-mile run down to the valley below and you are back at Banff, tired, of course, cold if it has been a sharp day, but very satisfied with the memory-pictures which will come to you long after, when little Banff is hundreds of miles away.

Lake Minnewanka may be reached by motor-car and, on your way there, a side-trip made to the haunts of the wild animals in the park which the government has set aside for them. You may watch the buffalo lazily chewing their cud in the warm sunshine, the goat scrambling over the roof of a tiny chalet of their own, the moose almost hidden in the thick-grown poplars and the stately elk sauntering haughtily and nonchalantly in their wide preserve. A flock of wild mountain sheep are hidden back in the hills behind the buffalo pasture but may be seen by taking a short walk if you are accompanied by the caretaker of the animals.

Then for the last motor drive and to keep for all time a beautiful memory of Banff, start westward on the (as yet) uncompleted motor-road which will eventually link Alberta with British Columbia. If the time of year is early spring or late August you will almost surely encounter some of the many flocks of wild sheep which abound on the northern hillsides. In the spring the ewes come with the young lambs, in the fall the rams join the family group and they are all most accommodating (if you slip up on them quietly), standing at attention while the camera is adjusted and a good photograph taken.

Occasionally a deer hears the car coming, pauses a moment, then bounds into the shelter of the thick, low willows; a coyote sneaks across the road; and, if you are specially fortunate, you may have the good luck to see a bear go lumbering up the mountain side, disturbed while out foraging for a meal of berries or rodents. The laws of the National Parks protect these animals of the hills which makes their shyness seem assumed rather than real.

Perhaps one of the most appealing parts of the entire drive is traversing the Hillsdale hills. What a wonderful little park it must have been before it was touched by the hand of civilization. It is a succession of low, grass-covered hills surrounded by high peaks. It is an ideal home for game and at every turn and bend of the road one looks for a grim old castle to dominate so superb an estate. But castles have not been built in this new-old land; only the deer follow our passing with affrighted eyes, the winds sigh in the lonely tree-tops and sway the wayside flowers, and we go on leaving all that splendour to be awakened in the years to come.

Johnson Creek crosses the road two miles west of the garden land just mentioned. Its banks are an ideal spot beside which to rest and have lunch or tea, while a pleasant stroll of three-quarters of a mile up its canyon well repays the slight effort. A good trail and stout bridges back and forth across the stream afford splendid opportunities for photographing a most artistic canyon.

Six miles beyond Johnson Creek we come to Castle Mountain; its great, grim towers frown down on a wide sunny valley whose human glory is long departed. In the early eighties there was a rush hither of miners on the report that silver, lead and copper were hidden there in the bleak mountain. But the ore was not to be found in paying quantities. The excavations in the sides of that gray old giant may still be seen, but the little shacks are fallen to decay and save for one ancient

miner who has lived there practically alone all the years since, and a small railroad station beyond, there is nothing to recall the once busy, noisy, mining village under the shadow of this mighty monolith.

From here the motor road still winds its beautiful way west about ten miles. Some day a branch line from it will reach Lake Louise, only ten miles beyond the present terminus; some day the main highway over Vermilion Pass will be connected with the British Columbia roads; but all such plans were perforce stopped during the world war.

In the above very inadequate sketch, I have endeavoured to show some of the many attractions for those who love Nature in her wildest mood; attractions that may be found at this beautiful mountain spot and in its vicinity during the spring, summer and autumn.

There still, however, remains one that demands attention—the Bow River. Born at the very backbone of Canada from the heart of a great, glistening field of ice sixty-five miles from Banff, and fed by reserves from two beautiful turquoise blue lakes, the Bow comes racing down a broad valley, winding between snow-crowned mountain masses and bordered by forests of pine. It is a swift flowing stream with numerous waterways and picturesque islands, and in its wild race down the mountain part of its course foaming rapids are seen at almost every bend.

Eight miles from Banff the river rests for a spell and presents an easy going course until Banff is reached, when, with a wild leap over the Bow Falls, just below the village bridge, the race is begun again with renewed energy, and so continues to the Gap that forms the eastern entrance through the bold escarpment of the Rockies.

All who come to Banff stand on the bridge at the head of the Main Street of the village and, gazing westward, see a jumble of red roofed, white boarded buildings showing brightly against a background of green forest and the snowy heights of the Massive Range in the far distance.

The boat house and its genial proprietor do much to make a visit to Banff enjoyable. Row boats, canoes and motor skiff ply in the blue-green waters of the river throughout the bright sunny days. In addition, the boathouse proprietor runs a motor-launch up and down this smooth way at intervals daily.

Those who wish to see the mountain beauties at their best are well advised to take a boat or canoe, or a seat in the launch, and make the trip to the end of the quiet reach; then, drifting homeward with the current, all the glories of the surroundings may be absorbed with supreme relish and satisfaction and the infinite beauty of the Great Hills makes lasting impressions upon the pages of memory's scrapbook.

For the row boat and canoe there are other paths of enjoyment: Echo River and Shadow Creek, the latter leading to Vermilion Lakes, are tributary to Bow River and very pleasant hours may be spent wandering over their surfaces, not forgetting the lunch basket and camp fire kettle, and even the fishing rod may be taken along.

For more strenuous work a canoe may be shipped by rail to Castle Station on the Canadian Pacific Railway, or even to Lake Louise Station, and a run made from either point to Banff; then swift water, rapids and falls are the order of the day. When the river is at high stage the trip may be made in a day, but at normal stage it requires two or more and camp accessories should not be forgotten. In the opposite direction, a canoe may be taken below the Bow Falls and a run made to Exshaw or even to Calgary, eighty miles distant, a most exciting trip for a canoeist.

Apart from the keen excitement of the race down the swift flowing stream, the nightly camps amid the pines are blissful in the extreme, as one lazes around the camp fire and watches the after glow upon the summit of the snow-topped peaks, in colours of bright red, pink and salmon, and

finally the grey shadowy massifs rising ghost like into the star lit dome of the heavens. This truly is heaven on earth and is as near paradise as one can hope to attain in an every day existence.

In all these pages I have mentioned only the summer days at Banff; they are all that the majority of people seem to know. But as our vast country is developing, so are we developing certain habits. In the winter there is a constant outpouring of Canadians to escape the rigors of the northern climate. I specially refer to those living in the prairie districts. The high winds, the bitter cold send them scurrying to the Pacific coast. They pass by our winter wonderland not one in ten knowing of its existence. A Californian wrote a year ago that southern California's population in winter was about half Canadian. I do not blame a resident of those bleak, wind-swept cities and towns for seeking a haven of warmth and sunshine, but I wonder he has not tarried awhile in one of the finest places of his own country and thus been able to tell the Californians where they too may find a change. It seems so human to desire a change, and some day the western coast will waken to the existence of our St. Moritz of Canada.

The atmosphere is dry and invigorating, the high winds of the prairies pass us by, it is very easy to keep warm in Banff. Skating begins in November and lasts about four months. Ice boating can be had on Lake Minnewanka. Sleighing usually begins in December and lasts till the end of March. The toboggan slide is always to hand and bathing in the hot sulphur pools under the open sky, a delightful and novel experience, while ski-ing and snow-shoeing may be added to the long list of pleasant things to do.

Taking all things into consideration, for anyone who loves the out-of-door life, Banff has no season when it is ever dull.

Little Banff, you are very fair, either in your winter robes or your summer draperies, and if I have interpreted you to even a favoured few then I have fulfilled a pleasant duty.

Selwyn Creek

By C. G. Waters

The Valley

Among the mountains of the Great Divide,
Where flows the mighty Fraser to the sea,
A valley lies, in which I love to be;
Great buttresses rise up on either side
On which, by might of rock and root allied
Courageous fir trees cling and stand erect,
Sweeping from azure sky, with cloud wisps flecked,
Down to an earth-bound streamlet, heaven supplied.
A crystal streamlet from the eternal heights,
Torrents of diamonds, pearls and opals blent,
Flinging a sheaf of rainbow-coloured lights,
Rippling through moss with ferns and flowers besprent;
While here and there a sky-reflecting pool
Lies like a perfect sapphire, clear and cool.

The Tree-line

The way above the cataract is won,
Above the turmoil and the roar and rush.
Into a little valley, filled with hush,
A little hanging valley in the sun.
Meandering streams, like liquid air, which run
‘Twixt mossy banks, to thirsty lips appeal,
Among these shadowy vistas Man may feel
That Man and God and Nature are at one.
The clustering larch and spruce trees have to face
A struggle for existence, which imparts
A gallant sturdiness and homely grace
That makes them very kin to human hearts;
And one might find among these glades and streams,
“Adventures in contentment” and dear dreams.

The Rocks

Above the region of the forest dense,
Where voice of murmuring stream has died away,
By giant hands, in some far bygone day,
Was carved an amphitheatre immense.
Nature seems waiting breathless, in suspense
The whistle of a marmot, shrill and clear,
A friendly ptarmigan that flutters near,
Serve but to make the silence more intense.
The Mountain Trolls at night make grim pretence

Of some wild drama on the valley's edge,
Surrounded by a ghostly audience,
Crouching on bastion, parapet and ledge,
And yonder shattered Gendarme forms a throne
Where Silence, Silence, Silence reigns alone.

The Summit

Men held the devil-haunted hills in fear
Till to their loftiest summit Satan sped,
Bearing the Son of Man and tempting said:
"Behold and worship me, whom all revere,
Then take Thy kingdom!" Christ made answer clear:
"Get thee behind me, Satan; thou hast read,
God only shalt thou worship." Satan fled,
And ministering angels hovered near.
Now kinship with the hills hast cast out hate;
Men love the struggle with the rocks, the strife
With cliff and chimney, cornice and arête,
Finding therein the epitome of life,
And on the summit, felt although unseen,
The uplifted spirit of the Nazarene.

IN MEMORIAM

Frank W. Freeborn

Old members of the Alpine Club of Canada will regret to learn of the death of Frank W. Freeborn, which occurred on June 21st, 1919, at his birthplace, Warren, Rhode Island. Mr. Freeborn was a charter member of the Club, never missing a Camp until 1914, when he was stricken with partial paralysis at Field on his way to the Camp in the Upper Yoho Valley.

Mr. Freeborn was educated at Brown University, graduating at twenty-two and travelling later in Europe, Palestine and Egypt. Thereafter he taught Latin and French in various American High Schools, being twenty years in Boston and somewhat longer in Brooklyn, N.Y. His chief subject was Latin, although he published a translation from Daudet for the use of his own students, a book still published and which brought him a letter of appreciation from the author. At intervals of four or five years he would return to Europe to spend his holidays in the Alps, but after his first visit to the Rockies, every summer was spent in the Canadian mountains.

It was during this first visit in 1905 that Mr. Freeborn and Mr. S. H. Mitchell, our Secretary-Treasurer, met at Glacier House. Both men loved the Swiss Alps, both were enchanted with these Alps of the New World, and when the Alpine Club of Canada was organized the next year, Mr. Mitchell put his new friend up for membership. Mr. Freeborn was then near the end of the fifties when even the hardest mountaineer's most vigorous days are over, but he climbed, tramped, and photographed in the Rockies every year thereafter until the fatal stroke which made an end of all such holidaying. He had spent the day on Mt. Field with his camera, that camera which produced for mountain friends so many photographs, keeping the pictorial record of his yearly

expeditions and of interesting activities in the Camps. More than once in the weary years which have intervened, Mr. Freeborn has said to Dr. Stone, his companion on happy expeditions, that he had hoped the end might come in his beloved mountains. Like his compatriot, John Muir, he had preferred death on some "noble mountain or in the heart of a glacier, to disease or some shabby lowland accident."

Mr. Freeborn's last active season was at Cathedral and Robson Camps in 1913. He climbed Mt. Mumm from Robson Pass, and made several excursions from the Camp, spending one whole day on Robson Glacier with Dr. Stone. At sixty-six he had joy in these easier expeditions, but it was joy with that element of wistfulness which comes to the enthusiast when his best days are gone, when he is fain once more to drink delight of battle with his peers amid the high snows and the steep precipices. He had climbed such difficult mountains as Sir Donald and had made such tiresome ascents as Mt. Temple; and no season between his first and last Camp but gave him several expeditions of interest. And the leisure hours of winter in New York, after the day's work with his boys, were spent in arranging his photographs, poring over maps and laying plans for the next summer's climbing and tramping. He was a great walker always, belonging to a walking club which took its weekly tramps in all weathers. He knew every trail in the Adirondacks and wrote a series of papers on them for "Appalachia." He was a member of the American Alpine and Appalachian Clubs.

Dr. Stone speaks for many another when he says that he has always felt grateful to Mr. Freeborn for introducing him to the mountains. "He was our most consistent and enthusiastic exponent of the gospel of mountaineering and of the open air." He was, indeed, to many a spiritual father in that gospel, a choice spirit, a good comrade on the mountain or in the valley. His was a transparent soul and an honest, incapable of the most harmless equivocation. He was not an expert craftsman, but he was a cautious one on rock or ice or snow; and he was a devoted and happy mountaineer such a every young climber might well wish to be. He belonged to the inner circle. He loved to linger on the summit. To him also, as to Guido Rey, that eminent devotee: "It was good to rest on the summit and to dream amongst the clouds for a few short moments of life." He leaves with us a fair and fragrant memory. Those who kept in touch with him during the years of his incurable malady are grateful that he lived to see his nation enter the war over which his heart was well nigh broken.

Elizabeth Parker.

* * * *

In 1906 I made my first journey to the northwest, visiting the mountain resorts on the C.P.R. after the fashion of the average tourist. On August 2nd, arriving at Glacier, I at once walked up to the Glacier, and from a large rock planned to take a photograph of the scene. I found there a kindly gentleman who engaged in conversation and with great interest began to point out to me and explain the surroundings. We walked back to the hotel together and presently had arranged a trip up Mt. Abbott for the following morning. This was my first meeting with Freeborn. Although I was a stranger and "tenderfoot," he made an unusual effort to assist me in knowing and loving the mountains. To our accidental meeting I owe my introduction to Alpine pleasures. We were together for two or three days, during which he conducted me up the beautiful Asulkan trail. On parting he gave me minute directions for visiting Lake O'Hara, which I did alone in an all-day tramp up and back from Hector station.

The acquaintance thus begun was kept up by correspondence, but it was not until 1911 that I was again able to go to the Canadian mountains, where I met Freeborn by appointment at the Club House early in July. We spent a few days about Banff and then went to Lake Louise for more ambitious undertakings. On July 11th we made an attempt on Lefroy accompanied by Edouard Feuz and Rudolph Aemmer, but were driven back from near the head of Abbot Pass by a freezing snow storm. We climbed the lesser peaks in the neighbourhood; made a three-day camping trip to Moraine Lake, Larch Valley, over Sentinel Pass to Paradise Valley and back to Lake Louise over Mitre Pass, I climbing Temple on the way. Then a second attempt on Lefroy on July 17th was successful, it being the first ascent of that year. I was proud to have Freeborn's approval of my behaviour on that occasion. We then went on to Field, whence Freeborn set out on a camping trip to the Yoho and I, after climbing Stephen, went on to Glacier and to Oregon. In 1912 we were back again planning to join Freeborn in a camping trip to Larch Valley with others, but for some reason this was not carried out, his friends failing to arrive at the last moment. Instead, Mrs. Stone and I spent some days climbing at Glacier and then joined the Annual Club Camp at Vermilion Pass, where Freeborn was present and we were much together.

In 1913 we met again at the Cathedral Camp, going together on numerous jaunts. Freeborn did not attempt any of the more arduous climbs freely acknowledging the advance of years, but he was the same companionable and helpful comrade, and one of the prominent figures of the Camp.

We went together to the Robson Camp that same year, covering the trail in and out side by side, he expressly wishing me to accompany him. During the Robson Camp we climbed Mt. Mumm together, this being, I think, his most ambitious undertaking, but we made several excursions together, including one whole day on the Robson Glacier. 1914 saw the end of poor Freeborn's mountaineering. With his friend Raiman going for a day on Mt. Field in search of photographs, he was stricken with partial paralysis. When we arrived at Field, en route for the Club Camp in the Little Yoho, we found him prostrate at the hotel. It was apparent that his climbing days were over, but we hoped for some recovery. This never came. I saw him several times in succeeding years, once at his home in Collingswood. He lived in the memories of his mountain days, but burdened with anxieties. He spent much time in arranging his abundant photographic material. He referred more than once to his desire that the end might have come in his beloved mountains.

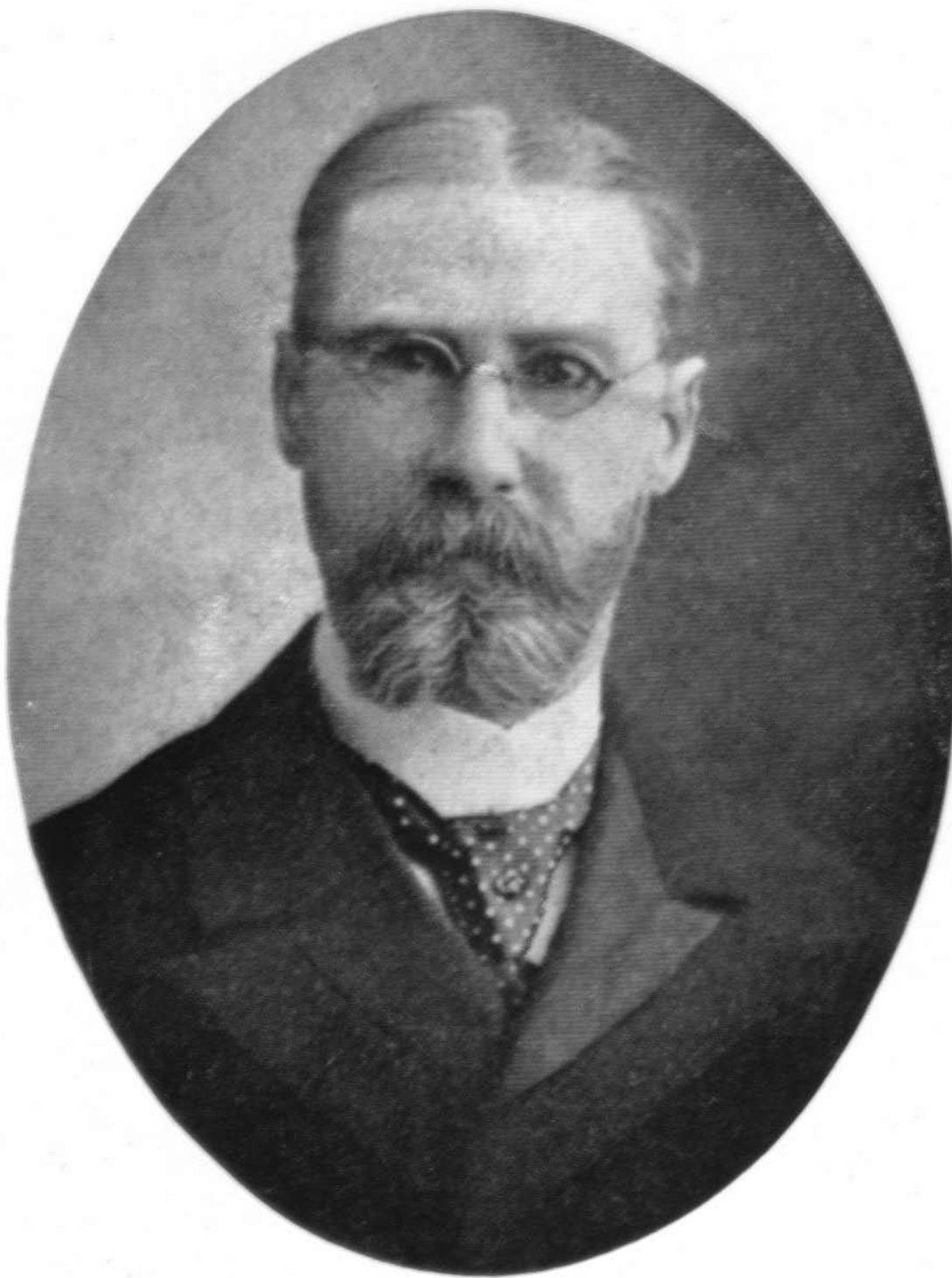
During all these years we exchanged frequent letters, and, after a summer's campaign. I always sent for his examination my photographic collection. During the last winter I sent, on his request, my entire collection of mountain negatives from many of which he made prints. The day before his death he wrote me a long letter wishing to Mrs. Stone and myself a pleasant vacation in his mountains.

I have always felt a deep obligation to Freeborn for his having introduced me to the mountains. What he did for me, he did for many others. He was our most consistent and enthusiastic exponent of the gospel of outdoor life and particularly mountaineering. His death to me is a personal loss. I shall never see the mountains again, which were so beloved by him, without recalling his kindly face and his keen enjoyment of them.

W. E. Stone.

* * * *

I feel that I should like to add a few words to the above tributes to Mr. Frank W. Freeborn.



F.W. Freeborn

Mrs. H. J. Parker and Dr. W. E. Stone have expressed my feelings towards Mr. Freeborn very fully—a man, a mountaineer, a boon companion and a loyal comrade.

I never had the privilege of climbing with Mr. Freeborn, but I have known him well since he joined the Alpine Club of Canada as an original member in 1906, subsequently becoming a life member, and have had much correspondence with him throughout the thirteen years of his membership. I knew him best as an ardent supporter of our Annual Camps, which he yearly attended, as the Dean of the American Corps, until incapacitated in 1914. Since then his connection with the Executive of the Club has been a close one and he always displayed deep interest and loyalty, his good judgment and helpfulness being very valuable to us. This is well known to the American Section of the Club.

Around the great camp fire at nights, after the day's mountaineering activities were over, he was a leading spirit and the memory of his trim, business-like poise, as he recited some specially prepared poem or suitable essay for the occasion will always be with us—the firelight flickering on his genial, smiling countenance with all about the silent snow-crowned peaks, the glistening icefalls and shadowy, mystic forests. I think of him thus at our 1909 Camp at Lake O'Hara, when our visitors from the Alpine Club (England) were with us for the first time, and again, below the mighty, towering heights of Mt. Robson in 1913.

Dear old Freeborn! His last ascent has been made—let us hope the highest of all his conquests—but the present generation of the Alpine Club of Canada will have passed long before his memory is forgotten.

Arthur O. Wheeler.

William Spotswood Green, C.B.

The Rev. William Spotswood Green, that witty Irishman and good explorer of mountain regions, has passed from our membership. In 1901 and 1902 I officially mapped the region covered by his explorations at the summit of the Selkirk Range in 1888. His map of that region, the first published, is excellent and later surveys showed him to be reliable and accurate in his geographical results.

The Selkirk Range in the vicinity of the Canadian Pacific Railway was my first love and I have not yet, in eighteen years of surveys and exploration in the Canadian Rockies, found any reason to change my allegiance. Before commencing I read Green's "Among the Selkirk Glaciers," and I confess it set me on edge to enjoy some of the experiences and delights there recapitulated, and my expectations were in no measure disappointed.

The book itself is the classic of the Selkirks. The abounding humour of anecdote and keen human interest it holds carry you along with intense interest, while thrilled by his scenic descriptions and readily understanding the simple related forms of his scientific observations. The story and his map work made me much desire to meet the writer, which I had the pleasure of doing at the jubilee dinner of the Alpine Club (England), held at Lincoln's Inn hall in London in 1907. I was surprised to meet a man of melancholy cast of countenance, which was instantly belied by the exceptionally humorous and fetching twinkle of his eyes.

W. S. Green was the first to record measurements of the Illecillewaet Glacier for advance or retreat.

Arthur O. Wheeler.

Mr. Green was born in 1847, ordained in 1872 and for some time was incumbent of

Carrigaline in County Cork. His love for zoology and exploration asserted themselves. He did much deep sea dredging and discovered mackerel spawn off the Aran Islands in the spring of the year, showing the possibility of the further development of the Irish fisheries. He was appointed Government Inspector of Fisheries and later Commissioner of the Congested Districts Board. He journeyed to New Zealand and reached within 200 feet of the summit of Mt. Cook, being thwarted of complete triumph by bad weather after a fine climb. His book, "The High Alps of New Zealand," is well known. In 1888 he spent the summer in our own Selkirk Range, his experiences being related in his book, "Among the Selkirk Glaciers," which appeared in 1890. When the Alpine Club of Canada was organized in 1906 Mr. Green was elected an Honorary Member, a distinction which he much appreciated. He was, however, in spite of many invitations, unable to visit Canada again. His book will keep his memory green for many a year.

Margaret Springate

The death occurred on November 17th, 1918, of Margaret Springate, a popular and energetic worker in the Winnipeg Section of the Alpine Club. She died suddenly of influenza. For four years she was the Local Secretary, but whether in office or not, she was an inspiration, organizing interesting gatherings and making the annual dinner a successful function. At the time of her death she was President of the Women's University Club.

Miss Springate joined the Alpine Club in 1907 and attended the Camp at Paradise Valley in that year, graduating on Mt. Aberdeen. From the first she was eager and proved a worthy apprentice. From this Camp she made the hardy expedition which encircled Mts. Lefroy, Ringrose and Hungabee, crossed the five passes — Mitre, Abbot, Opabin, Wenkchemna and Wastach; traversed five glaciers— Lefroy, Victoria, Opabin, Wenkchemna and Horseshoe. Such an expedition, covering two days, is a more effective test of what mountaineering stuff may be in a novice than the climb of an easy peak like Mt. Aberdeen. Miss Springate stood the test.

After the Paradise Valley Camp closed, Miss Springate exchanged the tramp for the coach, going into the hills for a hundred miles over the old, adventurous Cariboo road. In other years she essayed harder excursions. In 1908 at Rogers Pass, after the round trip involving Bear Creek, Baloo Pass and Cougar Valley, she made the heroic trip by Asulkan Glacier and Asulkan Pass, thence westerly along the ridge and over Castor and Pollux, traversing the west side of Castor to the Lily Col, then along the Dome, the Rampart and Mt. Afton, crossing Afton's shoulder on the north of Mt. Abbott, descending near the north end and returning by Marion Lake in a drenching rain.

She was not in the mountains again until 1913, when the Club climbed from the Camp in Cataract Valley. In the meantime she had been for a year in England and in Germany, where she taught English in a school of languages at Dessau. Her last expedition was in 1914. In that year she joined Miss Jobe in the adventure by pathless valleys and passes northwest of Mt. Robson to Mt. Sir Alexander, the distance travelled through forest by saddle and on foot, being nearly 400 miles the round expedition. The northern end of the journey involved "back packing," the strenuous method known to all true mountain adventurers.

Miss Springate never wrote any account of this interesting journey into virgin mountain country. Her friends urged her, and they hoped to get from her ready pen the story as told with such naivete and humour to the Winnipeg Section of the Club. For the last six months of her life she had been librarian in the Free Press Editorial Department and had made a promising beginning in journalism. She had a racy style, a quick mind, a keen and nimble but very kindly wit. For some

ten years she had been a teacher of Latin, French and German in Havergal College, Winnipeg, the last year of service there including the duties of house mistress. She had a special talent for Latin, but hers was a fair gift of "all the talents." She possessed a singing voice of considerable power, trained by a local teacher. To hear her sing "Land of Hope and Glory" was to feel the thrill of England's spiritual empire. Her social gifts were those that made for light hearted companionship. And she had a loyal soul, the genius for friendship. "The golden gift that nature did thee give to fasten frendes."

Essentially a child of the open air, Miss Springate was the leading spirit of a walking party that on Saturdays in all seasons tramped the roads leaving Winnipeg or the woodland trails along the two rivers. She will be missed for many a year and remembered always for her radiant spirit, her innocent gaiety and laughter, her joy in all of life that makes for healthy human delight.

Elizabeth Parker.

ALPINE CLUB NOTES

My Familiar Mountains in Canada - By F. W. Freeborn

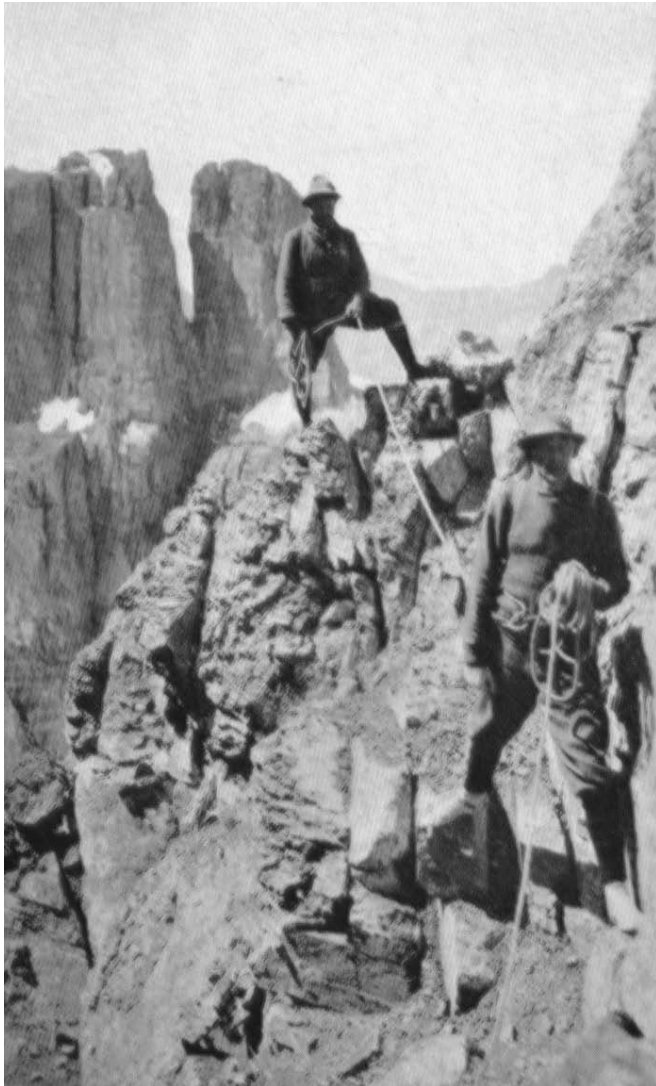
During the past year, 1918, Mr. F. W. Freeborn presented to the Club a delightful photographic album of his views taken in the Canadian Rockies since he first joined the Club as an original member in 1906 and up to his serious illness of 1914, which prevented his taking a further active part in the Club's camps. Notwithstanding his heavy handicap Mr. Freeborn kept active in mountain matters as the album of views here referred to well shows. I may here add that Mr. Freeborn was at the first camp held by the Club at the summit of Yoho Pass in 1906 and was not absent from an Annual Camp up to the time of his illness in 1914.

At these early camps we had a number of photographic competitions—a feature which is this year (1919) revived through the energy and hard work of Mr. C. G. Wates, of Edmonton, and the Committee of which he is chairman — and at them Mr. Freeborn figured prominently. In fact, I believe, he carried off a number of the prizes. I have noted Mr. Freeborn's results from year to year with deep interest and have seen him progress from a very amateurish standard to one of a high class grade that a professional might well be proud of, culminating in the results for the year 1913 at the Robson Pass Camp.

There are some 250 views in the album, which is in itself, apart from the direct interest and appeal of the views to all mountain lovers, a magnificent gift. On the front page is a general table of contents and in a pocket at the back a detailed index of the pages, the views to be found on them, the subject and date when taken; a very complete, useful and easily read index. Each view bears Mr. Freeborn's private number, which, it is noted, runs as high as 2,074, a view taken of Mt. Field from the train in 1914.

The album is in fact a very valuable historical, topographical and scenic record of the Canadian Rockies as centered about some of the best known and most visited beauty spots and, to one who knows and can read between the lines, is a book of delightful reminiscences and happy memories. Many of the major mountains of past camp grounds are illustrated from various points of view: Temple, Victoria, Lefroy, Stephen, Cathedral, Sir Donald, Rogers Peak, Mt. Robson, etc.

Inserted near the end of the volume are a few pictures of Mt. Hood, including two especially, showing snow formations of striking peculiarity from weathering and the action of the sun, wind and rain. One also taken on Mt. Hood shows a bergschrund of which the upper lip is hung with



**On Pinnacle Mt., 1918 Camp Between The Fixed Ropes.
Photo, L.H. Lindsay**



On Pinnacle Mt., 1918 Camp. Photo, L.H. Lindsay

icicles and is very remarkable.

There are many pictures showing climbing parties in action, and among them Mr. Freeborn frequently appears. Judging by his looks and those of the members of the parties he is leading, or by the more exacting and dangerous climbs where professional Swiss guides play a part, it is all taken very seriously and an immense amount of happiness and pleasure is derived from it. And why not? All who visit and climb in the Great Hills are gripped by their fascination and held for a return to them again and again. After four years of desperate and sanguinary fighting the mountaineering veterans of the Great War are still eager for a tussle with the Giants of the Rockies.

This is not the only volume of views Mr. Freeborn has presented to the Club. The previous presentations, seven in number, deal more directly with the camps that he attended and their activities. They represent a large amount of work such as only a lover of the mountains could accomplish and are a very valuable gift.

Arthur O. Wheeler.

Wiwaxy Lodge

Some years ago the Canadian Pacific Railway built a mountain hut on the meadow near Lake O'Hara, hoping it would be of use to the climber and camper. The irresponsible and unrespected trippers treated this in their usual fashion and it became useless for its purpose. Last summer Mr. Val. A. Fynn, one of our members repaired and refitted this hut at his own expense and, in conjunction with the Dominion Park authorities, a set of simple rules was drawn up which it is hoped will be observed by the most unthinking.

Immediately on arrival visitors are requested to register in the book provided for that purpose, not that there is any desire for unimportant autographs, but that some idea may be formed of how much and how well the hut is used. A supply of dry wood is stacked there. This, of course, will be replenished by each visitor, leaving the wood pile at least as large as it was found. All fires must be utterly extinguished and the hut and its surroundings left in a clean and orderly condition.

The equipment includes a stove, a broom, six mattresses, a crosscut saw, an axe and a shovel. All cooking utensils and other supplies must be brought by the traveller.

The Park authorities will keep strict watch over the hut and it is hoped that should travellers find any trace of disorder they will at once report the matter. It is only by constant care and watchfulness that such huts, badly needed as they are, can be preserved among the mountains.

Bibliography

Attention has been called to several errors and omissions in the Bibliography of the Canadian Mountain Region, published in our issue for 1918.

On page 160 there is a misprint. Line 18, Palliser's Report contains 325 pages, not 32, as printed.

Omissions are:

- | | |
|-----------|---|
| 1820 | Franchère, Gabriel. Relations d'un Voyage à la Côte Nordouest de l'Amerique Septentrionale dans les années 1810, 11, 12, 13 et 14. Par. G. Franchère, fils. |
| 1872 | McDonald, Archd., Chief Factor H.B. Co. Canoe Voyage from Hudson's Bay to Pacific in 1828. Edited with notes by Malcolm McLeod. |
| 1872-1882 | Fleming, Sir Sandford. Reports. |

- 1874-5 Hanington, C. P. Journal from Quesnelle through the Rocky Mountains.
1882 Baillie-Grohman, W. A. Camps in the Rockies. Should not have been included as it deals exclusively with the United States.
1907 Canadian Alpine Journal. Issued yearly.

Recent publications are:

- 1917 Alberta and British Columbia Boundary Report and Atlas, Part I., 1913-1916.
Commissioners R. W. Cautley, J. N. Wallace, A. O. Wheeler, Ottawa.
1917 Department of the Interior. Description and Guide to Jasper Park.

Annual Celebrations

As most members of the Club know, it was founded in Winnipeg on March 27th and 28th, 1906. Since then it has been the custom among the various Sections of the Club to mark one or other of the birthdays by some celebration at which the principal events of the Club's life are commemorated. It is much to be desired that there should be uniformity in the dates observed, as otherwise the true meaning of the celebration is missed. This year the festival was observed by the Vancouver Island, Vancouver, Calgary, Edmonton, Winnipeg, Toronto and New York Sections. At these meetings the address of the Director summarising the history of the Club for the past year was read, and speeches made concerning the Club and its work, in many cases illustrated by lantern slides of great interest. Such gatherings serve to keep up the strong mountain spirit of the members and to bind together the various sections in one body with Canada's mountain country as its sustaining interest.

Change of Name

The name of Mt. Habel in the Yoho region has been changed to Mt. des Poilus by the Geographic Board of Canada in appreciation of the magnificent services of our French allies in the Great War.

REVIEWS

Report of the Alberta and British Columbia Boundary Survey, Part I., 1913 to 1916, including Atlas⁶

Through the courtesy of Dr. E. Deville, Surveyor General of Dominion Lands, the Club House library is now in possession of a most useful publication issued from the Surveyor General's office. This publication takes the form of a report describing the various operations of the Interprovincial Boundary Commission in delineating the boundary between Alberta and British Columbia over an area extending from the International Boundary to the Kicking Horse Pass. A splendid atlas accompanying portrays the map work. Both are in book form and very neatly arranged and printed on splendid paper. The work covers the operation of the Commission from its inception in 1913 to the completion of the 1916 surveys.

The Interprovincial Boundary Commission as first formed in 1913 was composed of three members, viz., J. N. Wallace, D.L.S., Dominion representative, A. O. Wheeler, H.C.L.S., British Columbia representative, and R. W. Cautley, A.L.S., Alberta representative. These three gentlemen

6 *Officer of Surveyor General, Ottawa.

carried on the work of the Commission until July, 1915, when the Dominion Government decided that its interests could be looked after by the Alberta representative, Mr. Cautley. So, from July, 1915, Messrs. Wheeler and Cautley have carried on the boundary work to the satisfaction of the various governments involved.

In chapter one of the Report, the Commission deals with the necessity of such a survey and gives the reports and minutes of the different governmental executives, relative to the preliminary arrangements for beginning the survey of the boundary. By mutual consent the Surveyor General of Dominion Lands was authorized to make arrangements for carrying on such a survey. In chapter two appears the instructions issued for this work, including decisions to be made where technical difficulties might arise relative to watershed. It might here be stated that the boundary between Alberta and British Columbia follows the continental divide north from the International Boundary to the one hundredth and twentieth meridian. Following the instructions received, the Commission describes methods of survey employed. In a survey of this kind, topography is required for a short distance on either side of the boundary, so a party under Mr. Wheeler was given control of the topographical survey. Photo-topographical methods were used, based upon a triangulation system. In the various passes and summits the boundary is marked by monuments, of which full description is given. Mr. Cautley had charge of the line work in the passes. Photographs were taken of each monument as a means of identification.

From the point of view of a surveyor or engineer, chapter two is of great interest, as the writers go into the minutest details of survey operations and of the construction and erection of the monuments. The average Alpinist will probably not go into this as carefully as he will the descriptive matter following in chapters three to six.

In these chapters are given the reports of the Commission upon survey operations for each year from 1913 to 1916. Reference is made continually to the atlas accompanying, of which I will make mention presently. Each pass is dealt with separately, giving the history and origin of the name. Then follows a description of the topography. In connection with the Kicking Horse Pass, it will be of interest to many to note the derivation of the name. I have heard so many people state that this pass is named in such a way because the rock face to the north portrays a kicking horse. The name comes in a different way, however, and was painful in the memory of the late Sir James Hector. As Dr. Hector he was geologist to the Palliser expedition in 1858. At the confluence of the Beaverfoot and Kicking Horse Rivers he was kicked by a pack horse and invalided for a day. Hence the name which has "stuck."

In addition to the passes is a graphical description of the mountain masses between these, written as only a mountaineer can write. Numerous elevations are given which, with other details regarding trails, etc., make the Report of great value to the tourist and Alpinist. A most interesting description is given of the Mt. Assiniboine area, which will be the scene of the Welcome Home Camp of 1920. It is well worth while for members who intend to be present at this camp to consult the Report and Atlas should occasion present itself.

Reproductions of many fine mountain photographs are given throughout and are of the greatest interest. They are the selection from hundreds of pictures taken by Mr. Wheeler and party in the execution of the topographical survey. One photograph of more than ordinary interest is that of Mt. Ptolemy. Mt. Ptolemy is a unique specimen in Nature's vast architectural design. The profile of the ridge resembles that of a mummy in so much that, when the photograph is turned on edge, one would imagine that he held a portrait of an ancient Egyptian monarch in hand.

Following chapter six is given a short description of the Atlas, and Appendix I. describes

each monument erected and also gives a photograph of each. Appendix II. is a table of latitudes and departures referring brass bolts and cairns to the nearest monument in the passes.

The Atlas accompanying consists of 16 sheets of mountain topography along the boundary together with 10 detailed sheets of the passes, giving positions and altitudes of the various monuments. The work upon these sheets is a most excellent specimen of mountain map work and is done from the originals supplied by the topographical party under Mr. Wheeler, assisted by A. J. Campbell, D.L.S. It is a four-color work. Contours are in a light brown, trails and roads in red. Water, glaciers and snowfields are in blue and all other information in black.

The Atlas will be of greatest utility as a work of reference for the tourist intending to explore any of the areas shown. Altitudes of all principal features are given and many previously unnamed peaks now have a designation, the significance of which will always be recalled in centuries to come. I refer to such names as Mt. Foch, Mt. Sir Douglas, Mt. French, Mt. Jellicoe, Mt. Currie, Mt. Beatty, Mt. Joffre.

Such works as this Report are of untold value to a mountaineering Club, and the Alpine Club of Canada will look forward to possessing future reports of the Interprovincial Boundary Commission.

—R. D. McCaw.

Description of and Guide to Jasper Park—Edited by E. Deville⁷

Dr. E. Deville, Surveyor General of Dominion Lands, has presented the Library of the Alpine Club of Canada with the above named Guide. The Guide is the outcome of a photographic survey of the central part of Jasper Park executed in 1915 by M. P. Bridgland, D.L.S., an Active member of the Club. The topographical part of the Guide was written by him and the historical notes by R. Douglas, Secretary of the Geographic Board. The illustrations, which are mostly from survey photographs, were selected and arranged and the book edited by Dr. Deville.

It is stated in the preface that the map of the Bridgland survey on a scale of 1/62,500, about a mile to an inch, has been published in six sheets, 19 by 22 inches, and is sold at 15 cents per sheet, or, mounted and dissected for the pocket, at 50 cents per sheet.

The price of the Guide Book is 50 cents.

The Guide is a thin, nicely bound volume, beautifully gotten up and magnificently illustrated. It is of very great interest and value, specially owing to the chapter on the records of early travel in this historic ground, and the accurate, detailed topographical information written by Mr. Bridgland from his survey notes.

The Athabaska route, ever since its discovery in 1910 by David Thompson, has been of abiding interest and much has been written of the travels and adventures of the first pioneers, explorers of the North West and Hudson's Bay Fur Trading Companies.

In his chapter, "Location and Early History of the Park," Mr. Douglas has compiled a succinct general history outline from the early days of exploration to the present time, touching upon the explorations of David Thompson, Gabriel Franchère, Ross Cox, Alexander Ross, David Douglas, Rev. J. P. De Smet, Paul Kane, Milton and Cheadle, Sir James Hector and Sir Sandford Fleming. For purposes of accurate reference this chapter of the Guide is specially valuable.

The remaining chapters deal generally with the Park area and its special attractions in the various trips that can be made from Jasper, the principal townsite, and from Pocahontas, a village

⁷ Department of the Interior, Ottawa.

within its confines; also with the natural history and more striking scenic features.

The topographical portion by Mr. Bridgland is from information he obtained while making his surveys of the central portion of the Park. These surveys were made by the method of phototopography and have enabled him to provide the splendid topographical illustrations for which the Guide Book is particularly notable.

The maps accompanying it are very good. They are accurate and up-to-date, and contain the fullest information concerning the topography of the country defined.

Appendix A, giving a list of trips that can be made from Jasper, is useful to tourists.

Appendix B gives the place names and their heights and origins. There is a good index which enables the Guide to be used to advantage with rapidity.

The book itself is most tastily published and the arrangement and editing are exceptionally well done. The greatest credit is due Dr. Deville for this very attractive and desirable guide book, and it is to be hoped that he will extend his results to the Rocky Mountains Park, or at least to the central portion of it along the Canadian Pacific Railway and the parts more generally travelled by tourists.

While not of so great historical interest as the other two, a similar guide to Waterton Park would embrace and disseminate a knowledge of a considerable section of the mountain regions that contains much of interest and scenic attraction.

—Arthur O. Wheeler.

The Canoe and the Saddle—By Theodore Winthrop⁸

“Klalam and Klickalat” was the author’s original name for the diary of his romantic and hazardous trip across the Straits of San Juan de Fuca and through the States of Washington and Oregon by way of the Cascade Mountains and the Columbia River during the pioneer days of 1853.

Travelling alone with Indian guides, who proved too often mutinous and treacherous, Winthrop’s recital makes thrilling reading. In one instance he escaped massacre only to find himself in the still perilous position of a solitary traveller in an unknown region peopled by hostile tribes. From one difficulty after another he was successfully extricated by the Hudson’s Bay Company at Fort Nisqually, the missionary priests, Fathers Charles Pandosy and D’Herbomez, and finally by a detachment of American officers at Fort Dalles, where he was nursed through smallpox at the quarters of Major Alvord.

Though the book deals chiefly with the history of the Northwest, is supplemented by letters to the author’s family wherein he describes his journey across the isthmus of Panama and along the Pacific Coast, where he visited San Diego, Monterey, San Francisco, Seattle, Portland and Victoria. At Victoria his story begins and though it leaves him at the Dalles, having achieved the impossible in canoe and saddle in the perilous trip related, his subsequent diary continues the account of his homeward journey by caravan across the prairies, through Mormon land, and finally back to Connecticut. With the Seventh Regiment of New York, he served in the Civil War, meeting death in the engagement of Great Bethel, June 10th, 1861. He was thirty-two years of age.

He was a scholar and a gentleman and typical for his nationalism at a time when sectionalism threatened to disrupt the Union. His letters show him to have suffered ill health, yet, with the handicap of an inferior physique, he achieved in the strenuous days of his explorations what a more

8 John H. Williams, Tacoma.



On Horseshoe Glacier Below Mitre Pass. Photo, W.A. Lincoln



Return From Climb Of Pinnacle Mt., 1918 Camp. Photo, W.A. Lincoln

robust pioneer lacking Winthrop's indomitable courage would have hesitated to undertake.

The Winthrop Glacier of Mt. Ranier-Tacoma is named after the author who, in his book, devotes much space to the disputed christening of this famous mountain. Starting out by deploring the custom of naming our grandest peaks in memory of obscure men, he proceeds to demonstrate that, contrary to the recent finding of the U.S. Geographic Board, the word Tacoma, though in itself generic rather than specific, was used specifically by the Indian when referring to Mt. Ranier. In proof of which he states that the word Tahoma or Tacoma when given a special accent on the second syllable meant exclusively Ranier and when pronounced otherwise applied to all snowcapped peaks.

Winthrop was a lover of Nature and delights in minute descriptions of the mountain flora. There are exquisite pen pictures of the noble scenery through which he travelled. His imagination was always fired at night by the weirdness of the starlit solitudes, and many a vigil he kept within the forests primaeval while his red-faced guides, spent with exhaustion, snored beside him. The narrative is interspersed with legends told by his guides.

An interesting chapter deals with the Citizen's Road, the construction of which has been erroneously credited to McClellan, who never even saw the pass named in his honour, whereas his subordinate, Edward (afterwards Colonel) Jay Allen, when only twenty-two years of age, with the enthusiasm and perseverance of youth, achieved a miracle of engineering in the face of financial discouragement.

The book is a treasury of general information. Winthrop's mind was like a record that received and repeated the most insignificant transactions relating to the settlement of the Great Northwest. The price of lots in the city of Victoria, the rules and regulations of the Hudson's Bay Company and the relative value of Indian blankets versus squaws are most deliberately inscribed.

"It contains, moreover, a vocabulary of the Chinook jargon, of which Winthrop was a conscientious student.

The Canoe and The Saddle was first published fifty years ago, but has long been out of print. Recently the frequent demands for a new edition led to the present volume.

There is an introduction by John H. Williams, author of "The Mountain That Was God," as well as appended reminiscences by General Hodges and Colonel Edward Jay Allen; while sixteen colour plates together with maps and more than one hundred other illustrations lend additional interest to the work.

In speaking of Winthrop, George William Curtis once said "His death was as great a loss to American literature, as that of Keats to English poetry."

—Rhoda Walker Edwards

Far Away and Long Ago — By W. H. Hudson⁹

This book is scarcely within our category. It is not a mountain book, but appeals to every lover of Nature. Mr. Hudson has written many books on birds, stories of natural history, in English which it is a delight to read. Now he tells of his youth in early Victorian days on the South American Pampas.

It is a commonplace statement that as one is drowning, the events of one's past life rush up before the memory. There seems no evidence of the truth of this, but the belief is general. In similar fashion during a severe illness Mr. Hudson lived again the long forgotten past. Finding

9 E. P. Dutton & Co., New York.

his memories of vivid interest, he jotted down notes of the various incidents and this book is the result.

"It was to me a marvellous experience; to be here, propped up with pillows in a dimly lighted room, the night nurse lightly dozing by the fire, the sound of the everlasting wind in my ears howling outside and dashing the rain like hailstones against the window panes; to be awake to all this, feverish and ill and sore, conscious of my danger, too, and at the same time to be thousands of miles away, out in the sun and wind, rejoicing in other sights and sound happy again with that ancient, long-lost, and now recovered happiness."

The description of his earliest home will appeal to those who know the prairie, though the prairies of the northern and of the southern continent are widely different. It was remarkable in that it was on rising ground in the midst of the level pampas above a tributary of the Plata, and was called after its distinguishing feature, "The Twenty-five Ombu Trees." In that country every one rode. It was the common saying that a man without a horse was a man without legs. Even here it is only to-day that people are beginning to appreciate the benefit and the pleasure of walking.

The first visit of a country lad to a city is always an epoch in a life. Buenos Ayres to-day is the wealthiest, most populous Europeanised city in South America. Those were the days of dark and narrow streets paved with cobble stones, of night watchmen who called the hours, with whom the gay youths fought and spoiled of their staves and lanterns as did the English youth in the times of the Georges, the days of Tom and Jerry and Corinthian Kate.

Our author did not see Rosas, "The Nero of South America," whom his father greatly admired and whose portrait was the chief ornament of his home. He was "certainly the greatest and most interesting of all the South American Caudillos or leaders who rose to absolute power during the long, stormy period that followed on the war of independence." Many of his acts "to foreigners and those born in later times might seem the result of insanity, but were really the outcome of a peculiar, sardonic and somewhat primitive sense of humour on his part which appealed powerfully to the men of the plains, the guachos, among whom Rosas lived from boyhood, and by whose aid he eventually rose to supreme power."

Mr. Hudson, however, is more interested in the odd characters he came across than the story of politics; beggars, wandering tutors, frontier Englishmen of strange varieties, a patriarch of Spanish descent who was husband of six wives all living with him in the same house—esteemed and beloved by all.

His father was a brave and kindly man. From his mother came the love of Nature which pervades the book and has been the interest of his life. This it is impossible to bring into a review of limited space—it is an atmosphere not a series of incidents. It is best expressed in his closing words:

"I know that mine is an exceptional case, that the visible world is to me more beautiful and interesting than to most persons; that the delight I experienced in my communings with Nature did not pass away leaving nothing but a recollection of vanished happiness to intensify a present pain. The happiness was never lost, but, owing to that faculty I have spoken of, had a cumulative effect on the mind and was mine again, so that in my worst times I could yet always feel that it was infinitely better to be than not to be."

—S. H. Mitchell.

The Human Side of Animals—By Royal Dixon¹⁰

In this book Mr. Royal Dixon adds another and, perhaps, the most important phase to his already published books, "The Human Side of Plants," "The Human Side of Trees" and "The Human Side of Birds."

In it he collects in a number of chapters the similarity of the habits and customs of various animals to the human being. Seeing that original man, the cave man and the tree man, lived amidst conditions that were practically the same as those of his prototype in the animal world, the more intelligent species of apes, it is not to be wondered at that many points of similarity can be found and that the primal instincts of existence should in their first meanings be the same.

Reading Mr. Dixon's book and following out his parallelisms it might well be supposed that in the first cave conditions were much the same for both, but that the human species has evolved more rapidly to a high state of civilization in which the more easily tamed and more easily domesticated animals take a share as co-workers and companions.

Apart from this side of the question, however, Mr. Dixon's book furnishes much valuable instruction concerning the habits and mode of life of the many different species of animals with which he deals, and one is more than surprised to find that there is so great a similarity to the human animal in their general methods. Much corroborative evidence by eminent naturalists, past and present, is introduced and, generally speaking, the book may be considered an instructive and interesting addition to the natural history shelves of one's library.

The first chapter, "Animals that practice camouflage," is, perhaps, the most interesting, particularly in the light of events concerning the present world's war. All who have lived with Nature, to a greater or lesser degree, are acquainted with this phase of existence of the lower forms of life. To it is largely due the apparent absence of life in the forest, on the plains and in the mountains that is often commented upon. But animal life is generally there. The eminent naturalist, Professor John Macoun, once said to me when I complained of the absence of animal life in certain parts, "If only you will efface yourself and keep quiet you will find it is going on all around you."

Chapter V., "Miners and Excavators," and Chapter X., "Animal Architects, Engineers and House Builders," are of special interest. The everyday traveller in the Great Out of Doors frequently sees an animal disappear into its hole, but seldom stops to consider where or to what that hole is an entrance. Mr. Dixon gives valuable instruction in this connection and opens up an underground world of life that will be found distinctly new matter to many of his readers. Reading his lines one wonders at the time, patience and intelligence that is bestowed upon the construction of the animal cities beneath the sod by their inhabitants and also of the wonders that exist of which we have no knowledge. In the latter chapter the beaver is featured as a most intelligent constructor and engineer. The writer of the review can here corroborate all that is said by Mr. Dixon. In the course of a lifetime spent in the forests, on the plains and in the mountains, he has seen many works by beaver, some of them great works of scientific engineering skill, which would compare with the best results of trained intelligence. It has always been said that the animals work and travel only at night; such is not the case, for the writer has seen beaver working in the day time at Yellowhead Pass in the Canadian Rockies. Only last summer, while his pack train was travelling from Banff to Lake Louise, well known beauty spots of the Canadian Rockies, a beaver was met in broad daylight coming down the driving road. Did it leave the road and disappear quickly? Not

¹⁰ Frederick A. Stokes Company, New York.

much! It stood its ground, showed fight and stampeded the pack train which practically fled from it. It can thus be seen that the force of evolution towards a higher civilization is still going on in the animal world.

Mr. Dixon is to be congratulated upon his delightful book, which will come as a boon to all lovers of the animal part of Nature, than which there is none more interesting and instructive, no matter in what habitat it may be observed. Animals, birds and insects and their ways are a source of delight and recreation to all who love Nature and the Great Out of Doors, and any collective light on the subject, such as the volume under discussion, is a valuable gift to the general community and cannot but be highly prized.

—Arthur O. Wheeler.

Steep Trails—By John Muir¹¹

John Muir is so intimately associated with California that one feels inclined to describe this book in Spanish phrase as an olla podrida, or, more familiarly, a mulligan. It is a collection of good things gathered from various papers published from 1874 to 1902.

Much of the descriptive portion no longer applies to the neighborhoods dealt with, which have greatly developed of recent years. It is strange today to read of Pasadena, the millionaire's winter town, as "Now numbering sixty families mostly drawn from the better class of vagabond pioneers who, during their rolling stone days, have managed to gather sufficient gold moss to purchase from ten to forty acres of land. . . The conversation of most I have met is seasoned with a smack of mental ozone."

Even in the 70's Muir was sound on mountain questions. "The mountains," he says, "are fountains not only of rivers and fertile soil, but of men. Therefore we are all, in some sense, mountaineers, and going to the mountains is going home. Yet how many are doomed to toil in town shadows, while the white mountains beckon all along the horizon! But many on arrival seem at a loss to know what to do with themselves and seek shelter in the hotel, as if that were the Shasta they had come for. Others never leave the rail, content with the window views, and cling to the comforts of the sleeping car, like blind mice to their mothers. None may wholly escape the good of Nature. . . Fresh air, at least, will get into everybody, and the cares of mere business will be quenched like the fires of a sinking ship."

There is an interesting account of a wild night on Mt. Shasta in a blizzard, when the climbers took refuge near the fumeroles of escaping volcanic steam, dreading the fumes of the low-lying gas.

The account of the Grand Canyon of the Colorado is a fine piece of descriptive writing. But it is not possible to deal with the various papers in detail. All possess the charm of Muir's style, which while neither so fresh nor so full of surprises as that of the great masters, has always a certain distinction of its own.

Muir sums up the truth as known to mountain lovers: "Doubly happy is the man to whom lofty mountain tops are within reach, for the lights that shine there illumine all that lies below." "The light that never was on sea or land."

—S. H. Mitchell.

Worth American Cordillera, Forty-ninth Parallel—By Reginald Aldworth Daly

Presented to the Alpine Club of Canada's Library by the Geological Survey of Canada at

11 Houghton Mifflin Co., Boston and New York.

the request of Mr. James White

The book is a report of the geology of the North American Cordillera at the Forty-ninth Parallel of Latitude—the boundary line between Canada and the United States. It was done under the direction of the late Dr. W. F. King, C.M.G., International Boundary Commissioner, and published as a memoir by the Geological Survey of Canada.

The Report deals with the geology of the mountains crossed by the Boundary Line, and is a very full and comprehensive work in three parts, one of which consists of maps. There are several chapters which treat of the construction of mountain forms and their causes, and on this account are of general interest to all alpine people who study the architecture of the Great Hills as they travel through them.

Dr. Daly, of the Massachusetts Institute of Technology, was attached to the International Boundary Commission as geologist, and carried on the work from 1901 to 1906.

OFFICIAL SECTION

Report Of Paradise Valley Camp

The thirteenth Annual Camp, the fourth War Camp, was held in Paradise Valley on the site of the Camp of 1907, from July 16th to July 31st, 1918. The situation was a charming one, under the shadow of Mt. Temple, with a fine view of the north wall of Hungabee. At once the visitor realised that he was in the heart of the big mountains.

An outlying Camp was pitched in Consolation Valley, on the same site as that of 1910. This was a delightful place of sojourn, but rather far from the good climbs. However, few regret a good excuse for a day off.

The prevailing conditions rendered the attendance very small. Only 54 were placed under canvas. The mountaineering spirit was very keen and there were no loafers nor any evidence of the tourist spirit.

There were present members of the English, Swiss and American Alpine Clubs, of the Appalachian Mountain Club and of the Royal Geographical Society.

Those present at the Camp were drawn from the following places:

Canada

British Columbia: Cameron Lake, Field, Golden, New Westminster, Sidney, Vancouver.

Alberta: Banff, Calgary, Carmangay, Edmonton, Irricana. Saskatchewan: Melville, Saskatoon.

Manitoba: Lenore, Winnipeg. Ontario: Toronto.

United States

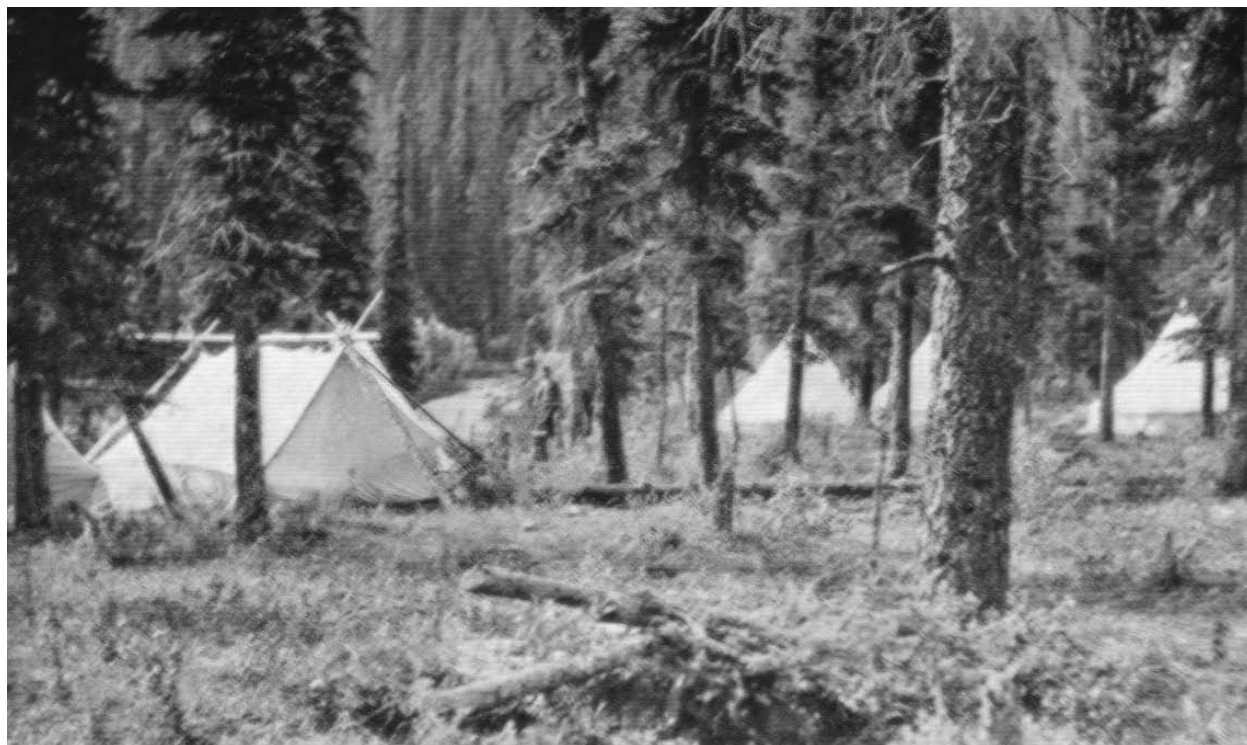
Connecticut: Stamford. Georgia: Atlanta. Massachusetts: Boston. Missouri: St. Louis. New Jersey: Orange, Summit. New York: New York.

Switzerland

Interlaken.

The Annual Meeting

The Annual Meeting was held in the dining pavilion on the afternoon of July 27th. In the



Gentlemen's Quarters, Paradise Valley Camp, 1918. Photo, D.M. Sinclair



The Effect Of A Snowstorm - 1918 Camp. Photo, D.M. Sinclair

absence of the President and the Vice-Presidents the Director took the chair.

The President's address was read. Mr. Patterson expressed his regret at his inevitable absence from the fellowship of the Club. He had been able to keep in full touch with all important matters concerning its welfare. He suggested that a message of appreciation be sent to all members overseas, and urged that every member should do his part to preserve the vital traditions of the Club.

Communications were read from the two Vice-Presidents, Dr. W. E. Stone, The Colorado Mountain Club, the Vancouver Section, and Mr. F. W. Freeborn, expressing regret at their absence and continued enthusiasm for the Club and its objects.

The Director then read his report, giving an account of the doings and standing of the Club since the last meeting. He informed the meeting that the Club had been asked to take part in the Congress of Alpinism, called by the Club Alpin Français to be held at Monaco after the war. He urged each member to realize that he had a duty to perform for the great mountain heritage and the Alpine Club of Canada.

The Secretary-Treasurer, in his report, stated that the finances were only preserved in a satisfactory condition by the utmost care. Full co-operation of each member was required. The Club was in need of increased membership.

The amendments to the Constitution, suspending the election of officers for the duration of the war and creating a class of War Members in Life Membership, were declared passed.

A resolution of appreciation was passed to be sent to all members on war service, and another of sympathy and congratulation to the released prisoners of war.

The suggestion of a committee of the Club to deal with photographic matters was discussed and left in the hands of the Executive for action.

The usual vote of thanks to all who had helped the Camp was passed and the meeting adjourned.

Report On Mountaineering And Expeditions

Mt. Temple dominated the Camp but was a very simple climb. In 1907 the ascent of it and Mt. Aberdeen were considered serious. In 1918 they were looked upon as well enough for training, but not the real thing. Mts. Pinnacle and the Mitre were climbed by quite a few parties and Pinnacle for the first time by ladies. A very interesting training ascent of Aberdeen was made by the Sheol Rocks and Mt. Haddo. A traverse was made of Glacier Peak down to Lake O'Hara.

Fascinating excursions abound in the neighbourhood, most of which are familiar. One, however, a very simple climb, was found well worth the making. Between Wastach Pass and Hungabee rises a dome shaped mountain slightly under 10,000 feet in altitude, which is easily climbed from the summit of the Pass. It is the key to many valleys and commands a superb view.

The professional guides were Edward Feuz and Christian Hasler, who as usual gave great satisfaction.

Nine passed the test for Active membership. Their names follow:

Mt. Aberdeen, July 18th

Miss G. J. May

D. F. Burnett

L. McKim

A. C. Tate

H. Herriott
Mt. Temple, July 22nd
Miss M. L. Derbyshire
E. W. Crawford

Mt. Aberdeen, July 24th
Miss M. K. Wilson
E. T. Hayward

Annual Report Of The Photographic Committee

At the Annual Meeting in Paradise Valley in the summer of 1918 a resolution was passed authorizing the formation of a committee to have charge of the photographic activities of the Club. This Committee was to have a member in each of the Local Sections and during the fall these were elected, with the result that the Committee stands as follows:

Vancouver Island	R. D. McCaw
Vancouver	Herbert O. Frind
Calgary	M. P. Bridgland
Edmonton	Cyril G. Wates (Chairman)
Winnipeg	A. A. McCoubrey
Toronto	J. Addison Reid
New York	F. W. Freeborn
London	Not heard from
Ex officio	The Director

At the time that the formation of this committee was suggested it seemed likely that its activities would be chiefly concerned with war work, but now that our soldier members are returning from overseas the question of laying out a broad and liberal policy to govern the photographic activities of the Club has become of principal importance. This the Committee has attempted to do, and, in spite of the difficulties involved in the interchange of ideas through the mail, many suggestions have been received and co-ordinated into what we believe is a really workable plan.

One thing that seems to have struck all the members was the need of so organizing the work that it could be carried on with a minimum of labour and expense and in such a way as to allow of unlimited extension in all directions as time passed.

The value of photographic records cannot be overestimated, and increases as they become older. It devolves upon every member of the Club who uses a camera in the mountains to see that nothing which may be of interest escapes him and that all such records, no matter how trivial they may seem now, are placed at the disposal of the Club for future reference.

A brief summary of the objects which the photographic committee hopes, in some measure, to attain are:

- (1) The promotion of interest in and knowledge of the art of photography in the mountain regions of Canada.
- (2) The education and entertainment of the members of the Club.
- (3) The education of the general public to the wonders of the Canadian mountains and the unlimited scope for health -giving recreation to be found among them.
- (4) The recording and collecting, by means of photography, of a mass of information with

regard to the Canadian mountains which will be systematically arranged so as to be available at all times for purposes of reference.

Some of the means by which the Committee proposes to further these objects are as follows:

Print Collection

There are at the present time a number of albums of photographs in the possession of the Club, most of which have been contributed by members. They will form an excellent foundation for a general collection of prints which the Committee hopes will ultimately illustrate all regions of the Canadian mountains and all the varied interests which it is the aim of the Club to promote.

In order that such a collection be of the greatest possible value it is essential that it should be so indexed and classified that all photographs illustrating any given subject can be easily referred to. In the absence of a paid official whose duty it would be to take charge of this work, it is desirable that these processes should be made as nearly automatic as possible.

The work naturally divides itself under three heads:

Collection;
Recording;
Classification.

To make the work included under the first two heads as light as possible the Committee are having printed a number of cards suitable for filing in the form of an index. There will be one of these cards for each print, which will provide space for all information of interest, and it is intended that members giving prints shall be asked to fill in the cards. Once a year (or oftener if desirable) the Committee will examine and classify all prints, placing the cards on file after adding such additional information as may be deemed of interest. The decimal system, commonly used in libraries, will probably be used in classifying the prints, as it allows of unlimited extension and subdivision.

As time passes and the collection increases in size, a system of cross-indexing will be added and albums will be built up of such prints as the Committee may select. Each print will bear a number to facilitate immediate reference to the corresponding card in the index and the prints will be so arranged—both in albums and drawers—that any print may be quickly found from its corresponding card.

It is only possible to refer briefly to a few of the possible uses of such a collection. Let us suppose that a party arrives at the Club House with the intention of making an attempt on Mt. Assiniboine by a new route. Perhaps there is considerable doubt in the minds of some of the party as to the practicability of some portion of the proposed route. A reference to the card index under the heading "Mt. Assiniboine" immediately gives a list of all photographs in the possession of the Club bearing on the subject, whether in albums, on file or framed on the walls, and a definite answer will probably be found to the vexed question.

Again, let us suppose that photographs are wanted to illustrate an article for the Canadian Alpine Journal or for some other publication. A visit to the card index will immediately give what is desired and will also give information as to the owner of the negative and whether the said owner is willing that the print in question shall be used for publication.

Questions of scientific importance will also be referred to the collection, such as the disappearance of lakes, changes in the outline of glaciers, etc.

I have referred at some length to the matter of a classified collection of photographs because the Committee regards this as the foundation of all photographic work in connection with the

Alpine Club of Canada. Such a collection, once started, will furnish material for sets of lantern slides, albums, enlargements for the decoration of the Club House and for art exhibitions, besides the more important uses previously referred to.

The Print Collection can only attain its object if the members of the Club will make a point of placing a print from every one of their mountain negatives in the possession of the Committee.

A supply of the index cards has been placed in the hands of each member of the Photographic Committee, from whom they may be obtained for the asking by any member of the Club or any other person who has taken photographs in the Canadian mountains which may be of value. The Committee deem it unwise to place any restriction on the contribution of prints. Any and all will be welcome, even when they may seem to the taker to be only of passing interest. Even camp scenes and groups of climbers may acquire a value in the future of which we can have no conception now, especially if they bear a record of the names of persons appearing in them. This hardly needs pointing out at the present time, for all the members of the Club realize the enhanced value of photographs bearing the faces of those members of the Club who have gone from us to pay the great sacrifice. A member of the Committee has suggested as a slogan: "WANTED—10,000 PHOTOGRAPHS OF THE CANADIAN ROCKIES," and, perhaps, it is not too much to hope that the print collection will reach this point within the next five years. With the hearty co-operation of all the members of the Club it should be easily possible.

While photographs on any kind of paper are welcome, it might be well for members having prints made by professional finishers for the Club collection to specify glossy post cards, for all negatives up to post card size. This will make uniform filing an easy matter and the glossy surface is best for the purposes of reproduction.

Lantern Slides

It is sometimes stated that the advent of the motion picture has destroyed the popularity of the stereopticon. This is very far from being the case; in fact, the demand for lanterns and slides has been greatly increased in the past decade. The practicability of the motion picture camera must always be limited by the difficulty and expense attending its use and these elements are of especial force in the mountains.

The Committee plans to form a Club collection of slides which shall ultimately prove a source of entertainment and education, not only to the members of the Club but also to the general public. The Committee approved the suggestion of the Director that a nucleus of this collection be formed by an annual donation of six slides from each of the Local Sections. These slides are to be given in duplicate and it is intended that, if possible, the same practice shall be followed in all donations of slides. This is in order that one complete set of slides may be kept in the possession of the Club at all times for the exclusive use of the members, while the duplicate slides shall be issued for the use of the Sections and lecturers who may desire to use them. As the collection of slides increases and funds become available, the sets covering various subjects will be augmented and completed by the addition of slides made at the expense of the Club from photographs selected from the Print Collection. If this policy is carried out, a very valuable collection of lantern slides will soon be acquired.

It is important that due credit for the ownership of the Club slides should be given at all times, and it is suggested that lecturers be required to exhibit a slide at the beginning and end of each lecture stating that all slides shown are taken from the collection of the Alpine Club of Canada.

Competitions

It was formerly the practice to hold photographic competitions at the Annual Camps. These have been abandoned of late years owing to the lack of interest largely due to the same persons winning the prizes year after year. With a view to reviving interest in these contests, a set of three competitions has been arranged for this year and suitable prizes offered. The most important of these is a trophy to be known as the Alpine Club of Canada Photographic Cup. In order that the competition for this cup may be made as keen as possible, the Committee proposes to assign a different subject each year and it is hoped that members will be helped to a clearer insight into the beauties of the mountains by a certain amount of specialization and also that it will be made difficult for one competitor to win the cup year after year.

It will naturally depend upon the success that attends the first year's competition whether or not the Committee will feel justified in extending and enlarging this feature. Announcement of the rules governing the contests have been sent to every member of the Club and we hope that the interest displayed will be fully up to our expectations.

Art Exhibits

It is fairly safe to say that every city which is the headquarters of a Section of the Alpine Club of Canada also has an Art Club. The majority of these Clubs hold annual art exhibitions which are largely attended by the general public. It has been suggested that these would furnish a valuable means for the education of the public to the beauties and interests of the mountains.

In one at least of the Local Sections this suggestion has already been carried out on a small scale. The local Art Club gladly acceded to a request from the Alpine Club executive for wall space and as a nucleus to the exhibit, a number of fine enlargements were loaned by the various railroad companies. To these were added photographs of all sizes, mostly the property of members of the Section. This little exhibit was a great success, much interest being displayed by visitors.

This idea has been enlarged upon, as follows: It is proposed that the various Sections and members of the Club be asked to loan one or more enlargements (framed if possible) for the season during which the Art Exhibitions are held—about six months. This would form a collection to be sent from city to city, and, with judicious press publicity, would be a valued feature at the exhibitions, especially if the pictures could be changed each year.

In submitting this report I wish to emphasize again the difficulties which naturally attend the meetings of a Committee separated from one another by the breadth of a continent. As far as possible I have given an outline of the combined ideas of the members of the Photographic Committee. Whether or not these ideas are carried to a successful consummation will depend entirely upon the enthusiasm with which the members of the Alpine Club of Canada support our efforts. If this movement receives only a part of the support to which its importance entitles it, I feel safe in predicting that the photographic branch of the Club's work will soon take a high place in our mountain activities.

Cyril G. Wates, Chairman
(202, Syndicate Block, Edmonton, Alberta).

The Club Library

For obvious reasons there have been no mountaineering books published recently. The list of additions to the library, however, contains several of historic and exploratory interest. The Club is not in a position to buy books, but our members and friends, as will be seen from the list of

additions, have been very good.

The usual exchanges have been received. The Journal of the Japanese Alpine Club now contains a section in English. A new addition to our list is the Journal of the Spanish Alpine Club and another work on the Sierra de Guadarrama, north of Madrid. Both are beautifully illustrated and printed and open a window on a region little known to our members. We also welcome the Klahhane Club Annual, the organ of the Olympic Peninsula Mountaineers.

Among books we should like to possess are:

Rydberg (P. A.). Flora of the Rocky Mountains and Adjacent Plains.

Belloc (H.). The Pyrenees.

Freshfield (D. W.). The Exploration of the Caucasus.

Washburn (S.). Trails, Trappers and Tenderfeet.

Weston (W.). The Playground of the Far East.

Mrs. A. O. Wheeler has presented the library with a most comfortable and seductive lounge, which is much appreciated.

General C. H. Mitchell has found time to send us a pair of snow-shoes such as are used by the Alpini in Italy and some flowers from Monte Grappa, which Mrs. Warren has kindly mounted and framed.

Col. W. W. Foster has arranged for a couple of machine guns to be sent us.

Dr. Wakefield has given a German helmet and the tail of a "French Pig," as well as some examples of war currency.

The list of additions follows: Report of the Alberta and British Columbia Boundary Survey. Pub.,

Department of the Interior, Ottawa. Donor, Dr. E. Deville. Reviewed on a previous page.

Description of and Guide to Jasper Park. Edited by Dr. E. Deville. Pub., Department of the Interior, Ottawa. Donor, Dr. E. Deville. Reviewed on a previous page.

Adventures in Alaska. By S. Hall Young. Pub., F. H. Revell Co., New York. Donor, LeRoy Jeffers.

A series of short stories of Alaskan adventure, gathered from the forty years' experience of a northern missionary. A good hunter, a good story teller, a man. The events of life have shown him that charity covers a multitude of sins. Who that does not know all can judge their relative importance? His choice of contributors to various objects in which he was interested is frank and novel. "When a man had been impoverished or made sick through drink I went to the saloons only for his relief. In other cases I made general canvass. When collecting money for church purposes I went to everybody except the saloon keepers and their following."

The Canoe and the Saddle. By Theodore Winthrop. Edit, and pub., John H. Williams, Tacoma. Donor, Mrs. E. B. Edwards. Reviewed on a previous page.

Far Away and Long Ago. By W. H. Hudson. Pub., E. P. Dutton & Co., New York. Donor, LeRoy Jeffers. Reviewed on a previous page.

Geology of North American Cordillera. By R. A. Daly. Pub. and presented by the Geological Survey of Canada, Ottawa. Reviewed on a previous page.

The Grizzly. By Enos Mills. Pub., Houghton Mifflin Co., Boston and New York. Donor, LeRoy Jeffers.

A series of pleasant talks by this well known writer, containing many facts of interest gathered from the experiences of thirty years.

The Hobo Philosopher. Written, published and presented by Roger Payne, Puente, California. A plea against the gospel of work.

The Human Side of Animals. By Royal Dixon. Pub., F. A. Stokes Co., New York. Donor, LeRoy Jeffers. Reviewed on a previous page.

The Indian Corps in France. Bt. Lt.-Col. J. W. B. Merewether and Lt.-Col. Sir Frederick Smith. Pub., John Murray, London. Donor, Mrs. A. O. Wheeler.

An account of the work of the Indian troops on the Western Front. Especially interesting to many Club members from the mention of the name of Major E. O. Wheeler, M.C., on several occasions.

Jungle Peace. By Wm. Beebe. Pub., H. Holt & Co., New York. Donor, LeRoy Jeffers.

The wilds of British Guiana are a far cry from the Rockies of Canada, nor have we space for reviews of books of travel, except those of most serious import, which deal with other provinces of knowledge than our own.

This really charming book is written evidently by a trained observer who sees things in their true perspective, from the appreciation of knowledge. His passing allusion to his homesickness for the great hills and eternal snows is of great interest. The Princess Lointaine, the Lady of Far Away, has us all in thrall.

The book is summed up in a paragraph of the preface: "It is possible to enter a jungle and become acutely aware of poison fang and rending claw—much as a pacifist considers the high adventure of righteous war. But it is infinitely more wonderful and altogether satisfying to slip quietly and receptively into the life of the jungle; to accept all things as worthy and reasonable; to sense the beauty, the joy, the majestic serenity of this age-old fraternity of Nature, into whose sanctuary man's entrance is unnoticed, his absence unregretted. The peace of the jungle is beyond all telling."

Our National Forests. By R. H. D. Boerke. Pub., Macmillan Co., New York. Donor, LeRoy Jeffers.

The Log of a Timber Cruiser. By W. P. Lawson. Pub., Duffield & Co., New York. Donor, Le Roy Jeffers.

These two books might be described by those who remember a childhood of an earlier fashion, as the powder and the jam. Both deal with the United States Forestry service, and both are of interest in their way. The former summarizes the work of the department, its aims and the results obtained.

"The Log of a Timber Cruiser" details in an amusing and attractive fashion with the incidents of a six months' field assignment in the mountains of Southern New Mexico. Many of the relations are vivid transcripts from life, and the whole makes a pleasant and informative story.

Steep Trails. By John Muir. Pub., Houghton, Mifflin & Co., Boston and New York. Donor, LeRoy Jeffers. Reviewed on a previous page.

The Years Between. By Rudyard Kipling. Pub., Methuen & Co., London. Donor, A. S. Sibbald.

Voyage through North America. By Alexander McKenzie. Donor, Mrs. A. W. Ross. A convenient edition of a valuable Canadian historical work.



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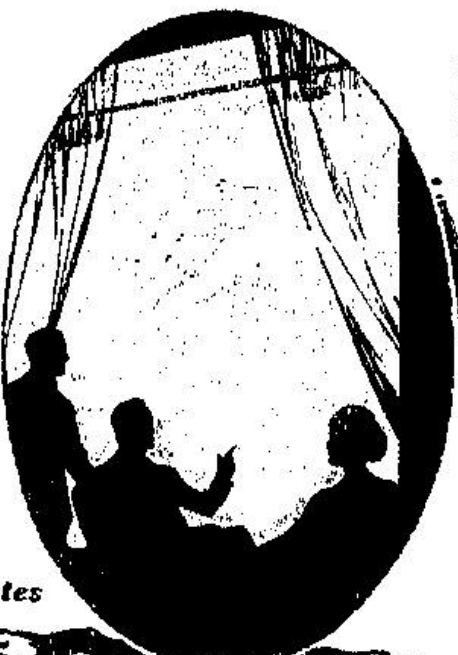


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