The Canadian Alpine Journal

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HEADQUARTERS
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VOLUME 52

THE

CANADIAN ALPINE JOURNAL

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Compiled By Don G. Linke

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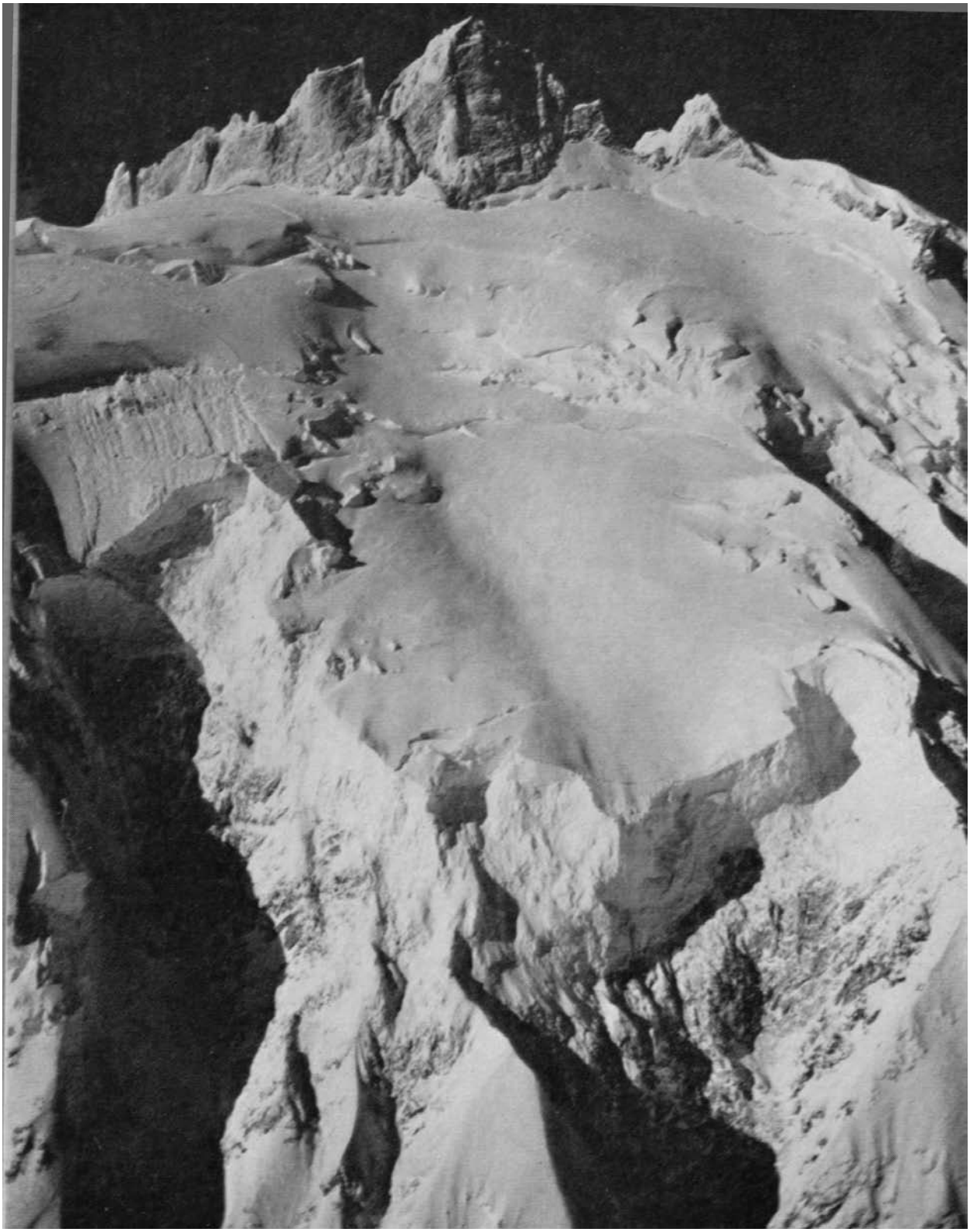

North Face Of Mount Waddington, From The Air At 10,000 Feet, December 1968. Photo: Barry Hagen

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THE ALPINE CLUB OF CANADA

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Resignation Of Mrs. Phyllis Munday As Editor

Through the medium o£ the Gazette, the Club membership has been informed of important changes in the direction and management of Club affairs.

Consistent with the function of my office, I am grateful for a few lines to comment, in particular, on the resignation of Mrs. Phyllis Munday, who has so fittingly held the position of Editor of the Canadian Alpine Journal for fifteen years; she has thereby earned the warmest thanks of the Club for a faithful and fruitful service carried out with loyalty and often under onerous circumstances.

When Phyl's predecessor resigned after occupying the position for some eleven years, it proved difficult to find a competent and willing successor, and it was indeed a self-sacrificing act on Phyl's part, that, without previous experience in the techniques of journalism she volunteered her services. For a number of years after her appointment, she was wholly responsible for the production of each year's issue and the management of the Journal affairs. Of recent years she has had the assistance of a small Editorial Committee but in retrospect we are impressed with the fact that our Editor has been responsible for making the chief representation on the printed page of the growth and advantages of mountaineering in Canada.

As Phyl now retires after a work so well done, it is meet that we all, both individually and collectively, by wish and deed, extend our very grateful thanks to her and our best wishes for her future.

—F. C. Bell, Honorary President

Material for the Journal should be sent to the Managing Editor, Mr. P. A. Boswell, P.O. Box 1026, Banff, Alberta. The deadline for submissions is November 1st.

Members are URGENTLY requested to assist the Club by furnishing articles themselves or by informing the Committee where articles might be obtained, as your Canadian Alpine Journal is one of the official records of climbing in Canada.

Contributions (original and one copy) should be typed DOUBLE SPACED.

Photos should be finished with glossy surface and submitted unmounted; do not use paper clips. A preferred size proportion is 5x7 inches. Black-and-white prints should be prepared from colour slides; do not send negatives or colour slides unless requested. Maps, diagrams or sketches (including a border) should be drawn with India ink on good-grade white paper, though photo or otherwise processed copies with dark lines on white background are acceptable' do not use pencil lines or blue ink. Thickness of lines and size of lettering should be such to allow possible considerable reduction to page size; scales for maps must be drawn, not stated in words. Number each photo (or drawing) on the back with SOFT pencil and supply a separate sheet showing typed titles and photographer's names, correspondingly numbered.

Printer's proof will be supplied only if requested. Separates of printed articles can no longer be furnished free; if any are desired, please state required number and estimate of cost will be given.

Neither the Alpine Club of Canada nor its Editor are responsible for statements made or terms used by contributors to The Canadian Alpine Journal.

Copies of past and current issues of the Journal may be purchased from the Club Manager, Mr. P. A. Boswell, P.O. Box 1026, Banff, Alberta.

THE OBJECTS OF THE ALPINE CLUB OF CANADA

(a) The encouragement and practice of mountaineering and mountain crafts and the promotion of these skills through participation in the activities of the Club.

(b) The education of Canadians in appreciation of their mountain heritage.

(c) The exploration of alpine and glacial regions and the promotion of scientific study thereof, primarily in Canada, but also in other countries possessing mountain ranges.

(d) The preservation of the natural beauties of the mountain places and of the fauna and flora in their habitat.

(e) The promotion of art and literature as applied to mountain regions.

(f) The dissemination for scientific and educational purposes of knowledge concerning mountains and mountaineering through meetings, publications and library.

(g) The exchange of information of educational or scientific value, information about equipment and techniques and any other matters of interest, with other mountaineering clubs and organizations having the same or similar objects, throughout the world.

WORK OF THE CLUB

(a) The exploration and study of Canada's alpine tracts. With this end in view, it can gather through its members literary material and photographs for publication and dissemination, and such publications shall be placed on record with the Club Manager, the Journal Editor or the Librarian and shall be distributed to the Club's membership and to organizations which correspond with the Club.

(b) The study of glaciers and of glacial action in Canada.

(c) The encouragement and publication of art and literature relative to mountain regions.

(d) The establishment and maintenance of climbing huts and bivouac shelters in the Canadian mountains.

(e) The development of reliable professional and amateur guides to assist the Club in carrying out its training, climbing and ski mountaineering programmes.

(f) The maintenance of a main summer camp and ski mountaineering camp each year in one of the alpine regions of Canada, the organization of other camps and expeditions in Canada and other countries and the encouragement of local section expeditions. Such camps and expeditions are for the purposes of training at all levels, enabling members to meet and enjoy the friendship and close association of camp life and promoting a high standard of mountain craft.

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The Headquarters of the Club are at Banff, in the Banff National Park.

NEW EDITION OF 1965 CLIMBER'S GUIDE TO THE BRITISH COLUMBIA COASTAL RANGES

A Climber's Guide to the Coastal Ranges of British Columbia (International Border to Nass River) by R. R. (Dick) Culbert of the British Columbia Mountaineering Club and published by the Alpine Club of Canada in 1965 proved so much in demand that the first edition was sold out some time ago. A review of this Guide appeared on pages 219-220 of the 1966 volume of this Journal.

Dick Culbert recently completed an extensive Supplement (to the end of 1968) which includes descriptions of many mountains and peaks and new access routes not covered in the original edition, as well as information about new climbing routes on mountains and peaks formerly described. Some errors in the earlier edition are noted, and a number of new official mountain names are stated.

This second edition, also published by the Alpine Club of Canada, comprises the whole of the 312-page original edition (with its separate maps), plus the estimated 110-page Supplement having its own index, in one hard-cover binding. It is expected to be available in June, in time for the 1969 summer climbing season. Price $5.00 to Alpine Club of Canada members, $6.00 to non-members. Order from Mr. P. A. Boswell, Manager, Alpine Club of Canada, P.O. Box 1026, Banff, Alberta.

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Southern Logan Mountains, N.W.T., 1968

By Peter Rowat

Party: Ted Maden, Peter Rowat, Nona Okum.

On July 16th Ted, Nona and I landed on the upper end of Lonely Lake in the Hole-in-the-Wall Valley in the Logan Mountains — a wild remote range in the Canadian Northwest Territories 150 miles north of Watson Lake in the Yukon. We set up camp about half a mile further west up stream from the head of Lonely Lake. Two otter were swimming in the lake. The vertical north face and prominent east ridge of the First Guardsman stood vigilant above us.

Two days later we all climbed "Reconnaissance Peaks", small but conspicuous on the north ridge of the valley with excellent views. On our return we flushed out a brown bear from the bushes just above camp.

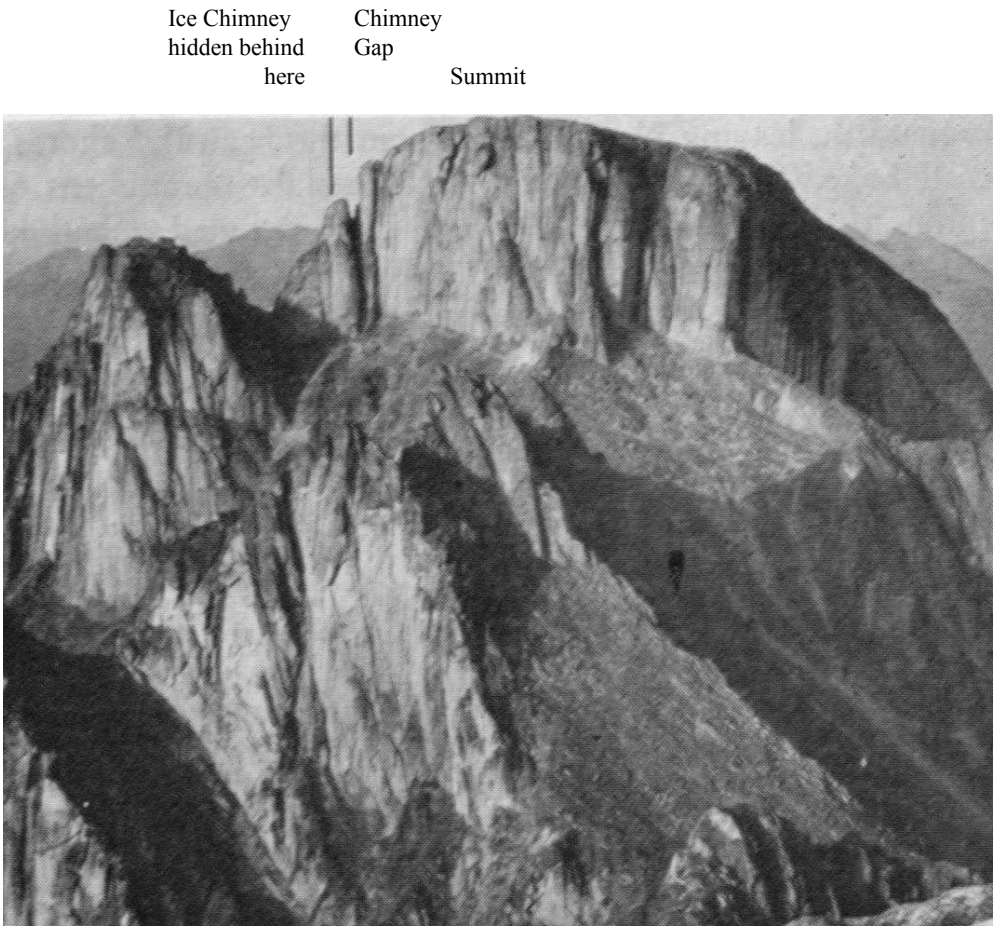
Next day Ted and I climbed the First Guardsman by a circuitous route. We traversed around the east ridge, continued below the slabby south face, and passed a barrier of cliffs at its upper end. Heading for the gully descending from the col between the First and Second Guardsmen, we went slightly left, then back to the right with two short pitches on which we roped. From the col we traversed to the right on a ledge and then back left up a steep narrow ramp (5.7, Al) and continued over easier ground. This was followed by blocks and a short steep chimney that landed us on the summit.

After a day of rest we backpacked with 10 days' food over the col between Mt. Elysium and Cariboo Peak. We camped by a small lake high above Nightwind Creek. We called this "Cub Lake" since Ted, the first to arrive, disturbed a brown bear and two cubs. The following day, July 22, in an attempt to climb Peak 24 we dropped down to Nightwind Creek, walked up to Nightwind Lake and gained the ridge connecting 24 to the lower "Sunset Peak" lying immediately to the south and conspicuously overlooking Nightwind Creek. From our new vantage point it was clear that we had not chosen the easiest approach. A traverse across the southeast face to the east ridge seemed the most reasonable possibility, so for reasons of time we retreated. Some easy rock pitches took us to the top of "Sunset Peak" and after one rappel we ran down a rock gully to Nightwind Creek in the gathering gloom and climbed back to camp in darkness.

Next morning we moved camp to "Dawnwind Lake" (the southern Nightwind Lake). On the 24th Ted and I set out for Peaks 2 1 and 22, or "Nightwind Peak" as we named the highest point on the map between Peaks 21 and 22. From the west end of "Dawnwind Lake" we ascended the glacier immediately above and crossed a small rock barrier. We continued near an avalanche runnel then went right onto rock.

A few pitches up this led to the southwest ridge which took us without difficulty to the summit. We continued along the ridge towards 22, descending some rock steps until we came to a steep drop before the final rise to the summit.

Leaving the ridge we descended a steep ice couloir on the north side for several rope



Southwest Face Of Thunder Dome. Photo: Peter Rowat

lengths, using rock belays where possible since we had no ice screws. After traversing a steep snowfield, more snow and then rock led us to the top. Two rappels down the vertical east face of 22 returned us to the ridge, and a rocky couloir led down to Dawnwind Lake just in time to reach camp before it started to snow.

Three days later, on the 27th, Ted and I climbed "Promontory Peak" (Peak 23). We went west up the boulder-filled cwm above northern Nightwind Lake, then north to a snowy couloir coming down from a notch on the east ridge. We avoided the slabby, loose couloir by rocks on the left, then headed left up the ridge. The solid granite provided many enjoyable pitches even though the weather had closed in on us. At one point we traversed onto the north face and climbed back to the ridge. Abruptly, at a gap in the ridge our solid granite changed to red crumbly rock which gave two unpleasant pitches to the summit.

Brief clearings in the mist showed how conspicuously this peak stuck out into the cirque leading around from Mt. Savage to Peak 20. It snowed while we were descending the ridge but luckily, lower down, the rain didn't start till after we returned to camp, and a warm meal waiting for us prepared by Nona.

After an intervening day of rain we moved camp to a beautiful site high in the valley on the north side of Mt. Savage. Before dawn on the 30th Ted and I set out for Mt. Savage by its east ridge. We reached the crest of the ridge by working westward up the easternmost glacier on the

north side of the ridge. This involved some steep ice. The crest was followed past a gendarme to the summit pyramid where we made a descending traverse left, to a huge perched block in the middle of the southeast face. Delicate slab work on the top of the block took us to a stance behind. A crack, a traverse left to a short slippery corner, another traverse left, and another crack followed by a short traverse right, brought us, in two pitches, to a large bay.

The exit was by an evil-looking chimney which soon eased off into a couloir leading back to the ridge line. Easy rocks led us to the summit. We were disappointed to find a cairn. (First ascent by John Milton from the west in 1961.) The view was not disappointing.

Our long walk back to Lonely Lake next day in a downpour included three falls—I fell 20 feet into a crevasse, luckily landing on an ice bridge. The other two were falls in swollen rivers. Very luckily we were blessed with sun in the morning.

Four days and much rain later, we had pitched a high camp at the junction of two small valleys to the north of Peaks 14, 15, 16 and 17, and had some tantalizing glimpses of great faces and overhangs on the northwest side of all these peaks.

On August 6th, however, we found that an easy snow couloir led up to the northeast side of 15, and 14 gave no substantial difficulty from the east. It was from these two peaks that we first began to appreciate the real nature of Thunder Dome. Its southeast face rolls away in a huge exfoliation dome. Its vertical southwest face is several hundred feet high and offers no obvious line of ascent, while on the northern side of the mountain there is a system of Yosemite-like faces and slabs probably 3,000 feet high, reaching down towards Hole-in-the-Wall Lake. Through these, "The Ramp" slashes from bottom left to upper right. From Lonely Lake "The Ramp" appears as a ridge. There may well be a long and easy ascent of Thunder Dome starting east of Hole-in-the-Wall Lake but our ascent by the "Ice-Chimney" on August 7 is probably most feasible for a party based at Lonely Lake. From the foot of the southwest face we went left beneath a large chimney-gap to a small snow col, from where the several-hundred-feet high, rock-walled, hard-ice-filled, north facing chimney was the only obvious route. Going under a large chockstone and surmounting an overhang gave interest to the step cutting. We crossed the chimney-gap at the top and landed on a shelf above the line of continuation of the ice chimney. The shelf involved a jam-crack and ended in a narrow 30-foot chimney down which we slithered to the final snow and ice slope leading to the summit plateau. We climbed and rappeled down the chimney-gap in descent.

On August 9th, leaving Nona fishing from the beautiful shores of Hole-in-the-Wall Lake, Ted and I walked beneath slabs reminiscent of Glacier Point Apron to the foot of the Ramp. I even included a bolt kit in my sack since there was no obvious line from below where the upper end of The Ramp merged into the wall at a corner a few hundred feet below the summit plateau. The Ramp itself was easy, being nothing more than a glorious steep walk beneath huge boiler-plate walls on our left, but our apprehension mounted as we approached the corner. It was with relief mixed with a little disappointment that we burst into the sun and saw a loose ledge all the way round. Fifty yards along the ledge a chimney system led upwards.

Half a dozen 5.6 pitches later we unroped and scrambled to the top, actually a subsidiary plateau of Thunder Dome.

After a cold but incredibly beautiful bivouac on this subsidiary plateau we went over the top of Thunder Dome and down the chimney-gap. We continued, and climbed "Storm Point" (Peak 17) with a few rope pitches. Then we did "Symmetry Spire" (Peak 16) by a great boulder-filled couloir, both on their southeast sides. Back at camp we celebrated our victories with a delicious meal of six trout, caught and cooked by Nona.

After an intervening day of crag-climbing and blueberry picking we had exhausted our food and so started back to Lonely Lake with visions of a good hearty meal at our well-stocked base camp. To our dismay the bears had beaten us to it and had eaten or pulled apart practically everything. Very luckily it was only 4 days before our rendezvous with the plane.

Next day, August 13th, after a meager breakfast and carrying no food whatsoever, Ted and I climbed the east ridge of the First Guardsman. This was a rock climb with about ten pitches, grade NCCS IV, 5.8. In the lower part of the climb I remember a jam-crack and a steep black wall. The last three pitches, however, really made it memorable. They were progressively a steep slab with a start above an overhang reached by sly rope moves from knifeblades, a short vicious jam-crack, and a magnificent 150-foot flake and crack pitch up the final vertical granite wall.

On August 15th Ted and Nona climbed "Lonely Spur", the peak overlooking Lonely Lake, connected by a ridge to Lonely Peak. Next day we were flown out to Watson Lake.

All the above climbs, apart from Mt. Savage, are first ascents. All numbers, and names without quotation marks, refer to William J. Buckingham's map published in A.A.J. 1966.[1]

The Chilkoot Range And The Alaska-B.C. International Boundary

By Thomas R. Stengle

Party: Lawrence E. Nielsen (leader), George Barnett, Russell Batt, William Bendy, Jurgen Meyer-Arendf, Dan Reeder, Thomas Stengle, Charles Warren.

In North America today hardly any climbing areas are left unexplored. The few that remain will soon be visited by eager climbing expeditions. The panhandle of southeast Alaska has been especially inviting to mountaineers looking for new ranges. The Juneau Ice Cap and the area south of Mt. Nesselrode has been thoroughly covered by several scientific expeditions. The first party in the Takhinsha Mountains on the west side of Lynn Canal was led by L. E. Nielsen in 1966. The following year an intrepid party of four explored the region south of Skagway as far as Mt. Bagot during an attempted Skagway-to-Juneau traverse. Between Mts. Bagot and Nesselrode the Chilkoot Range lies along the Meade Glacier just to the west of the British Columbia-Alaska border. There is no record of it being visited since the International Boundary Survey in 1907. They had climbed but two of the many peaks, and only one of these is a boundary point.

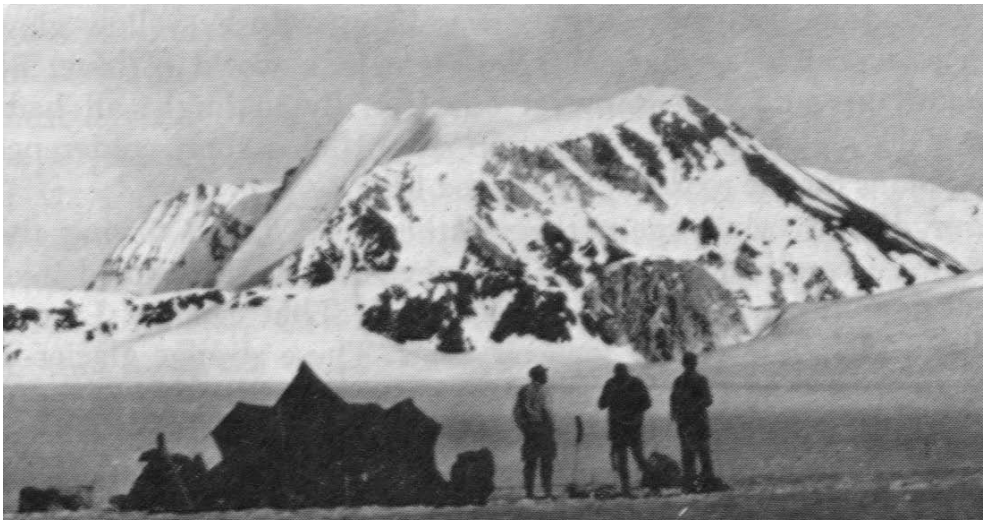
In 1907 it was a major undertaking to reach the border in this area. From Lynn Canal the party followed the Katzehin River to its source at the terminus of the Meade Glacier. Beyond this point the men and pack animals had to traverse a dozen miles of badly broken glacier surface before reaching Mt. Canning which was designated boundary point 105. Today's explorers have life much easier. It is a simple matter to make airline connections to the town of Haines, Alaska, where Layton Bennett's Flying Service will provide a ski-wheel plane for the rest of the trip. It took us less than 30 minutes to fly to the foot of Mt. Poletica (boundary point 102) where our base camp was set up. The peaks are rugged and, for the most part, snow covered. They are just short of 8000 feet, and an occasional one has a flat top suggesting that they are the remnants of a plain long since worn away by the glaciers.

Our 1968 expedition was planned and led by Dr. Lawrence E. Nielsen, a research chemist and glaciologist from St. Louis, Mo. The advance group assembled at Haines in mid-May here

1 See also map on pages 44-45, C.A.J. 1962.

Airstrip At Base Camp. "Mt. Hislop" In Right Background.

"Mount Steacie" From The North.



"Camp West" With "Trident Mtn." In Background. Photos: T.R. Stengle

we set up headquarters in the Halsingland Hotel, the former officers' quarters of old Fort Seward. Word of our presence quickly spread through the town after we bought 50 man-weeks of supplies at the local market. It was the largest single order the grocer had ever filled! Before we had time to get our food properly organized, Layton Bennett announced that the weather had cleared over the Meade Glacier, and that we had better fly in now, or we might have to wait a long time for another clear day. By nightfall we were established in base camp located just over the border in British Columbia. Before finishing for the night, George marked our camp with the sign "Welcome to the Meade Glacier, B.C. Population 4".

The good weather held during the following day. May 19, so the four of us set out to climb Mt. Poletica, the most striking peak in the area. We chose a route up the steep snow on the northeast corner, a truly outstanding climb. With George Barnett leading, the summit was reached at 4 p.m. From here we had a good view of our climbing area. It appeared to be a vast sea of snow broken by occasional mountains. Toward the east the elevation dropped rapidly to Atlin Lake, 20 miles away. In the other directions one could see nothing but glaciers and high peaks. Besides George, the first ascent party consisted of Larry, Jurgen and myself. The descent was slowed by many stops for photography, but we were in camp in time for a late supper.

For the next 4 days we were grounded by bad weather. To the delight of all, Jurgen had the foresight to bring a copy of Playboy. It became the most popular reading material in camp. One evening a thunderstorm passed by, a rare event in this part of the world. Later we heard that it was only the third such storm to be seen in Skagway in 1 8 years. At last we began to see a pattern in the weather. The morning would start with a whiteout and light rain, discouraging any climbing. In the afternoon the cloud cover would start to break, and by evening, it was often clear.

With our new understanding of the daily weather cycle, we decided to climb the peak to the north of camp by starting at 1 p.m. Our party of four started up the east ridge over steep snow and easy rock. Higher up a rotten limestone gendarme blocked the way. It took a long time to force a route around it, and it was evening by the time we succeeded. Worried by the late hour, we turned the rope around and headed back to camp, reaching it at midnight.

Here we sat, a party of eager mountaineers, surrounded by gorgeous unclimbed peaks, and the weather confined us to camp. For two more days we cursed our luck and spent the time eating, reading, eating, talking, eating, writing, and eating. This is not the place to loose weight or improve one's fitness. At last we got a break and climbed a small peak northeast of camp. Jurgen, the expedition physician, led the climb and named the mountain "Sparrow Peak". Shortly after returning, we heard the happy sound of an airplane engine. Layton had brought in Russell Batt as well as some badly needed luxuries. Russ had been weatherbound in Haines for some time. He had obtained a short-term job as a carpenter's helper to meet his expenses while waiting for flying weather.

The following day, May 25, brought promising weather and after an early lunch, Russ, George and I made up our minds to have another go at the mountain just north of camp. Instead of the east ridge, we went directly up the south face, a route which had been reconnoitred by George some days earlier. The climbing was on snow all the way, and it went without a hitch. By mid afternoon, we were on the top. This mountain lies entirely in Canada, and since Russ and I are both chemists, we named it "Mt. Steacie", in honour of the late Dr. E. W. R. Steacie, past president of the National Research Council, and a world famous physical chemist. This mountain is distinguished by a flat area of several acres on the top.

After waiting out another day of bad weather, Layton flew in with the remaining members

of the expedition. The population of the Meade Glacier had risen to eight. Now we could move to a new camp. Utilizing simple sleds of corrugated aluminum, we moved several miles south to the foot of the unnamed boundary peak 101. Here we had previously air dropped a cache of food sufficient for 3 days.

On May 28, in absolutely perfect weather the party travelled around the base of this peak so as to approach it from the east. We split into two ropes, one selecting a line on snow, and the other taking a mixed snow and rock route. From the summit we had a clear view of Mt. Fairweather, over 100 miles distant. Larry suggested that we name this peak "Mt. Service", after Robert Service, poet of the Klondike. On the way back to camp, a supply of willow wands and food was cached along the trail in the hope of passing this way tomorrow on a climb of boundary peak 100.

As we might have guessed, the weather deteriorated during the night, and we had no chance of doing our climb. In whiteout and light snow a few of us followed the trail back to yesterday's cache to pick up the supplies. We lingered long enough to climb two minor summits, the "Bicorn Peaks", just to the east of "Mt. Service". The following day we packed back to base camp where a 2-day spell of good weather gave the latecomers a chance to climb Mt. Poletica on May 31. Meanwhile the rest of us organised supplies and gear for the move to our next camp.

That evening, after the snow surface had hardened, we hauled the heavy sleds to Camp West, 6 miles down glacier from base. There was no airdrop here, but we did not mind the extra load, since we were travelling downhill all the way. It was the most spectacular march I have ever made. The slowly setting sun cast long mountain shadows across miles of glacier. Between shadows, the snow surface was lit in a dusky yellow glow. Later the sun sank below a ridge, and we were in a world of blue. Blue sky, blue mountains and blue snow at our feet. By midnight all had turned to blue-black as we reached the camp site. After a short conference to lay climbing plans for the morrow, we turned in.

To our dismay, once again the weather turned bad during the night, and we were confined to camp. The next day we attempted a climb in marginal conditions, only to be turned back. That evening Larry decided to go down glacier to search for ice worms. These strange glacier-dwelling animals are found only along the Pacific slope of northern U.S. and Canada. Two years ago in the Takhinsha Mountains Larry had seen millions of the creatures, but his party had no alcohol to preserve specimens. This time we were prepared. Larry felt that the best hunting would be around the 4000-foot level, so at dusk three of us started down. In a couple of hours we came to a cobalt-blue meltwater lake at about the right elevation. An hour's search produced no ice worms, but we did collect a number of tiny glacier fleas. They were very small black things that were present in great numbers on the snow surface. When you held your hand close to one, he would react to the heat either by burrowing into the snow, or by making a mighty hop which put him a foot or two away. They were later identified as springtails of the order Collembola.

Camp West was quite a disappointment. The third day was also unsuitable for climbing. On the fourth day there was no choice but to trek up glacier back to base. Fortunately, conditions for the move were good. About noon Layton flew over looking for us. We set out the ground-to-air "All's Well" signal, which Layton responded to by dropping a mail sack. Since we had no radio, this was our only means of contact with the outside. The mail was received with great enthusiasm, particularly when we discovered that it contained 5 pounds of smoked salmon. This northern delicacy is the specialty of the house at the Halsingland, and it was sent to us by Clarence Matson, the proprietor.

About mid afternoon of June 4 we came to the base of boundary peak 103. With the

prevailing fair weather, it was too good an opportunity to pass up. As two ropes of two, George, Russ, Chuck Warren, and myself started up the east face on a long rock scramble. The last few hundred feet went across an inclined summit plain, the highest point of which was a wobbly pile of boulders. There was room for just one man at a time on the top. The descent turned out to be more of a problem than we had anticipated. We thought it would be fun to try a different route down, and were lured onto a steep snow slope that led to an impossible crevasse field. To make matters worse, the entire face avalanched while we were on it. Happily, the fracture line was just a rope length above the lowest man; he was able to arrest without difficulty. There was nothing for it but to climb back up and descend by our original route. At 2 a.m. we finally came off the mountain. At this latitude it never really gets dark at night, and the last of the descent was made in deep twilight. The peak was named "Mt. Hislop" after John Hislop, an engineer on the construction of the White Pass and Yukon Railroad. This name had been suggested by the mayor of Skagway.

The next day Layton flew in to base camp picking up Dan, George and Jurgen who had to leave early. The rest of us had one last objective, the climb of Mt. Canning, 14 miles to the north. Weeks before we had placed an air drop at the halfway point; now the five of us .headed out for it. Along with our equipment we had several hundred "willow wands," really bamboo tomato stakes. In all of our travels, Larry placed one every 50 yards or so to mark the trail in case of whiteout. Today the air was clear, and we were able to spot the air drop without difficulty. Its accuracy was amazing; Layton and George had put the six boxes within a 40-foot circle. It had been placed from such a low altitude that not even the crackers were broken. With high hopes for the morning, but with our fingers crossed for good weather, we went to bed.

Since our mountain was still 7 miles off, on June 7 we planned to rise at 3 a.m. At that hour, Larry peered out of the tent and saw that we were enveloped in a snowstorm. "Aw shucks!" he said. "That ain't the way I spell it," came a reply from the back of the tent. Thoroughly discouraged, we went back to sleep, finally awakening at 7. Someone gave a shout—the storm had blown away, and the sky was clear. We threw some gear into our packs, had a cold breakfast and struck out. The party consisted of Bill Bendy, who led the climb, Larry, Russ, Chuck, and myself. After a few miles we found that we were being watched. A few hundred yards from us a bear stood on a mountain side and observed our progress. We were astounded to see a bear in these mountains, 20 miles from the nearest forest. However, it is not uncommon for them to winter in the woods around Atlin Lake, B.C., then cross the mountains in the spring to go salmon fishing in Lynn Canal. Such a journey would be unthinkable for lone human; even in a well equipped party, it would be quite an undertaking. During the rest of the day each of us quietly worried if the animal had followed our tracks to camp and wrecked the tents.

By lunchtime we had reached the base of the mountain. It was fortunate that we had no further to go, since our supply of wands was nearly gone with 14 miles of trail marked at this point. Canning is the only granite peak in the area. However the rock is thoroughly jointed, and the frost had been at work. The climbing was technically easy, but the loose rock made it slow work. The mountain has two summits of equal height. Our route led up to the east peak and then followed the summit ridge to the west peak, which was the point picked by the boundary survey. To our surprise, the copper bolt placed by the 1907 party was still intact. This bolt marks the boundary. It was placed by O. M. Leland, and his initials are inscribed on it. The survey crew also left a piece of stove pipe and a rusty tin can, but it contained no message. We placed our account of the second ascent inside it. Contrary to the survey's conclusions, our measurements put the west peak 10 feet lower than the east. By right that should have been made the boundary point.

Since this was our last climb, we were reluctant to leave the summit. After hours of carefully picking our way through the loose rock, we reached bottom late in the evening. Our exhilaration made the 7 miles back to camp pass swiftly. We were relieved to see that the bear had not gone for our camp. His tracks came down to ours, followed us for 50 yards, then cut off toward the Meade Glacier in the most direct route to the sea. It was an amazing bit of pathfinding. At 1:30 a.m., dead tired, but glowing inside, we reached camp. With a mouthful of cold food for supper, we fell into bed.

The next day was spent in loafing, eating, and taking pictures. After supper, we packed the sled for the pull back to base. The evening sky was clear allowing the snow to harden, and the sled glided easily over the surface. As we approached base, the moon rose over Mt. Poletica, making a spectacular photographic subject. It was an opportune time, as the next day was to be our last in the mountains.

Around noon Layton flew over with Bill Bendy's wife; she had wanted a look at our base camp. The lighting was too flat for a pilot to see a signal stamped in the snow, so the five of us lay down by the runway in the form of a large human T, the sign that we wanted to be taken off today. As usual, the weather interfered with our plans, and it was late the next day before Layton could land. In the meantime we had spent many man hours stamping out a firm runway surface with our snowshoes. Without this preparation, the downwind, downhill takeoffs would not have been possible. Working late into the night, and then returning early the following morning, Layton took us off, one man at a time. By supper the happy crew was assembled at the Halsingland where a busload of tourists stared curiously at the bearded, smelly men.

Ten Weeks On Mount Logan

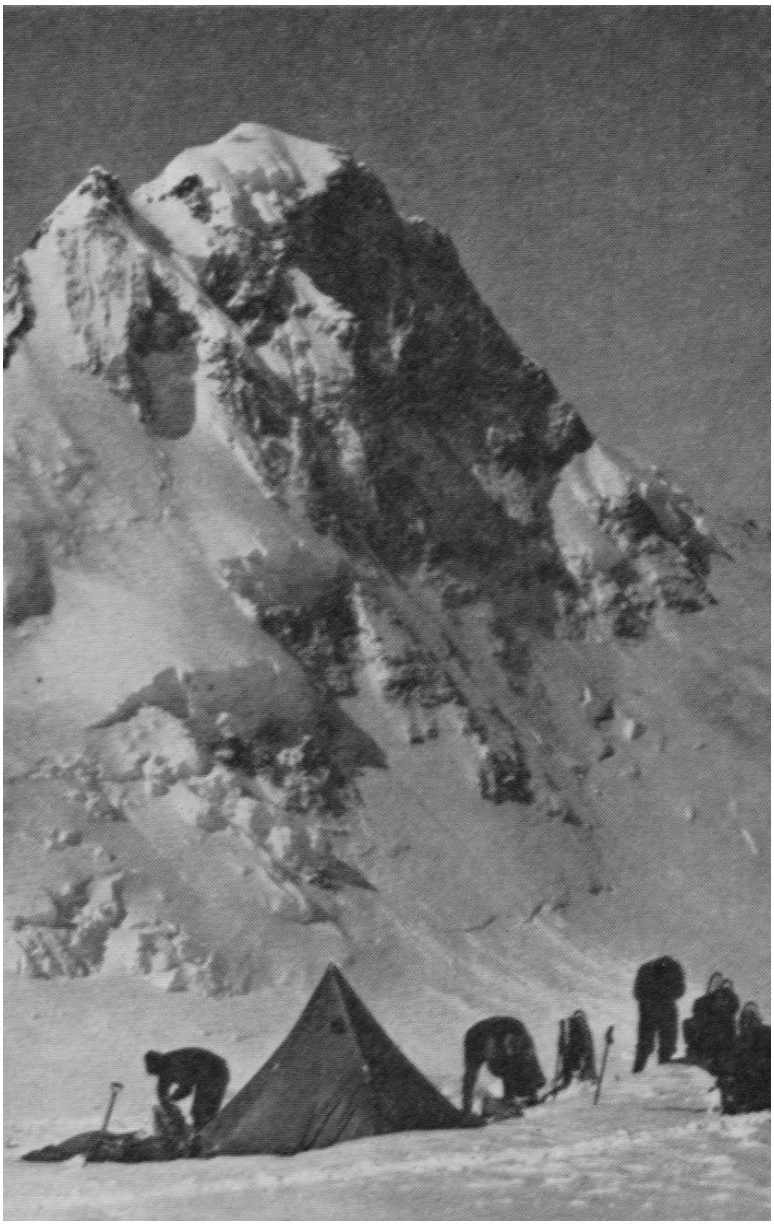
By Joseph C. Labelle

Party: Jim Underwood (climbing leader), Joseph C. LaBelle (scientific leader), Del Smith, King Seegar.

During the summer of 1968 the Arctic Institute of North America sponsored a scientific expedition to Mount Logan, the highest peak in Canada, in the Yukon Territory. The purpose of the expedition was to have a four-man team climb to a high-altitude site on the summit plateau of the mountain at 17,300 feet, establish a camp, and carry out studies in climatology, glaciology, and high-altitude human physiology. Logistical support was to be carried out by Helio Courier aircraft piloted by the Institute's very capable glacier pilot, Phil Upton, and the physiological programme was to be run by several doctors who would be flown to the high camp at intervals with technicians and volunteers.

The four permanent personnel were flown from Kluane Lake, in the Yukon interior, into "King Trench" below King Peak, on the southwestern side of Mount Logan, on June 5, 1968. We had previously spent a couple of days on the Kaskawulsh-Hubbard glacier divide sorting gear from a cache buried there. We spent 3 days in the Trench, building an igloo, shuttling cache loads into "King Col", and generally acclimatizing.

On June 9 we began the climb, following the original route put in on the West Buttress by MacCarthy and Foster in 1925. The climb was uneventful except for being pinned down by storms at intervals, and the interesting route-finding problems in the icefalls. We reached the summit plateau on June 13, having been joined by another group just above King Col, a group of five men



Camp 3 On The Climb Of Mount Logan, With King Peak Behind. Photo: Joseph C. Labelle

from the Army Cold Regions Research and Engineering Lab (CRREL) and the Institute of Polar Studies (IPS). These men planned to do various studies on the summit plateau for a couple of weeks, and then return down the mountain.

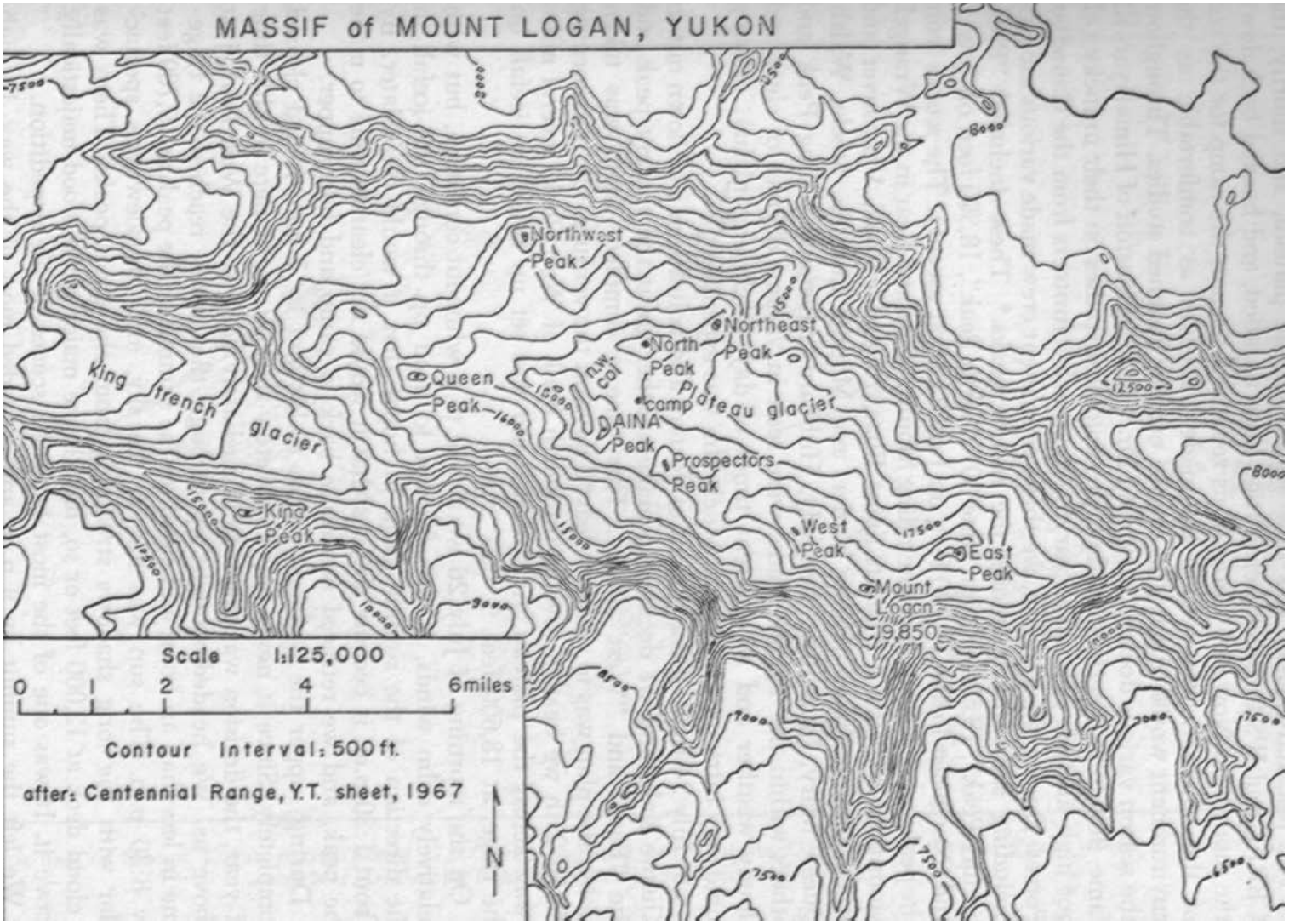
Upon reaching the summit plateau King Seegar became seriously ill from the altitude, and after 3 days he was evacuated by aircraft from the plateau. After a brief period in Whitehorse hospital, he was sent home when it became evident that he should not return to high altitude. Though it was determined that he did not have high-altitude pulmonary edema, his illness was never satisfactorily diagnosed, and it yet remains a mystery.

Our first task was to locate and dig out a plywood hut which had been constructed on the plateau by Barry Bishop and his crew the previous year. This hut, put up for the purpose of housing

Prospectors Pk. 18,500 ft. AINA Pk. 18,400 ft. North Pk. 18,300 ft.

View To West From Summit Of "West Peak", 19,700 Feet, At About 9:00 pm.
The Vast Summit Plateau And Its Surrounding Peaks Are Shown.

Site Of Permanent Camp On Summit Plateau At 17,300 Feet, Below "North Peak". Photos: Joseph C. Labelle



Map: Massif of Mt. Logan, Yukon

the men, equipment and instrumentation necessary for the research program, was completely buried by the winter snows and its exact location unknown. After several days of searching with avalanche probes in the vicinity it was known to be, it was finally discovered with the aid of a photograph taken by Bishop in 1967. The peak of the hut was found to be buried under approximately 2 feet of snow, making a total accumulation of about 9 feet of snow near the hut since the previous summer. What proportion of this was fresh snowfall, or wind-drift, is unknown. A tunnel was dug into the hut and it was opened and occupied by the group.

Though the purpose of our expedition was mainly scientific, we were all ardent mountaineers and hoped to bag several of Logan's far flung summits. We decided to make an attempt on the Main and West Peaks before setting up the instrumentation, and set out on June 21 with minimal gear, hoping to gain the summits and return without the necessity of an advanced camp. That turned out to be a mistake, as we were caught in a storm on the north flank of the West Peak and forced to bivouac at 19,300 feet in the storm, without sleeping bags. A most uncomfortable night, with temperatures below -20° F and high winds; possibly the highest enforced bivouac in America. The following morning a return to the plateau camp was made when the storm broke, with neither peak taken. We would try again later.

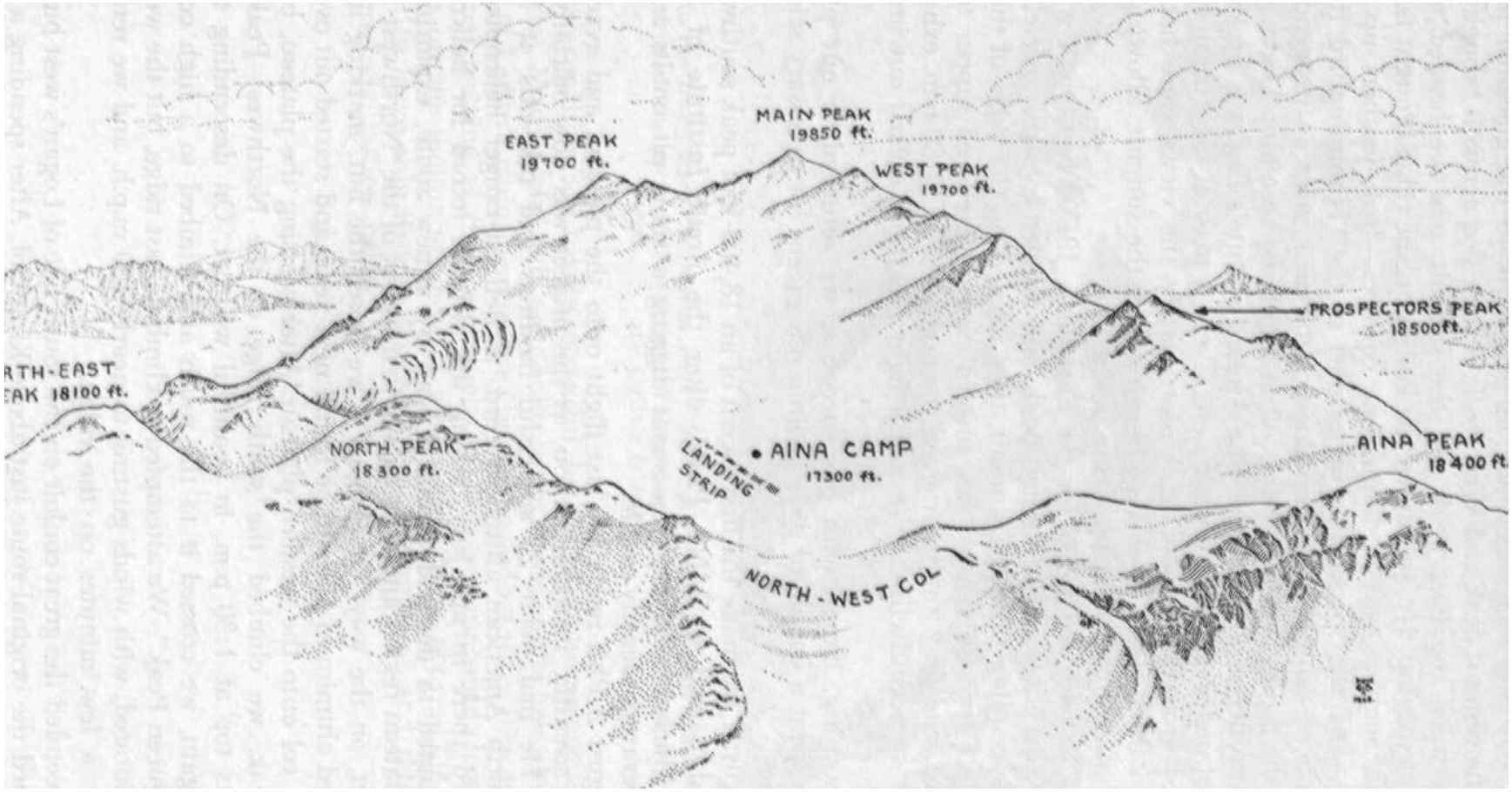
The research facility was now set up on the plateau, and shortly, the CRREL and IPS finished their duties, bade us adieu, and headed back down the mountain. Now only three of us remained to man the camp for the rest of the summer. We settled in, made ourselves as comfortable as the environment would allow, and carried out our assigned studies. Throughout the season various doctors, including Dr. Charles Houston of Himalayan K2 fame, flew in and performed their physiological studies on their unlucky (all got high-altitude sickness in varying degrees) volunteers from the Canadian Forces. During this interval, we three permanent crew made various ascents, including some firsts, among the nearer peaks.[2] These included "Prospectors Peak", 18,500 feet, on June 30; "North Peak", 18,300 feet, on July 1; and 'Northeast Peak', 18,100 feet, on July 22 (first ascent). The scenes from the peaks were magnificent, including Mounts Bona and Bear in the Wrangell Mountains of Alaska, Mounts Saint Elias, Augusta, Cook, Vancouver and others on the Yukon-Alaska border, and Mounts Lucania, Steele, Walsh, Queen Mary, McArthur, Kennedy, Hubbard, Alverstone, King Peak and others within the Yukon. These were seen in various degrees of clear and cloudy weather and at different times of day (including night), offering some very intriguing contrasts. Much film was expended.

On July 24 the last contingent of doctors and volunteers was flown out to Kluane Lake and we decided to make another go at the summit peak and the "East" and "West" Peaks. This time a complete camp was taken along; the plan was to spend at least 3 days on the venture. On the morning of the 25th we headed toward the north flank of West Peak, several miles away across the plateau. Advanced camp was set up below an icefall on the ridge, at 18,600 feet.

On the morning of July 26 we awoke to a whiteout condition, but with relatively calm winds. It was decided to head up through the icefall in the direction of the summit peak in hopes that it would clear later. By about 1:30 p.m. it became obvious that it would not clear in time to make the peak, and we retraced our route back to camp and had supper.

During supper the whiteout began to lift and by 7 p.m. it had cleared completely. Since it never gets completely dark at night here at this time of year, the decision was taken to immediately

2 For convenient reference to the various somewhat lower peaks of the Mt. Logan summit plateau, names applied by previous parties are shown in double quotation marks the first time they appear in this article; single quotes denote names applied by our party. These names are not necessarily official.



Sketch Of Eastern Half Of Mount Logan Massif Above 17,000 Feet. Drawn By Niki Threlkeld, Smithsonian Institute.
Showing Peaks Climbed, Except "Northwest Peak" Which Is Behind The Observer.

go after the West Peak, just above us. We headed straight up through the icefall, reached the ridge-line in less than an hour, and stood on the summit of the peak at 19,700 feet by 8:30 p.m. The sun was low in the sky, and the view was spectacular with the long shadows streaming from the great peaks. There was a cloud deck at 12,000 feet or so, but all the major peaks stood majestically above it. It was one of the most beautiful scenes of the expedition.

We left the summit by 9 p.m. and glissaded most of the way, in high spirits, back to camp. With luck, the weather would hold for the Main Peak on the morrow.

Saturday morning, July 27, we again trudged up through the icefall to the ridge, but this time descended its east flank to the glaciated plateau between the summit peak and West Peak. A long slog across it brought us to the col between the East Peak and the summit, and we headed up the ridge to Logan's top. Up and down the bumps on the ridge brought fascinating sights, such as several large rime cornices—frost feathers up to 30 feet long!—and the spectacular upper part of the "Hummingbird Ridge". We cramponed up the final steep slope of the peak, over an ice gendarme, and onto the top by 4 p.m. It felt good to finally be here atop Logan's head after two unsuccessful attempts. The Arctic Institute's flag was broken out and several pictures of the summit were taken. A toast of blackberry brandy was passed around to celebrate. Unfortunately

View To The Northwest From "Northwest Peak". Photo: Joseph C. Labelle
The Ogilvie Glacier Runs Northward Through The Centre Of The Picture. The Alaska-Yukon Border Runs Diagonally Across Just Past The Ogilvie Glacier.

the views were not good today, as a thick cloud layer kept blowing over the summit, allowing only fleeting glimpses of the neighbouring peaks.

Del and Jim decided to try for the East Peak, 19,700 feet, but I was too tired after this climb of the summit peak, and decided to satisfy myself with it. After descending from the summit, they headed up the ridge of the East Peak while I trudged slowly back toward camp. I prepared supper toward their return, and they finally dragged themselves in at 11:30 p.m. exhausted from their successful climb. We had a light meal and sacked out immediately.

Next morning, happy with our successes, we returned to our plateau camp and spent a couple of days goofing off, except for necessary scientific observations.

On August 1 we made the first ascent of an 18,400-foot peak southwest of camp, and named it Peak', after the Arctic institute of North America. Much of the day was spent digging a snow pit on its summit for a temperature-density profile.

On August 2 Phil made his last flight onto the plateau, and evacuated all of the scientific instrumentation, as the project was now officially over for 1968. He had made 28 successful landings and take-offs at 17,300 feet, a North American altitude record. A Bell jet-ranger helicopter had also landed there in mid-July, taking the altitude record for helicopters. We planned to descend Mount Logan by a new route, exploring the western plateau region and making the first ascent of the 'Northwest Peak', 17,000 feet, on the way. On August 4 we closed the hut, marking it with long, guyed aluminum poles to be found next year, and started out over the northwest col onto the western plateau. After crossing the plateau, behind AINA Peak, we climbed the south ridge of the Northwest Peak and reached its top at 1:30 p.m. in beautiful weather. On descending to the plateau again, we crossed it to the south and climbed to a high col just east of "Queen Peak". We attempted to climb its east ridge, but the weather had deteriorated, with winds gusting to nearly 100 m.p.h. and we retreated after only a few minutes on the ridge.

We descended the great couloir on the south side of Logan's west buttress, and rejoined the original route just above King Col. After spending a night there, we descended the rest of the way into King Trench, where we were picked up by Phil Upton 2 days later.

The expedition was highly successful, both in mountaineering and scientific terms. Many useful data were collected in the scientific fields investigated, eight of Logan's major peaks were climbed including three first ascents, and the first crossing of the western plateau was accomplished. Even after 10 weeks on the mountain, most of which were spent above 17,000 feet, we hated to leave this strange but beautiful environment and return to the cluttered civilization below.

New Ascents Above Icewall Lake British Columbia Coast Mountains

By Jim Petroske

Party: Jim Petroske (leader), Bill Eubank, Chris Eubank, Dallas Kloke, Harry Hibler.

Icewall Lake has been used in the past on several occasions as an approach to the Mt. Raleigh-Gilbert area lying to the southeast of the Southgate River. The peaks adjacent, to the lake itself, however, have more or less gone unnoticed, except for those ascents made in 1959 by R. Hutchinson and his party on their return from the first ascent of Mt. Raleigh.[3] Because of this, we felt that we had come upon a relatively ideal situation, namely an area of unclimbed peaks with an

3 C.A.J., I960, pp. 30-36. (See also C.A.J, 1966. pp. 63-70.)

Icewall Lake Area, Coast Range, B.C.
(Scale: approx. 1 inch = 2 miles)

North Face Of Mt. Filer (Left); "Squaw Peak" (Centre); "Northwest Chieftan" (Right). Photo: Jim Petroske
Taken From Below Tavistock Mtn.

approach marred by only a minimum of exposure to the bush.

We were first able to unite together as a group on July 31, 1968, in Mt. Vernon, Washington, after many months of letter writing and occasionally telephone calls. We classified our party as the "old men": Jim, from Portland, Oregon, Bill from Kansas City, Missouri; Chris, age 13; and "the stalwarts": Dallas and Harry from Anacortes, Washington.

Our first problem arose at the border, where after a certain amount of persuasion and reassurance that we were only mountain climbers, we were allowed to proceed. The next crisis occurred at Campbell River, where we found to our chagrin no one knew about us or was aware we were going on a mountain climbing expedition. Also, to complicate matters, we discovered that B.C. Airlines was going out of existence at Campbell River and Trans-Mountain Air was taking over, giving us some concern as to just who was going to take us into and out of Icewall Lake.

Trans-Mountain Air with B.C. pilots filled us with awe on the flight into Icewall Lake. Two "Beavers" were used, one for the air drop, and the other for the rest of the equipment and three of us. Our friendly pilot's comments prior to landing consisted of statements such as: "this trip sure is fun for me, I don't get to do this sort of thing often", or "the lake seems to be pretty small". Without any hitch, however, we were quickly deposited on the east shore of the lake.

After burying a cache of food in the rocks adjacent to the shore for our return, we settled back to relax and enjoy the fine clear weather which prevailed during the days ahead. We could do nothing but marvel at the surrounding cliffs and the cascading river of ice terminating in Icewall Lake. Our reverie abruptly ceased with the realization that we had to be on our way through brush up a side creek leading east to the headwall we planned to climb the next day to get to our airdrop

on the southwest arm of Filer Glacier. Fortunately, only about half of the 2-mile trek to the base of the headwall was bush. Dallas felt it was of fairly high calibre, at least class 5.6. As we approached the lateral moraine of "Garrulous Glacier" beneath the headwall, a small herd of five sheep atop it stirred up a cloud of dust in their attempts to avoid us. After creating our own cloud in ascending the moraine, we mutually decided to call it a day and take on the headwall in the morning. Our first camp was located on a canted, grassy slope and provided us an excellent site for the evening's entertainment of recurring avalanches breaking off "Garrulous Glacier" opposite us.

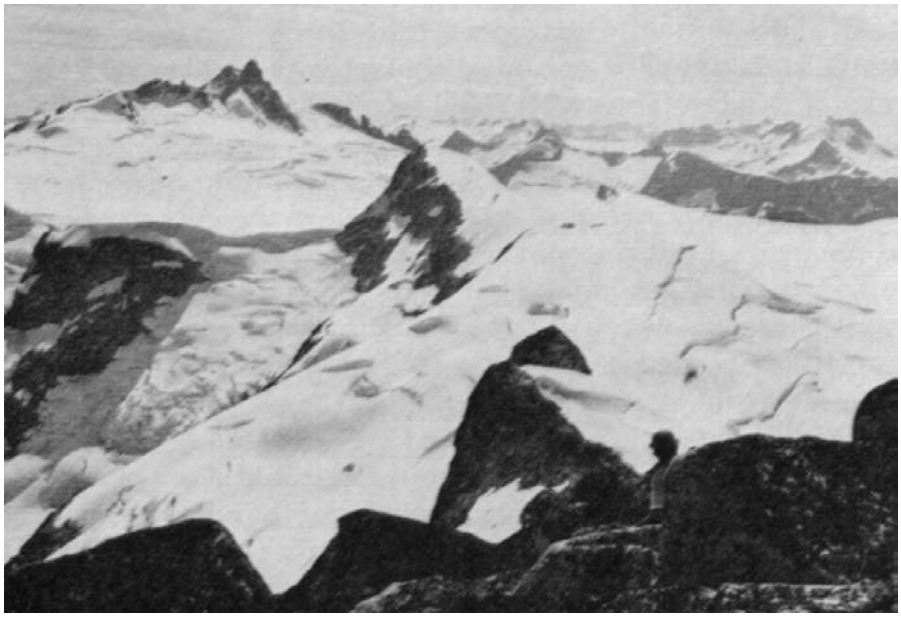
In the morning the 1000-foot headwall presented no particular difficulties, except that of endurance. A rope had to be used several times for the stragglers, but after 3 hours the top was reached. More gentle rock and snow were then gradually ascended to the summit of the ridge overlooking Filer Glacier, with a gradual ascending traverse into the basin lying to the south of "The Three Chieftains". Here we found our airdrop intact and then set about establishing basecamp at 7300 feet, close to a rockwall that conveniently provided us with a water supply.

On Saturday, August 3, we finally got down to the business of climbing, with the decision to try Mt. Filer. With perfect weather and snow conditions, the entire group set out from camp in an easterly direction. Climbing easy snow slopes out of the snow basin, we ambled toward the southwest rocky face of the peak looming above us. A traverse across steeper snow was made to the base of a wide 600-foot rock-filled gully separating the higher west from the lower southeast summit. Dallas and Harry went ahead over loose rock and multiple chockstones. About halfway up, an extra-large chockstone blocked the ascent, requiring a piton for protection on the right wall which consisted of down-sloping steps with no handholds. Bill, Chris and I arrived at this point and were forced to sit it out for a while. Harry had removed the piton and we had not bothered to bring any along. Finally, after getting a belay, we proceeded ahead to the notch and traversed left out onto the exposed face which nicely provided a sufficient number of widely spaced solid holds. Once above, it was an easy 100-foot scramble over broken granite blocks to the top. The climb had taken about 4 1/2 hours and we found the elevation to be 8900 feet by an aneroid altimeter. The view was magnificent in all directions with the nearby "Northeast Chieftain" appearing especially foreboding. Three rappels were made on the descent, off the top to the notch, over the chockstone, and at the bottom of the gully back onto the snow.

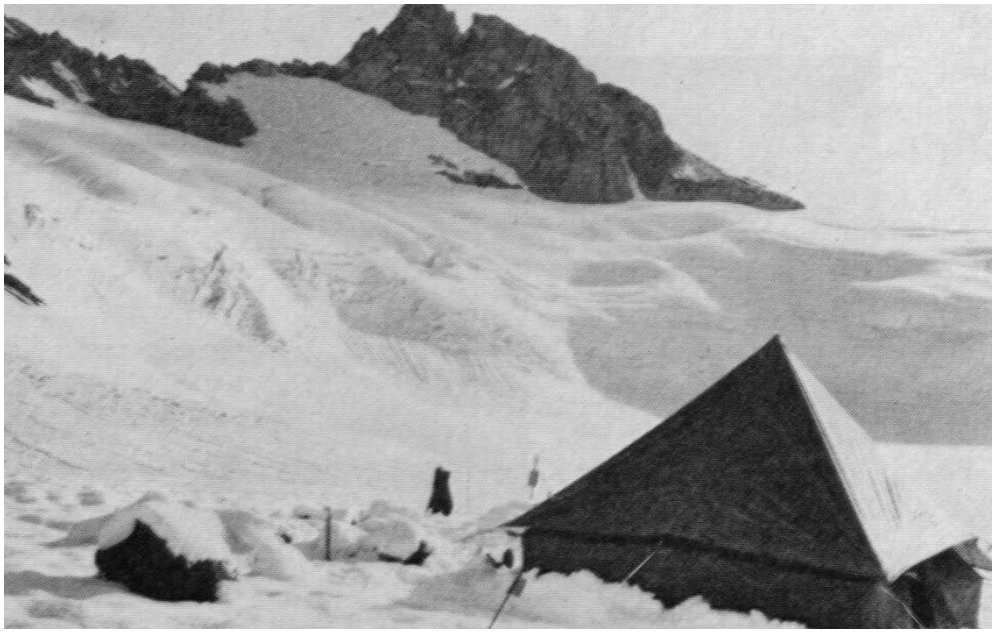
Feeling more successful after having made a first ascent, Bill, Chris and I opted for a rest day, whereas Dallas and Harry loaded up for a 3-day jaunt to the south. After quickly scurrying across Filer Glacier and the col separating it from Icewall Lake, they ascended a corniced ridge forming the sharp, southern boundary of Filer Glacier and set up a high camp. They then headed northeast along the ridge, climbing first the south summit of a double-summited peak and then traversed over snow to the north summit. They decided to christen them "North and South Thunderbird Peaks". Not being satisfied, they trudged onward over another col and ascending simple snow and rock made another first ascent, that of "Potlatch Peak", via its south side.[4]

On Monday, August 5, both camps awoke to unsettled weather with intermittent snow showers. Dallas and Harry headed southwest along their ridge to make a second ascent of

4 Editorial note : Names in quotation marks are not as yet official. This party originally suggested Skagit", "Anacortes" and "Castellani" for three of their first ascents, but editorial correspondence with the author resulted in permission to suggest the more appropriate names "Potlatch", Kwakiutl" and "Salish", respectively, as having more association with the British Columbia coast. The British Columbia Government Geographic Division has already indicated the suitability of "Potlatch Peak", and that "Salishan" is more acceptable than "Salish" ; "Kwakiutl" is still under consideration.



"Northeast Chieftan" From The East, "Kwakiutl Peak" In Mid-Ground.
Taken From Tavistock Mtn.



Base Camp, And Southeast Face Of Mt. Filer Showing Route Up Chimney To Notch.
Photos: Jim Petroske

"Peak 8650" which lies west of "Garrulous Peak" and was previously climbed in 1959. Bill and I contemplated taking on the peak directly above base camp, but were doubtful about getting anywhere because of the weather. Nevertheless, we started climbing the snow slope directly north of us which quickly led into a steep snow couloir. After a bit of tiring step kicking, we gained a loose rock slope which rapidly led to the broad summit ridge and a whiteout. Twenty-five wands later we arrived at the top after having dodged around several broad crevasses. Feeling somewhat

disconcerted at being denied the spectacular view, we set about erecting the usual cairn and named the 8400-foot peak "Squaw Peak" in keeping with the nearby "Three Chieftains". The climb had taken only 2 hours from camp literally directly below. We gratefully collected our wands on the return trip and arrived back in camp at noon, prepared a hot lunch, and had a snooze.

During the night we had our one and only snowstorm during the trip, which unfortunately was sufficiently heavy enough to collapse Dallas' and Harry's two-man tent. This incident apparently adversely affected Harry. After his return to base camp that afternoon, he immediately set about with Chris' assistance to construct a huge ice cave where he spent the rest of his time while in base camp. He became so engrossed with his project that he wouldn't even take time out the next day to try and climb the formidable-appearing "Northeast Chieftain".

Under clearing skies on Wednesday, August 7, we plodded west from camp leaving Harry behind, with shovel in hand. The sweat poured off us as we zigzagged upward toward the sheer rock face of the "Northeast Chieftain". The huge granite spire seemed to tower higher and higher above us as we approached the base of the peak. Dallas scouted ahead in an attempt to find an easy access onto the east rib. This rib in turn appeared to lead upward to the base of the vertical east face of the peak. Chris, Bill and I watched from below as he struggled onto the rock. We willingly took his advice to try the other side of the rib and shortly found ourselves ascending a steep snow slope. After several hundred feet we were able to sanely gain the rib and scramble up loose rock. We were united once more at the base of the precipitous cliff leading up to the summit ridge.

The wall above us was the crux of the climb. Dallas went ahead with Bill belaying. Facing outward, he used the left side of an open chimney to push against and advance upward 50 feet. He then placed a piton for safety and clambered ahead on more adequate holds to a broad ledge. I brought up the rear and was about over the critical section when I had my one misfortune of the trip. After hearing several dull thuds, I noticed something was the matter. Only then did I realize that I had just lost my prized camera and the more prized film inside. Without loosing a hold I climbed onward, feeling relieved that it was not myself which had just gone down into the abyss below. The cliff became more broken, allowing us to scramble up easy short cracks and ledges to the summit ridge. Some 100 feet further and we were at the top of the unclimbed peak at 9100 feet, after 4 enjoyable hours.

The panorama below us couldn't have been any more beautiful. To the northwest lay the Southgate River and Bute Inlet. Directly westward clouds would form over Icewall Creek and boil over us, intermittently blanking out the view of the surrounding peaks. Before starting down we spotted a wide chimney descending from the top down to the snowfield at the base of the east face which appeared feasible, but more difficult than our route.

We chose to go down the way we came and set up a 90-foot rappel over the chimney we climbed. Bill looked for my camera in the chimney but found nothing. Several hundred feet further, however, little bits and pieces of lens and light meter were retrieved for souvenirs. Descending rapidly, we completed the climb with one final glissade ending right in camp. It was 5 p.m. and time for dinner.

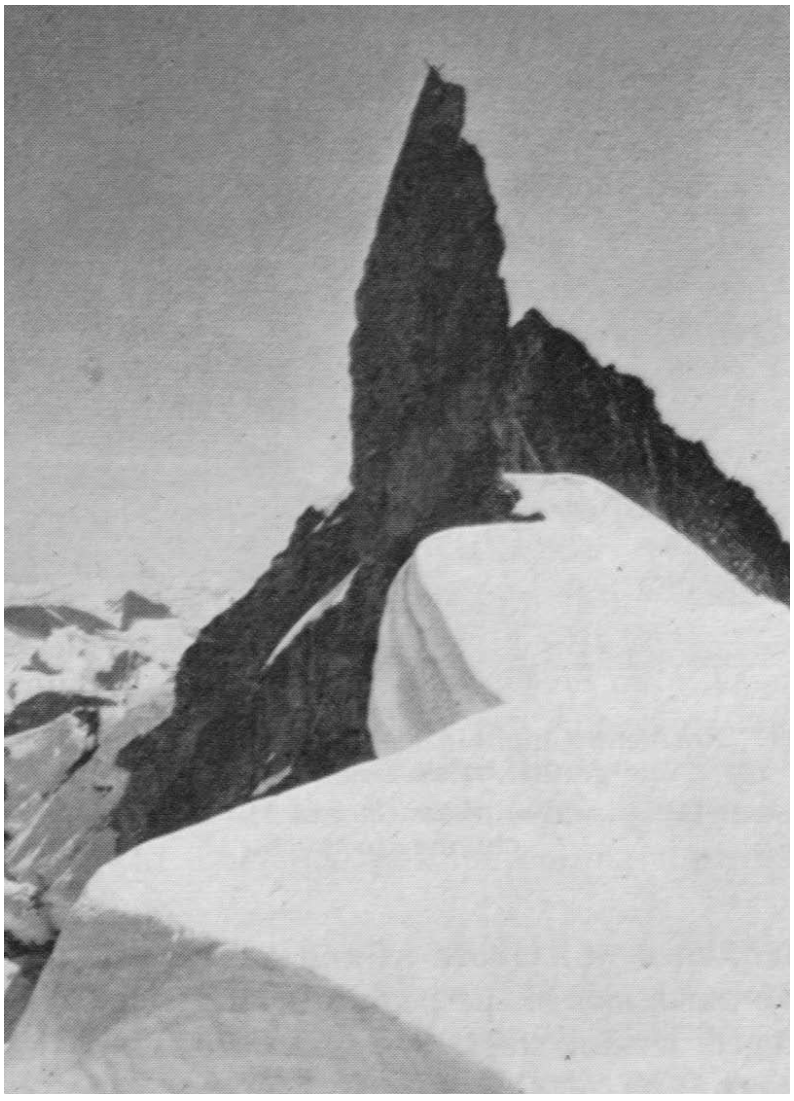
The morning of August 8 was crisp and clear, providing ideal conditions for the long traverse to Tavistock Mtn. Dallas and Harry galloped out of camp an hour before the rest of us who were content to dawdle over breakfast. We finally aimed north at 8:30 a.m., making good time on the firm snow. After crossing the col between "Squaw Peak" and Mt. Filer, we contoured a huge snow bowl bordered on the north by a half-domed peak. We avoided the sharp rock wall above us and crossed another col to the west of the peak. The north side of the peak provided a fine hard

snow slope up which we zigzagged, kicking steps to the rounded top of this summit in 2 1/2 hours from camp. The 8300-foot peak was given the suggested name “Kwakiutl Peak”.

Ever onward! Down the broad ridge we preceded toward Tavistock Mtn.

Ahead of us we could see two small dots moving up the north side of the mountain and eventually disappear over the rock ridge leading to the summit. This about ended our quasi contact with Dallas and Harry for the remainder of the day. The gentle snow ridge terminated at the base of a rock cliff that undulated upward above us to the rock summit 3/4 mile distant. Wanting to be different, I suggested trying the south side of the mountain. All went well as we ascended on snow below the rock wall on our left; that is, almost well, till the snow ran out about 300 feet below the summit and we had nothing but an overhanging cliff above us. Being prepared for almost all contingencies, we had forgotten to bring along any iron. We disgruntledly descended to the base of the ridge and had lunch.

A more successful attempt on the peak was made on the north side of the ridge. Although the snow was steep and crevassed we were able to steadily forge ahead. Bill nicely negotiated the



“Little Chief Tower”, Ascended On Right. Photo: Bill Eubank

only ticklish lead out of a crevasse onto the ridge proper. From here on the remainder of the climb was more or less a plod to the summit of the previously unclimbed peak. Satisfied that we had done a day's work in making two first ascents, one of them almost twice, the three of us headed back toward camp.

In the interim Dallas and Harry, after descending Tavistock, raced westward across a long snow basin toward another virgin peak. They ascended the 8900-foot peak on snow slopes on the east side and traversed below the east ridge. The slabby rock below the summit presented no problems and they were shortly able to attain the rock summit of "Salish Peak". Thus satisfied after climbing this fine appearing peak 2 miles west of Tavistock, they also returned to base camp.

On Friday August 9, after a leisurely breakfast, Dallas, Harry and Bill departed from camp for an easy day of climbing on the remaining "Chieftain". They first scampered up snow and rotten rock to the top of the "Southwest Chieftain". A descent was made to a sharp 80-foot pinnacle lying between it and the "Middle Chieftain". Dallas and Harry spent the next 3 hours scaling it while Bill recorded their efforts as official photographer. The first pitch off the snow was especially difficult and slightly overhanging, necessitating several pitons for protection. Dallas struggled over it and up 60 feet to a belay point. Securing himself, he belayed Harry up and past for 20 feet more to the knife edge summit ridge. They then independently edged over to the highest point. As there was no place on top a cairn, Dallas looped a sling over the summit with a register attached. The 8750-foot pinnacle was named "Little Chief Tower" and required seven pitons for the ascent.

To complete the day the trio proceeded onward up steep, huge, and loose boulders to the summit of the "Middle Chieftain". They found a cairn here but no register as they had on the "Southwest Chieftain", both of which had been climbed in 1959. After descending the steep snow below the summit and plunging across a bergschrund, they hurried back to camp in time for spaghetti dinner.

August 10 proved to be another busy day. Dallas and Harry broke camp and once more headed south with full gear and 2 days' food. Their objective was to climb some of the peaks south of Icewall Lake, from a camp below "Peak 8650" above "Garrulous Glacier". Chris, Bill and I had as our more mundane goal the southeast summit of Mt. Filer.

We trudged eastward across the flat snow basin and swung up onto the south ridge of the peak under clear skies. Following Chris, we gradually gained altitude up the broad snow-covered ridge. After climbing through a small boulder field below the summit we arrived at the top 2 hours after leaving camp. We found ourselves to be about 20 feet below the main summit. After snuggling down in the rocks out of the wind, we located Harry and Dallas winding up the ridge south of the Filer-"Garrulous Glacier" Col.

The next morning Chris, Bill and I dismantled base camp, leaving behind a big hole full of extra provisions. The spot was marked for any future hungry explorers who might happen by. We then struggled on with huge packs, eventually arriving at a welcome heather slope opposite "Garrulous Glacier". Bill found a narrow ledge just wide enough for the tent with a nearby stream. Chris was once more content because he finally had rocks he could lean against. For days in base camp he had been complaining of the lack of this little comfort.

That same morning, August 11, across from us Dallas and Harry hurried out of their camp westward across flat snow slopes and in 50 minutes found themselves at the top of Tahumming Mtn. for another first ascent. The peak, forming the south boundary of "Garrulous Glacier" was ascended by snow slopes on its north side.

With hardly a pause, they next turned to the south toward a sharp rock spire. Appropriately

naming it "The Fang" they added it to their first ascents. The north ridge was followed on snow till they reached the rock. Here they had to traverse on the east side of the ridge for 200 feet before being able to climb to the crest of the ridge. The route continued to the base of the north face where a way through a notch was found which led across easy ledges for a rope length across the east face. They were then able to complete the climb up the face just to the right of a large flake over class 3-4 rock.

On their return Dallas and Harry momentarily detoured to the west to climb 8500-foot "Perseverance Peak", another first. This peak providing the western boundary of Tahumming Glacier, was approached from the east and only entailed an easy ascent of the snow slope on the north side to attain the summit. There being no more peaks within easy reach, Dallas and Harry were willing to call it a day.

Dallas and Harry, the more intelligent element of our group, packed up and returned to our new camp early on the morning of August 12. Bill and I acted on our poor judgment and set out to climb "Peak 8650". As we later found out, we had come to within 50 feet of the summit. All we knew was that we were wet, cold, and blind because of whiteout. I finally agreed with Bill's comments that this trip wasn't really necessary and maybe we ought to go back. Following our wands we plodded back to camp and thawed out.

The rain persisted all night as Bill was able to confirm by finding 2 inches of water in our cups outside the tent the next morning. After some hesitation, we reluctantly decided to attempt the headwall and return to Icewall Lake. The situation had really changed for the worse, with the headwall presenting a potentially hazardous descent. With full packs and soaking wet we slipped, slid and fell down the wall during the next 5 hours. Luck was with us and no one got hurt. After 5 more hours of torture we arrived at our cache at Icewall Lake. The tent was somehow strung up and we piled in for a night of soggy comfort.

Wednesday August 14 was supposed to be our day of return. It turned out, however, to be one of doubt and concern. The weather didn't appear too bad for us, but no plane. Dire rumours began to circulate the camp that maybe we had been forgotten during the airline management changeover that had occurred the day we flew in.

The 16th was much more ebullient for us even though the weather appeared more foreboding. We spotted the tiny "Beaver" wending its way up from the Southgate Valley and shortly were rapidly heading back toward the tangles of civilization. We had nothing but praise for our pilot who had made a non-scheduled flight in for us despite the deteriorating weather and a limited gas supply.

Thus ended a thoroughly memorable trip for the five of us. In summary we had made thirteen first ascents; several second ascents and a couple of abortive ascents of the peaks in the Icewall Lake area. The challenge of the unknown still remains, however. Several handsome unclimbed peaks await others to the south and west of Icewall Lake as do a fine group of sharply pointed rock spires about 2 miles north of Tavistock Mtn.

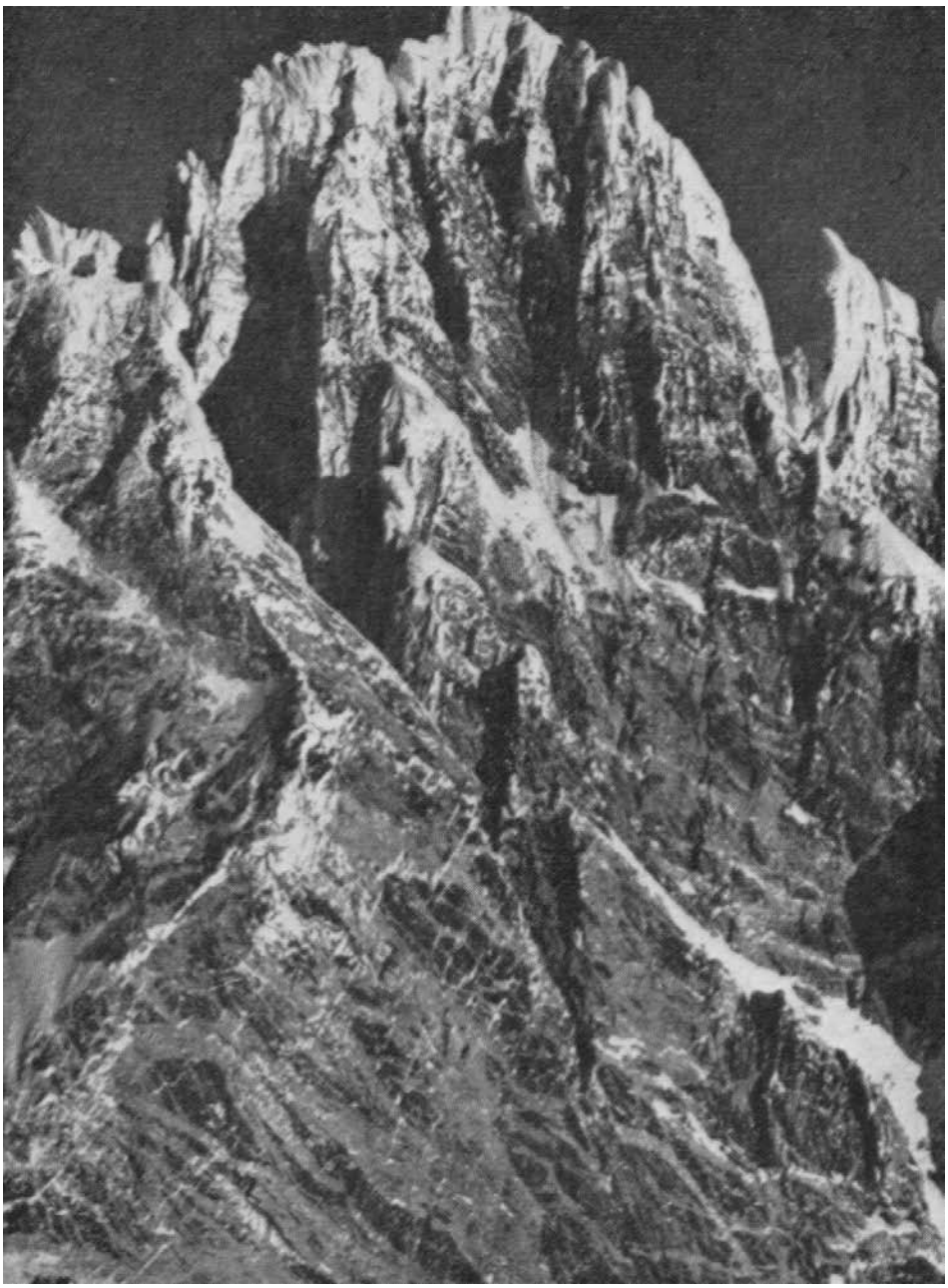
Traffic Jam On Mount Waddington

By Dick Culbert

The 1968 Waddington Range Camp of the B.C. Mountaineering Club crowns an impressive list of club camps into various corners of the British Columbia Coast Mountains. Unlike past

years, this was not an exploratory expedition, but there is something of a pilgrimage in going to Waddington that has always made it magnetic. A total of 19 climbers took part in the main camp, of which 7 operated on Tellot Glacier and the rest on the Tiedemann.

1968 was a big year for Waddington; 30 people reached the main summit, and for a peak which has been averaging only 2 or 3 a year, that is quite an increase. Only a Japanese expedition had preceded our July camp, and the Club put a total of 13 people on the main summit. In addition we made ascents of both other peaks of Waddington, including the second and third ascents of The



South Face Of Mount Waddington, From The Air At 10,500 Feet About Southeast Of Summit. Photo: Barry Hagen

Tooth. Other camp innovations included a new approach route, 5 new peaks and 4 new routes.

Members were as follows: Tellot Camp—Ian Kay, Don Wilson, Roger Timmis, Ken Williamson, Ron Facer, George Lorenz and Heinz Schneck; Tiedemann Camp—Sheila Pilkington, Alice Purdey, Heidi Springer. Gery Kozel, Tony Clayton, Bob Cuthbert, Tom Hall, Brian Howard, Gernot Walter, Hans Peter Munger, Max Lustenberger and myself.

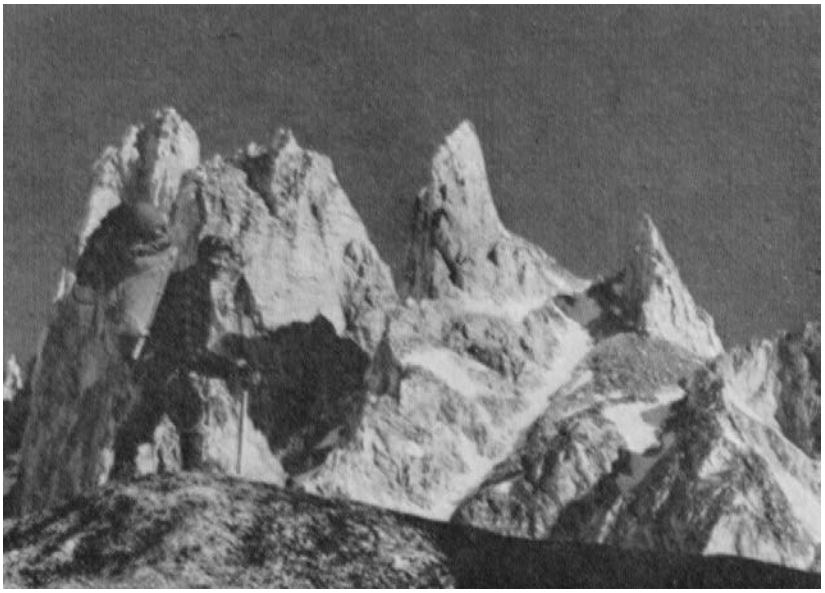
The road to Middle Lake was a final indignation to cars which had already been battered ruthlessly on the Bella Coola road to Tatla Lake. Spirits were not raised by 3 days of spotty weather which prevented flying in. Finally, however, our copious air drops on Tiedemann and Tellot glaciers were completed and Wilderness Airlines flew two of us and all the packs in. For a while it looked like the climbers weren't going to be able to follow their packs, but things calmed down that evening and all were reunited by a new and nameless lake at the snout of Tellot Glacier.

This was our new approach, and a major improvement on Ghost Lake, though we had to return to the latter to fly out. Needless to say, it didn't remain nameless long; in fact it developed several appellations, of which "Ephemeron Lake" will be recorded in the guidebook in view of the lake's short life expectancy. From this lake it is only 2 1/2 hours bushfree pack into Nabob Pass.

In Nabob Pass we met Bill Tupper and two companions. Bill is doing a remarkable map of the Mt. Waddington vicinity, and we had arranged to take a transit into the Waddington-Bravo Col to get reciprocal readings with him for better elevation control. It was also near Nabob Pass that the Tellot and Tiedemann parties split, each leaving the lovely meadows of this one green pocket and traversing to their respective glaciers for 8 days of pure rock and ice.

Tellot Party

All airdrops were recovered 100%. Clouds during the dropping had prevented locating as high on the glacier as would have been wished, so camp was a little distant from the best peaks. A pond beside a rock knob known as Mills Tower on the upper Tellot Glacier, or a ledge by a creek just west of Claw Peak, are two good campsites with water higher up, and both were occupied by smaller parties.



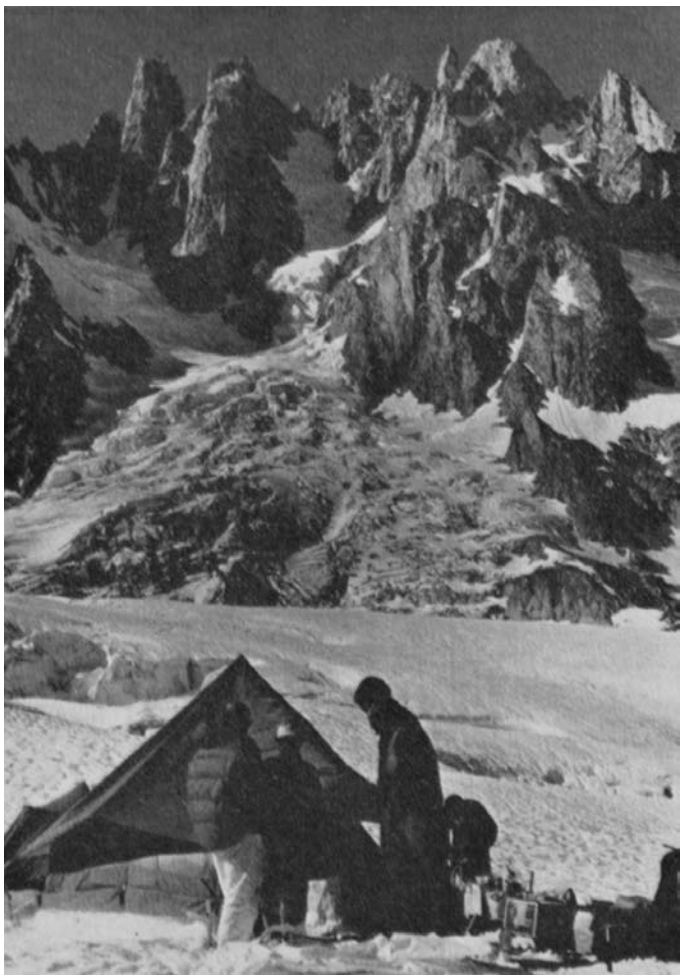
Dentiform And Stiletto. Photo: Dick Culbert

Ascents by Tellot Camp members included Argiewicz, Eaglehead, Dragon-back (Shand), Claw Peaks and two of the Tellot Spires from high camp, while Schultz, Argiewicz, Heartstone, Claw Peak, and a new route (by Ken, Don, Ron and Roger) on the class 4 west face of "Five-S", were done from base. An attempt on Stiletto was not successful. Other innovations were made by members of the Tiedemann party who wandered over, as will be mentioned.

George and Heinz were specifically interested in the photographic opportunities of the Waddington Range and packed in an impressive amount of camera equipment. Their photographs and films were correspondingly impressive.

Tiedemann Party

In the morning following our arrival at Rainy Knob a party of six began to plough trail to Bravo Col, carrying 4 days' supplies. Not yet appreciating the advantages of early starts, this first encounter with the abysmal snow and crevasses of Bravo Glacier was a bad scene, and we were lucky to have been able to get through up the centre. Each party passing this route figured that they would be the last over those snow-bridges, but when we left 3 weeks later, groups were still coming through. The recent Japanese expedition had left a large and interesting cache atop Rainy Knob, containing everything from dried squid to snow-saws. Rather than force the Bravo



Serra Peaks From Base Camp On Tiedemann Glacier. Photo: Barry Hagen

headwall, we went left and along the flanking ridge; a long section of sharp snow crest here will not be soon forgotten by those who teetered along it with heavy packs. Bravo Col (10,000 feet) was not reached until 10 p.m. and this became high camp. Next day, in bad weather, the rest of the party brought packs to the col, while those above slacked off except for ploughing trail to the base of the summit rocks. (See Frontispiece.)

The following day was the big one. Brian, Sheila, Gernot and Max became the first summit assault party; Tom and I retreated to Spearman Col with the transit to take readings (and climb Spearman Peak); all the rest went over to do the lower peak of Waddington. All parties were successful.

A word about conditions on Waddington this year: It was plastered. Bob and Gery probed the unclimbed northwest ridge where we had hoped for a new route, but quickly turned back when they met enormous ice feathers cantilevered out from the rock, and generally hopeless ice conditions. Even the "tourist" route was in bad shape, but the first party got away with only a few bruises from flying ice. The summit was not as difficult as had been expected.

After a day of bad weather, our second summit party (Alice, Bob, Gery and I) did the main peak. The ascent went smoothly, requiring less than 4 hours from base of rock. There is precious little class 5 involved even when things are iced up. All went well on the descent until the final rappel, when a sling left during the Japanese party's climb broke and Gery fell 100 feet down snow and rock and over the Waddington bergschrund. Much luck and soft snow saved him from serious injury. One end of the rope had snagged at the base of the rock and by tying swami belts, etc. together we were able to reach it. The sling had been in place only 3 weeks, which is a sobering lesson on the use of old rappel slings. The Tooth, Waddington's spectacular southernmost spire, was climbed for its second time that day by Tom, Heidi, Hans Peter and Tony. It is partly class 6.

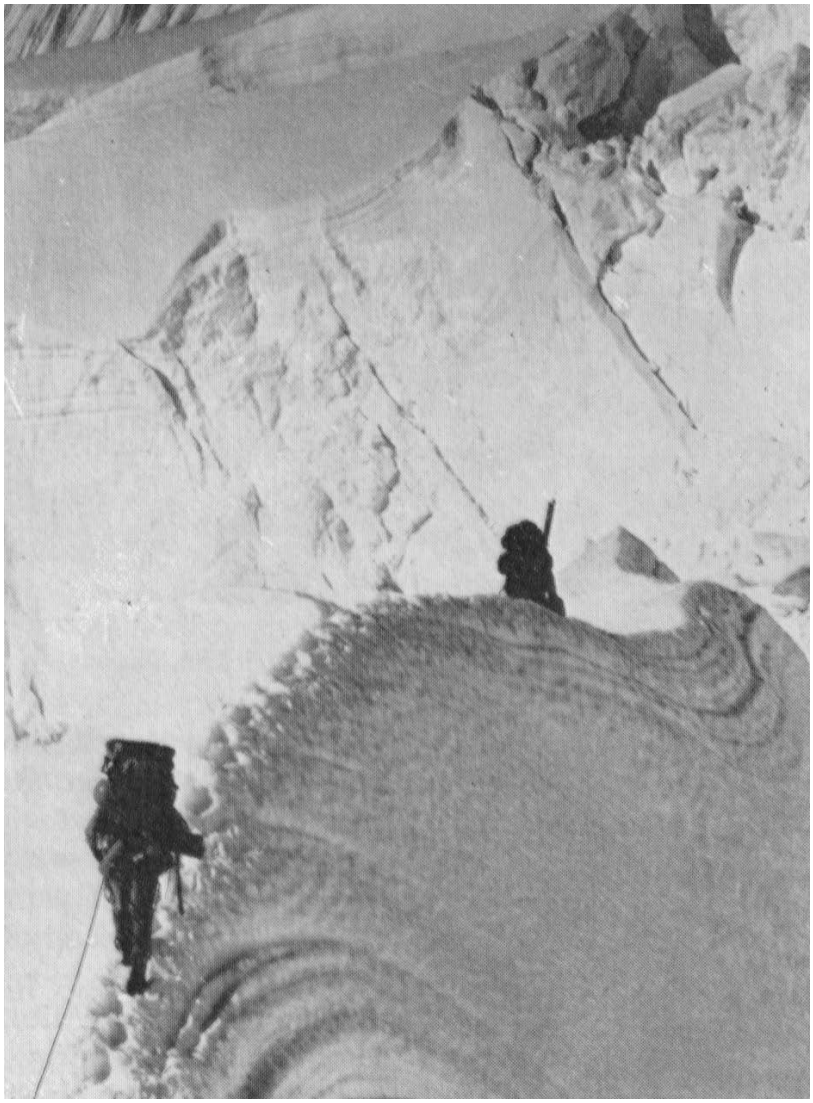
Wednesday was a hot, clear day—the first of many. The Tooth party just mentioned did the main peak and certainly had the best view, but also the worst ice-fall problem, as the feathers started coming down in earnest. Both ropes were cut by falling ice, which sort of speaks for itself. Bob and Gery climbed the Tooth, having some brief entertainment when a piton pulled on Gery. Alice and I returned to Rainy Knob, and the first summit party moved off from Rainy to join the camp on Tellot Glacier. From the Tellot they did some nice climbs, including a 2-day traverse by Brian and Gernot of the seven Claw Peaks, three of which had been previously un-climbed. Meanwhile Alice and I spent a day making the first ascent of "The Gnat's Tooth", an 8600-foot rock fang (class 5) on the ridge flanking the Tellot Icefall.

Hence the deed was done — all twelve members of our Tiedemann section had climbed Waddington and all that remained was to get out. The six in high camp came down the Bravo the next afternoon, which was a mistake. The going was bad indeed, requiring some rappelling to avoid soft bridges, and Bob almost strangled in his Prusiks when he went through at one point.

The trek from Rainy Knob to Ghost Lake is a long haul for one day, but there was only a day left. One group took an unscheduled excursion into the wrong pass, but everyone was down to one end or the other of Ghost Lake by night.

The Leftovers

When the camp left the Waddington Range, Alice, Bob and I remained behind. On the plane evacuating camp, Barry Hagen came in to join us, and with him came four climbers from California. These, together with a Washington party of four relaying packs up the Bravo, made a total of twelve in the region. I went down to meet Barry in Nabob Pass, and after I recuperated

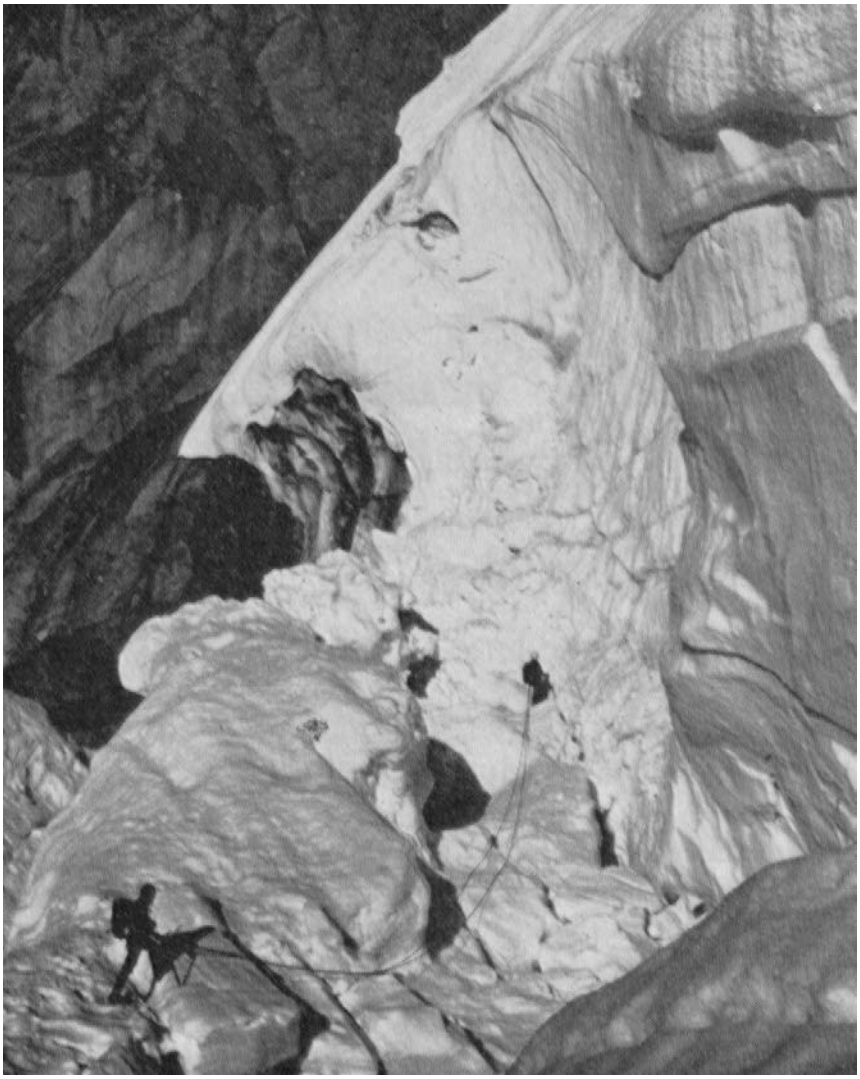


Route Finding In Bravo Glacier. Photo: Barry Hagen

from a case of stomach flu, we returned to Rainy. Meanwhile, Bob and Alice had been probing the icefall at the head of Tiedemann Glacier and snow gullies on the south face of Tiedemann, finding that it had become both unpleasant and unsafe to travel on steep snow after about 8 a.m. Snow was rotten to depth as a result of the year's first extended hot spell.

First the four of us (Alice, Bob, Barry and I) headed up for a well camouflaged tower at 10,500 feet on the face of Serra II. Sure enough, the snow was lousy. Furthermore, much of the rock on the great southern aretes of Tiedemann, Asperity and the Serras turned out to be rotten. Although the final five leads up our tower itself were mostly on firm ground, this overall tendency toward sheared rock combined with the bad snow ended our fond hopes of putting up one of the big faces or ridges that year. We bivouacked in a small flume on the face that night, not getting back from our first ascent (called "Phantom Tower") until mid morning.

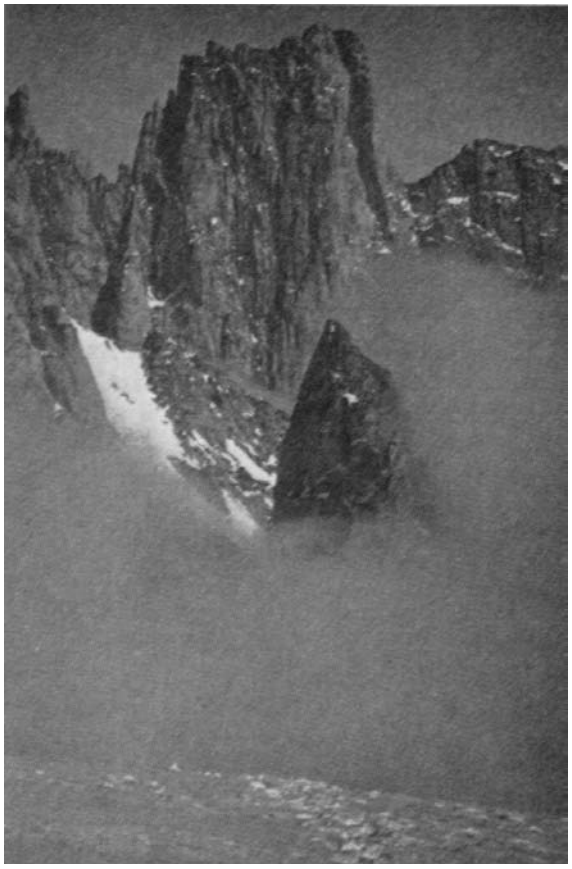
By this time the Californians had caught up to us and were ready for a go at Waddington, Barry joining them on the climb. The five of them went up to Bravo Col next morning, there meeting the Washington party as they returned from a successful ascent involving a bivouac just



Final Bergschrund Leading From Stiletto Glacier To Base Of "Phantom Tower". Photo: Barry Hagen

below the summit. That same morning Alice, Bob and I packed up to Tellot Glacier and climbed Dragonback Mtn. (Shand), being thwarted in our goal of the un-climbed Tellot Spire by deep slush on the upper Tellot Glacier.

Next dawn we walked the Tellot on a crust and climbed to between Serras II and III, hoping to get to a spectacular unclimbed pillar behind. We didn't. In the long run we settled for the nice looking Serra II, and swam back down the Tellot in the evening. That was enough of that nonsense, and next day we put up a nice new route (southeast ridge) on nearby Claw Peak before descending to Rainy Knob in the afternoon. Meanwhile, Barry Hagen et al. had climbed Waddington, having a couple of close calls with falling ice blocks, but coming through in good style. Next day all nine people in Bravo Col came down, having one devil of a bad time. One person went through twice, pack and all, and there were real rescue problems. By now all parties had had enough of the revolting snow conditions and wanted out. On the following day the Fireys of Seattle arrived with a party of six by helicopter. The remaining 4 BCMC'ers flew out with the chopper, and with



"Phantom Tower" (10,500 Feet). Photo: Dick Culbert
As Seen From Upper Bravo Glacier. Stiletto And Stiletto Needle In Background.

us we had messages to the airlines concerned asking for prompt pickup of the other parties. It seemed unreal, begging out of Waddington Range in good weather, but one does get tired of doing the breast stroke on glaciers. By that evening we were enjoying the hospitality of the Fosters at Twist Lake and reflecting that a 2-week Waddington expedition at $100 a head is a bargain on any terms.[5]

5 Editor's Note: The 1968 Japanese party who preceded the B.C. Mountaineers on Mt. Waddington were Teruo Shibata, Yukie Takahashi and Hiromitsu Kawamoto, who climbed the peak on July 3; on July 4 four additional members attempted the summit but were turned back by fierce winds. On July 5 Yuji Saito (leader of the expedition), Toshiichi Shimizu (deputy leader), Miss Tsuneyo Takebe, Kei Tsuda and Teruo Shibata climbed Spearman and Bravo Peaks. Yuji Saito was deputy leader of the 1965 party who were unable to reach the summit, but climbed Bravo Peak instead.

Mount Waddington - First Winter Ascent

By Dick Culbert

Party: Dick Culbert, Bob Cuthbert, Dr. Barry Hagen, Alan Steck, Bill St. Lawrence, Les Wilson.

Mount Waddington has a nasty reputation for storms, avalanches, and icing conditions even in the summer. Nobody really knew what sort of defences or surprises it might add to its winter arsenal, and our party of six which flew on February 18, 1969, from Prince George to the head of the Tiedemann Glacier was prepared for the worst, and rather expecting it. Our first surprise came as the ski-equipped Otter of Thunderbird Airlines winged over the Pantheons and towards the main Waddington massif—bare rock! Most of the big faces looked just as dry as in summer; and these the same walls that get totally plastered as a matter of course by summer blizzards. But winter snow is dry and it doesn't stick much. To be sure, Waddington had its usual ice feathers, but not much larger than during the previous August, and a lot more stable (see Frontispiece).

The next surprise came when looking down the gorge of the Tiedemann Glacier—no avalanche tracks! Hanging glaciers were open for business as usual, but the fresh snow wasn't sliding anywhere. As for the 8 days of continuously clear and warm weather we enjoyed in there, they were likely a fluke. British Columbia coast mountain winters are usually an endless series of storms with a few clear, cold snaps (it hit 60° below during one of these on the nearby Chilcotin Plateau about 6 weeks earlier). Whether 13,177-foot Mt. Waddington rides above the coast storms, we never found out, because the whole region had a week of unseasonably splendid weather.

Of our party (Sierra Club members Alan, Les and Bill of Berkeley, California, and British Columbia Mountaineering Club members Bob, Barry and myself), four had climbed the mountain previously.

As we had hoped, many of the crevasses on the Bravo Glacier had been filled in and we were able to ski up it without route-finding problems. It was on the Bravo, however, that we were first visited by a form of collective exhaustion which was to plague us throughout. This phenomenon was variously attributed to dehydration, electrolyte imbalance, a virus, or to underestimating the effects of packing on skis and snowshoes. Whatever its cause, we were forced to place our first snow cave below the headwall of Bravo Glacier, and next evening found us digging in just short of Spearman Col (10,500 feet), exhausted and without much food in reserve. As we were not expecting the good weather to hold, we started for the final assault at dawn on February 21.

It took us 3 hours to crampon up the usual l 1/2 hours of ridge to the base of the summit, and here three of the party wisely decided they were not up to making the rest of the ascent. For the three of us who continued (Barry, Alan and I) the climb was no pleasure. Shivering, panting, and ridiculously weak, we hauled ourselves up the summit tower in a slow 8 hours. Crossing the bergschrund required an ice screw, and the face traverse on The Tooth was iced up more than it had been last summer. The rest of the climb is a little foggy now—I recall taking out lead after lead mechanically, breaking an ice hammer trying to clear holds, and doing a lot of rock climbing in crampons and with bare hands. It wasn't much different from last summer. There were no summit hurrahs, and we were very lucky to rappel down through the festoons of ice feathers without snagging our ropes. It was doubted that we were in condition to maintain body heat for a bivouac, so we rappelled on into the night. We managed to drop all our hammers, and drove the last rappel piton with an ice axe, reaching the snow cave at 10 p.m. very tired, sick and undated.

On February 23 the remaining three members of our party did the main tower in continuing

good weather and in much better spirits. They found it very enjoyable. We other three started out for a look at the northwest ridge, but found we did not have much drive so spent the day making use of the extensive photographic opportunities. Next morning Alan and Barry climbed Spearman Peak for yet more photos, and that afternoon we all skied or snowshoed back to the Tiedemann Glacier for our plane pick-up.

In retrospect, some important problems have been left unsolved. In the winter, ski planes are available for flying into remote glaciers of the Coast Mountains. If indeed the snow does not stick to the higher peaks and is stable on the slopes, then the possibilities are obvious. The big question remaining is weather; just what does a typical winter storm look like at 10,000 feet in the Coastal Ranges?

Exploring Strathcona Park, Vancouver Island From The Diaries Of The Late Geoffrey R. Capes

Edited By Katherine Capes

Part I. Courtenay To The Summit Of "The Dome" (Comox Glacier), July 26-30, 1929

Friday, July 26 was dull and there had been heavy showers in the morning. Undeterred, however, six climbers—Mr. and Miss Berkeley from Departure Bay, Mr. Leighton from Victoria, and Messrs. A. W. B. Paul, Ben Hughes, and myself, all of Courtenay, left the foot of Comox Lake in Rees' launch at noon, relying faithfully in a good-luck omen in the form of a black cat that had crossed in front of the car.

When at 2:15 we shouldered our packs at the head of Comox Lake, the rain had ceased. Following the old trail and skid roads of cedar poles made by loggers, we reached the foot of the First Trout (Willemar) Lake at 4:15 Here we piled into three boats, one without rowlocks, and rowing two and towing the third, we arrived at the head of the lake at 6 p.m. Following the Puntledge River, now only a stream on our left, we walked along a swamped-out trail through a magnificent stand of timber to the Third Trout Lake.

Here we found, as if made for us, a rough table with seats, and a fireplace, which we designated Base Camp.

After eating, Paul made his way across the lake to get bearings and view the route, and the fisherman (myself) waded out into the water, where, besides getting cold feet, I caught a fair sized trout.

Next morning, we left behind all the comforts of Base Camp at 5:25. On a bearing N65°W magnetic, we climbed to the top of Comox Gap, about 1200 feet elevation. Then on a bearing S75°W, still climbing steeply, though the absence of much underbrush made the going good, we reached a small pond at about 7. Here a halt was called for breakfast. The weather continued to improve, the clouds lifting.

On again, we climbed steeply to a bluff giving us a view of the Puntledge Valley. A short descent, then rising again, we saw through the trees on our right the valley of the southern fork of the Cruickshank. A breather followed, while oranges were consumed and hardtack thrown at inquisitive whisky jacks, who ignored it. Another short descent, then a steep rise, sometimes hugging the bluffs over the Puntledge Valley, other times scrambling through thick azalea (probably white rhododendron) bushes, brought us at last to the more open country of the high lands.

Topping a rise, a superb view burst upon us. In the brilliant sunlight, the glaciated "Dome",

slung between two peaks, gleamed ahead. South of the glacier, a towering square peak we later named "The Pillar" (The Red Pillar), streaked with a long white cloud, dominated all the other mountain tops. Eastward, the Comox Valley, the sea, the smoke of Powell River, and the myriad peaks of the Coast Mountains stretched before us; while on our left spread the flatter country of Alberai, across another jumble of peaks.

For a short time we travelled over more level ground to the summit of Mt. Evans, from which we descended steeply into a park-like valley, where the heather tempted one to rest under the shade of the scattered trees. A fair sized lake (Tatsno) connected by a stream to another smaller lake.

The ascent from this inviting valley was up long slopes of mostly bare rock, to the summit of a mountain we christened on our return "Black Cat Mountain", owing to our success.

It took a little time to find a way down Black Cat Mountain. We followed a deer trail along a ledge, until it gave place to a sheer cliff. By hanging on to trees and branches we descended into a narrow valley or pass. I broke my alpenstock here.

The Late Mr. Capes On Kings Peak, Vancouver Island.

Climbing brought us to the base of "The Dome", reached by a short steep bit onto a gradually rising ridge, more or less flat on top and not very wide, which we named "The Dome Approach". The final stage loomed ahead and above. It might be possible to reach the top by dark but the route was unknown. No one was sorry at the decision to make camp at 3:30.

The sky was cloudless by sunset, giving promise of a chilly night at our elevation of probably 4250 feet. We were in a fairly sheltered spot, a rocky ledge at our backs, with patches of snow all around us. A long fire was built, boughs were spread on the heather, and more boughs erected in the lee of the ledge. The packs filled with heather made good pillows. We lived in the lap of luxury and supped on bacon, sausages, bread, butter, jam, and coffee. While daylight lasted we scrutinized the cliff above us; a ledge seemed to offer a possible route.

The party gradually settled down on the bough beds. The fire burned brightly at our feet; the two outside men were the coldest. Some time after dark an eerie wind swished past, making a sound as of a gale in the trees, only there were no trees. Most of us slept well in about 20-minute snatches, occasionally everyone rising simultaneously to get nearer the fire. Before dawn we all drank a cup of Oxo, and at 3:30 got up. The eastern horizon over the Coast Mountains gradually lightened into a vivid orange until the sun rose.

After a light breakfast we moved off at 5, taking only enough food for one meal. The ledge we had studied from our camp site proved wide and easily negotiable; in fact we called it the "Wagon Road".

We climbed between the snow and the rock, then scrambled up a steep brush-covered cliff to emerge on a small mountain connected with the main mass of "The Dome". The Twin Peaks and the glacier drew our eyes always.

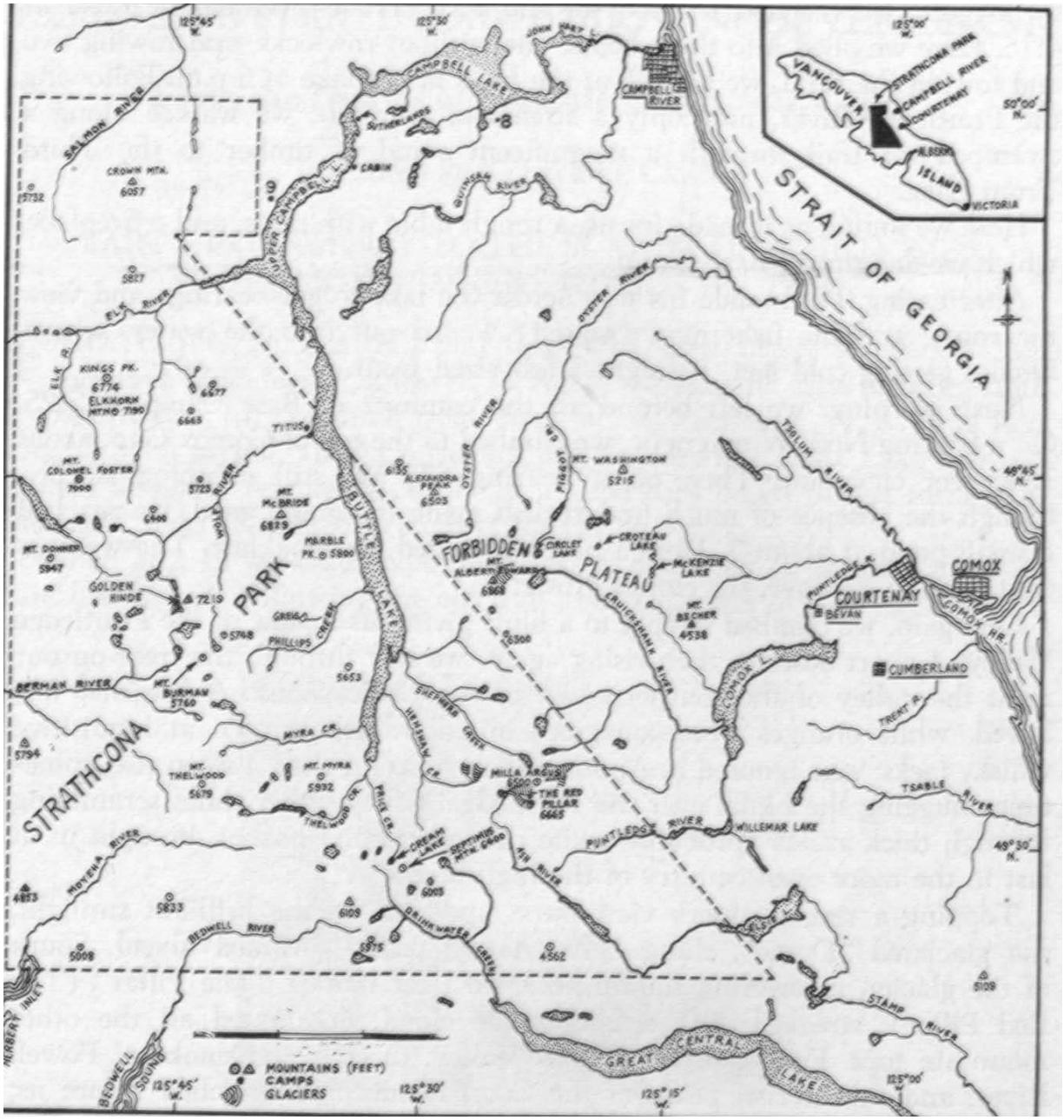
What had appeared simple at a distance became different on a closer view. Instead of continuing on and up, we found ourselves descending to an intervening deep gully. The negotiation of this gully took some time but, that accomplished, the final stage was before us. We came to "Two-Tree Pass", named after two widely separated lone trees.

The top of the Dome from "The Dome Approach" had the appearance of one side of a cube, with precipitous walls. On the southeastern corner the cliff bulged out, reminding one of a fortress with a bastion at one corner. Although steep, the "bastion" proved an easy route to the summit from the pass. Climbing leisurely up the rocks for about 1000 feet, we paused here and there to examine the many flowers—penstemon, saxifrage, phlox. Veering to the right through a thick patch of scrub cedar, we reached the edge of the glacier at 8:45 a.m.

Not much of the big snow field was in sight; it was hidden over the brow. A crevasse not far away decided us to use the rope. Paul leading, we followed parallel with the bare rock of the southern edge until we had climbed over the brow, when a vast expanse of dazzling whiteness met our eyes.

I should judge the snowfield to be about 2 miles long by 1 wide. It was not level, but very like its name, "The Dome". The glaring white of the snow was a vivid contrast with the intense blue of the sky. We climbed gradually higher, turning at right angles, parallel with the other magnificent glacier (Cliffe Glacier) and its guardian peaks (Argus Mountain and The Red Pillar). A steeper bit and, at 10:15 we reached the highest point (6445 feet), a rough, rocky island on the northern edge of the mountain.

Below, between us and the sea, the only sign of civilization was the Comox Valley basking in the sun. The main street of Courtenay was plainly visible through the glasses. Our first thought was to light a fire with the sticks we had collected along the way. Then we poured on our "pillow"



Strathcona Park And Forbidden Plateau, Vancouver Island.
Names Of Certain Mountains, Peaks, Lakes, Logging Camps And Cabins Or Camps Mentioned In Mr. Capes' Diaries Are Included. Scale: 12 Miles To 1 Inch.

heather, which we had kept in our packs. This made a smoke that we hoped would be seen from Courtenay.

To the east and the north, across the Strait of Georgia, the peaks of the Coast Mountains stood out, Mystery Mountain (Mt. Waddington) being plainly visible. Out of the haze to the southeast rose the top of Mt. Baker. Immediately north of us lay the Forbidden Plateau, showing Mt. Albert Edward and the other mountains of that area. Southwest, west, and northwest stretched

a wilderness of sharp peaks, many of them higher than our viewpoint. Numberless little glaciers hung to the sides of the mountains. A deeper blue through notches in the peaks indicated the Pacific Ocean.

A thousand feet or so below us lay a small lake of vivid green ice (Milla Lake). The other glacier (Cliffe) and its two peaks appeared of easy access by a narrow, flat, snow-topped ridge.

Having eaten, we investigated the well-built cairn that stood oN the highest point, and to our regret found nothing in it. We wrote our names and addresses on a piece of paper and put them in a box, which we buried in the cairn.

It happened that before leaving camp in the morning, Paul, grieving for my alpenstockless condition, had fashioned out of a small tree a thick and heavy substitute. Although I might have had desperate need of it on the descent, the party, without by-your-leave, considering the symbol more important than the individual, now commandeered the stick and stuck it upright in the cairn, tying thereon a flag made of a Quaker Flour sack, which would have waved in the breeze had there been any.

We started the descent at 12:30 and, returning over much the same route we had followed in the morning, reached our camp site at 3:30. After eating, we set off again at 4:45, descended into the pass, and, in the broiling sun, made the arduous ascent of "Black Cat Mountain". We struck straight across the top and descended into the green beauty of Evans Park, reaching our lunch spot of the day before at 6:45. We decided to camp here, and the first thing everybody did was to head for a swim, Miss Berkeley to the upper lake, the men to the lower one.

We left camp at six in the morning and climbed to the summit of Mt. Evans. We could see most of the route we had followed to the top of "The Dome" and we spent some time taking a long farewell of the magnificent scene. Two pigeons flew by as we made our way to the highest point of this mountain, where we built a cairn. We came unannounced upon a buck and two does. The buck watched us with twitching ears, then suddenly gave vent to two long, loud snorts and darted away. The blackflies kept us on the move when we would have rested for a spell.

We lost our way for a time but soon our leader, Paul, signified with his favourite grunt to come on. We found our old friend the Breakfast Pond and, from then on, negotiated the uncomfortable descent to Comox Gap and the still worse travelling over the loose rocks down the final steep slope to our base camp, where we arrived at 10:45 a.m. We revelled in various soups and foods and unlimited tea. 18

About 2 p.m. we packed up and hiked through the forest to the First Trout (Willemar) Lake in about 40 minutes. We embarked in the boats and arrived at the cabin at the foot of the lake, then lazed away the rest of the day. At 8 o'clock next morning, leaving the boats as we had found them, we set off down the partial skid road trail to Comox Lake. On reaching the lake at 10, Rees and the launch were waiting for us. On the way down we stopped the boat to have a last look at the corner of "The Dome".

Part II. From Courtenay Across The Mountains To Buttle Lake, July 11-24, 1930

We drove to Bevan just before 7 a.m. Barry Harvey (game warden), his big dog Sport, myself and two packs were allowed to pile onto the Comox Logging Company's speeder with the men going to work. The speeder was a Ford engine on the front car with attached trailer having a seat lengthwise on its sides. We crossed the Puntledge River and zig-zagged up the mountain. This saved us an arduous climb through the uninteresting logged-off country.

At 1700 feet, when we reached the timber, we got off and started up the Becher trail. The

weather was sunny, with light clouds and a cool breeze. My pack weighed 45 pounds, Barty's a bit heavier. As we did not propose to tire ourselves out, we took our time, and it was not till 12:40 that we reached the Becher cabin, built by Comox District Mountaineering Club.

At 2 we set off again, climbing the steep hill over the shoulder of Mt. Becher. On the more level and open spots Barty stopped to put up Game Department signs, for this part of the country has been declared a game reserve. The rough ground was a mass of purple (red) heather in bloom, marked here and there with patches of white heather. At 5:10 just before a shower came on we reached the late trapper Tommy Anderson's cabin on McKenzie Lake.

Staying here for the night, we enjoyed a supper of Aunt Jemima's pancakes, later walking around the meadow surrounding this end of the lake, where voracious mosquitoes were in much evidence. The meadow grass was a vivid green against the dark patches of timber on the mountain sides. We watched four deer for some time, their curiosity about us bringing them every once in a while a few steps nearer. Although there were plenty of mosquitoes outside, we were absolutely free of them sleeping on the old boughs on the dirt floor of the ancient cabin.

Setting off next morning, after crossing the meadow it was all up hill through the woods until we reached the more or less level open country. At noon as we descended into the woods at Panther Lake, it rained a little. We lunched in the shelter of the trees, then crossed more open country till we came to the steep ascent that led us to Croteau's Camp on the shore of Croteau Lake. The little cooking shack of shakes and the scattered tents were rather dismal looking, enveloped in drifting fog.

We left at 4:15, following the trail back down the steep hillside, over some sodden grass land, then up and down across country. Eventually we arrived at the surveyors' camp on Circle Lake. Regan, who was in charge of the Esquimalt and Nanaimo Railway survey party, made us welcome. Due to the low-lying clouds, they had been making slow progress in their work of fixing the boundaries of the proposed park. We were lucky to have found shelter, as it rained all night.

Owing to the unpropitious weather we delayed leaving until mid morning when the clouds had lifted a bit. The first part of the ascent up Mt. Albert Edward was very steep, but good going over heather. About 5300 feet elevation, some 1300 feet above Circle Lake, we struck rock, with low-lying scrub timber in sheltered spots. A cold wind met us. Snow, marked red in patches, lay here and there. A heavy shower of hail sent us crouching under umbrella-like branches of the low trees. This shower was the last of the bad weather.

At length we reached the bare, wide mountain top, several hundred feet below the peak. Leaving our packs we reached the summit cairn (5858 feet) in 20 minutes at 5 p.m. There were many beautiful small flowers along the way.

Buttle Lake and its surrounding mountains were smothered in cloud. Our prospective route lay thousands of feet below, down a timbered valley. We observed the divide between Cruickshank River flowing towards Comox Lake, and Ralph River, which we planned to follow, going to Buttle Lake. In the opposite direction, Seymour Narrows and the innumerable coastal islands were visible, though the mainland mountains were hidden. After leaving our names in the cairn, already stuffed with other names, we returned to our packs.

We began to drop down a series of gentle sloping terraces with almost perpendicular bluffs between each terrace; plenty of handholds but the continual descent was very hard on the legs. We saw a blue grouse and through the glasses spotted two otter on Ralph Lake. Then we were stopped short on the brink of a 100-foot drop. After half an hour's search we picked out a draw, which we descended. As we went down, we were struck at meeting vegetation characteristic of much lower

altitudes on the coast side.

The next half hour was one of the most trying I have ever experienced. In growing darkness, we forced our way through tangled brush, small-growing trees, mostly cedar, interwoven with long horizontal alder branches; underfoot were vegetation-smothered boulders and broken rock. At last we struck heavy timber with less underbrush. It was 8:15 we had descended some 3000 to 4000 feet in 3 hours. On finding a comfortable place to camp by Ralph River, a spot of rum relieved our weariness enough to enjoy an excellent supper. We turned in, the fire burning merrily at our feet, and slept fairly well until about 2 a.m. when we woke up cold so threw some more wood on the fire and made some Oxo. Sport must have had a hard day for he gave vent to some delayed-action barking after sounds of something dashing through the woods had faded away.

Mightily refreshed, we woke to a summer's morning and left at 9:30. Fair going through timber along the river brought us in half an hour to Ralph Lake sparkling in the sunshine. An old B.C. Lands Department pamphlet describes the lake as abounding in gamey cutthroat trout, but nary a one would "rise". Later, as we discovered the series of waterfalls that make up Ralph River, we did not see how any cutthroat without wings could reach the lake. The south side was impassable because of a mountain rising straight up; on the north side a wooded space divided the lake from the mountain. From then on the going was poor, due largely to alder growing outwards instead of upwards.

After lunch we went down a sharp descent, through some hard going with devil's club, then up steep bluffs. At the summit we had a three-way view. Ralph River lay hidden below. We could see up the valley we had come, and down its tree-covered length where it widens out toward Buttle Lake. Opposite us to the south another tree-smothered valley (Siokum Creek) rose steeply until it curved out of sight between two mountains. One of the things that remains in my memory of that view was that the whole country, except the mountain tops, was covered with trees. From such a viewpoint the amount of forest is striking.

We made a long descent, probably 1000 feet or more, which was hard on tired legs. We kept to the river for a time and once waded to the other side, but the going was no better so we crossed back and climbed up a ridge, which we followed from then on. The top of the ridge, while good walking, seemed interminable. Finally after about 3 hours we went steeply down to Ralph River and in a few minutes arrived at the long-hoped-for junction with Shepherd Creek. After wading across we made camp in a delightful spot on an open sandy beach free of mosquitoes.

We decreed the morning for rest. Once more laden with packs, we struck off through the timber in early afternoon aiming for Henshaw Creek. It is an up-and-down country with occasional bluffs and a certain amount of salal, and on the bluffs starving timber. In late afternoon we reached the lake shore so had succeeded in our undertaking of crossing the mountains from Courtenay to Buttle Lake. We followed the shore southwards to the head of the lake, which entailed travel around a long bluff, then through a terrible patch of matted windfalls. Eventually we reached a big creek that we decided must be Henshaw. We crossed on a log, through some devil's club and down to a perfect camping spot on the shore. The remains of many shacks and bits of useful debris were there from an old camp.

Next day with some logs, old shakes and rusty nails we built a raft, made a mast and paddles. We then paddled about a mile across the lake to set up camp by a little stream.

In the morning, the wind being against us, we stuck a blanket on the mast and went up the lake to Myra Creek. We explored up stream for about half a mile, till we reached a much used campsite; cupboards nailed to trees, fireplace, and all the rough comforts made by campers who

are staying some time. It was probably the headquarters of prospectors, as this area is all staked out in mineral claims.[6] Going further we came to a wide dark Pool; across it a simply magnificent waterfall, an unexpected delight.

Returning to the mouth of the creek, we decided to travel down the lake all night, to avoid daytime winds. The lake was calm and the stars shone from a clear sky as we paddled. The air was warm and pleasant. Several times we heard melancholy howling away off which we took to be wolves. About 1 o'clock a slowly growing glow showed up the rim of the mountain. Gradually a crescent moon appeared, then the whole of it, a deep yellow. At daylight we landed on a gravelly beach.

About 7 I was awakened by the terrific heat of the sun, so hunted a shady spot. Waking again about 11 and seeing the enticing beach from which to cast a fly I could not resist the temptation. The "Queen of the Waters" soon attracted many fish. I caught nine, all about 1/2-pounders.

At 6:30 p.m. we shoved off on the unwieldy raft. We put up the blanket but progress was slow, about 1/2 a mile an hour. Just after 11 we were astonished to see a light a mile or two away that appeared and disappeared. Barty signalled with his powerful flash, but the light was seen no more. An hour passed by, and another; instead of blissfully floating, we were experiencing a nightmare—condemned to paddle like fury and getting nowhere. However another flash, much nearer, effectually awakened us. Barty's signals were answered and we were soon within hailing distance. We touched shore to be welcomed by a man named Munro who had arrived that evening from Victoria with his two sons.

Next morning we left the raft with regrets, though without it we could not have covered the 8 miles we had taken 14 hours to cover. Munro's two boys agreed to take us in their rowboat as far as Mrs. Titus', which required several hours. The lady at first appeared annoyed by the arrival of two tramps at her establishment, then made us welcome.

A speedy motor boat took us to the foot of the lake, where we put on heavy boots again and took the trail to the Upper Campbell. About dusk we halted for the night in a comfortable cabin with a stove of sorts. Late next morning on reaching Sutherland's Camp we were welcomed and given a hot meal. We then drove back to Courtenay which we had left 2 weeks before.

Part III The First Two Ascents Of The "Rooster's Comb" (Golden Hinde), July 1937.

Sid Williams, Roger Schjelderup and myself left Courtenay about 7 a.m. on July 18, 1937, in Roger's old Model T Ford truck. First, though, we had weighed our packs—Sid's nearly 60 pounds, Roger's about 35 and mine 50 pounds. Arriving at Sutherlands on Upper Campbell Lake we got a boat and rowed up the lake reaching the start of the trail to Buttle Lake at 11:30. On Buttle Lake we rowed to a beach two bays beyond Wolf River and camped at 8 p.m.

We left next morning early in perfect weather: calm, with lifting clouds and sunshine. After about 2 hours' row, we landed at Phillips Creek and followed surveyors' blazes up the creek. Soon we had to climb a steep ridge, but the going was good; not much underbrush, and few mosquitoes.

We came across the surveyors' Camp 2 across the river, 6 miles from Buttle Lake, where we made a 2-hour halt for lunch. The going continued good, with a steady and easy ascent, now travelling more or less west. At 6:40 we met two of the survey party packers returning from Camp 3. At 7:30 we decided to descend to the creek for a suitable camp spot. All the way down, the ground was covered with windfalls, then we struck the terrible thick bush along the creek. There was no

6 This is the locality of present controversial mining operations in Strathcona Park.

gravel bar or any spot at all for camping. A few yards ahead on the other side was a large open space on the mountain slope, with patches of snow. Crossing the creek on a log we immediately struck terrible travelling—almost impenetrable bush interlaced with long, outward-growing alder branches, and no visibility. Sid finally climbed a small tree and we found a way out. It had taken 2'/2 hours to go no more than probably 200 yards. We finally made camp at about 3000 feet on a heathery uneven slope alongside a brawling stream. A full moon lit up the country.

Next morning we descended to Phillips Creek, crossed and found the blazes without trouble, and at 10 emerged onto a small bluff. Hearing a shout we saw through the glasses a man rapidly descending from the top of the 1000-foot pass ahead. Sid has a yell that can be heard for miles and for a time we had a yelling match. We went on, coming out towards the head of the valley with mountains on all sides. After crossing the creek on the remains of an enormous snow slide that covered it, we knew we had to go over the pass but had lost the survey markers, so waited for the man, who turned out to be one of the packers. He pointed the way, so we went on, crossed a rock slide and snow patch, then for 400 feet the blazes led us through brush and timber up a mountain side. We came out into a wide gully of rock and snow. It was quite an arduous climb to the top of the pass, reached at 1 p.m.

Below us was a valley in which lay a string of lakes, the source of the Burman River, which empties into the West Coast. Here we lunched. On a mountain top (Burman) across the valley we spotted two men, who turned out to be Slocomb and Robinson, surveyors.

Just after 3 p.m. we started along the top for a short way, then made a steep descent through timber and brush for about 500 feet to a lake. At the far end, standing by itself over a wooded ridge showed the "Rooster's Comb". At the other end we saw a tent which was the surveyors' Camp 4. On the lake floated cakes of snow, broken off from the snow patches surrounding it. We followed along the shore to camp, where we met Slocomb and Robinson and made use of their fire for supper.

Later in the evening we spotted a figure at the other end of the lake, who turned out to be Jones, assistant engineer for the City of Victoria. We had made space in the small tent for the five of us; now we had to squeeze in six, where there was room only for three. It became very cold with fog all around us when we turned in.

It rained in the night, but by morning showed signs of clearing. We left Camp 4 at 9 a.m., Mr. Jones accompanying us. A small lake just above the camp was still more than half covered with ice and snow. We topped the ridge and came down on a fairly large lake, the source of Wolf River. The clouds were lifting but the Rooster's Comb would not clear. After waiting over an hour for a photo we did at last get a glimpse of the top.

Our route lay around the left of the lake across three fairly large and steep snow patches, where a slip would have meant drowning. From the end of the lake we looked down the length of the Wolf River valley. We descended steeply 300 to 400 feet, crossed over some flat open ground, then had an uncomfortable traverse along a bush- and timber-covered mountainside. The route followed a short way up a small gully, which we left to emerge onto a ridge of the Rooster's Comb in open country.

Above to the right we could see the top camp of the survey party at about 5000 feet. Following the ridge tops we reached their Camp 5 about 4:30 where we found Stewart, the head of the survey party, and his assistant, Harris. They informed us they had that day (July 21) climbed Rooster's Comb. Stewart offered us Harris as a guide for our attempt next day.

July 22 dawned a perfect, cloudless morning with a film of ice on the little lake by the

camp. Harris led off at 8. We crossed an easy slope, then a wide scree and snow field until we reached a rock face, where we roped, although there were foot and hand holds. Next we crossed a few-feet-wide steep snow patch and then had more rock climbing. About 100 feet from the top we discarded the rope and made our way over broken boulders to the summit, reached at 10:35. The "Rooster's Comb" (now officially Golden Hinde) is 7219 feet, the highest point on Vancouver Island, and very nearly at its centre.

We stayed on top for over an hour, examining the surroundings and photographing. We put our names in the small cairn that Stewart and Harris had built the day before. We could see some of the survey party on the big peak of this mountain, away from the three-peaked summit we were on. We reached camp at 1:15.

Starting homewards at 3:15, we arrived at the meadow at the top of Wolf River valley just above the waterfall by 5:15. There were a few ducks on the lake just above the falls. Three of our party got to Camp 4 about 7:15; I dragged in some half an hour after. In full moon light we all squeezed into the little tent.

The next day we spent en route to the survey party base camp, which we reached after a forced halt over night. The cook treated us royally with a whopping breakfast. The rest of the day was lazed away in 82 degrees temperature.

On the morning of the 25th we started down the lake in perfect weather, with the cook at the engine. Arriving at the end of the lake at 11:15 we lunched, said good-bye to the hospitable cook, and started up the trail to Upper Campbell Lake. Seeing no boat at the cabin at 3:55 we of necessity continued on the trail, reaching Sutherlands at 5:15. As seen from the truck, the logged-off rolling country to Camp 8 was a purple mass of blossoming firewood. We had clutch trouble, but reached Courtenay by dark.

Fifteen Days On A Canadian Alp

By David Wessel

Party: David Wessel, Scipio Merler, Jack Cade.

What do experienced mountaineers do nowadays on their climbing holidays, especially if they have been spoiled by the conveniences of the 1967 Y.A.C.E. Camp? Why, they go to a fine, remote climbing area which is readily reachable by helicopter. And that is what three old A.C.C. hands did in August 1968. The three of us had agreed in the previous spring that it would be fun to conduct a small expedition together, and Skip suggested that he knew just the place. He had been to the Clemenceau Icefield area a few years before and had a hankering to go back. He remembered a fine peak, Tsar Mountain, a few miles south of the Icefield, which he thought we ought to tackle.

So, after the annual A.C.C. meeting at Schaffer Lake, the three of us gathered at Golden, B.C., to pack all of our gear and provisions, ready for a flight on the morrow. On Monday morning Derrick Ellis crammed us and all of our stuff into his Alouette II, and lifted off. The scenery of the Rockies and the Selkirks sedately unrolled alongside us as we flew up the Rocky Mountain Trench above the Columbia River for some 60 miles before turning north over the western ridges of the Rockies. As we proceeded, the weather went from doubtful to threatening. Our expedition plan had been to set a 5-day camp at the foot of Tsar and to fly in a cache for the remaining 8 or 9 days on Clemenceau Glacier, to which we would walk overland. Tsar looked magnificent but

distinctly uninviting as we partially encircled it in gathering storm. Inasmuch as we could see nothing of the country we'd have to traverse later, we made the ad hoc decision to have only one camp, at the eastern base of Mt. Clemenceau. Derrick manoeuvred our bird between misty walls, guessing his way until Skip shouted that he recognized the glacier and we began to settle down to a medial moraine. Though we had come prepared for camping on the glacier, this prospect looked dismal indeed. Just as we were about to land, the mist cleared a bit and a small green shelf became visible high above the glacial trough, and Derrick was directed to it. After the brief hailstorm which celebrated our arrival at "Ptarmigan Alp", we piled our stuff out and bade a slightly wistful farewell to Derrick extracting from him the promise to return in 13 days. The alp's name came easily, since upon alighting from the craft, I nearly stepped upon a ptarmigan.

As the afternoon weather improved and we worked to set up camp, our good fortune and good judgment became very clear. Here we were, apparently on the very flank of Mt. Clemenceau, with superlative views across its glacier to the icefield and its bordering peaks in the Continental Divide to the east, and to nearby Mts. Tusk, Shackleton and Duplicate to the south. Our little alp had everything for the "compleat alpine camper": grass, flowers, rocks, small firs, animals, and even a small stream—fed by snow patches—which flowed alongside the sort-of-level spot where the two sleeping tents were erected. A handy big boulder was in just the right location to serve as rear support for the ridge rope over which was stretched our bright yellow tarp. Thus was made an excellent commissary shelter, and Jack immediately set about to putting things in order. He also announced, to the considerable delight of Skip and me, that he'd just as soon be the expedition cook! He proceeded to justify his position with the first of our relatively excellent meals. Skip and Jack had given considerable thought and effort to planning and packaging a set of meals which would be easy to prepare under rough conditions. If the typical alpinists' aliments such as freeze-

Mount Clemenceau From Southeast Icefield. Photo: Dave Wessel

dried entrees and concentrated carbohydrates lacked a rich variety, they at least were plentiful and nourishing.

The first night severely tested our new light-weight tents, as wind and rain howled down around us. But they withstood the onslaught very well, and with minor adjustments to their setups, proved to be snug and dry throughout. In fact, the only serious problem with sleeping was occasioned by the cheap plastic air mattresses which the other fellows brought, and which managed to keep one large leak ahead of their frantic attempts at repair. I admit to gloating over my nice long foam pad. The next day turned out so beautifully that we chafed at not having gone out on a major climb. We contented ourselves with improving the camp and getting acquainted with our alp and its denizens, vowing that on the morrow we'd tackle our primary objective, 12,001-foot Mt. Clemenceau. The sight of two mountain goats observing us from a few hundred feet above enticed me into climbing the ridge toward them. They disappeared, but I did get a look around the corner and was able to verify that we were indeed perched on an eastern shelf of Clemenceau, with its great bulk rising over a vertical mile on all sides to a shining snowy crest. At dawn on Wednesday we took off, rounding mighty walls and icefalls as we proceeded up the smooth glacial floor for a few miles on the south side of the mountain. Upon reaching the cascade of névé which comprises its west face we put on crampons and rope. Skip led up for awhile over smooth expanses of snow, then through an interesting icefall. From this midpoint the only feasible route crosses a basin between icefalls, ascends a steep snow flank, then threads crevasses in a long upward traverse to gain the north arête. Our final pitch up the undulations of hard snow on this crest was accompanied by a bitter arctic wind. But the sky was nearly cloudless and we were rewarded at the summit with what must be one of the most sweeping vistas in the Canadian Rockies. Mount Robson towered over its neighbours in the northwest, the whole chain of the northern Selkirks stretched along the western horizon, nearby mountains such as Edith Cavell, Fryatt, Alberta, Columbia, and Tsar were easily identifiable; and we were sure that one of those innumerable points in the faint southeastern distance must be Mt. Assiniboine. The look of our immediate neighbours whetted our appetites to try them, even though none reached as high as we were. Massive though Clemenceau is, its steep upper rock bulwarks discouraged our considering an alternative route of descent, so we retraced our spiraling path back down to camp, getting there in late afternoon. We'd got the major peak and had had a magnificent day of varied climbing in doing it.

Next day was a rest day—more for savouring the previous day's climb than for need of rest from it. I found that the alp was ideal for my habit of poking around with a colour camera. So I stalked marmots and ptarmigan and the spring flowers which were in full bloom. We improved our commissary by building stone walls under the tarp to keep the wind from ventilating it too generously and the rain from infiltrating the carefully shelved supplies. We also studied the icefall which tumbles from the flank of Mt. Shackleton down between Tusk and Duplicate. It looked well-nigh impossible to me, but Skip assured us that he and Jo Kato had climbed through it on the way to reaching the north and middle peaks of Shackleton. The south peak apparently had never been climbed and he was anxious for us to try it.

On the beautiful crisp morning of Friday we dropped off of our shelf, crossed the valley glacier, and moved up to the base of the icefall. Just as we started up some nasty dirty black ice which was the beginning of the only possible route we had spotted, one of Jack's crampons broke. Consternation! But he was game to continue. Skip led through intricate formations of séracs and crevasses and ridges and troughs, in which our ice screws proved of inestimable value. In 3 hours we had ascended about 800 feet and were within a rope length of easy névé". But—the last crevasse

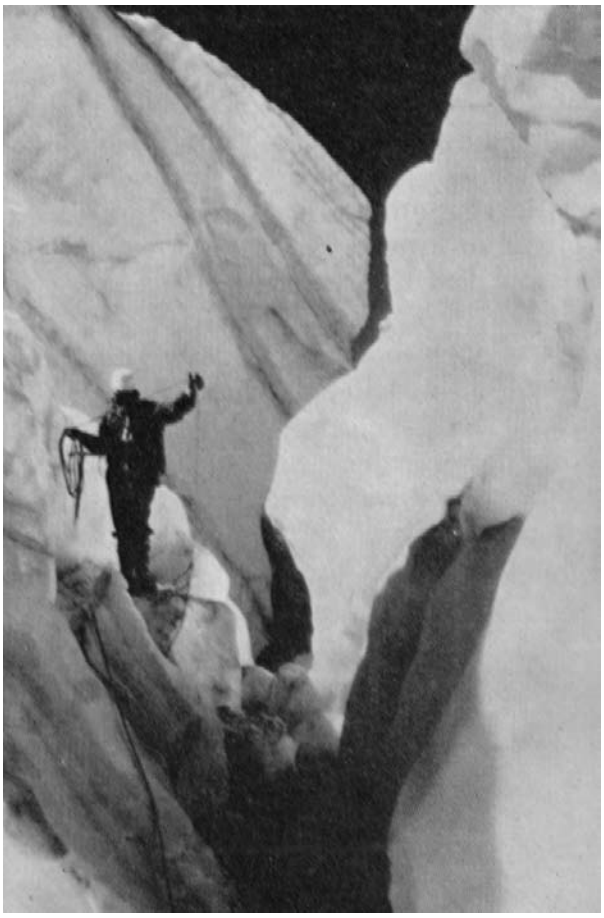
was impassable! Everywhere we looked, it yawned too wide to jump and dropped to fearsome depths, and we soon saw that it stretched from the black walls of Duplicate to the blacker walls of Tusk. So we did the only sensible thing to do at that juncture: sat on a broad ice block, ate lunch and enjoyed the view. In comparing the accounts of early expeditions (Gibson, et al.) and Merler's recent one with conditions as we found them, we can only conclude that the icefall is steadily becoming more intricate and chaotic as its ice volume decreases. Disappointed at being foiled in an attempt on Mt. Shackleton (we could see no other approach from the north), we resolved at least to enjoy to the fullest the sport of ice climbing in the beautiful weather which prevailed during our return to base. The sportiness was enhanced considerably for Jack, but he managed quite well on one-and-a-half crampons. Our early return gave us time to go to the little pool we had found amongst some boulders to bathe and look ruefully at the tantalizing icefall.

Next day we headed out early up the glacier toward the Clemenceau Icefield proper, determined to follow it around east and south of Duplicate to see if Shackleton was attainable from that side. After many miles and hours of trudging with almost no technical challenge, we topped a last steep snow pitch to a minor crest which afforded a view of Shackleton. No climbing there. If a route could be found at all on the steep rotten rock faces, it would entail the setting of a camp over at the mountain's base. So once again, defeated in summit aspirations, we admired the bold scenery until blackening sky warned us of a storm racing toward us from the Selkirks. It caught us down on the icefield and we huddled under our parkas until it abated. Two more storms assailed us before we arrived home. They were harbingers of a spell of bad weather, for the following 3 days were too stormy to permit climbing. Again we thanked our luck for having found this alp; its comfort and convenience and beauty helped us to pass the time without too much impatience.

Whenever the sky cleared briefly, we gazed at Tusk Peak looming boldly 4500 feet above us across the glacier. It was the most worthy summit attainable. So, when Wednesday promised

Mount Shackleton From Tusk Peak. Photo: Dave Wessel

clear and cold weather we lost no time in getting underway. Up our glacial highway we went, then up a hanging glacier on the west flank of Tusk. A narrow, steep 300-foot ice gully cleaves the upper rock wall and connects this glacier with the south arête of Tusk. Inasmuch as the frangible rock appeared everywhere to be generously coat-with verglas, we determined that the couloir was to be our route. It required extreme care in belayed climbing, making considerable use of ice screws and crampon toe points. Clouds swirled around us as we gained the arête, but not before we'd been treated to an impressive perspective of Mt. Shackleton and could look down onto the great crevasse which had stopped us a few days earlier. The arête provided some interesting rock climbing, including one short difficult pitch, as we ascended in cloud to the summit. It would have been nice to have a clear view of our surroundings, because ours must have been a very airy perch, overlooking one of the tallest high-angle faces in the Rockies.



In The Shackleton Icefall. Photo: Dave Wessel

Storm made our descent more demanding of care than the ascent had been, especially in the couloir. I was very glad indeed that all three of us had considerable climbing experience and were inured to rigorous conditions. Skip's leadership was, as always, impeccable. Storms continued to harass us all the way back to camp, but in our elation over another great climb we didn't mind a bit.

Next morning we awoke to snow and fog. A good day to stay in the sack. But hunger, etc., forced us up at 7:30. As a reward, the weather began to improve. Soon the snow melted, the sun

came out, and we enjoyed another day of the good life on our alp. I followed two ptarmigan hens back and forth across the rocky turf, trying to analyze their remarkable vocabulary of clucks as they tried to keep their nine rambunctious chicks under control. Marmots and conies perched on rock lookouts and called epithets and warnings. A green humming bird invaded the commissary. For the first time a family of golden mantled ground squirrels enlivened the sward around our tents. Tusk sparkled with a new mantle of snow which clung to all possible ledges and crannies.

Friday was our last day to climb, if the helicopter came on Saturday morning as planned. A lovely day it was for a stroll. The small ridge we climbed, west of Mt. Clemenceau, was not impressive, but it did furnish some good rock climbing and glissading and was probably a first ascent. It also gave us a fine new view of the mountains we had climbed, as well as a good look down the forested channels to the west, through which we would have to bushwhack if the 'copter didn't show and we had to make it to the Columbia River on foot. Such a prospect was only hinted at that evening as we sat around our last campfire and reflected upon our good times together.

The prospect loomed bigger by noon Saturday, some hours after the absent chopper was due. By late afternoon we were regretfully discussing what items of equipment to jettison, how to conserve food, and what route to take for backpacking out. Voila! At 7 p.m. came the welcome sound, and down out of the firmament near Shackleton came a little three-place Bell helicopter. Its pilot explained that Derrick's machine was laid up, and he'd been asked to rescue us. Skip urged Jack and me aboard while he stayed with our stuff to await a second trip by the chopper. Before long, we were all reunited at a Forest Service camp on the Big Bend Highway. Derrick had thoughtfully come up there to lend us his pickup, in which we jounced contentedly to Golden and a hot bath.

All in all it was, we agreed, a well-rounded fortnight of alpine experience, well-suited to the tastes of old mountaineers like us.

Tusk Peak. Photo: Dave Wessel

A 10,000-Foot Twin Summit In The Palliser Range

By T.W. Swaddle

Party: Dr. T. W. Swaddle, Dr. Michael Benn, Dr. Ted Sorenson.

According to J. M. Thorington's A Climber's Guide to the Rocky Mountains of Canada, there has been little interest in the region north of Mt. Aylmer around the headwaters of the Ghost River, despite ready accessibility from the urban areas of Southern Alberta. My fellow University of Calgary chemists, Michael and Ted, and I therefore decided to run a brief exploratory trip into this area, September 6-8, 1968, in a last effort to salvage what little remained of a very poor climbing season before term began again.

Our interest was stimulated by our discovery on the map (Lake Minnewanka West sheet, 82-O/6 W) of a double peak, each summit of which just exceeded 10,000 feet in altitude, and apparently unclimbed. The summits are on the Banff National Park boundary, 4 miles from Mt. Aylmer at 330° and 335°; they are separated by about 650 yards and a drop of about 200 feet (thus, they can scarcely be considered as separate peaks). Two small lakes lie beneath the peaks, to the south. These peaks seemed to present a worthwhile objective, and we decided to approach them from Aylmer Pass, starting from Lake Minnewanka parking lot on September 6th. There is something disheartening about the undulating slog along the lake, followed by the steep slog up to Aylmer Pass — why this should be so is a mystery to me, since the trail is good and the scenery quite attractive. On this particular occasion, our spirits were dampened in a very real sense — the heavens burst apart with a great thunderclap around midday, and we were soaked to the skin by the time the rain stopped and the sun broke through to greet us at the summit of Aylmer Pass.

The north side of Aylmer Pass lies outside the Banff National Park, yet, perversely, it is much more pleasing, to my mind, than the side enjoying legislative protection. Broad, pleasant meadows and clear creeks tempted us to set up camp at once; however, to the north, the group of peaks which included our 10,000-footer could be seen intermittently in the clouds, and it seemed advisable to try to get closer to our objective before dusk (besides, we suspected that the meadows would be windswept in the event of a storm). The map indicates that the trail descends progressively to intercept a tributary of the Ghost River, and so we followed the trail on down past a rather spectacular waterfall which drops over a limestone cliff into a lateral trench. Soon we were in the forest again, but it eventually became apparent that the trail actually bears east and follows the south side of the valley at a high level to avoid steep terrain nearer the river; we subsequently realized that the map is probably incorrectly drawn from aerial photographs, in which an old ruined road which runs along the river banks will be clearly visible and could be mistaken for the trail. The trail is, nevertheless, clearly defined and fairly often used by horseback parties.

Accordingly, we left the trail as it swung below the impressive north face of Mt. Aylmer, and struck straight down to the valley floor. By a stroke of unaccustomed good luck, we immediately stumbled onto a handy campsite on a secluded sidearm of the river, just downstream from the confluence marked on the map at 6500 feet. Old rusty traps and a fragment of a powdered-orange-juice packet testified to the interest of hunters, traditional and modern, in the abundant game of all types which inhabits this remarkably verdant area.

We got very little sleep that night, thanks to the alarmingly fierce drumming of rain on our tents—we would like to blame our late start on this, but in fact it was clear when we finally crawled into the daylight, and furthermore leisurely breakfasting and general juvenile tomfoolery ensured

an 8:30 a.m. start. We crossed the river to gain the derelict road on the north bank (pausing only while the author, in observance of tradition, fell into the water), and followed this road on over the north tributary for a few hundred yards before striking up the steep, densely forested slope on our right. The thick bush was water-laden, and we were glad when the slope eased and we found ourselves on the south side of a delightful sunny valley in which open meadows alternated with slide areas and timber. Fine campsites were in abundance here, along the banks of a pleasant stream, but the map suggests that the stream may be intermittent in drier seasons.

Ahead on the right, our objective was coming into view—plastered with snow! We ascended grassy slopes to the mouth of the hanging valley, at the head of which our twin peak stood, and decided to proceed via the ridge which formed the west wall of the valley. As we ascended over easy iron-stained shaly slopes, the two small lakes marked on the map[7] came into view—a bleak, inhospitable place, hemmed in by limestone peaks. A small summit at 9400 feet was reached at noon, and found to have a small cairn on it—possibly built by sheep-hunters, although the ridge forms the Banff Park boundary. Further progress along the ridge was less easy, as we were now obliged to descend a series of small cliffs of decidedly rotten rock which were also slick with fresh snow. The ridge also narrowed considerably but we moved on to our chosen peak without serious difficulty.

It became apparent that the remainder of the ridge between us and the more westerly of the 10,000-foot summits was rather broken in places, notably just below the summit, where there was a sharp cliff-band. However, the rottenness of the rock apart, the direct approach seemed preferable to a long detour over steep, unstable talus slopes on the west face of the mountain. Indeed, the ridge climb proved easy enough, and enjoyable; in retrospect, we should certainly have roped up for the final cliff-band, which we broke through after traversing out on a ledge on the rather exposed south face— progress was easy, but the rock was rotten. We arrived on the west summit at 2:05 p.m.; there was no sign of prior occupancy, so we promptly built a cairn and fell to wondering whether the east summit might actually be the higher of the two.

We set off very cautiously along the rotten, snow-encrusted knife-edge ridge between the two summits; the distance is only 650 yards and the loss of altitude a mere 200 feet at the most, but it took us fully 50 minutes to reach the eastern summit, thanks to frequent back-tracking to avoid gendarmes and other obstacles. Again, we found a virgin summit, more pointed than the other but clearly lower; at the same time, it was clear that we were on top of the biggest mountain in the district excluding Mt. Aylmer. We built a substantial cairn, and left a record book.[8] Thus encouraged, we were tempted to try to continue along the east wall of the cirque in the hope of adding the substantial 9700-footer[9] there to the day's bag, but a sudden violent increase in wind-strength accompanying clouding skies, together with a sobering view of the sharpness and brokenness of the ridge ahead, served to persuade us to strike down to the valley floor by the twin lakes. This was none too easy, as we had to negotiate water-slickened cliff-bands and outsloping rubble-strewn ledges; however, the strata sloped west as well as south, so we were able to lose at

7 In keeping with the established name Ghost River, the author suggests for these two lakes the name "Spectral Lakes" because of their bleakness, and "Spectral Creek" for the intermittently flowing ('ghostly') stream draining them into Ghost River.

8 The author suggests the name "Revenant Mountain", as connoting both 'ghostly' and its second ('recurrent') summit.

9 The name "Apparition Mountain" is suggested for this summit a mile southeast of "Revenant Mountain".

least some altitude by following the ledges. A large flock of mountain sheep came fearlessly out to greet us as we passed the lakes; evidently, our red-jacketed colleagues reach these parts less frequently than we had imagined.

Back at the campsite, Mike produced a bottle of Canadian champagne from his famous cornucopia-cum-backpack, and we celebrated our small success in appropriate style. We cannot pretend that it was a Great Feat of Mountaineering, but then it isn't every day that one climbs a new 10,000 footer—and we did have to take our hands out of our pockets to climb it! In the course of the 5-hour hike home, we fell to discussing whether we should seek to name it. To our minds, it seems inappropriate that our mountains should commemorate foreign generals of 50 years ago, but not Canadian scientists; accordingly, we have suggested to the Geographic Board of Alberta that the twin peak be named "Mount Steacie", and the lakes Steacie Lakes, after late Dr. E. W. R. Steacie, former President of the National Research Council and an internationally renowned chemist, to whom Canadian science owes much of its current prestige elsewhere. The Secretary of the Board, Mr. E. J. Holmgren, has replied to say that there may be a mountain named for Dr. Steacie in the Arctic, but the Canadian Permanent Committee is reviewing the suggestion at the time of writing.[10]

Further Ascents Along The Cline River

By Howard D. Stidham

Party: Howard and Sue Stidham, James P. Robbie[11] and Dianne Robbie.

Although he did no climbing there, on his passage through the McDonald Creek valley A. P. Coleman named the mountain range to his southwest and north of Hahaseegeewapta[12] (now called Cataract Creek and the Cline River) the Cloisters,[13] after the cathedral-like rock walls that faced his campsite. While climbing "Cornice Peak" in the Cloisters.[14]

, which is on Provisional Map 83 C/2W east of the Banff-Jasper Highway in Alberta, members of the Bucket and Doorknob Society (BDS) observed in 1967 a textbook example of a geological slump situated at the base of an unclimbed 10,110-foot mountain that capped the next upthrust sheet to the northeast of the peak they were climbing. The very long and rather broad summit of this mountain is guarded by a rampart of vertical limestone cliffs, at the lowest point at least 100 feet high, which appeared to have no weakness on the southwest face save possibly at the extremities. The northeast face is probably one of the cathedral-like faces that so impressed Coleman.

Time did not permit a scouting party to enter the valley containing the slump that summer. After a winter of contemplation of slides, maps and personnel, a new party of BDS members was assembled and committed to the tasks of investigating the slump and climbing the mountains accessible from the valley containing the slump.

10 Editor's Note—Presumably quite independently, another 1968 p name "Mount Steacie" for a peak in the Chilkoot Range on Boundary; see page 5 of this Journal.

11 Deceased August 16, 1968.

12 A. P Coleman The Canadian Rockies New and Old Trails (Henry Frowde, Toronto, 1912), p. 135.

13 Ibid., p.223

14 C.A.J. 1968, p. 182.

Since this party in August 1968 knew where it was going, the hike in to "Berkshire Creek" was much more efficient than had been the case in the 1967 venture. Access to the valley containing the slump was gained from this watercourse by way of a bushwhack initiated at a point about 2 miles upstream from its confluence with the Cline River, a tributary of the North Saskatchewan River, Alberta. The bushwhack was more difficult than is necessary. The going is much more open and the way but slightly longer if "Berkshire Creek" is followed until the party is abreast the southerly termini of the two upthrust sheets which retain this stream. The route then diverges right (northerly) from the stream and slabs close to the southeastern rock face of the upthrust sheet containing "Cornice Peak" until at last the valley containing the slump is entered past some tremendous boulders. The only spring in the valley near timberline was at the 7000-foot level, just below a characteristic rock formation in the wall which we called "Cat Rock." Camp was made here.

After sitting out a day of wretched weather, the climb of the mountain behind the slump was begun on August 12 in light rain. At about 9000 feet the rain developed into patchy cloud interspersed with occasional mild snow, weather that attended the remainder of the climb. The resulting fractional visibility provided glimpses of the slump below and the mountain above. The climb up to the guarding cliffs is entirely over scree and infrequent snow.

The southeastern extremity of the cliff system may be seen from the confluence of "Berkshire

Slump Mountain. Photo: S.N. Stidham, 1967

Creek" and the Cline River, and the route suggested by observations made through field glasses at that site bears in corkscrew fashion across snow and scree around this extremity to a more northerly face of the mountain. This route was now followed until at last the scree ended in a vertical wall on the northeast face, fortunately only about 40 feet high and penetrated by a diagonal crack system that permitted access to the summit scree by a single technical lead. The rope was used here for the first time. One piton, later removed, was placed to protect the lead. Another piton was placed at the top of the pitch to anchor both the belay on the ascent and the rappel on the descent. Above this point, the route threads on scree through couloir tops to the broad, flat, somewhat tilted summit scree field. Cairns marking the rappel point and the entrance to the maze above the couloirs were built, though in the absence of cloud these would be unnecessary. The highest point registered 10,110 feet on the altimeter. The name suggested for the peak is "Slump Mountain." Two large cairns were built, one at the highest point to be visible from the valley leading to McDonald Creek, the other lower down to be visible from the entrance to the valley containing the slump. The ascent took 6 hours, and 3 hours were required for the return to camp.

On the following day, for a change the weather was good, and the party set out to climb the high point on the ridge connecting "Slump Mountain" with "Cornice Peak". This climb was over scree and slab, and was accomplished without roping in about 4 hours. The way-led past the very impressive slump with its own tiny upthrust sheet overlooking its base. The altimeter registered 9750 feet at the top of the ridge. The name suggested for it is "Michaelis-Mountain", after the biochemical interests of some of us. The return route passed the low point on the ridgeline connecting "Michaelis-Mountain" with "Cornice Peak", and it was evident that a route across the glacier between the bases of "Cornice Peak" and "Bertram" is feasible and will lead to an as yet unclimbed 10,200-foot writing-table mountain north of this spot across the ice. The miniature upthrust sheet at the base of the slump was climbed on the return to camp, and the top afforded unobstructed views of the Roman-like ruin at the bottom of the slump, dramatic in the flat red light of sunset.

The hike out to the road was begun the next day and was conducted almost entirely in rain. At higher altitudes, the rain became snow that lightly dusted the summits of the peaks in the Cloisters, visible through infrequent breaks in the cloud. Only raw cold cloud accompanied the party returning across the flats of Sunset Pass, and the mountains just visited were not visible. A sodden crew of four happily deregistered their climb with one of the: Saskatchewan River Wardens who happened to meet them at their car parked at Alexandra Youth Hostel on the afternoon of August 15.

Ancohuma

By Barry Hagen

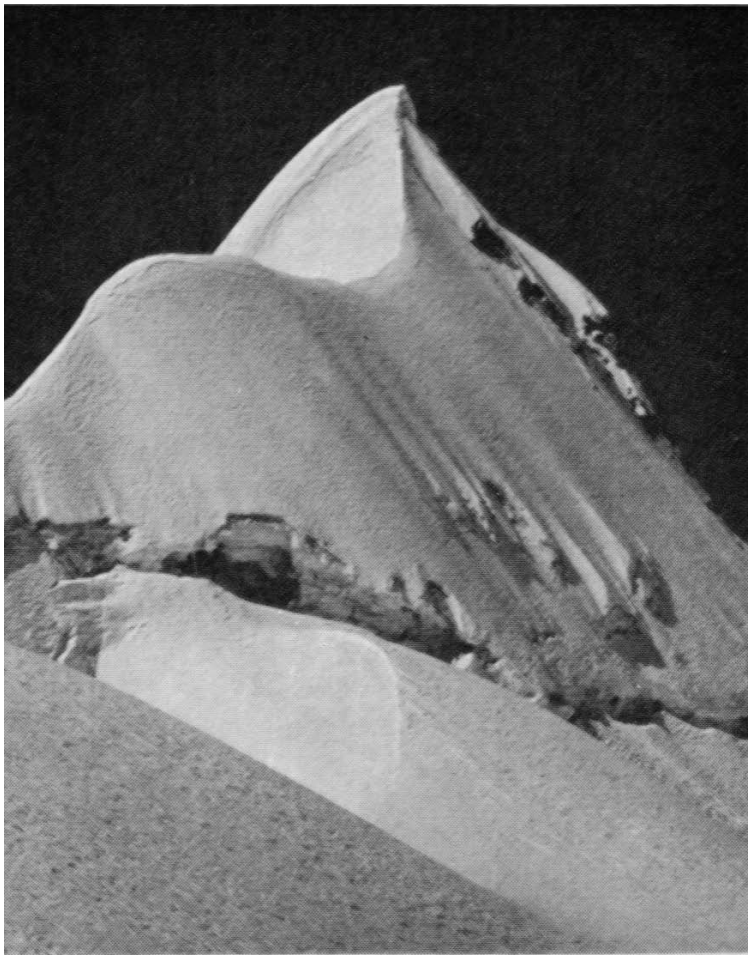
Ancohuma, 23,012 feet, is the highest peak in Bolivia and one of the highest in the Western Hemisphere. Standing at the northern end of the Cordillera Real, its massive outline, when seen from Lake Titicaca, somewhat resembles that of Mt. McKinley. Prior to our ascent, Ancohuma (meaning "white water" in the Aymara Indian tongue) had been climbed three times, each time by the northwest ridge.

After 2 weeks of travel in early June of 1968 in the highlands of Peru and Bolivia, our party, euphemistically referring to itself as the "Good News Mountaineers", gathered in a little

Ancohuma (23,012 feet) As Seen From Lake Titicaca.

East Face Of Ancohuma. Photos: Barry Hagen
Ascent Route Followed Southeast Butress And Left-Hand Skyline.

hotel in La Paz. From the Boston area were David Isles, our gallant leader, with whom I'd climbed Yerupaja in 1966; Paul Doyle, keeper of the exchequer; Jim Strum, equipment co-ordinator; and Earle Whipple, geologist. From British Columbia came Martin and Esther Kafer, logistics expert and quartermaster general, respectively; and myself, first-aid man and general irritant. Joining us in La Paz were Padre Gustavo Iturralde ("Itu"), one of Bolivia's most prominent mountaineers, chairman of Club DYM ("Dios y Montanas"), with several major first ascents to his credit; Rodolfo Gutierrez Beltran, archeologist and linguist, responsible for getting the expedition to the



Yoka De Ancohuma (20,100 Feet). Photo: Barry Hagen
Ascent Route Followed North Face In Upper Left-Hand Skyline.

mountain; and "Fiqui" and "Pepe", two high-school boys taken along to serve as porters and to learn mountaincraft.

On June 16 our obsolete and heavily laden International one-ton puffed up the hillside out of La Paz amid cheerful catcalls ("loco alpinistos", "viva Che Gueverra"—they loved our beards), and steamed north across the 14,000-foot altiplano. At length we left the eastern shore of Lake Titicaca and crossed a series of incredibly rocky, barren hills, then wound downwards to the beautiful semi-tropical town of Sorata, at 9000 feet. Above us loomed the immense bulk of Ancohuma and the nearer, more sharply defined Illampu, a mere 150 feet lower than Ancohuma.

Refreshed by the beauty of Sorata and by a night's rest in the courtyard of the Franciscan Friars, we continued our journey, climbing for hours to cross the 15,400-foot Choocho Pass, then winding down to the pueblo Ancoma. The miserable road now degenerated to little more than a rough trail, with innumerable horrifying switchbacks. Another pass, another dizzy descent, and we were at road's end, a small tin mine, known as Mina Candeleria, at 13,000 feet.

"Okay, gang," said David, "let's get this show underway". Guty quickly hired a miner to serve as a guide and within an hour six heavily laden gringos were following a well-used trail across slopes frequently swept by mine wastes, thence down to the tiny pueblo of Coocoyo at 10,800 feet. Our guide indicated that waterfalls would prevent hiking directly upstream to the

mountains we sought, and that we would therefore have to climb the opposite valley wall and traverse the ridge crest.

Hour after dusty hour we struggled upwards, watched by bored llamas and silently circling condors. Severe thirst, aggravated by heavy breathing, accelerated our fatigue, and we were forced to bivouac below the 15,000-foot ridge crest. Next day we pushed on to a small tarn, and, after attempting to drink it dry, set up a temporary campsite. Guty, directing eight porters, three alpinistos and 25 llamas appeared on the skyline at sundown, and was received warmly particularly since we had run out of food.

Across the wide glaciated valley rose the impressive east faces of Ancohuma Illampu, Pico del Norte, and a host of lesser peaks. We had crossed to the Amazon side of the Cordillera Real and were in an area previously visited by only one other party, the University College of North Wales Andean Expedition of 1966, which had made first ascents of most of the surrounding lower peaks before making the third ascent of Ancohuma's northwest ridge.

By June 21, base camp, at 15,800 feet, was a comfortable little tent-town at the snout of a steep icefall flowing from the wide basin below Ancohuma's east face. While David led a party westward to look closely at Illampu's sharp south ridge, the Kafers and I scrambled up the opposite moraine and threaded our way through the icefall to the silent basin, at 17,000 feet. Ancohuma, still 3 or 4 miles south, rose grandly above its satellites, its east face a sheer 5000-foot granite wall. Although somewhat steeper than the northwest ridge, the unclimbed southeast buttress, forming the left skyline, appeared to offer no insurmountable problems.

David's party, too, had been encouraged by finding a feasible approach to Illampu. Should we divide the party and try both peaks? Discussion raged into the night. Exasperated, Martin and Itu, in an amazing display of energy, retraced David's path and pushed on to the 19,500-foot col at the foot of the south ridge of Illampu. Long after dark, we spotted their single headlamp moving down the central moraine of the glacier, and we rushed up to meet them. Martin and Itu, thoroughly exhausted, had encountered thigh-deep snow, but had gotten far enough to see a severe-looking 500-foot rock step in the ridge, followed by a long, corniced knife-edge. Our chances, with our limited time, would be better on Ancohuma.

Two days later, from an intermediate camp in the basin, Esther and I made the first ascent of "Pico DYM", 19,300 feet, then traversed to Yoko de Ancohuma, 20,100 feet, which had been climbed by the 1966 North Wales party. Across a 19,000-foot col rose the southeast buttress of Ancohuma, rising 4000 feet in one grand sweep. The east and south faces appeared severe and exposed to avalanches, but the buttress, except for an ice-wall at 21,500 feet, appeared technically easy.

Martin and Itu, well rested but still suffering from the altitude, now tackled a couloir leading to the col. After fixing 600 feet of 1/4 inch nylon line in the difficult upper half of the couloir, they returned to the high camp we had established in the upper basin. The following morning, David and I climbed to the base of the buttress. Recalling that a 1500-foot gully, just to the right of the one already climbed, would lead to a fine snow-cave site on the buttress, we started up it, by-passing the fixed line. Most of the day we climbed, alternating leads on the steep ice. Ice pitons were useless in the thin, porous surface layer, and pickets could seldom be placed. Consequently, most leads were protected by tied-off ice-channels driven into wide cracks in the granite walls. Martin, Esther and Itu, meanwhile, noting our slow progress, proceeded up their own couloir and hacked out a small cave in the col, then climbed a knife-edged snow ridge to meet us, just as we emerged from our dark gully.

We spent a cramped, cold night in the tiny cave, with five pairs of legs stuffed into three down bags. It was dawn at last, another cold, brilliant day, June 27. Along the knife-edge we moved quickly, then began to crampon up the ever-steepening buttress. By 10 o'clock we had reached the ice-bulge, and Martin prepared to belay me. As he lifted his new camera from around his neck, his glacier goggles fell off. He stooped to catch them, and the camera went bouncing down the south face. Bounding after it, Martin forgot the cliffs below him. I rammed in my axe, and the rope felled Martin like a steer. The camera was gone.

The bulge proved to have a weakness, and soon we were over it, leaving a fixed line for descent. The slopes above were steep, but the snow was perfect for step-kicking, and, despite the altitude, we reached the narrow summit crest by noon. Half an hour later, we stood on the summit.

To the north stood Illampu, scarcely 150 feet lower. "I wish we had time to try it, too," lamented Esther. To the west stretched the brown altiplano, with Lake Titicaca a sparkling blue. South of us stood the entire Cordillera Real, with its 21,000-foot giants. Fully 22,000 feet below us, and but 20 miles away, cloud-covered jungles stretched eastward to the horizon.

My thoughts turned to the tin miners, working a 10-hour day for 66 cents, beginning at the age of thirteen. If not killed by cave-ins, they all suffer from silicosis, frequently complicated by tuberculosis, by the age of thirty. Could they sympathize with our seemingly fatuous devotion to the mountains?

ALPINE NOTES AND TECHNICAL CLIMBING

Mount Temple - First Winter Ascent

By James Jones

In 1894 while making the first ascent of 11,626-foot Mt. Temple, Walter Wilcox observed that the temperature on the summit was 45° colder than the temperature down below in the valley (C.A.J. XXIX, p. 11). He comments that this "would indicate that the climate on the top of Mt. Temple would not be very pleasing in the middle of winter." My imagination dwelled upon his remarks during a —40 °F. cold spell in December. When my friend Dave Haley arrived from Seattle for a visit, he agreed that we should make a winter ascent. Unfortunately the intrepid winter climber Eckhard Grassmann was unable to join us as he had planned.

The two of us left Lake Louise Jan. 2, 1969. After a long slog up the Paradise Valley on snowshoes we camped below Sentinel Pass. Here we dined upon some frozen oranges we had foolishly brought along and awaited the dawn. In the morning, two hours of wallowing and cursing in waist deep snow took us up to Sentinel Pass. Here we were greeted by a cold wintry wind and a disappointing view of our proposed route—bottomless powder too steep for snowshoes. We took to the windswept southwest ridge to the left of the normal route. Though windy and cold, the ridge offered good going until we reached some gendarmes halfway up. Rounding one of these we came to a steep couloir—powder snow over ice, the only difficulty on the climb. Above the couloir we found only long snow slopes blown hard by the wind. Now we could only see a few feet ahead, the weather having degenerated into a snow storm. Blowing snow had a nasty tendency to freeze our eyes shut. Eventually we came upon the (fortunately immense) summit cairn. A hasty search for the register produced nothing. For a while we contemplated some gigantic cornices which

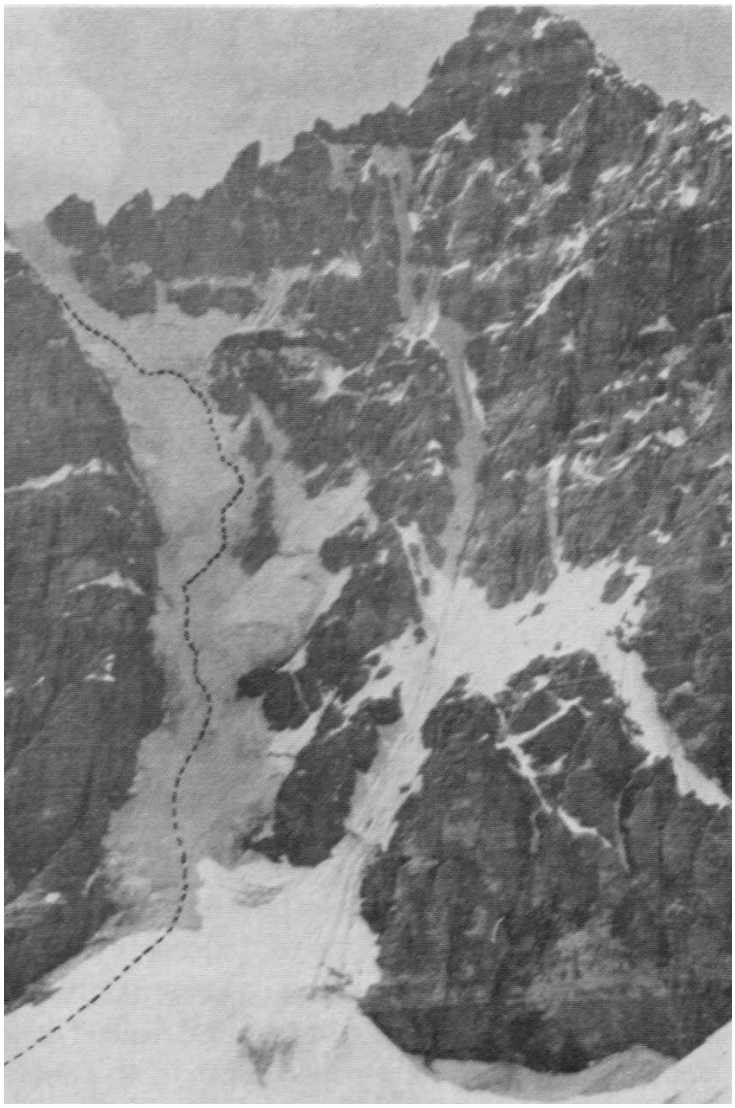
overhung to the east and listened to the wind, then turned around and began to descend. Thinking mainly of the Hot Springs at Banff, we retraced our route and arrived back at Lake Louise that same evening.

The Deltaform Glacier

By Glen Boles

When one looks from Moraine Lake at the impressive escarpment, The Ten Peaks, you can't help but be stirred by the momentous sight. From Mt. Allen (No. 5) to Neptuak Mtn. (No. 9), the wall of rock seems to have no weaknesses.

If you were to hike up the trail to Wenkchemna Pass, you would be very surprised on going as far as Eiffel Lake. From there you can see a spectacular hanging glacier tucked behind a sharp buttress on the northeast flank of Deltaform Mtn. This seems to be the only break, if you can call



Our Route On Deltaform Glacier, Taken From Near Eiffel Lake. Photo: Glen Boles

Brian Greenwood Approaching Top Of Sixth Rope Length. Photo: Glen Boles
On Which We Passed A Spectacular Serac, Part Of Which Is Visible On The Right.

it this, in the ramparts.

Brian Greenwood and myself had looked this glacier over in August of 1961, but owing to the dry year it was bare ice from bottom to top. We changed our minds and climbed Deltaform by way of Neptuak and the northwest ridge (see C.A.J. 1962). The route was not forgotten but we never seemed to make an effort to try it until the 1967 season. A few of the local climbers began to talk about it and by the spring of 1968 we were dislodged from our dreams and decided to give it a try.

Owing to the steepness and the fact that a lot of rockfalls and avalanches clatter down the northeast face of Deltaform onto this glacier in the early part of July, we decided to tackle it early in the year and at an early hour of the morning. We also decided if the snow on the east ridge of Deltaform were in bad condition from the morning sun we would simply climb the glacier for the route and traverse to the Graham Cooper Hut as best we could. The late spring of 1968 stalled our plans until June 22nd, but we found it in the best of condition except for a lot of new snow at the top.

Joe Farrand, Charlie Locke, Brian Greenwood and myself arrived on the Wenkchemna Glacier at 5 a.m. We peered anxiously up at the 2700 feet of snow and ice which looked steeper than ever in the early morning light. At 5:45 we started up the runout from the glacier. Our crampons bit into the ever steepening hard snow. We were able to climb 1100 feet before we roped up at our first problem, a small ice step. This we passed by using an ice screw. Above here we came out on an apron below the second icefall. The first two rope lengths on bare ice and hard snow followed the left side of a snow chute. The overhanging ice of the second icefall bulged out above us so we veered to the right, crossing the chute on the next rope length (4th). The following rope length (5th) on very steep hard snow brought us up under a spectacular slender sérac. The next pitch (6th)

passed the sérac on the right and we began to get into new snow over the older hard snow.

Sitting in the saddle-like belay above the spectacular sérac, the steepness of the slopes below finally penetrated my mind and I realized what an exciting climb we were on. The next rope length (7th) took us straight up a steep snow slope to the base of a 100-foot icewall. From here the route above appeared to be barred but after climbing diagonally up to the right (8th) on hard snow and ice we came to another saddle-like belay and all was well. We could traverse farther to our right under the icewall to a belay point in a horizontal crevasse. A 30-foot pitch on bare ice and a squeeze under an ice flake provided us with another of those spectacular belay points. We sat on the flake, tied to a screw, with our crampons braced against the icewall for stability. Manoeuvring around each other made us use the most delicate movements.

Steps were cut in the ice for the next rope length (llth) then as the slope eased we got into a lot of fresh snow and came out on the lower lip of a crevasse, overhung by a wall of ice. This we followed for about 250 feet to our left toward the middle of the glacier. Farther on we traversed a very steep slope hoping the new snow would not slide. This brought us into a bowl above the last of the ice hummocks off to our left. We were now above all the difficulties.

About 400 feet or maybe more of open slopes, which got steeper near the top, lay between us and the col. Slugging along, my pace got slower and slower travelling through the snow. By noon we had reached the top, in better time than we had anticipated. We hurried to the small summit on the top of the east buttress to slump down and relax in the ecstasy of our success.

It took us until 7 p.m. to traverse to the Graham Cooper Hut, only to find it full of snow. We shovelled most of it out and spent a fairly comfortable night after toasting our climb with tea and enjoyable climbing palaver. Every one of us agreed it was one of the most enjoyable snow and ice climbs we had done.

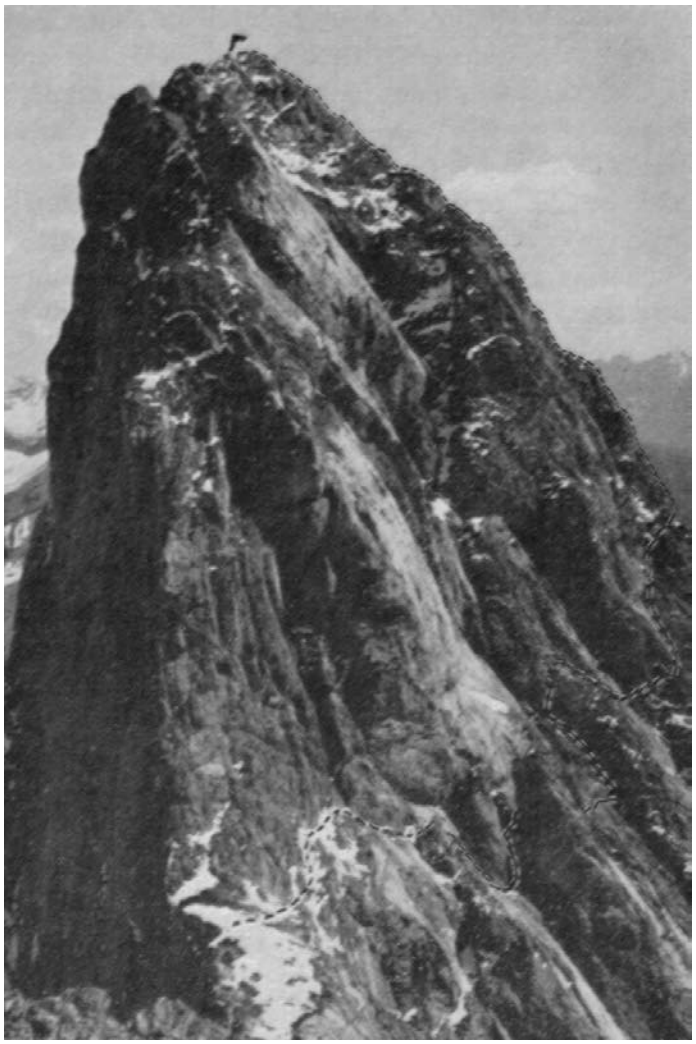
Mount Wintour

By Glen Boles

When driving the fire road in the Kananaskis Valley, the east side of the valley presents numerous peaks which would make any climber's imagination wander. As you proceed south and cross King Creek, the more spectacular peaks such as Mts. Blane, Burney, Jerram and Elpoca are hidden by a lower mountain which runs for about 2 miles along the east side of the road. This is Mt. Wintour. Previous climbing parties mounted the north (slightly west) ridge of Mt. Wintour and followed the very easy but spectacular ridge, rising gently for a mile or so to its highest point; here they turn and retrace their steps after taking in a tremendous view of the main spine of the East Kananaskis Range. To the south you gaze at a spectacular tower which happens to be the main summit of Mt. Wintour, in the Opal Range, Alberta.

Believing the main summit to be unclimbed, Ed Peyer and myself climbed the north ridge on a dull September day in 1968. Crossing the north summit we dropped 300 feet or so into the saddle to the south, where we stopped to eat and to look over the main summit tower.

Looking up from the saddle the north ridge of the tower turned out to be quite a problem, so we decided to traverse to the right and find an easier route. We traversed some 200 feet, and from our perch looked south at a large gendarme, above which a smooth slab rose for about 200 feet. On the far side of the slab a system of corners and gullies led out to the top of the west ridge. We decided this looked encouraging so we dropped down about 50 feet to the base of the gendarme



Main Tower Of Mt. Wintour. Photo: Glen Boles
Looking South From The Lower North Summit.

then climbed a short pitch on firm rock to the gap between the gendarme and the main tower.

From the gap, easy ledges skirted the bottom of the slab to a corner which had looked promising, but after a short ways up this we decided the overhangs higher up would require too much valuable time so we traversed two gullies to the south (right) and came out on the west ridge. The lower part of the ridge provided us with some fairly good rock which Ed enjoyably led; higher up the quality of the rock was much poorer. After six rope lengths and some scrambling we came out on the 9150-foot summit at 3:30 p.m. No sign of a cairn was visible so Ed's main concern was to build one. In it we left a canister and a register.

At 4 p.m. we left the summit, a bit concerned about the threatening weather which had completely enclosed the Kananaskis Valley to the north. We descended the same route we had climbed, making three rappels (on Ed's rappel rope and my 150-foot climbing rope tied together) along the way, arriving back by 5 p.m. at the point where we had started on the ridge. Choosing to descend straight down instead of going all the way around to the north summit we climbed down another 200 feet to a col, where gullies went to both the left and to the right. We took the one to the left (south), and after descending 400 feet or so we came to a drop-off, which we expected.

Our ropes barely touched the bottom of the gully below, so we were treated to a spectacular rappel down an absolutely smooth vertical slab (one of those you only see in pictures). On completing this rappel it began to rain; we hurried on, following the water course and making two more short rappels during our descent.

In the gathering darkness we came out on the grass slopes above the road, where we stopped for a last look at our route. I had spent a most enjoyable day with a fine companion.

The Third Sister-North Face

By Bob Cuthbert

In June 1968 Alice Purdey and I made the first ascent of the north face of the Third Sister (9600 feet) above Canmore, Alberta.

After quitting our camp at the side of Three Sisters Creek, we made our way up the long scree slopes to the saddle north of the Third Sister. After a short stop we dropped down out of the wind onto the slopes below the north face.

Above us rose two buttresses. The left-hand one was the more prominent of the two, rising steeply from the saddle to a large step and then continuing as a narrow crest to the top. The right-hand one, which was our objective, was less well defined but gave a more direct route to the summit.

After trudging up some more snow-covered scree we gained the foot of the buttress. Here we roped up and were soon tackling the first of the difficulties, an iced-up gully. I took the first lead and soon found myself scrabbling for invisible holds covered by the newly fallen snow. With a little bit of step cutting and with a couple of pitons for protection I reached the top of the gully.-From here we climbed up to gain the crest of the ridge which was followed until we reached a large ledge about halfway up the face. The next section was the hardest of the climb. After Alice had secured herself to a bomb-proof peg I started up the wall. The first section was over a rotten overhang with crumbling handholds to a steep wall which was topped by another overhang. Before starting the second overhang I managed to place a short peg which gave me the necessary confidence to tackle the overhang, which was also climbed free. Another 30 to 40 feet of hard climbing and we were back on easier ground.

We followed the ridge until it merged into the face, where we continued by a series of ledges trending leftward to gain the northeast ridge. We were very close to the top now but proceeded very carefully as the snow was very unstable and the ridge heavily corniced. We reached the summit in worsening weather at 6:30 p.m. after 11 hours of climbing.

Notes From The Northern Selkirks

By Robert Kruszyna

Leigh Andrews, my wife Harriet, and I helicoptered in to the Sir Sandford Hut last July, where we enjoyed a week of fine weather and even finer climbing. Subsequently we packed to Fairy Meadow to join the Club's Alpine Climbing Camp for more superb mountaineering. Following are some comments and observations on the climbing in this spectacular area. On our climbs of Mt. Sir Sandford and of Ravelin, we tried both approaches to the Ravelin-Sir Sandford Col, east and west. In our view, the most direct and technically easiest is from the east, as described in the

guidebook under route 3 on Sir Sandford The approach from the west is longer and involves some nasty scrambling on poor rock just below the col. In the col between Sir Sandford and Vidette stands a startling obelisk of compressed gravel called Minaret. Leigh and I climbed as high as feasible on this peak without using the paraphernalia of the rock engineer. We recommend to those interested in this unclimbed pinnacle that they be equipped with modern hardware, including extra long expansion bolts, and a good sense of humour. The rock is, to be charitable, extremely soft and friable.

We ascended Silvertip Mtn. by its northeast ridge from Belvedere Col (probably a new route), descending by the normal southeast ridge route to Haworth Glacier. This traverse is a lovely, easy, and short climb from the hut.

The south ridge of East (Big) Blackfriar proved the most interesting route we climbed from the

Sir Sandford Hut. Above the icefall of the Silvertip Glacier, one gains the ridge at any one of several convenient places. At the point where the ridge abruptly steepens, there follow several technical rock pitches, one class 5 and a few class 4. After a few hundred feet, the climbing eases to a scramble in a spectacular ambience. Descent is easily made en rappel by the same route. We highly recommend this thoroughly enjoyable route.

With Robert Burns of Calgary, we made a first ascent of the northwest ridge of Quadrant Mtn., christened the "Rabbit-Ears Arête". This pleasant and moderate route proved popular at the camp.

Our fondest hope was gratified when Leigh and I completed the traverse of Adamant Mtn., Turret Peak, and Austerity Mtn. while at the camp. We approached the peaks via the Turret Glacier between Adamant and Austerity. Two modest ice pitches led us to the base of the great overhanging ice wall blocking direct access to the Adamant-Turret Col. A sensational steep and exposed pitch to the right passed this obstacle. From the col, we ascended the steep but broken rocks to the summit of Adamant. Returning to the col, we climbed Turret by its glorious arcing snow ridge. After three rappels, we gained the Turret-Austerity col, from which a delightful rock scramble brought us to the summit of Austerity. In our opinion, this beautiful, mixed, and moderate climb is the premier route in the Adamant massif. That day certainly was the finest experience of my mountaineering career.

East Ridge Of Mount Sir Sandford

By Ted Church

During an 18-day July trip to the Northern Selkirks we were fortunate enough to make the first ascent of the east ridge of Mt. Sir Sandford and to make what is believed to be the second crossing of the Austerity Glacier. (Palmer reported an ascent of Austerity via this glacier in 1911.) From our camp on the glacier we scrutinized the faces of Turret, the Black Friars and Austerity which present formidable 3000-foot Yosemite-type rock-wall climbs. We followed Palmer's route toward Austerity but were forced to limit our objective to Iron Man due to extremely icy conditions. The valley is certainly one of the most attractive mountain locations to be found in Canada.

Our ascent of Sir Sandford began from the Great Cairn Cabin. On the first day our party of five, consisting of Chuck Loucks, Art Fitch and Ted Church as the summit party and Jim Ingham and Earlyn Dean as the support team, packed to a high and windy camp at the Footstool, 10,000

feet. On July 10th at 6:30 in the morning the summit party left the camp, crossed over the Footstool to the bergschrund, which was crossed on the left.

The climb proceeded up the corniced ridge on firm snow to the first rock band. Climbing was continuous on a single rope with the protection of snow pickets. The first rock pitch led straight up the gully slightly to the left of the snow ridge and to the left of a piton and carabiner left by the Church party in 1967. (The snow was higher this year enabling the party to climb straight up rather than being forced to traverse sharply to the right at this point.) The third pitch continued up a 70° gully of mixed ice, snow and rock requiring four pitons and nut wedges for protection. The rock is worthy of mention as unlike most of the Selkirks it is a grey, coarse-grained conglomerate of very unstable consistency. Pitons can be driven straight into the rock, crumbling it. This pitch took well over an hour and required severe climbing in crampons. Another 50-foot pitch up the gully regained one piton for protection with several awkward traverses to the left and ended with the first solid belay around a large block of rock.

The next pitch led up 20 feet to a 20-foot left traverse to arrive at a sharp ridge which was ascended a cheval to an uncomfortable notch in the ridge. This required four pitons and one or two slings.

We had now arrived at the second and steeper, to our alarm and surprise, snow ridge, which was double corniced like the Cordilla Blanca and 450 feet long. It was climbed continuously with the protection of pickets or nuts placed in protruding rocks. Snow conditions up the 450-foot ridge were fair, being soft and rotten in places. Due to the fact that we were climbing on a windy and snowy day with rather cold weather the snow was probably better than it might be on a clear sunny day. The last difficult rock pitch maintained the climbers' interest with a 30-foot hand jam followed by a friction slope. The leader carved the handholds with his fingers. Several pitons and nuts were used on this pitch which was estimated to be at least a class 5.5 on solid rock.

The remaining 75 feet to the summit ridge were easy and done without belays. Although corniced with mixed rock and snow, the summit ridge was comparatively easy, and the summit was attained about 8 p.m. As none of the party wished to contemplate the thought of returning down the east ridge we proceeded down the standard route, bivouacking at the Hourglass. The snow was soft on the Hourglass over watery ice causing treacherous conditions. The following morning we rapelled over the gendarme and continued down the normal route and reascended to the Footstool camp. That night approximately 10 inches of snow fell, making the route inconceivable to our party. We concluded that the snow conditions were critical to the success of this classic route.

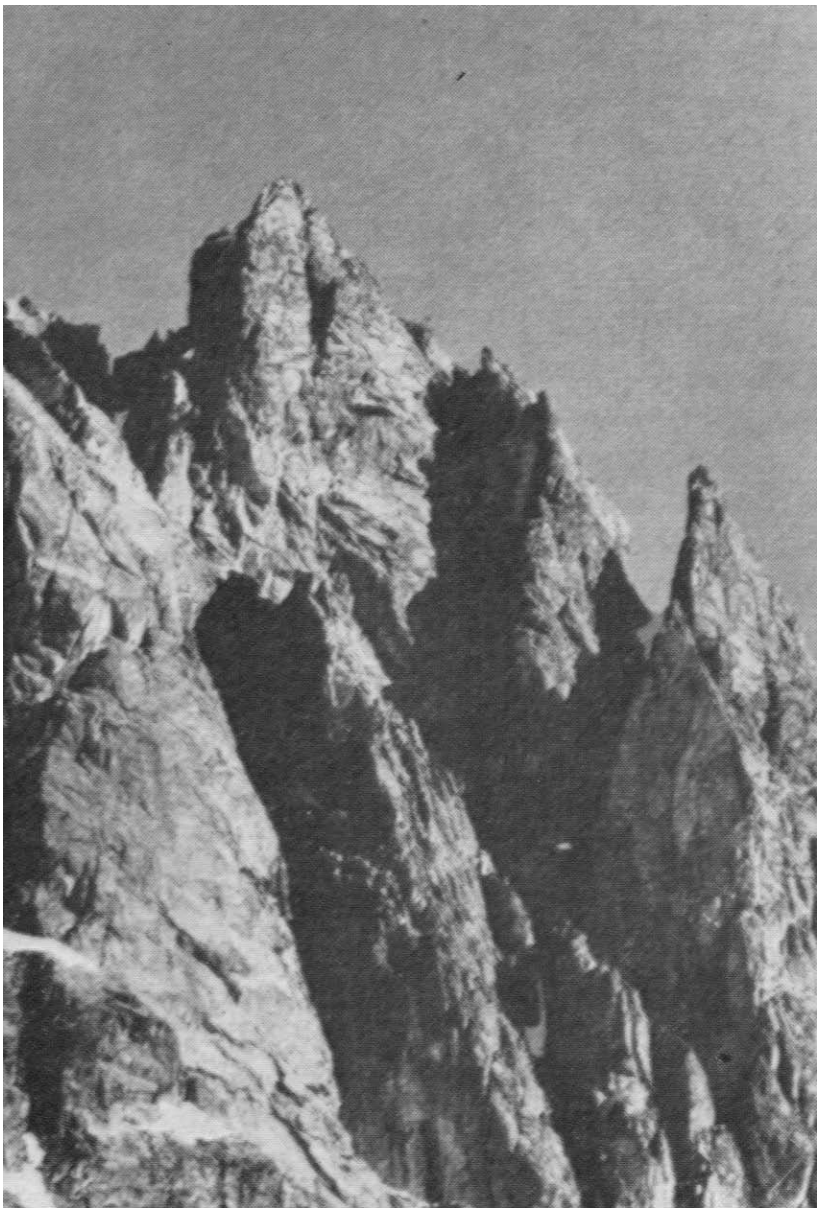
Four New Routes In The Tantalus Range

By Bob Cuthbert

Often on my way to climb on the Squamish Chief I would look across Howe Sound to the Tantalus peaks and recall my friends' stories of fantastic walls and ridges waiting to be climbed, for although for 3 years I had lived in Vancouver which is only 30-odd miles away, I had never visited the Tantalus Range. But in 1968 I finally made it.

One day early in June, Alice Purdey and myself plowed our way to the Alpha-Serratus Col through knee, and sometimes thigh-deep porridge-like snow, where we bivouacked.

Shortly after dawn we dropped down onto the slopes on the north side of Alpha Mountain and after wending our way through some minor crevasses reached the northeast ridge. This ridge



Mount Tantalus Upper West Wall. Photo: Dick Culbert

had presumably not been climbed before, probably because of the long approach to it.

The first part of the ridge consisted of five rock towers which gave some very enjoyable climbing; a couple of pitches were 5.0-5.2. The descent from all the towers except the last one required abseils. From a wide saddle about halfway up the ridge we figured we were only seven or eight rope lengths from the top. How wrong we were! As it turned out, we had twice this number to go. Due to the rotten snow we floundered and swam rather than climbed the rest of the ridge. It was shortly before midnight when we reached the top and after a short rest stumbled our lampless way down the west ridge to our bivouac site.

In July we were back again. This time we were joined by Gery Kozel also of Vancouver. Our objective was the west face of Mt. Tantalus.

From our camp on the west shoulder of Mt. Dione, we climbed down into the cirque below

the west face and after crossing the remains of a large avalanche gained the base of the buttress bounding the left-hand side of the central gully. We climbed the buttress by a series of ledges, grade 3-4, sometimes climbing together to save time. From the top of the buttress we made a short abseil into a gap and after climbing a rubble-filled gully gained a large terrace which ran all the way across the face. We traversed along this terrace to its northern end where a short chimney pitch brought us onto a steep rib which ran to the top of a prominent rock needle. The rock on this section was very sound and gave some good free airy climbing.

A deep gap seperated us from the final summit ridge.

A long, 150-foot free abseil took us into the gap. the climb out of the gap did not look too difficult and it wasn't until I had climbed the first 20 feet or so that I realized what I had let myself in for. The various contortions and acrobatics I employed to overcome this pitch took 3 1/2 hours to climb 70 feet of rock, all of which was done free! When I at last reached the top of the pitch, I hammered in two very solid pitons and flopped down trying to get my breath back and to unjangle my nerves. To save time, as the sun was now setting, Alice and Gery jumared up the rope. Gery went into the lead and after an hour's climbing we reached the summit in the dark. 150 feet down the east face we bivouacked.

Next morning we returned to the summit to leave a record of our climb before going down to camp for a well earned rest.

Next day we climbed the west face of Mt. Dione. It was a nice, easy, relaxing type of climb with large, comfortable belay stances and nothing above grade 4. We made a short side trip to climb a little rock needle. It took quite a bit of courage to stand on its boot wide summit with an almost 2000-foot drop below, while somone took hero shots with their camera. After some more easy climbing a clean-cut Chamonix-type corner took us onto the summit crest only 10 feet from the cairn.

Early one August morning found Gery Kozel and myself making our way through the headwall of the Lake Lovelywater cirque, our objective this time being the east face of Mt. Lydia. A week earlier Gery had tried to climb the wall but had been turned back by darkness.

This time, after roping up, Gery made the long step over the bergschrund onto the wall. The climbing was easy for the first few pitches and with Gery's knowledge of this part of the face we made good time. Our rapid progress was brought to a halt by a very steep wall. A long traverse to the right followed by and equally long ascending traverse to the left took us around the difficult section. A little higher a very narrow chimney proved to be the crux of the climb.

Lying sunning ourselves on the summit of Lydia we looked around us at the peaks of the Lake Loveleywater cirque, tracing imaginary routes up the ridges and faces as yet unclimbed and making plans to return next year to turn these imaginary routes into reality.

Some New Routes Near Vancouver

By Dick Culbert

North Faces of the Western Lion and Mt. Harvey

Considering their accessibility so close to Vancouver and generally good rock, these two walls have been receiving undeserved peace. A very nice route was put up the main wall of the Western Lion 2 years ago by Alice Purdey and myself, sticking to the right of face center on good, blocky gabbro in the upper parts. A route by Doug McRae and myself this summer (1968) on the

northeast buttress turned out to be comparitively unaesthetic. The "Pups Butt", the casual name for the main northern butress of :harvey's Pup", descends immediately adjacent to the couloir cutting the Pup from the main summit of Mt. Harvey. This was climbed by Alice Purdey, Bob Cuthbert, Gery Kozel and myself, proving to be a most pleasant route. Starting at the outlet of the couloir, ascend overhanging rock to roof, traverse right and do next lead up a chimney. After crossing easy slabs above, there is an impressive overhang-come-gulley affair which required an aid pin (the first) and is followed by a lead and a half of pleasant class 5 crack climbing. A mossy exit pitch at this point may be avoided by a three-pin aid crack to right. A main ledge beyond and three more leads on the broken summit nose completes a very reasonable climb (class 5.6 A2).

The Squamish Chief - Prow Route

The prow is another of those routes on "The Chief" whose numbers have been subject to a population explosion, and it goes through an assortment of roofs and corners to the left of upper South Gulley. It does, however, have a few distinctive features. To begin, with, it is likely the most unpleasant of all Chief routes to reach the start of, and it is about all Bob Cuthbert and I had time to find out about the first day up there. Next weekend we nailed up to under a final jutting prow, where three possible routes diverged. After partly nailing and denailing tow of these we called it a day and bivouacked, which brought about the other novel event. During the night Bob's boot laces let go and he lost a boot.

Next weekend we rappelled in from the top and completed the climb, which is aesthetic in that cracks are good, overhangs prominent, and the photographic opportunities excellent by Chief standards.

Edge Mountain - North Wall of the East Peak

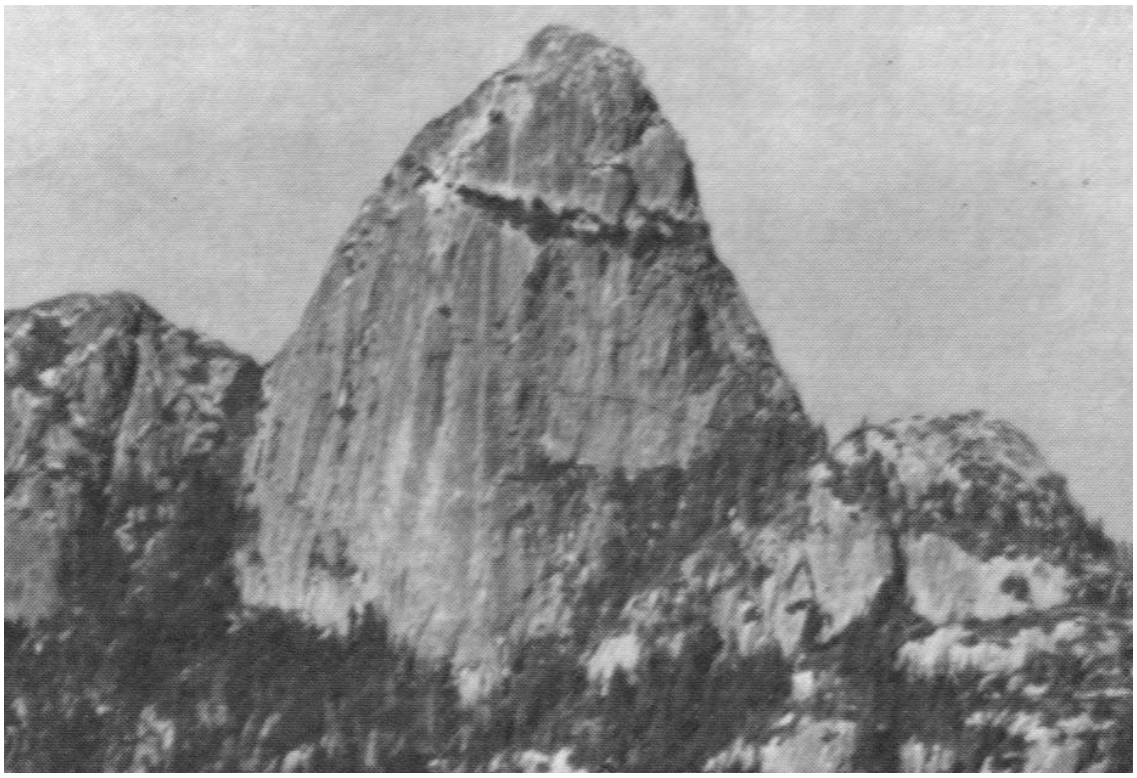
The east peak of Edge Mountain in the Golden Ears Group 10 miles NNE of Haney, is cut from the main massif by a deep and dastardly chasm. To the north there forms a corner between north and northwest faces. Our party (Dave Harris, Brian Moorehead, John Rance and I) forded Gold Creek one evening this summer (1968) and started for the wall at dawn.

A major gut collects under the northwest wall of Edge's main peak, but veers out to allow a sharp shoulder to potrude from the eastern summit. The route went from this shoulder, starting to the left near the forementioned corner. The first pitch was ugly: bad bush and greasy rock. Weather was poor. All but the ^weather improved dramatically, however, and most of the climb was on steep gabbro, reduced to class 4 by magnificent holds. Only a couple of moves were really class 5. The route is forced to an apex, then cuts through a wall beyond and onto an easier angle on the upper face. Here we cut to the right across a groove to complete the route below the summit rocks. It was a recommendable (class 5.1) climb, or would have been had it been over—but it wasn't. There was the problem of descent.

The east peak is one of those obnoxious summits that just doesn't have an easy way down. On its first ascent we had crossed the gorge to the main peak, but that was a very distasteful memory. This time we climbed and rappelled northeast down the main divide, but were stopped by a chasm with overhanging far wall, and did not get back to our packs until after dark.

Mt. Habrich—The Gambit Grooves

The western and southern exposures of Mt. Habrich, about 4 miles southeast of Squamish, are easily reached (one hour from road) and present some of the nicest rock climbing in the Vancouver



Mount Habrich Southwest Face. Photo: Dick Culbert

area. Despite this, only one route had been put up previous to 1968. During a 1968 summer B.C. Mountaineering Club trip, Manifred Putz and Gernot Walter started up a very sporting line just to the left of the classic southwest nose, and got up two leads before being turned back by cold rain.

Two weeks later Bob Cuthbert, Tom Hall and myself returned to their route near the nose. The first two leads involved a class 5.6 overhanging chimney and slabs beyond, which must have been dicey in the rain. Shortly above we chose the left of two possible lines, which may have been a mistake. Thirty feet of nailing through an overhang was the only aid and several leads of mixed class 4 and 5 followed on lovely rock. Tom did the final lead, pushing the hardest climbing of the route on a groove and slab system with poor protection. In retrospect this is one of the nicest climbs available in a day from Vancouver. The rock is corroded in places, but rough and excellent. When seen from the Sky Pilot group, the route looks like a nailing job all the way, and it is surprising that only one aid pitch was involved (5.7, A2). It is 800 feet long and almost continuous class 5.

The next day we did the north face of Co-Pilot, a pleasant climb of three leads on reasonably good rock to right efface centre. Overhanging cracks on the final section provide entertainment (class 5.5).

Hozomeen Mountain-The Southwest Face

Bv Dick Culbert

The impressive southern walls of Hozomeen's north peak, in the Cascade Range of northern Washington just south of the International Boundary, drop some 3000 feet toward Hozomeen Lake

and are visible also from the Ross Lake Road. The first attempt on this wall was made by Bob Cuthbert, Gery Kozel, Alice Purdey and myself in mid July, 1968, but was drowned at the base by bad weather. Alice and I returned in mid August with 3 days' supplies, and this time the weather was obliging.

It is a 3-hour pack to the base of the walls at 5000 feet or so. The initial bluffs may be turned on the true divide of the northwest nose and only scattered resistance is offered until 5500 feet. At about 6000 feet we were brought up by a large roof in a chimney. Three aid pins here proved to be the only artificial climbing required in the whole wall, although the menacing bulges above gave us little hope at this time. Shortly beyond we bivouacked on a major ledge which cuts under the largest of the cliff bands at about 6500 feet. This is about 800 feet high and a bilious yellow-green in colour due to lichen growing profusely where protected by overhangs. Before dark we found a gully on up, with a hopeful looking right fork.

With dawn we started up the trough. Rock continued to be reasonably good, steep but lots of holds. All but the first pitch involved class 5, and at the top we emerged on the great nose which displays the spectacular (and unclimbed) "Untouchable Towers". These we bypassed to the right and ascended the gully beyond to the notch behind the highest. As there were still 600 feet to go, and as it would now require a full day to rappel out if we met an impasse, we reluctantly forewent these class 6 virgins and took off up the final face. Two leads up we discovered a gully—a surprisingly easy gully, which led rapidly to the south ridge just below the summit. By noon we were on top.

Alas, we had only Kletts and running shoes, and getting down off the peak was a time-consuming problem. The long thrash to the Skagit River caught us for a second bivouac about an hour from the road. In retrospect, it was easier than we had expected, but a most beautiful and rewarding climb (class 5.5, A2).

1968 Published Or Advance Map Sheets, British Columbia

Compiled By John O. Wheeler And Neal M. Carter

A note on pages 145-150 of the 1966 volume of this Journal introduced the intention of publishing annually in the Journal a list of new or revised Canadian map sheets of possible alpine interest that became available during the past 12 months from the Canadian Federal or Provincial Governments. That note explained the Canadian National Topographic System of designating map sheets, illustrated portions of some Map Sheet Indexes for locating the areas covered by the various map sheets, gave information concerning scales and nature of the various types of maps, and indicated which detailed maps of alpine areas were not yet available up to the end of 1965. Lists of new maps issued in 1966 and 1967 were published on pages 82-83 of the 1967 Journal and on pages 211-213 of the 1968 Journal, respectively.

Map Sheet Indexes for all parts of Canada are available free upon request from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa; Map Sheet Indexes for the individual Provinces are similarly obtainable from appropriate Provincial Departments (e.g. for British Columbia from the Surveys and Mapping Branch, attention: Geographic Division, Department of Lands, Forests, and Water Resources, Victoria, B.C.). These annual Indexes indicate all areas already mapped, and give prices of the maps. Copies of Map Sheet Indexes, and of many of the maps themselves, are also available from, or may be consulted at, certain local Government offices (e.g. Canadian Geological Survey; Government Agents; Provincial Land Commissioners;

Canadian Government Queen's Printer Bookshops in Halifax, Montreal, Ottawa, Toronto, Winnipeg and Vancouver). Maps ordered from the B.C. Provincial Government in Victoria require a 25-cent "handling charge"; and a 5% sales tax, when applicable.

The following are among the new or revised British Columbia map sheets that have become available during 1968 and to March 1, 1969. The Canadian National Topographic System reference is followed by the map sheet name, and the type of map edition in parenthesis. Further details are given in the annual Federal and Provincial Map Sheet Indexes. National and Provincial Park maps are also available.

1:250,000 scale, published. B.C. Government. 60 cents per sheet

92E—Nootka Sound (road revision, 1967)
92M/102P— Rivers Inlet (2nd status)
93C —Anahim Lake (2nd status)
93F —Nechako River (2nd status)

1 inch to 2 miles scale, published. B.C. Government. 60 cents per sheet

82L/NW — Shuswap Lake (2nd status)
82L/SE —Sugar Lake (2nd status)
92I/SW —Lytton (2nd status)
92I/NE — Kamloops Lake (2nd status)

1:50,000 scale, published. Federal or B.C. Government. 30 cents per E or W sheet

82E/3 E&W—Osoyoos (1st)
82E/5 E& W—Penticton (1 st)
82E/6 (1 sheet) —Beaverdell (2nd)
82E/7 (1 sheet)—Almond Mountain (1st)
82E/9 (1 sheet) —Burrell Creek (1st)
82E/10 (1 sheet)—Christian Valley (1st)
82J/6 E&W—Mount Abruzzi (1st)
82J/11 (1 sheet)—Kananaskis Lakes (1st)
82J/12 E&W—Tangle Peak (1st)
82f/13 E&W—Mount Assinibome (1st)
82K/16 (1 sheet) — Spillimacheen (1st)
82L/1 (1 sheet)—Eureka Mountain (1st)
82L/4 E&W—Shorts Creek (1st)
82L/5 E&W—Westwold(lst)
82L/7 E&W—Shuswap Falls (1st)
82L/8 E&W—Mount Fosthall (1st)
82L/9 E&W—Gates Creek (1st)
82L/10 E&W—Mabel Lake (1st)
92H/8 (1 sheet) —Hedley (1st)
921/2 (1 sheet)—Merritt (1st)
921/7 (1 sheet)—Mamit (1st)
921/8 (1 sheet) —Stump Lake (1st)
921/12 E&W—Lillooet(lst)
921/13 E&W—Pavilion (1st)
92L/9 E&W—Minstrel Island (2nd)
92L/10 E&W—Alert Bay (1st)
92L/15 E&W—Broughton Island (2nd)
92L/16 E&W—Kingcome Inlet (2nd)
82E/13 (1 sheet) — Peachland (1st)
82E/14 E&W— Kelowna(lst)
82E/15 E&W — Damfino Creek (1st)
82E/16 E&W— Edgewood(lst)
82F/3 E&W— Salmo (2nd)
82J/3 E&W— Mount Peck (1st)
931/14 E&W— Kmuseo Falls (1st)
931/16 E&W— Redwillow River (1st)
93J/9 E&W— Hominka River (2nd)
93J/10 E&W— Tacheeda Lakes (2nd)
93O/6 E&W— Morfee Lakes (1st)
93O/8 E&W— Le Moray Creek (1st)
93O/11 E&W— Cut Thumb Creek (1st)
93O/12 E&W— Blackwater Creek (1st)
93O/14 E&W— Point Creek (1st)
93P/2 E&W— Flatbed Creek (1st)
93P/5 E&W— Burnt River (1st)
93P/6 E&W— Gwillim Lake (1st)
94A/4 E&W— Hudson Hope (2nd)
94A/5 E&W— Ground Birch Creek (2nd)
94B/7 E&W— Hacknev Hills (2nd)
94B/8 E&W— Kobes Creek (2nd)
94B/10 E&W— Chowade River (2nd)
94G/4 E&W— Mount McCusker (1st)
94G/5 E&W— Redfern Lake (1st)
94O/1 W — Sahtaneh River (1st)
94O/3 E— Stanolind Creek (1st)
940/12 E&W— La Jolie Butte (1st)

92M/3	E&W—Belize Inlet (1st)	94O/13	E— Sandy Creek (1st)
92M/4	E&W—Cape Caution (1st)	94O/14	E&W— Maxhamish Lake (1st)
92M/5	E&W—Goose Bay (1st)	94O/15	E&W— Emile Creek (1st)
92N/1	E&W—Chilko Mountain (1st)	94O/16	E&W— Stanislas Creek (1st)
92N/7	E& W—Mt. Queen Bess (1st)	94O/16	E&W— Stanislas Creek (1st)
92N/9	E&W—Tatlayoko Lake (1st)	103I/11	E&W— Exstew River (1st)
92P/13	E&W—Chimney Lake (1st)	103I/12	E&W— Khutzeymateen River (1st)
93C/5	E&W—Atnarko (lst)	104I/12	W— Halfmoon Lake (2nd)
93D/8	E&W—Stuie(lst)	104K716	E— Nahlm River (1st)
931 /5	E&W—Otter Lake (1st)	104N/1	E&W— Nakina Lake (1st)
931/6	E&W—Spakwaniko Creek (1st)	104N/3	E— Sloko River (1st)

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92O/3	E&W— Warner Pass	93K/11	E&W — Cunningham Lake
920/4	E&W — Tchaikazan River	93K/12	E&W — Pendleton Bay
92O/5	E&W— Mt. Tatlow	93K/13	E&W— Tochcha Lake
92O/6	E&W— Nadila Creek	93K/14	E&W — Trembleur Lake
920/7	E&W — Chum Creek	93K/15	E&W — Inzana Lake
92O/10	E&W— Gaspard Creek	93K/16	E&W — Tezzeron Creek
920/1 1	E&W— Big Creek	93L/15	E&W — Driftwood Creek
920/12	E&W— Elkin Creek	93L/16	E&W — Fulton Lake
93K/7	E&W— ShassMtn.	93M/1	E&W— Old Fort Mtn.
93K/8	E&W — Fort St. James	93M/2	E&W— Harold Price Creek
93K/9	E&W— Pmchi Lake	93M/7	E&W— NetalzulMtn.
93K/10	E&W — Stuart Lake	93M/8	E&W — Nakinilerak Lake

1:40.000 ar.d 1:50.000 scale, advance ozalid prints. Federal. Prices vary.

83D/9	E&W — Ptarmigan Creek	93C/10	E&W — Downton Creek
83D/10	E&W — Amethyst Lake	93C/1 1	E&W — Christensen Creek
92G/10	E&W — Pitt River	93C/12	E&W — Tusulko River
92G/15	E&W — Mamquam Mtn.	93C/13	E&W— Ulkatcho River
92G/16	E&W— Glacier Lake	93C/14	E&W — Comlick Creek
921/4	W — Lytton W	93C/15	E&W — Kushya River
921/5	W — Stein River W	93C/16	E&W — Toil Mountain
92J/3	E&W — Brandywine	93D/9	E&W — Tahyesco River
92J/9	E&W — Shalalth	93D/10	E&W — Swallop Creek
92P/6	E&W — Green Lake	93D/15	E&W — Kimsauit
92P/16	E&W— Mahood Lake	93D/16	E&W— Sigutlat Lake
93A/3	E&W— Murphy Lake	93E/1	E&W — Oppy Lake
93A/4	E&W— 150 Mile House	93E/2	E&W— Tesla Lake
93C/3	E&W — Charlotte Lake	93E/7	E&W — St. Thomas River
93C/6	E&W — Anahim Lake	33E/8	E&W— Tlutlias Creek
93C/9	E&W — Clusko River	93E/9	E&W — Chitezli Lake
93E/10	E&W—Whitesail	94N/2	E&W—Scaffold Creek
93E/15	E&W—Nadina River	94N/3	E&W—Eight Mile Lake

93E/16	E&W—Wistaria	94N/8	E&W—Nelson Forks
93F/1	E&W—Suscha Creek	94N/9	E&W—Catkin Creek
93F/2	E&W—Tsacha Lake	94N/10	E&W—Scatter River
93F/3	E&W—Fawnie Creek	94N/11	E&W—Bulwell Creek
93F/4	E&W—Qualcho Lake	94N/13	E&W—Thorpe Creek
93F/6	E&W—Natalkuz Lake	94N/14	E&W—Beaver Creek
93F/7	E&W—Chedakus Creek	94N /15	E&W—Crow River
93F/8	E&W—Euchiniko River	103O/1	E&W—North Price Lake
93F/9	E&W—Tatuk Creek	103P/2	E&W—Lava Lake
93F/10	E&W—Big Bend Creek	103P/3	E&W—Tseax River
93 F/11	E& W—Cheslatta Lake	103P/4	E&W—Greenville
93F/12	E&W—Manila	103P/5	E&W—Observatory Inlet
93F/13	E&W—Takysie	103P/6	E&W—Aiyansh
93F/14	E&W—Knapp Lake	103P/7	E&W—Kiteen River
93F/15	E&W—Hallett Lake	104J/6	E&W—Beatty Creek
93F/16	E&W—Nulki Lake	104J/7	W —Little Tuya River
93H/7	E&W—Goat River	104J/9	W —Little Dease Lake
93H/8	E&W—McBride	104J/10	E&W—Tachilta Lake
93H/9	E&W—Mount Rider	104J/11	E&W—Granite Lake
93H/10	E&W—Loos	104J/14	E&W—Kawdy Creek
94K./15	E —Stone Mountain	104J/15	E&W—Calata Lake
94K/16	E&W—McLennan Creek	104J/16	W —Porter Landing
94.N/1	E&W—Dunedin River	104M/11	W —White Pass

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MEMBERS ABROAD

A Trek In Nepal

By Len Chatwin

Editor's Note: Len and Norma Chatwin have been resident in New Delhi, India, for just over two years and expect to be there until May 1970. On a 6-week business trip around the world in September-October 1968 Len took the opportunity of making an aerial photographic swing around the Mts. Cook and Tasman massifs in New Zealand, and of visiting Grindlewald and Zermatt during his first visit to Switzerland. Shortly after he returned to New Delhi, Norma and he took a trip in Nepal, which they described in their Christmas 1968 message to friends in the Club

and to relatives. The following are excerpts from those messages:

We have just come back from the greatest adventure of all—a 20-day trek in incredible Nepal, a region so delightfully behind the times that it can be toured only on foot. At no time in our lives have we ever had such a thrilling experience. It wasn't a case of going on a long tedious walk to get somewhere. Every day of the 20 was full of different experiences and the landscape and the people were ever changing. We walked about 160 miles and climbed and descended tens of thousands of feet.

The trip commenced with a 2 1/2-hour flight from New Delhi to land at sundown in Kathmandu, where we were joined by David Cohen, a young chap from Victoria at present an Immigration officer at the Delhi High Commission. Next morning we took the 40-minute flight to Pokhara in a plane which had all the baggage strapped down the middle and we sat or crouched on benches down the sides. We were met by our sirdar, Sona Ishi, who has climbed to the third last camp on Everest. He is a young Sherpa, clever, highly efficient and a lot of fun. We were able to communicate in English. He, two other Sherpas, Ang Tsering and Dorje, plus six porters from a Tibetan refugee centre, looked after our every need. These three irrepressively gay Sherpas, and the porters with their character-filled faces and unfailing good humour, even under 70-pound loads and over rough trails constantly gaining and losing altitude, made remarkable company. They did such a good job that none of us had any sickness; in fact our only minor discomfort was the odd blister but we were well prepared for that.

Starting from Pokhara and doing an average of 10 miles a day, we walked through rice fields, forests and villages, from valley to valley, over passes and along steep river gorges, beside such famed giants as Dhaulagiri and Annapurna, until we reached remote Jhomson where the country takes on the barren but grand look of Tibet. Every night brought a new camp site in especially beautiful surroundings. Each day our interest and astonishment were kept at a high level while we observed the ways of life of the friendly and very likeable people—the primitive methods of tilling and harvesting; the variety of villages and styles of houses; trains of mules decorated and harmoniously belled guided by colourful Tibetan muleteers; mani walls and prayer wheels; 6-foot-wide streets with a fantastic parade of inhabitants human and animal; files of heavily loaded barefoot porters including women wearing bright orange beads and nose rings; yaks grazing in the high pastures. And nature contributes endless species of birds, flowers and trees, avalanches and alpenglow and exhibits a transition from tropical to alpine which is uniquely sudden—we were taking pictures of poin-settia, orange and lemon trees against the slopes of 26,000-foot peaks!

There is no denying the suffering of the villagers through lack of medical facilities. Yet somehow one takes heart that here amid great beauty live a charming and cheerful people unaffected by the gross ills of modern society.

To trace our varied experiences would take a book, so let me give just a few of our impressions. Suppose I describe our sixth day when we hiked from Eeorali Pass (9000 feet) to Tatopani (4000 feet). As usual we were up at 6 a.m., tea and biscuits at 6:30 with porridge. At 7:15 camp had been lifted and we were off. Within a half hour we came in sight of Dhaulagiri, the ninth highest peak in the world, 26,810 feet. It stands by itself and rises straight up from the valley floor as a huge white block—the beauty of this sight took our breath away. We were later to pass right beneath it and to witness the largest avalanche any of us had ever seen. An hour or so later we came to the tiny village of Chitre where the views of Dhaulagiri and other Himalayan giants were staggering. As usual about 10 a.m., in a very picturesque spot we stopped for our 2-hour siesta and brunch. This soon proved to be by far our favourite meal of the day, when we stuffed ourselves.

For our meals they would spread out a huge canvas ground-sheet and we would bask in the sun and rest as we waited for them to cook up the meal on the campfire in the open. We would take off our boots and rest our feet. We all became healthier than we'd been in years and our bodies soon were very fit. Deep breathing and puffing the fresh mountain air was like running a vacuum cleaner through our lungs. On this day as on others we passed through many villages and always the people are interesting. We were ever fascinated with their activities—weaving, threshing the millet by hand, grinding grain; and in the fields, plucking the millet heads by hand, cutting the rice with a little hand sickle, carrying the grain from the fields on their backs to be hand threshed outside their homes. Picture subjects were so numerous that Norma and I took altogether well over 700 Kodachromes. For instance, who could resist a close-up picture of Dorje on this day. In his pack was a live chicken looking at him somewhat disconcerted and he with his roguish face—our dinner that night in Tatopani! We made a large steep descent to the gorge of the Kali Gandaki River, then proceeded to follow it north, which several days later was to bring us to Jhomson.

We camped that night a little beyond Tatopani and had a dip and wash in the cold Kali Gandaki. Tatopani means "hot water" and there are hot springs there. On our return journey we camped the other side of Tatopani in a rice field right by the springs. Here we had a marvellous bath in the hot pools. Actually at camp each night and each morning the Sherpas provided us with a pail of hot water and basin for washing. It was dark each night by 6 o'clock so we were often to bed by 7:30 or 8. Sometimes we had campfires when there was wood available.

North of Tatopani one constantly sees mule trains carrying bags of salt from Tibet and returning with grain. One morning we came to a village which was a mass of mules being harnessed and we had a ball taking pictures. The harness is highly decorative and colourful. Even the padding under the harness is like an oriental rug it is so beautifully done. Many of the mules are decorated with huge red plumes above their heads and below their chins and they all have bells with different notes which create quite a musical effect. The Tibetan muleteers are themselves very colourful.

Our route took us right through the Himalayan range and into the barren hills similar to those in Tibet. In this area we saw many travellers from Mustang (a tribal area of Nepal bordering on Tibet). These simple people were very distinctive, interesting and friendly. On our way up we gained a day so were able to take an extra day and climb to some yak meadows at 12,500 feet where we camped. It was a glorious setting. By now the moon was half full and the light on the icy giants on two sides of us made a sight never to be forgotten. Next morning we climbed up to 13,260 feet and what a sight! We looked to the north far into the rolling barren hills of Tibet. At this point a group of Sierra Club members from California passed us on their way to greater heights—equipped with ice axes and crampons. Shortly we came upon a herd of yak and again had a ball taking pictures of these hairy giants.

We crossed many suspension bridges but none of them could be described as difficult. On several occasions the trail itself was hair-raising, cutting along perpendicular cliffs high above the river. They chisel out the rocks on these cliffs and you pass along a sort of tunnel which is open on one side.

The village of Lete is worth a mention. Here we had our only half day of rest on the whole trip. It is surrounded by all the big peaks—Dhaulagiri, Tukche, Nilgiri and Annapurna No. 1. The altitude is 8000 feet and there are lovely pine forests. Annapurna was particularly beautiful in the alpenglow' of the setting sun.

Speaking of forests the vegetation was ever changing. On our fifth day we travelled through the most amazing variety of zones of vegetation—rhododendron forests, bamboo forests,

evergreens such as spruce, etc., bigger than the very biggest in the B.C. rain forests, then suddenly, as we descended a south slope, we came across a zone of large arbutus trees with their red peeled bark and this is the only place we saw them on the whole trip. Much of the time we were in sub-tropical zones with rich and varied vegetation which included lemon and orange trees loaded with ripe fruit, bananas, poinsettias in full bloom.

The above is just a tiny sketch of our experiences. Let me conclude by mention of the last two days. On our eighteenth day we camped on a rice paddy just wide enough to take the tents and just below a high pass. We arrived there as the evening alpenglow lit up more of the Himalayan range than we had seen before. It was a staggering panorama as the mountains were so close, clear and gorgeous. One of our pastimes in the evenings was to stargaze and to watch the satellites go by with periodic regularity. At dawn there was a repeat performance of the alpenglow—it's a sight we'll never forget and we have many pictures to remind us. On the twentieth day we arrived at Pokhara mid-morning and had our finale brunch in a magnificent setting by Lake Phewa. Here we took pictures of the clear reflection of the same peaks in the lake. Wow!

Like to join our next expedition? We hope to leave Delhi for Kathmandu February 21 and go on a 20-day trek to the Everest area!

Editor's Note: Mr. Ralph Forster of the Edmonton Section sent us a copy of an article that appeared in the May 4th, 1968. Edmonton Journal describing some of his experiences during a 31-day, 330-mile trek from Kathmandu in Nepal to the Buddhist lamasery at Thyangboche, which is only a day's march from the base of Mt. Everest. Some of his impressions were interesting to Club members, as he met on the trail other members of the Club also on a long trek, especially Dr. and Mrs. Kennedy of the Vancouver Section, who were carrying their baby. They stopped for two days at Thyangboche, 12,500 feet, and were rewarded to see Mt. Everest. Mr. Forster had seven Sherpas including three Sherpinas who also packed 60-pound packs. There were many ups and downs and in the mountain meadows the flowers were in bloom. Mr. Forster says the ancient road where the Sherpas travel is one out of history, rugged and beautiful.

SCIENTIFIC SECTION

Plants And The Regime Of Snow In Black Tusk Meadows, Garibaldi Park, B.C.

By V.C. Brink

In its glacier-hung peaks, colourful lakes and spectacular volcanic features the Black Tusk Meadows area of Garibaldi Provincial Park in southwestern British Columbia may claim to possess some of the most outstanding alpine scenery in North America. Additionally it shares with relatively few areas in the Pacific Northwest extensive alpine soils which, for a few weeks in summer, support masses of flowers.

The rambler is usually content to survey the colour of the meadows or to learn the names of a few species. There is, however, another dimension to interest in the plants—the plants as they relate to the regime of snow.

Snow, directly or indirectly, is the dominant factor in the plant environment in the Black Tusk area. The maritime forest region on which the meadows border receives the heaviest precipitation on the continent and at the levels of the meadows, around 5000 feet, 75% of the precipitation

may fall as snow. Notably, however, in July and August, and sometimes in September, there is little precipitation and many days are clear; the other nine months are usually cloudy with much precipitation. Seasonal and daily temperature ranges are usually minimal and cool. The result of a maritime mountain climate is a snow pack which in some years and in some sections exceeds 25 feet, although in the Tusk Meadows it rarely exceeds 12 to 15 feet. The snowpack which deepens until early April may not disappear until early August when summer, at much lower elevations, is waning. The winds from the glaciers and a "perpetual" snowpack are seemingly never far away in time.

The profound influence of snow in the plant environment of Black Tusk Meadows is evident in many ways. The limits of the growing season for herbs, shrubs and small trees, although not for tall trees, are set by the disappearance and rebuilding dates of the snowpack and rarely by killing frost. The shortening daylength (photoperiod) and the falling ambient air temperatures which characterize the beginning of the growing season here must have profound effects on the physiology and on the distribution of the species in the meadows. In years when the snowpack melt is late, as has been the case frequently during the last two decades, storage of carbohydrate in plants is limited and in the following year the deficiency may be reflected in poor blueberry crops and few flowers. Indeed, in some locations near snow patches, plants such as Tolmie's saxifrage must exist under snow for two seasons.

The snowpack is not a passive blanket. It has great weight, exerts pressure and may glide and creep on slopes; it is not homogeneous in texture, moisture or temperature and it may impede gas exchange between the soil and the atmosphere. It is probably no accident of nature, but evolution in a regime of snow, that has produced boughs in the shrubs and conifers which bend freely and that the half-shrubs such as the false heathers, Cassiope and Phyllodoce spp,, have smooth leathery leaves over which snow (and sometimes mountaineers) glide readily.

The snowpack is a remarkably good insulator. The Ross Mackay "cryopedometers", which consist simply of water-filled glass vials placed in dowelling at different levels in the soil and

Mount Garibaldi And Garibaldi Lake. Photo: Phyl Munday

snowpack profiles, have yet to show any but surficial soil freezing and then largely in summer and early autumn. It is therefore not surprising that some transplants from the alplands at 5000 feet are not very frost hardy in Vancouver gardens at sea level. The soil in summer is, however, cold and near freezing; and as the snowpack disappears on warm clear days the temperature gradients from soil to air, to which the plant is subject, are extreme. The uptake of water by plants from the cold soil is slow and the aerial parts on bright summer days lose water freely. It is not surprising that massive wilting, even on moist soil, has been observed.

The productivity of plants, that is their ability to yield organic matter over a unit area, depends to an astonishing degree on the snowpack duration and on aspect and slope. The herbs of the flower meadows on steep south slopes may yield over 1800 pounds of dry matter per acre in a season while, at the same elevation, on cool slopes and flats little or no dry matter may be produced. A consequence is that many parts of the meadow turf are very susceptible to wear by the boots of hikers, and their recovery after grazing by horses is very slow.

Offhand one might assume that soil erosion on slopes covered with snow for most of the year would be minimal. This does not appear to be the case and a fascinating struggle between plants attempting to establish on bare surfaces and the forces of erosion is very much in evidence. Until 1850 or thereabouts glaciers, glacierets, and snow patches were extending. Since then they have been receding and large areas of soil and rock devoid of vegetation which have not been free of ice and snow for centuries are now being uncovered in summer. Evidence of a vegetative cover predating the last or 19th century maximum is found in fossil forest and buried soil profiles. New or different erosive forces are at work on the newly bared areas and, in places, they are of considerable magnitude. For example, in some places on the Cinder Cone it can be reliably stated that as much as 2 feet of topsoil has eroded away in less than a century. Plants attempting to colonize the new soil surfaces must contend not only with the vagaries of snow-pack and other climatic hazards, but must also contend with unstable surfaces which in some places move as much as 6 feet in a year. W. H. Mathews and V. C. Brink of the Vancouver Section of the Alpine Club of Canada and R. Mackay have made some measurements and have attempted to designate the erosion forces. That they are complex is probably the case, involving snow creep and, in summer, under the influence of frequent clear cool nights and warm days, soil surface freezing, needle ice formation and melting. Patterned ground' in miniature, resulting from surface freezing, is much in evidence on bare surfaces in summer. The early colonizing plants or ruderal species, such as lupine, mimulus, arnica, Hooker's thistle, and valerian, establish quite readily on warmer exposures and soon reduce soil erosion. On other exposures, however, establishment can occur only in the lee of large stones which move little or not at all; in many situations plants may root only to have banks and terraces of soil and rock build above them and in time overwhelm them.

Snow, in its differential accumulation and melting and in its many indirect effects, makes a patchwork of varied plant communities and bare soil over the Black Tusk meadows. To the rambler with some imagination and leisure, the patchwork becomes a fascinating narrative of the regime of snow.

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The Development Of Glacial Landforms In The Vicinity Of The Saskatchewan Glacier

By H. J. McPherson[15] And J. S. Gardner[16]

Geomorphologists often base their reconstructions of events in the Pleistocene Period on interpretations of the glacial landforms present in an area. In recent years a number of detailed investigations have been undertaken in areas near the snouts of modern glaciers to test some of the basic assumptions regarding the formation of glacial landforms.

One region where such studies may be readily carried out is the Canadian Rocky Mountains. Glaciers in this area have receded fairly rapidly during the past century and some detailed records of their behavior exist in photographs and published accounts.

This paper is a preliminary discussion of the formation and emergence of an assemblage of landforms at the Saskatchewan Glacier (52°08'N and 117°12'W). An examination of these landforms raised some important questions regarding previous interpretations of glacial landforms and their formation. For example, in once glaciated areas, now vegetated, cross-valley topographic "highs" or ridges are often interpreted and mapped as end moraines. Evidence found at the Saskatchewan Glacier suggests that such an interpretation may not be correct in all cases. In addition, smaller landforms such as "annual" moraines and flutings, which would be obscured in a vegetated situation provide important evidence on the past behavior of the glacier. Therefore, the primary purpose of this paper is to describe the principal landforms at the snout of the Saskatchewan Glacier, relate their forms to glacier behavior and raise some questions regarding traditional interpretations of glacial landforms.

Recent Behaviour Of The Saskatchewan Glacier

The behaviour of the Saskatchewan Glacier has been well documented.[17] Since 1945, the position of the snout was recorded at least every two years by the Inland Waters Branch of the Federal Department of Energy, Mines and Resources.[18] While most of this work involved establishing the positions of the glacier snout, some very significant research has been carried out on the structures and mode of flow of the glacier.[19]

The Saskatchewan Glacier has been in a general state of recession since the first photographs recorded its position in 1912 and perhaps since its "Neoglaciation" maximum position in the middle 19th century. Considerable thinning has accompanied recession of the glacier terminus. Figures 1 and 2 show the position of the glacier terminus at a number of different periods. In the accompanying table the annual rates of recession for several periods since the "Neoglaciation" are given.

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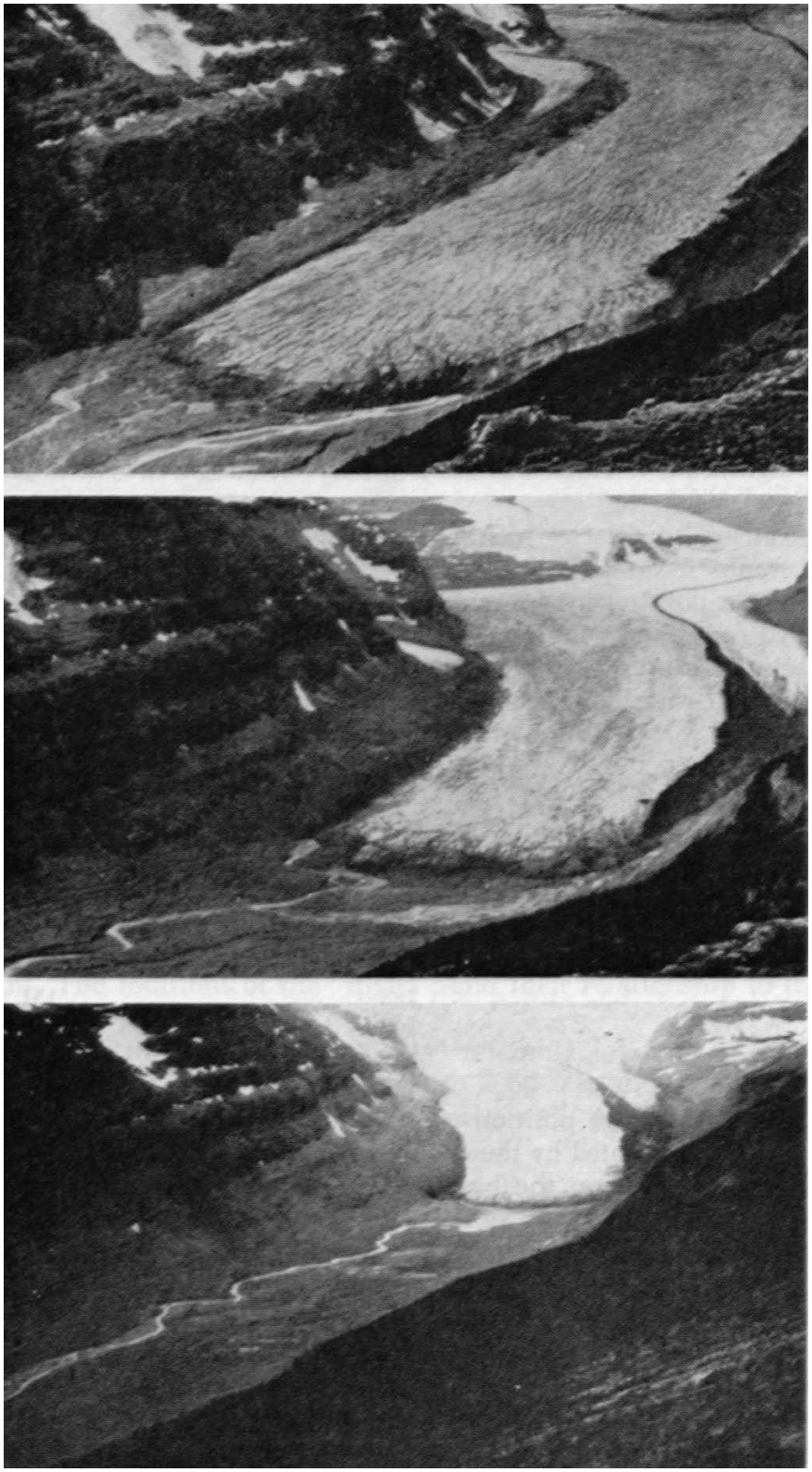

Saskatchewan Glacier From Parker's Ridge.
Top: 1919. (Photo By A.S. Thompson, In CAJ 1920, P. 138.) Middle: Aug. 4, 1948 (Photo W.O. Field In CAJ 1949, P. 108.)
Bottom: Aug. 17, 1968.

Recession Of The Saskatchewan Glacier

Period	Absolute Amount (feet)	Annual Rate (feet)
1854-1911	400	7
1912-1924	550	46
1925-1944	2072	108
1945-1950	870	176
1951-1956	788	131
1957-1962	744	124
1963-1966	264	66

The maximum advance position of the Saskatchewan Glacier in the "Neoglaciation", which is indicated by the down-valley distribution of till and a trimline, has been dated at 1854 on the basis of tree-push evidence along the trimline.[20] Recession appears to have been slow until about 1925, when a more rapid retreat began (see table). From 1925 to 1963, the average annual rate of recession was between 100 to 250 feet per year. However a small moraine (Figure 2), dated at 1937 to 1938 from early air photographs, suggests that recession has not been as steady as the numerical data would suggest. Rather, a "still-stand" or perhaps even a minor advance took place sometime in the few years prior to 1938. Since 1963 the recession presumably has been slower than in the previous 20 years. Although its terminus has receded, the glacier has remained active with flow continuing within the ice mass.[21]

The flow has resulted in the development of several structures in the terminus zone. Some of these may have played a role in the formation of several of the minor landforms. Well-developed shear planes have been and are present in the terminus area. Also, in the terminus area, splaying crevasses extending down-valley along the glacier axis are evident in 1948 air photographs. Meier described similar crevasses a few years later.3 In the 1967 air photographs and in 1968 in the field, splaying crevasses were not observed in the terminus zone.

Glacial Landforms

The topography between the "Neoglaciation" limit and the terminus position of 1968 consists essentially of two topographic "highs" separated by two depressions. The locations of the "highs", and their relationship to the terminus in different years, are shown in Figure 2.

In appearance the topographic "highs" resemble low ridges with their tops smoothed off. They have widths of 1500 to 2000 feet and heights of 100 to 120 feet. The material within the "highs" is entirely till composed of 38% boulders, 19% gravel, 20% sand and 23% silt-clay.

Although the "highs" have been dissected in a number of places by glacial meltwater at different periods, their crest lines can be traced across the valley. This is especially true of the one

20 Heusser, C. J., 1956: Postglacial Environments in the Canadian Rocky Mountains: Ecological Monographs, Vol. 26, No. 4, pp. 263-301.

21 Dyson, J. L., 1952: Ice-Ridged Moraines and their Relations to Glaciers: American Journal of Science, Vol. 250, pp. 204-211; Hoppe, G., 1953: Some Observations on Fluted Moraine Surfaces: Geografiska Annaler, Vol. 35, No. 2, pp. 105-115.

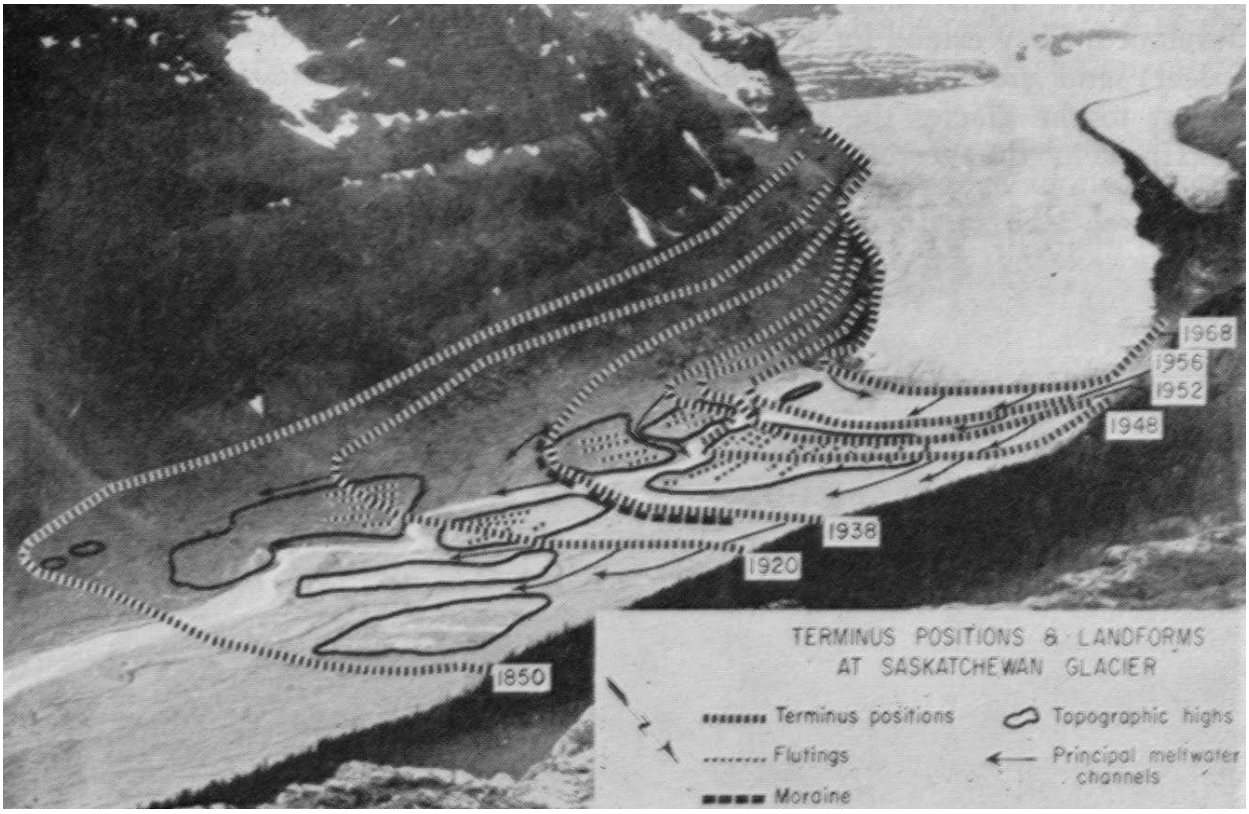

Figure 2 - Terminus Positions and Landforms at Saskatchewan Glacier

closest to the glacier which is ridge-like and whose crest line curves up-valley (Figure 2). This "high" appeared from beneath the ice between 1938 and 1952 while the second or furthest down-valley "high" emerged from under the ice between about 1850 and 1930.

Outwash material occupies the low areas between the two topographic "highs" and in front of the present glacier snout. Several levels of outwash can be identified. Degrees of sorting and stratification of the outwash and the angularity of the gravels vary from one level to the next.

Superimposed on the topographic "highs" are two sets of low ridges (1 foot to 3 feet high and 2 to 5 feet wide) which intersect at right angles. The ridges contain till similar to that found in the topographic "highs".

One set of ridges, parallel to the axis of the valley, exists on both flanks of the topographic "highs" and these ridges are the more continuous and better developed. They extend for several hundreds of feet, are quite closely spaced (3 to 6 feet) and are remarkably straight (Figure 3). On the topographic "high" closest to the glacier the ridges are especially obvious. Similar landforms are described in the geomorphic literature and have been termed "flirtings" or grooves.

Some confusion exists regarding the definition of the term "fluting". It was originally used to describe parallel shallow depressions but has also been applied to the ridges between two depressions. In this report the term will refer to a ridge and an adjacent groove or depression.

Extending in a cross-valley direction is a second set of ridges. These seldom continue for more than 100 feet and occur infrequently. It is thought that these transverse ridges are annual moraines. Comparable features can be observed near the terminus of the Athabasca Glacier. When

Flutings In Front Of Saskatchewan Glacier, June 1968. Photo: J.S. Gardner

the two sets of ridges meet, the transverse ridges are superimposed on the flutings. Lying on the surface of the topographic "highs" and in the area of outwash between, are many boulders up to 10 feet in diameter. Some of these are striated. The boulders are not distributed in a systematic pattern and their positions do not bear a relationship to the flutings. Certainly the flutings do not terminate on their up-valley end at boulders as has been observed elsewhere.

Discussion

If the topographic "highs" were encountered while mapping in a vegetated area from which the ice had long since retreated, they would probably be mapped as end moraines. The "high" nearer to the glacier in particular closely resembles an end moraine. Their presence would be taken as evidence to indicate that the glacier temporarily halted during its retreat and such an interpretation might lead to implications regarding minor climatic changes.

However, photographs of the Saskatchewan Glacier taken during the past 50 years clearly show that the "highs" are not end moraines which formed in the classical manner described by Flint.[22] Rather they are much older landforms which have emerged from beneath the glacier. One possibility is that they are end moraines which were overriden during the Neoglaciation advance. If this is the case, however, the till was not disturbed because push structures were not observed in any of the excellent stratigraphic sections investigated. A satisfactory explanation for the formation of the "highs" awaits further fieldwork. However, it can be said that they probably formed prior to

22 Flint, R. F., 1957: Glacial and Pleistocene Geology: New York, John Wiley and Sons.

the retreat period from the Neoglaciation maximum.

The flutings also present a problem. Many hypotheses have been put forward to explain these features.[23] Grant and Higgins suggested that they are the result of debris falling into fissures near the ice front. Ray described flutings developed on outwash and believed that they were produced by the grooving of gravel when ice passed over it. Dyson suggested that flutings are formed when material is squeezed into subglacial tunnels which develop in the lee of large boulders. His mechanism was later accepted by Flint. Gravenor and Meneley thought that flutings are erosional forms and that they develop as a result of alternating parallel high and low pressure zones at the base of the ice. That is, material is eroded from the high pressure zones and deposited in the low pressure zones.

None of the above hypotheses satisfactorily explains the formation of the Saskatchewan flutings. From the fact that they are composed of till containing striated boulders and can be observed emerging from beneath the ice in early photographs the writers believe that they are subglacial features formed when unfrozen till is squeezed into mouldings at the base of the glacier. This explanation is similar to that of Gravenor and Meneley. However, the latter stated that the flutings are erosional features usually formed during ice advance but could not account for their spacing. The writers believe that the flutings were formed during ice retreat and that their spacing is a function of the distribution of splaying crevasses near the ice terminus.

Examination of successive air photographs revealed that the positions of flutings coincide with the former positions of splaying crevasses. It is suggested as one possible explanation that in a rapidly retreating and thinning ice margin, such as that of the Saskatchewan in the past 50 years, limited but well defined zones of high and low pressure are created at and very near to the ice margin because of an unequal distribution of ice weight. Unfrozen till is squeezed up into the low pressure zones associated with the crevasses to form the flutings.

Finally as the ice retreated, material which was being extruded from the shear planes that appear across the glacier snout was deposited parallel to the ice margin and in places on top of the flutings to produce the annual moraines.

Summary And Conclusions

1. Large cross-valley topographic “highs” composed of till were not formed as the Saskatchewan glacier retreated from its Neoglaciation limit. Rather they are older landforms which have emerged from beneath the ice. This finding has important implications for traditional glacial geomorphic interpretations. For in a vegetated field condition these landforms would probably be mapped as end moraines formed in a “still-stand” period during the retreat of the last glacier to invade the area. Such an interpretation would be erroneous and result in incorrect conclusions regarding the manner of ice retreat in a valley glacier. Further detailed fieldwork is needed to establish the origins of the topographic “highs”.

2. Flutings found on the topographic “highs” are believed to have formed subglacially during ice retreat. It is hypothesized that the flutings result from the squeezing of unfrozen till into linear low pressure zones at the base of the glacier. These linear low pressure zones develop

23 Grant, V. S., and Higgins, D. F., 1913: Coastal Glaciers of Prince William Sound and Kenai Peninsula, Alaska: United Slates Geological Survey, Bulletin 526, Washington. Ray, L. L., 1935: Some Minor Features of Valley Glaciers and Valley Glaciation: Journal of Geology, Vol. 43, pp. 297-322; Dyson, J. L, 1952: Ice Ridged Moraines and their Relations to Glaciers: American Journal of Science, Vol. 250, pp. 204-211; Gravenor, C. P., and Meneley, W. A., 1958: Glacial Flutings in Central and Northern Alberta: American Journal of Science, Vol. 256, pp. 715-728.

as a result of splaying crevasses near the glacier terminus which create an uneven distribution of iceweight.

Acknowledgements

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Glacier Research In Canada, 1968

By J.O. Wheeler

The following is summarized and extracted from the annual report of the National Research Council Subcommittee on Glaciers prepared by Fritz Mtiller, Chairman.

WESTERN CANADA

Southern Cordillera, British Columbia And Alberta (Glaciology Sub-Division, Inland Waters Branch, Department of Energy, Mines and Resources: A. D. Stanley).

Field programmes continued on long-term studies of Place, Sentinel, and Berendon Glaciers in the Coast Mountains, Woolsey Glacier in the Selkirks, and Peyto and Ram River Glaciers in the Rockies. At each glacier standard glaciological, hydrological and meteorological data were obtained by parties of two or three persons. Accumulation measurements were made in late May or early June and measurement of ice melt continued throughout the summer until early October — the end of the ablation season.

In the winter of 1967-68, snowfall in British Columbia was slightly above normal and the snow above 2,000 metres did not begin melting until late May. The summer was average for most areas and ablation was considerably less than the previous year. Ice surfaces were exposed in the latter part of June in the eastern ranges but further west were first exposed in late July.

Radio echo sounding was carried out on Peyto Glacier and extended to part of Wapta Icefield. The latter has an average depth of 200 metres for most of its northern section.

ROCKY MOUNTAINS, ALBERTA

Athabasca Glacier (Inland Waters Branch, Department of Energy, Mines and Resources: I. A. Reid).

Terrestrial photography of the glacier was repeated to determine the volumetric changes on the basis of biennial detailed topographic mapping. Radio sounding depths of 300 metres were determined for part of the glacier and were apparently 30 metres less than that determined from seismic methods.

YUKON TERRITORY

The Icefield Ranges Research Project (American Geographical Society and Arctic Institute of North America: W. A. Wood and M. Marcus).

"Fox Glacier"

For the second successive year intensive studies of the total environment of this glacier were pursued in the anticipation that this small ice body may surge in the foreseeable future. These included seismic and gravity studies; measurements of accumulation, ablation, surface movement and water discharge aided by chemical detectors; and a study of morainal sequences to determine

the chronology of glacier fluctuations in the past.

Steele Glacier

This glacier, which surged recently, was the subject of studies concerned with the geological and hydrological aspects of surging glaciers. Photogrammetric work was also continued.

St. Elias Glacier

Miscellaneous investigations ranging from meteorological and climatological observations, through radio echo sounding to oxygen isotope studies, were also undertaken in the range.

CANADIAN ARCTIC

Baffin Island (Glaciology Sub-Division, Inland Waters Branch, Department of Energy, Mines and Resources: O. H. Loken). Field work was badly hampered by weather and operational difficulties.

"Barnes Icecap And Decade Glacier"

The winter snowfall was heavier than during any of the three preceding winters. Exceptionally high accumulation occurred on Decade Glacier

Devon Island (Arctic Institute of North America: R. J. Braithwaite and I.M. Whillans).

A preliminary study for the investigation of the dynamic response of a subpolar ice cap to climatic changes involved the establishment of two grids of gravity stations. Mass-balance and glacier climatological studies were also undertaken preparatory to the installation of fully automatic long-term weather stations at the ice cap summit and on the southeast side of the ice cap to yield data during the entire year

Melville, And Meghen Islands (Polar Continental Shelf: W. S. B. Paterson and W. J. Seifert).

Mass-balance observations continued, photogrammetric work undertaken to compare the surface elevation with 1960 levels, and ice core is being measured for oxygen isotope abundances.

Axel Heiberg Island (McGill University: F. Müller). Various studies were undertaken on Thompson Glacier push moraine. These included gravity and seismic measurements to establish the thickness and subsurface shape of both the push moraine and the advancing glacier snout; movement of four surface profiles; permafrost drilling to 119 feet in the outwash plain in front of the moraine to establish stratigraphic sequence and temperature regime; and the mapping, tectonic and stratigraphic evidence in push moraine and the frontal portion of the glacier.

Data were also collected to determine the amount, distribution, and decay of snow cover in a high arctic catchment basin. The aim of the study is to explain the snow accumulation pattern within the basin in terms of various landscape parameters.

Mass-balance studies were carried out on White and Baby Glaciers, and on the former surface velocity fluctuations were related to hydrological and climatic changes.

Northern Ellesmere Island (Defence Research Board: G. Hattersley-Smith).

Mass-balance studies were carried out on Per Ardua Glacier on Tanquary Fiord area and on Oilman Glacier. Movement studies were also made on the former glacier. Mass-balance and strain rate measurements are also made on Ward Hunt Ice Shelf.

SYMPOSIA ON SURGING GLACIERS

Two symposia were held on surging glaciers in 1968. "Causes and Mechanics of Glacier Surges" was held at St. Hilaire, P.Q., on September 10 and 11. "Surging Glaciers and their Geologic Effects" was held in Banff, Alberta, on June 6 to 8. The papers of the two symposia will be published as a special volume of the Canadian Journal of Earth Sciences.

CLUB CAMPS AND PROCEEDINGS

A.C.C. Glacier Ski Camp-Easter 1968

By Dan Startin

Prior to camp, Bruce Eraser had laid the foundations for a successful week of skiing. As Chairman of the Ski Mountaineering Committee he had made all the necessary arrangements and we were sorry that he could not be with us. Many thanks are due to him. Dudley Godfrey acted as Camp Manager and we were fortunate in having Leo Grillmair with us again as professional guide. Heather Haines was our cook and Dave Vallance camp boy. Of the twenty-five attending camp, ten came from the west coast, ten from Alberta and three from Ontario. We were glad to welcome Stella Degenhardt from Seattle and Dr. Ed Little from California.

In contrast to other ski camps held at the Wheeler Hut at Glacier, B.C., we were able to drive our cars right to the cabin. There was therefore no shortage of gear or equipment.

Saturday, April 15th, was a warm-up day and everybody headed up the Illecillewaet Glacier. It was cloudy and there were 10 inches of fresh, wet snow. We stopped at the 6500-foot level and on the run back there were many spectacular falls due to the heavy going. It snowed steadily all next day. Most of the party went with Leo up the slopes of Cheops and skiing on the run back was most enjoyable, except for one member who fell head first into a hole by a tree. Another hapless skier lost the sole off a ski boot, but he was able to navigate safely home with the aid of sundry lengths of cord. Willi Pfisterer who was with the Federal Government Avalanche Research group at Glacier took a small group up Fidelity Mountain by "snow-cat". They enjoyed a magnificent descent with a 3500-foot vertical drop.

On Monday the whole group returned to the Illecillewaet Glacier only to find a repetition of deep, fresh, heavy, wet snow. However, the sun came out periodically, to the joy of the photographers. Next day it was snowing intermittently and most of the party went up the Asulkan Glacier and found good skiing conditions. The more active members climbed Mt. Abbott to the observatory at the 6400-foot level. Here they were able to watch the artillery of the Canadian Armed Forces in action in the avalanche control programme. The "crack, thump, whistle and crump" of the shells was impressive and they observed one spectacular avalanche triggered off by a shell burst. The return run was excellent. We learned that the army units usually returned to their base at an earlier date and this was indicative of late snowfall in the spring of 1968. As the artillery was in action every day, we had to get clearance from the Park Warden before setting off on our trips.

It was a beautiful day as we started out on Wednesday for the "Steps of Paradise" at the head of the Asulkan Glacier. It soon clouded over with the inevitable dusting of snow. The return run was delightful, concluding perhaps our most successful day. The Park Warden, Bob Wood, had warned us of an approaching storm. He was not wrong. It snowed heavily without a let-up and for the next two days we skied on the slopes of Macdonald. In spite of the heavy precipitation the skiing was first class and visibility was not a problem. Everybody enjoyed themselves immensely. On the final Saturday a depleted party set off up the Asulkan Glacier. It was a lovely day, but alas, all the recent snowfall was converted to an abominable "crud". By this time most of the party was getting used to the "coast powder" and we took it in our stride.

During the week our evening activities were varied. We had an excellent talk by Bob Burns and Arthur Schwartz on avalanches and a few days later Willi Pfisterer kindly came over to the

cabin and talked on the same subject and of his experiences over many years. We also had a talk by Leo Grillmair on the care of ski equipment, which was most instructive.

Peter and Brida Baker had brought in their cross-country skis and after our normal runs they ably demonstrated the Scandinavian technique.

In spite of the 30 inches of snow that fell during our stay we all had a good time, and it was quite a wrench to leave the beautiful mountains behind and head back to civilization. At least we will have many pleasant memories of the good companionship that pervaded and of the friendly atmosphere of the evenings spent in the Wheeler Hut.

1968 A.C.C. Lake O'Hara Camp

By Ray Hunter

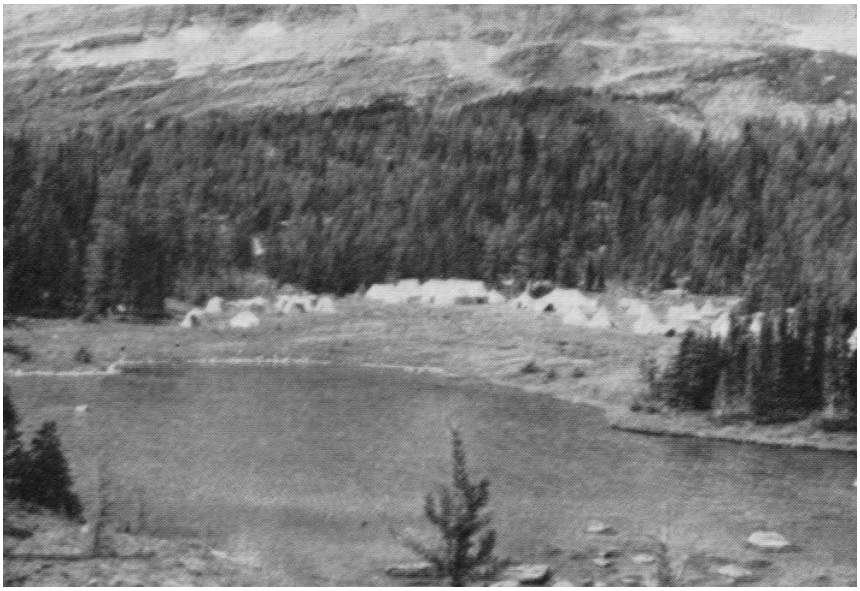
Good weather must surely be the main contributing factor to the success of any camp, and the 1968 General Mountaineering Camp held at the Schaffer Meadows, Lake O'Hara, enjoyed it almost without interruption. This was surprising, in view of conditions in the area during the 2 weeks preceding camp opening on Sunday, July 21st, especially to the crew who had endured torrential rain, below seasonal temperatures and occasional wet snow while erecting the camp.

Early registrants who arrived by bus at Lake O'Hara on Saturday, July 20th, could only hope for fair weather to follow and it is possible that some of that exuberant camp spirit began to wane as we stood around in a veritable downpour waiting for our gear to be unloaded. But there was John Tewnion, the Camp Manager, on hand to give us a cheerful greeting and to arrange for dunnage and camp supplies to be loaded on the pack horses for the 11/4-mile trek to Schaffer Lake. John was obviously undismayed by the bleak surroundings dripping foliage and muddy trails well churned up after a week of packing equipment and supplies—rather he seemed to be completely engrossed with such domestic problems as "What happened to the bacon?" and "Where's the other bottle of propane gas?" Organization, the second most important factor, appeared to be in good hands.

The campsite occupied the meadows beside Schaffer Lake and even in conditions of low cloud and steady drizzle it was most impressive. A large grassy area easily accommodated kitchen, staff quarters and dining tents, office, equipment and tea tents, the bell tents occupied by the men, and, separated from the main area by a convenient stream which flowed right through camp, the married couples' quarters. The ladies lived in a secluded area just above the main camp and they had at their tent flaps (so to speak) a chain of delightful little tarns which completed a very picturesque setting.

The Schaffer Meadows site offered the utmost for a camp of our size. It was conveniently removed from the public campsite on the meadows above Lake O'Hara, was ideally situated as a starting point for climbs in the area, and afforded a startling view of some of the higher peaks. To the northeast were the Wiwaxy Peaks standing under towering Mount Huber with its enormous buttresses lost in cloud, and behind Huber the long south ridge of Mt. Victoria bearing away to the right and Abbot Pass. This panorama positively dominated the scene, and when the last wispy clouds left on the evening of Wednesday the 24th and revealed a new snow cover, the result was breathtaking and compelling to climber and photographer alike. The long and easy northwest ridge of Mt. Schaffer (which began practically in camp) obstructed any other view to the east; indeed, we had our very own mountain as close as one could wish for. This was very convenient for those

Hungabee Mtn. (Left), Mt. Biddle (Right), Mt. Schaffer (Above Lake To Left) And Lake McArthur From Odaray Mtn. Photo: Bob Paul



Lake O'Hara Campsite At Schaffer Lake. Photo: Cam Ledingham

wishing to indulge in an hour or two of scrambling or even for more serious work on quartzite on the face to the west of the ridge. Park Mountain appeared to the south. Although its main bulk was hidden by higher ground in the vicinity of McArthur Pass it presented an interesting view and promised a good climb. To the west and north west lay Odaray Mountain. It included the "Pimple" on the south end, Little Odaray or "Middle Peak", and Odaray Main Peak to the north. This was another convenient mountain which allowed a trip to the Pimple or to Little Odaray when weather might not permit more difficult climbs.

Camp opened officially on Sunday the 21st. The rain had stopped and clouds obscured only the highest peaks. Climbers arrived all during the day, some walking in the 9 miles from Wapta Lake. They came from almost every Canadian Province, and from Austria, Great Britain, New Zealand and the United States. Cam Ledingham welcomed each new arrival and arranged accommodation, and such was the convenience of the location that informal parties were constantly going off to climb on nearby Mt. Schaffer or to follow the trails that led to McArthur, and Odaray Plateau and Prospect. Supper that evening was a happy affair and so, in fact, were all the meals to follow. There was, of course, the traditional campfire after supper where new friendships are formed and old ones renewed, where today's climbs are dissected and tomorrow's planned. There would be singing (and yodelling too) at campfires to follow but this was the first night and it seemed that it must be reserved for trading news of events that happened since last year's camp.

It was obvious that the new snow which had been falling above 10,000 feet for the past week would delay attempts on the higher peaks, but if the weather cleared there was every reason to expect that the "big" climbs would be posted towards the end of the first week of camp. In the meantime there was much to be done. Ice and rock schools, conducted by our guides Leo Grillmair and Ferdl Taxbock, were very well attended. Leo favoured the glacier in Opabin Pass for his snow and ice school, while Ferdl had found rock to his liking in the vicinity of Lake Oesa. Mount Yukness, Wiwaxy Peaks, Park Mountain, Mt. Schaffer and Little Odaray all offered interesting and enjoyable climbs, and except for some rained out attempts on Tuesday of the first week there were successful parties on at least two of these peaks every day. One of the rained out attempts was a 4:30 a.m. start on Park Mountain led by Jack Cade. After a dreary march in steady rain to the south side of Lake McArthur the leader decided to retreat (a reasonable decision in view of the fact that the mountain overhead was totally lost in cloud and there was no sign of improvement) but the desire to return to the comforts of a dry camp was not shared by all. To Lloyd Beech, our popular Kiwi visitor, every rock outcrop and slight overhang along the trail offered a "beaut bivvy" and it took all of Jack's qualities of leadership to get the party back to camp intact. However, Wednesday presented fair weather and the climb went. In fact everything started going on Wednesday and by Thursday morning we were blessed with superbly sunny skies which were to remain for the duration of camp.

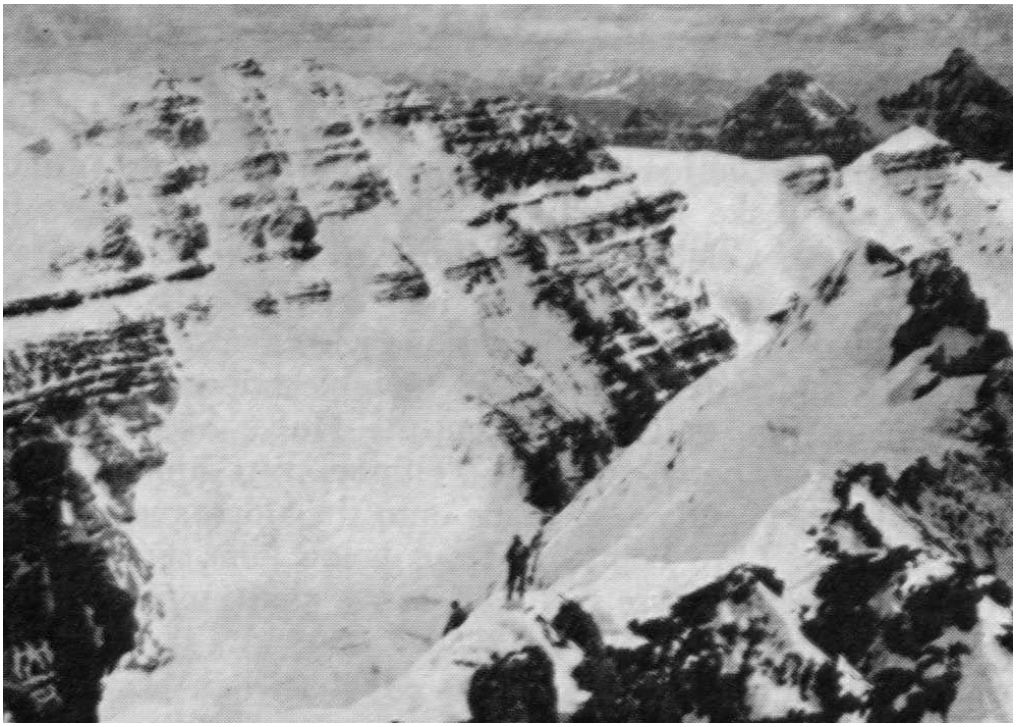
A fly camp was set up in Paradise Valley and a number of parties completed the 2-day trip which went over Abbot Pass, included a night in the fly camp, and returned through the Valley of the Ten Peaks, Wenkchemna and Opabin Passes. This entailed approximately 15 miles of moderately strenuous hiking in surroundings of scenic splendour that apparently have called forth the ultimate in superlative—in this area that has long been known as the loveliest in the Rockies. Eagle's Eyrie, an interesting limestone pillar, is found in Prospector's Valley at the foot of Wenkchemna Pass and at least one party hiked over Opabin Pass and down into the valley to view it.

The many miles of splendid trails in the Lake O'Hara area are a tribute to the mountain lovers who built them and they provided much comfort to us as we returned from a climb or hiked leisurely admiring the scenery.

Some of the very popular trail hikes were to McArthur Pass, Odaray Plateau and Odaray Prospect. The alpine lowers were slightly late but those that were showing were beautiful, and the views almost defied description.

The following from a National Parks publication is, I think, worth repeating:

"The views from Odaray Plateau are beyond description, embracing all the O'Hara area, McArthur Pass, Cathedral Basin, Linda Lake and the whole Cataract Valley and affording an



Descending To Abbot Pass From Mt. Victoria, Mt. Lefroy Across To Left. Photo: Bob Paul

unforgettable view of the Goodsir Mountains to the south and Mt. Huber to the north east."

Towards the end of the first week, climbing conditions approached the ideal and there were, as a consequence, many enjoyed ascents. Not all of the climbing activity was of the "tiger" variety, neither was any of it a "walk up the mountain", and so some mention should be made of the fact that Henry Baldwin at 72 years young went to the top of Little Odaray, Park Mountain, Mt. Schaffer north peak, and Wiwaxy, and it is suspected that some far younger members wished they had the energy he seemed to hold in reserve.

Whether by plan or by coincidence it is not clear, but many of the climbs provided added interest by varying from the more established routes. Two parties, the first led by Dave Fisher and the second by Roger Neave, climbed Mt. Victoria from Wiwaxy Gap and the Huber-Victoria glacier and traversed the south ridge, returning by Abbot Pass. Ringrose Peak was climbed by two parties, the first led by Leo Grillmair and the second by Roger Neave, both forsaking the recognized route and introducing interesting variations. A party led by Bob Paul on Mt. Biddle left the comparative safety of the west ridge, traversed onto the southwest face and ascended the dangerously slabby and loose rock of the summit mass. Lloyd Beech, leading a party on Mt. Lefroy, ascended the west face, and Dr. Morley Turtle led what is probably a new route (direttissima) on Park Mountain from Lake McArthur. Finally, in the interests of good rock climbing, two ropes led by Bob Hind and Jim White climbed the Grassi Ridge of Wiwaxy Peak.

Climbing in the Lake O'Hara area leaves one with a host of pleasant memories but if I were asked to describe my most memorable impression I would have to choose that moment, on the climb from the Huber-Victoria glacier to the south summit of Mt. Victoria, when the climber lifts himself out of the last step in the narrow snow gully that leads onto the ridge and suddenly beholds the exquisite beauty of Lake Louise laid out below him. From the uninitiated there is bound to

come, as there did from me at that moment, a gasp both of surprise and appreciation.

As for impressions of the camp I would say that high on my list were the comradely spirit of fellow climbers (whether met on a climb or by the camp fire), the dedication of John Tewnion and Cam Ledingham to the principle that all the comforts of home must be transported to the A.C.C. General Camp, the cheerful disposition of the camp crew and the excellent chicken dinner following the Annual General Meeting, the standing ovation so sincerely given retiring president Roger Neave, and last, but by no means least, the kindness of Dot, Marg Hind's sister, who stayed at the Elizabeth Parker Hut down on the Alpine Meadows to provide many a weary climber with cups of delicious hot tea without which, I fear, the remaining mile up to the Schaffer Meadows would have been painful indeed.

The First A.C.C. Alpine Climbing Camp (1968)

By P. J. Dowling

The natural outcome of the expedition to the Yukon in 1967 was the formation of the Alpine Climbing Camp. The expedition showed that there were a good number of climbers who wanted greater freedom of movement in their daily climbing activities and the challenge of making out on their own without the restrictions necessitated by larger operations.

What the Camps and Expeditions Committee wished to offer was a small camp, limited to about thirty climbers who could lead grade IV climbs, a choice climbing area with a large number of high grade ascents and the minimum of camp organization. The latter could only be accomplished by disciplined mountaineers who knew what was expected of them and who were prepared to give up the type of comfort that Club Members received at the regular camp.

The area chosen was the Adamant Range in the Northern Selkirks with a base located at the Fairy Meadows Hut. Within reach of this hut, in one day's travel, was the Sir Sandford Hut.

The total party was made up of 24 persons. The average age was 33 years, the youngest being 18 and the 33 oldest 53.

The party got under way on August 3rd by crossing the Columbia River, from the Big Bend Highway, 43 miles north of its eastern junction with the Trans-Canada Highway. The crossing, on fast water, was accomplished with a 12-foot aluminum boat using a 71/2-horsepower engine—two passengers at a time. On a gravel flat, near Swan Creek, about 1/4 mile from the landing on the west bank, a one-night staging camp was erected.

Freight and food were flown by helicopter. The cook, Becky Burns, and her husband also took the flight to unload and set up camp. The helicopter, being late on arrival at the loading site, caused us to soak the fresh meat in a mild brine solution for several hours to protect it from the heat.

The party left the staging camp about 7 a.m. on the morning of the 4th, carrying personal gear in loads of 40-50 pounds. The 'trail' had been partially prepared for a short section by Don Lyon and a group of Calgarians on a weekend prior to camp. However, the greatest length had to be slashed and marked by a party of five men under Don Forest who had crossed early on the 3rd, cut trail and made bivouac that day. Then, on the 4th, they completed the slash through slide alders and marched to camp.

The main party took 1 to 1 1/2 days to cover the route which crossed an old burn, a long stretch of mature timber, devil's club and deadfall, three large slide alder slopes, a steep rocky

hillside and an easy moraine to Fairy Meadow.

On arrival, the tents were found erected in front of the cabin, below the waterfall and on the "farm" at the foot of the north ridge of Sentinel.

August 5th was a day of rest and climbing began seriously on the 6th. The regulations set out called for meal hours at 4 a.m., 7 a.m., and 6 p.m. Only the cooks lived in the cabin. All climbers were required to register their climbs the preceding night. A list of the most accessible peaks was posted with appropriate starting times.

The movement of persons in the area was restricted only to the size and timing of parties going to the Sir Sandford Hut, due to the limited size of the hut.

Good weather conditions persisted for the first 10 days and then gradually deteriorated into moist unstable air, low cloud, poor visibility and snow at higher altitudes.

A total of 32 different routes were climbed on 28 peaks, some several times over. Four parties climbed Mt. Sir Sandford, 11,555 feet. Three were successful, the fourth being turned back by a storm above the "Hourglass" at 10,500 feet. The third party made the summit in 4 hours and 50 minutes from Great Cairn and returned in a total time of 11 hours!

One party traversed four summits in one day. Kruszyna and Andrews did a traverse of Adamant, Turret and Austerity. The only peak of true importance not climbed by the party was East Blackfriars, whose great north face rises 1500 feet above the Austerity Glacier.

Towards the end of camp, everyone seemed satiated and quite 'climbed out'. The fresh meat, which had been stored in a snow bank, had lasted well. A good supply of non-perishables was stored in the cabin for future use.

At the time of departure, ten persons elected to stay in the cabin and await the helicopter rather than face that 'trail' again—more accurately described as a "hole blasted through the bush".

On Saturday, August 17, fourteen persons descended to the Columbia River Crossing, taking a total time of 10 to 12 hours. The helicopter did not arrive that day at Fairy Meadow. Checking on Sunday in Golden, it was discovered that our machine was non-operational and would be so for at least a week. This left the ten at the cabin in a predicament as they were without exit, the boat having been removed from the west bank of the Columbia. An alternate helicopter, from Okanagan Helicopters in Revelstoke, was found to be available and this machine made the pick up on the afternoon of Monday, August 19.

This camp was the first of its kind in the A.C.C. It attracted some of our younger and most competent mountaineers.

It is believed to have been a success and will be continued as future Club policy. Additional camps of this type may be organized to meet a growing demand.

1968 A.C.C. Tantalus Camp

By Franck Britton

The Vancouver Section was asked to undertake the organization and operation of another camp at the Tantalus Hut, and having by good luck or good management found a successful formula at the first such camp, it was decided that the second should be a repeat performance, with as few changes as possible.[24] Bruce Mackedie, upon accepting the job of directing the operation, acquired

24 See 1967C.A.J. page 129.

a useful file about what happened at the first camp and swung into action. Hans Schwarz of Jasper was engaged as the guide, and Nina Wisnicki of Vancouver agreed to forsake art temporarily and become the cook.

Applications were received from members and associates in Ottawa, New York, Cleveland and from two New Zealanders in transit to new jobs, but mostly those participating came from the Canadian West. Altogether there were 27, counting Hans and Nina, which is rather more than capacity for the Hut. Three slept in tents.

On 4th August West Coast Air Services ferried the party in to Lake Lovely Water, the leader, guide, cook and supplies going directly from Vancouver and the rest of us, four or five at a time, from the dock at Squamish. The same plane flew out a work party of the Vancouver Section co-ordinated by Andrew Gruft which had been erecting the fibreglass igloo on the Tantalus-Serratus Col, so that, in passing, we were able to get first hand reports about it and the best way of getting there. The flight from Squamish to the lake takes only about 10 minutes but to anyone unfamiliar with mountain flying it is an exciting time. The plane takes off in the harbour and flies over the log booms and mud flats at the head of Howe Sound, with the granite face of the Squamish Chief on the left and the granite steps and shoulders of Mt. Murchison on the right. The plane circles around, proving that there is really plenty of room and flies up the Squamish valley, climbing hard. The Tantalus Range is now on the left, and the peaks and snowfields in Garibaldi Park on the right. The plane turns left and seems to be heading straight for the middle of the great wall of the Tantalus Range with no hope of going over the top. It shoots through a narrow gap, with a little red-roofed cabin below beside a glorious green lake, and turns in the cirque behind the gap, almost brushing the rocks of Alpha and the hanging glaciers of Lydia, to land on the lake and taxi up to the cabin. It is a surprise to find that the lake is nearly a mile long and a quarter of a mile wide, and that there were actually several hundred yards at least between the plane and those jagged rocks at all times.

Supper at the Hut was the curtain raiser for a succession of smash hits in the line of cordon bleu, gourmet cookery, planned and executed by Nina. This part of the narrative should be written in poetry because nothing else would convey the sense of amazement and delight as one triumph followed another each day. All this magnificence was produced with remarkable efficiency and generally right on time.

The first day was the only one in the week with bad or even doubtful weather. At Hans' urging, we all went up to the steep snow slopes below Iota and Pelops for a Snow School. The older members and the experts grumbled a bit, but in the end it proved to be well worth while. The area is notable for its glaciation and there is ample opportunity for a serious accident to those whose technique is rusty or deficient. Knots and rope handling were thoroughly reviewed as well and a good standard system was laid down for the leaders of parties for the remainder of the camp. As seems to be inevitable with all Snow Schools, we got rather wet, and ate our lunch huddled on a rock to keep out of the rain and wind. The weather cleared by supper time and the rest of the week was perfection.

The climbs were all on the usual routes, and exploration and innovation was generally confined to inadvertent departures from the standard. For the record there were a traverse of Omega (three parties), a traverse of Pelops and Iota (three parties), Niobe (one party), Lydia (three parties), a traverse of Alpha, east to west, (one party) and Tantalus-Dione (two parties). The Tantalus parties led by Hans went over the Serratus-Ionia Col on successive days and spent one night in the new fibreglass bivouac shelter, climbing the next day and returning to camp. Both parties ascended the

steep snow gully on the west side of Tantalus; the snow was hard, crampons were used and a fixed rope was installed to assist in the descent. The views from all these peaks are superb. To the south one can see straight down Howe Sound to the tip of Point Grey, reversing the familiar view to the north from the University of British Columbia. To the east and north of the Tantalus Range there are snowfields, glaciers and peaks of every shape and description as far as the eye can see, which is about 40 miles. To the west the peaks are less interesting, but the valleys are far below and there is always a river or a lake or an arm of the sea enclosed in the deep folds of rock and forest.

On Saturday, August 10th the plane arrived shortly after lunch to begin ferrying the entire party in d installments to Squamish and Vancouver. Some enthusiasts on Omega, and one with skis on the snow slope below Iota, dallied in their enjoyment and almost cut it too close, but they arrived puffing and blowing at the last moment and so, without further incident, we closed this camp. Our thanks to Bruce Mackedie, Hans Schwarz and Nina Wisnicki, and the rope leaders for a job wall done. It was a happy time for all.

Apart from those previously named, the following attended this camp (*signifies rope leaders):

Miss Rosemary Anderson, (Vancouver); *Mr. Lloyd Beech, (New Zealand); Dr. Gerard Bloem, (Vancouver); Mrs. Trudie Bloem, (Vancouver); *Mr. Franck Britton, (Vancouver); Mr. Peter Britton, (Vancouver); Mr. Jamie Britton, (Vancouver); Mr. Michael Craddock, (Vancouver); *Mr. Dennis Davis, (Victoria); *Mr. Dave Douglas (New Zealand); *Mr. Frank Foster, (North Vancouver); Miss Aileen Harmon, (Banff); Mr. Ron Howard, (North Vancouver); Mr. Bob Lake, (Victoria); Mrs. Barbara Lake (Victoria); Miss Christa Leipert, (Vancouver); Mr. Ted Mitravitz, (Vancouver); Dr. Ferris Neave, (Nanaimo); *Mr. Stan Paterson, (Ottawa); Lt. John Pirquet, (Victoria); Miss Polly Prescott, (Cleveland); Mrs. Ruth Robinson, (New York); Mr. Bob Smith, (Vancouver); Mrs. Mary Sylvander, (Ganges, B.C.).

A.C.C. Annual General Meeting, 1968

The 63rd Annual General Meeting was held at Lake O'Hara Summer Camp, July 28th, 1968.

About 90 members and guests were present. The meeting was called to order by the President, Roger Neave, at 9:30 a.m. The minutes of the last Annual General Meeting, which was held on August 27th, 1967, at the Club House, Banff, Alta., were approved as printed in the 1968 Canadian Alpine Journal on the motion of Lillian Gest, seconded by Bea deLacy. The President welcomed the following guests who were present at the camp—our Honorary Member, Mrs. Phyllis Munday; and two guests, Mrs. Anni Lampl from Austria, and Lloyd Beach from New Zealand.

Correspondence: The President reported on a letter from the Canadian High Commissioner to India, extending an invitation from the Western Himalayas Mountaineering Institute for members of the Alpine Club of Canada to visit the Himalayas. The Institute will outfit the party if required, provide food and porters, and make any other arrangements required. This matter will be looked into further and costs for such an expedition developed.

Campbell Ledingham read a letter from Prof. O'Dell extending thanks for the invitation to attend the Lake O'Hara Camp and extending best wishes to all those attending. He also read a letter from the nephew of Dr. A. Y. Jackson, the well-known artist, sending regrets that due to illness his uncle could not attend the O'Hara Camp.

Obituaries: The President referred to the passing of the following members and expressed

sympathy on behalf of the Club to their relatives and friends: Miss M. R. Baxter, Laurance Boylett, Miss Alberta Chase, Mrs. Herman Furrer, David A. Gillies, Miss Jean Parker, A. Rother, H. B. Silsbee, G. Morris Taylor.

Camp and Expeditions Committee Report:

Since the 1967 Annual General Meeting fell after the Yukon Alpine Centennial Expedition, the activities of that summer have been largely covered in the 1967 Annual Meeting reports. With the end of the Club year normally falling in the middle of the Camps and Expeditions Committee period of activity, it is difficult to present as comprehensive and conclusive a report as we would like. However, without quoting specific facts and figures, there are a number of items which we would like to bring to your attention at this time:

1968 Camp Registration—Registration for both the General Mountaineering Camp and the Alpine Climbing Camp has been lower than anticipated. This has largely been attributed to the after-effects of the expensive Y.A.C.E. camps and climbs of last year, as well as several lesser factors, including an increase in camp costs and fees. This has affected our budgets, which we have been able to adjust in some but not all areas, to correct the financial problems this brings on.

The 1968 General Mountaineering Camp—The camp has returned to Lake O'Hara for the first time since 1951, seventeen years ago. This site was selected when a budget for the proposed White River-Italian Military Group site indicated that at this time, it would be an excessively expensive location, costing approximately 50% more than for a camp at O'Hara. We were pleased to receive quite a high number of camp registrations from non-members, and believe this may reflect our increased level of publicity, which will be described later. Camp is running over budget, which is largely attributable to trucking, horse-packing, and professional guiding charges being higher than originally estimated. Coupled with slightly reduced man/weeks of registered participation, there is a definite possibility that we may suffer a financial loss in this operation for 1968.

The 1968 Alpine Climbing Camp—This is the Alpine Club of Canada's latest venture in climbing camps. Since only the General Mountaineering Camp is open to non-members, it is hoped interest in participating in the other camps will act as an incentive for non-member climbers to consider joining our Club. The Alpine Climbing Camp commences on August 3rd, and is located in the Adamant Range. About 1400 lbs. of gear and food, etc. for the group is being flown in by helicopter, and participants will hike in the trail and marked route carrying their own gear. Registration for this camp is also lower than anticipated, and costs have been largely returned to budget by eliminating the professional guide originally slated for the camp.

Publicity—The Camps and Expeditions Committee, in conjunction with the Clubhouse Committee, has embarked on an expanded publicity programme. Basing our actions on the need to have more people aware of the Alpine Club of Canada and its many operations and membership advantages, the number of brochures printed was increased from approximately 1500 to 2700 copies. These have subsequently been distributed across the continent and around the world, to mountaineering clubs and organizations whom we believe would find the material informative and useful. It is anticipated that distribution and availability of camps, Clubhouse, and general Club information will be generally increased and broadened in the near future.

The National Parks of Canada—Recent discussions with the Parks authorities indicate that their National Parks Policy, which is now under development, will have a great effect upon the type and extent of use allowed, especially in those areas being designated as perpetual wilderness. Since a full two-thirds of our summer camps of the past 24 years have been located in the National

Parks, we must give our full attention to our camp policies and formats if we are to continue holding such camps as this one in the Parks. With the imminent defining of those park areas which are to be maintained as wilderness areas—areas, I might add, which are the usual sites for our camps—the type, size, and activities of these groups using these areas will be carefully scrutinized before permission for the camp is granted. It is possible that the General Mountaineering Camp as we know it today may not be permitted to use these wilderness areas in future. As an example of how the new regulations and restrictions may be affecting us, where we normally have been allowed to cut sufficient poles for all our tent and table needs, this year we were given special permission to cut two poles for the dining tent ridges, and these only because suitable poles could not be brought up the trail. Although we can usually bring this material in by horse or helicopter, we must keep in mind that such action is very expensive.

While mentioning the National Parks, I would like to bring your attention to our reputation and image as an organization. Over the decades we have developed quite a high reputation for being a reputable group; tidy, conscientious, and law-abiding; believing in the existence of our National Parks as living museums to be maintained for future generations. This coming Tuesday, July 30, we are expecting a visit from three senior administrators of the National Parks. We are depending on you who are staying at camp to both continue and improve the Club reputation, and help us pass this review with the best of colours. Please ensure that everything in the area of camp is as it should be, and help us gain approval for the continuation of our camps system in the National Parks.

Camp Costs — This year has seen a camp fee increase, and under our present system, we must expect this trend to continue. For a number of years the summer camp has, as requested by the participants, tended to continually offer more services, more facilities, and more guiding, while at the same time the participants have become less and less active in the organization, preparation, administration, and operation of the camp, on a voluntary basis. It is largely this general trend which is increasing camp costs. Here are some of the major areas of cost for the General Mountaineering Camp:

Packing and transportation generally is becoming very expensive. The cost of hiring horses and wranglers has now reached the point where, pound for pound, they are competitive with helicopters. Horse packing offers the advantage of frequent trips throughout camp, transporting gear and fresh provisions, and the disadvantages of requiring a wide solid trail over reasonable terrain, and good bridges over the large streams. As an interesting comparison, about 40 Ibs. of gear and food are needed to keep a climber at the Alpine Climbing Camp for one week, while the same climber requires about 115 Ibs. of gear and food at the General Mountaineering Camp — almost three times as much! Some 25% to 45% of camp expenses can be attributed to transportation.

Camp erection and operation, including management, cooking and serving of meals, cutting fuel and carrying water account for about 35% of the camp budget.

The cost of professional guides has risen sharply in the past year, with an increase in Guides' Association fees. It is still less than 10% of the camp costs, but to this should be added the cost of maintaining a corps of amateur guides needed to carry out the climbing program and training schools which are an integral part of the General Mountaineering Camp.

Food and other supplies account for nearly 25% of the camp expenses. However, we are not interested in reducing costs in this area when it means a change in the quality and quantity of the meals. We believe that good food is a prime requisite to good climbing and a good camp.

Camp gear is continually wearing out and becoming unsuitable for further use, and about

7% of the camp costs must be allocated towards replacement of it.

Recommendations for the future—We are recommending that the new Camps and Expeditions Committee and the Board of Management give serious consideration to the following suggestions:

(1) That a third camp be founded, to complement the General Mountaineering Camp and the Alpine Climbing Camp. It is suggested that this camp be of a small, informal and self-serviced nature, and that it allow family groups to participate.

That the General Mountaineering Camp be established to handle a smaller and pre-determined number of participants at a time, and that additional weeks of camp be made available to take care of all those wishing to attend. This would reduce the amount of gear needed for camp, spread the cost of setting up and dismantling camp, and be more personal in nature due to the smaller number of people attending at one time.

More use should be made of the persons participating in the camps, in helping organize, establish and operate the camps, spreading part of the work-load of the committee members and their staff, etc. to those directly benefiting from these activities.

(4) The Annual General Meeting be held at some place other than at the summer camp (General Mountaineering Camp usually). As our camp system grows, the meeting at the camp will have less representation of the membership and the various membership regions, and the desire to attend these meetings causes an undue burden on the camp's budget, necessitating almost double the tentage for the one night preceding the meeting. Whereas most participants would normally leave the same day that others were coming in, we now encounter this one night overlap. The extra transportation, camp erection, etc. costs must be borne largely by those coming for the mid-week climbing.

In closing, I would like to say that we are now completing our first two-year term of the existence of a Camps and Expeditions Committee. The responsibilities of the committee entail a considerable amount of work organizing and operating the camps for the membership, which it is hoped will in future be well shared among a full complement of members comprising a strong and active committee. Already much of the work of the committee is becoming easier, as we compile additional records, guidelines, camp information, operational procedures and experience. We hope this aspect of the work continues to become easier, so that the anticipated expansion of the Camps and Expeditions programme will not become an unbearable work-load for the committee. One of the greatest needs of the Alpine Club of Canada, if it is to prosper, is for more participation of the general membership in not only the activities, but also in the work of this organization which lies behind the activities we enjoy. We would like to suggest that the camps program is a good place to institute such a trend!

This report is respectfully submitted by the Camps and Expeditions Committee, 1966-1968. R. Donald Lyon, Chairman.

The adoption of this report was moved by Don Lyon, seconded by Bob Hind. Lillian Gest commented that it was an excellent report. Adoption of the report was carried.

Camp Site Committee Report:

Cam Ledingham read the following report from Peter Vallance, Chairman of the Camp Site Committee:

I regret that 1 will not be able to be present for the Annual General Meeting at the Lake O'Hara Camp.

I am advised that the Board of Management has decided that the 1969 Camp will be held in the Freshfield area. As Chairman of the Campsite Committee I have nothing further to report.

Yours sincerely, P. S. Vallance.

Adoption of the report was moved by Beth Henson, seconded by Ed Potworowski. Carried.

Club House Committee Report:

This report was presented by Roger Neave, temporary Chairman of the Club House Committee:

At the end of last year's operations, Doug Hawkes, the Chairman of the Club House Committee, resigned. A number of people in Calgary were approached to see if they would take over this position, but without success. By mid March it became most urgent that this committee be reactivated in order to make arrangements for the summer's operation. The only apparent solution was to take over the Chairmanship of this committee myself. 1 therefore requested and received approval from the Board to assume this position. The other members of the committee agreed to continue to act.

The Board, at a previous meeting, had decided that, if possible, the Club House should be operated as in previous years. We therefore proceeded on this basis and steps were taken immediately to start hiring the necessary staff. Miss Susan Tatum, one of our Vancouver members, agreed to act as Hostess, and has proved most capable and efficient. Mrs. Dorothy Hawkes arranged for a cook, and Miss Monkman has been serving excellent meals since the staff started to assemble on June 15th.

The Club House was officially open for business on Saturday June 22nd, although we did have a few guests during the previous week. To mark the opening of the facilities we had a buffet luncheon on Sunday June 23rd, and invited some of the Parks officials, guides and Banff members of the Club.

In order to increase the Dormitory accommodation one of the rooms was converted to double-deck sleeping platforms. This increases the possible capacity of this room from 4 persons to 10 persons. A donation kindly given by Dr. Isabella Perry was used for this purpose. The sleeping platforms are equipped with 3-inch foam mattresses. The room has also been provided with shelves and with openings over the door for cross ventilation.

During the latter part of June Mr. and Mrs. Varian Green visited the Club House and generously donated $250 to winterize the Mt. Louis cabin. This donation was made with the expressed hope that others would contribute towards the winterization of other cabins. Prompt action was taken to use this donation, and within ten days the materials were purchased and the work completed. The walls and ceiling were insulated with 2'/2 inches of fibreglass, and the cabin was lined with pre-finished mahogany plywood. Since the labour was all voluntary, the cost came within the $250 donation.

Last winter over $1000 was collected for use of the limited facilities which were left open and available for winter use. This would seem to indicate that there is a demand for accommodation at the Club House during the winter, and that if better facilities were available during this season

increased revenue could be obtained. This would appear to be the logical way to eliminate the deficits which have occurred on the Club House operations for the last few years.

Two of the main difficulties with winter operation are the lack of a suitable water supply and adequate sanitary facilities. If these two problems were overcome, I believe more revenue could be obtained throughout the winter.

I would like to extend to Gladyse and Dorothy Hartley a sincere vote of thanks for the excellent job they did in looking after the Club House premises through last winter. They issued and collected keys, received and banked fees for the use of the facilities, and visited the Club House very frequently. It is probably partly due to their efforts that such a good revenue was collected last winter.

This Committee had one change of personnel this year. Bob Gibbins moved from Calgary to Kelowna and was replaced as treasurer by Ron Smylie. Ron has made several visits to the Club House to set up the books and assist in the accounting procedures. He was also most helpful in obtaining building materials for the work that was carried out in Dorm and Cabin.

Respectfully submitted, Roger Neave, Chairman.

Adoption of the report was moved by Roger Neave, seconded by Dorothy Peck. Lillian Gest commented that she knew much work had been done at the Club House this year by the Chairman, assisted by his wife. Motion Carried.

Hut Committee Report:

In the absence of the Chairman of this Committee, the report was read by Cam Ledingham:

This has been a busy year for your Hut Committee members. The various projects are wide and diverse. As is usual the help supplied to these members from the three major Sections is up to previous enthusiastic standards.

The response to the sale of the new Huts Information Book has been gratifying. To date eight books have been sold to various Sections and one outside group.

The Bow Hut which was erected this winter by a consortium of Calgary Sports Groups has been a happy success. The A.C.C. paid for truckage and supplied three members as part of the construction crew.

Aluminum for the Wates-Gibson Hut was taken in during the winter under the direction of two Jasper members. The job of re-roofing has been undertaken by the Edmonton Section. It is planned to do the same to the Elizabeth Parker and Wheeler Huts during the fall.

Our unofficial Section in the Kelowna area have been doing extensive repairs to the Hermit Hut, including installation of a new stove, a floor, and generally making the Hut more comfortable.

The Calgary Section will be cleaning up the last of the debris from the Red House demolition. This was halted due to snow last Fall.

The un-assembled oblong shelter in the Bugaboos was brought down for shipment to the Vancouver Section. They plan to erect it on the Serratus-Dione Col as a High Camp in conjunction with the present Tantalus Hut. The structure is now an Igloo as the parallel sections have been stored at the Club House.

The Board of Management are still pursuing the B.C. Parks with the proposal to erect a

substantial Hut at Boulder Camp in the Bugaboos. The problem has become difficult as the B.C. Government have set aside this area as a Park. Taking advantage of a recent helicopter lift, a Coleman stove, benches, tables, a few pots and pans and buckets were left for conveniences.

Some plastic piping has been purchased to pipe water into the Fairy Meadow Hut. The existing system was damaged by the snow loads of two years.

Hut usage continues to be high. The increasing interest in ski mountaineering is reflected in the winter use by members. Interest in Fairy Meadow is very keen as evidenced by groups all trying to book dates for the best climbing and touring season.

Respectfully submitted, Ron Matthews, Chairman Hut Committee

Adoption was moved by Bob Hind, seconded by Ted Mills. Carried.

Ski Mountaineering Committee Report:

This report was read by Helen Butling in the absence of the Chairman: The Annual Ski Mountaineering Camp was this year held at the Wheeler Hut, Rogers Pass, Glacier National Park, B.C. during Easter Week. Under the direction of Dudley Godfrey as Camp Manager and assisted by Leo Grillmair, Guide, Mrs. Heather Haynes, Cook, and David Vallance, Assistant, the eighteen Members and six guests enjoyed some great high-country skiing despite indifferent weather. Ski trips were made on the Illecillewaet Glacier, Macdonald Shoulder, Cheops Mtn., Fidelity Mm., Mt. Abbott, and to the Steps of Paradise in Asulkan Pass. For the first time in many years, cross country skis were tried by several people with reasonable success. In the evening during camp talks were given on avalanche safety and search procedure by Art Schwartz and Bob Burns, on equipment by Leo Grillmair, and avalanche control in Glacier Park by Willy Pfisterer. Our President, Roger Neave, discussed the Alpine Club's problems informally. Discussion was also held on the proposed site of the 1969 Ski Camp and it was felt that the little Yoho area was preferred. As there were no injuries during camp and a modest profit of $199.82 was made, the 1968 version of Ski Camp was a definite success. During the past year the Ski Committee asked the Board of Management for permission to purchase a portable rescue ski tobbogan and avalanche probes for use at future ski camps and approval was granted. In view of the sagging attendance at Ski Camps the past few years a reassessment should be made of the purpose of Ski Camp and the type of skiing wanted, size of future camps, amount of relative luxuries required and other pertinent details. Consideration should be given to running more rugged camps for smaller groups with an eye to genuine mountaineering on skis in addition to the regular camp now being held. Group charters to interesting ski areas on this continent and abroad should also be considered.

Respectfully submitted, Bruce Fraser, Chairman.

Helen Butling moved adoption, seconded by Marjorie Hind. Carried.

Finance Committee Report:

The Chairman of this Committee, Reed Naylor, read this report.

Tangible efforts of the Committee this year were confined to attending to the reinvestment of several substantial holdings which matured during the year. As interest rates are currently at a very high level an advantage accrues to the Club in the form of higher income.

In line with rising interest rates our investments have shown some shrinkage in value from cost—less than 5% in the case of investments held in General Funds and some 10% in the case of Specific Fund assets. It appears probable that the trend will reverse itself and that the high coupon bonds we have recently acquired, along with the fact that our holdings are well diversified as to maturity, should result in improvement in value at a better than satisfactory rate.

Our Specific Fund Reserves are currently under review and the reporting Finance Committee would hope that some of these will disappear, to the simplification of our balance sheet.

Our income for 1967 increased by some $4300, reflecting the new schedule of membership fees. While our expenses were not significantly different from the previous year our increased income made it possible to operate at a slight profit as against a loss in 1966 of over $4000.

With summer camps again a possible contributor to our income, and with tighter control of several operating departments we would hope that net results will more than offset the obviously rising costs with which the Club must contend.

Your Finance Committee has spent much effort in attempting to develop more readily understandable financial statements and we hope that our successors will be able to persuade our auditors that streamlining would be more desirable than the fiscal complexities appearing on the accounts which you receive.

Respectfully submitted,
Reed Naylor,
Finance Committee Chairman.

Adoption moved by Reed Naylor, seconded by Lillian Gest. Carried.

Canadian Alpine Journal Editor's Report:

This report was given by the Editor, Mrs. Phyl Munday:

I have pleasure in presenting the report on the 1968 Journal. First I must say how sorry we are that this special edition is so late coming out. There have been many unexpected holdups quite beyond our control because of the inclusion of the special Yukon Alpine Centennial Expedition ascents. This material was extremely slow and late coming in and all had to be very carefully checked and rechecked by Dave Fisher. His tireless care for accuracy with details in all the script, and especially with maps, caused many changes resulting in extra expense and loss of time, but resulted in the best Journal we could produce.

The Journal will be a historical issue containing the personal accounts and the organization of the Yukon Alpine Centennial Expedition, the splendid and successful undertaking by our Club. We were requested to keep down the expenses as much as possible, so we had to forego a coloured frontispiece and coloured Provincial coats-of-arms for heading the Centennial articles; and the black-and-white pictures were smaller and fewer than we had hoped for.

Suitable pictures were hard to get and delays were caused by receiving many Kodachromes, which had to be processed for reproduction.

We wish to thank Messrs. Steve Harrison and Art Belfie of Evergreen Press who know our Journal so well. They have contributed many suggestions to help keep our costs down.

My thanks to many people who assisted with proof reading during Neal Carter's absence for a short time. My greatest thanks go to Neal who has been a tower of strength at all times. His enquiring, scientific mind has been more helpful than words can say.

Respectfully submitted, Phyl Munday, Editor.

Moved by Phyl Munday, seconded by Winnifred Dennison. Carried.

Gazette Editor's Report:

This report was given by the Editor, Dorothy Peck: Three numbers of the Gazette have been issued since the last Annual General Meeting. We tried hard to make these punctual and apologize for some delays. No expenses have been incurred. Thanks are extended to Jack and Joan Miller for helping with the posting, and to David Fisher as the Publisher and overall producer.

The Editor would like to remind everyone to read their Gazette and is also always anxious for any constructive suggestions for the future. I also wish to thank the Assistant Editor, Gillian Deane, for taking over the February issue.

Respectfully submitted, Dorothy H. Peck, Editor.

Motion for adoption was made by Dorothy Peck, seconded by Fran Losie. Carried.

Photographic Secretary's Report:

In the absence of Wally Joyce, this report was read by Cam Ledingham: Entries for the 1968 photographic competition were judged in Toronto on June 10 by an international panel of three very experienced photographers: Mr. John Powell, a distinguished member of the Toronto Camera Club; Mr. Peter Carr-Locke, an English member of the Toronto Section of the A.C.C., who is concerned with visual aids at the John Brown College of Applied Arts and Technology; and Mr. Paul Ries, a member of the A.C.C. originally from U.S.A., who has recently returned to Toronto after several years in Germany. Although the quality of entries was high, the number of entrants was disappointing, especially in the black-and-white prints. Altogether 112 colour slides were submitted by 14 entrants, but only 4 members contributed black-and-white prints (which totalled 16).

I am certain that there are many very good photographers in the Club who did not contribute. The problem, which 1 have inherited from my predecessors in office, 'is to stimulate them to action at competition time. It seems to me that this can only be done by positive action at the local level, and I would recommend that each local Section be asked to appoint a member as Section Photographic Secretary with the specific task of collecting and forwarding entries for the competition.

Aside from a general tendency to procrastination, it has been indicated to me that some Club photographers may be reluctant to submit their best slides or prints because of possible damage in their handling under Camp conditions. I do not propose to take any original slides to the 1968 camp, but instead, plan to show small colour prints of the winning slides, which will avoid damage to the originals and should be more convenient for viewing, although colour quality necessarily suffers in reproduction. I propose to follow this practice again in 1969 if the Board agrees. I feel that publication of this treatment may help improve the number of entries.

Two positive suggestions for changes in the categories included in the Photographic Competition have been made by Don Lyon in correspondence with Sylvia Evans and myself:

To permit photos taken outside of Canada to be entered.

To establish a special class to encourage entry of pictures taken on "expedition", which

should be

defined to exclude week-end sorties as well as formal camps organized by the Club.

Sylvia Evans considers that entries were limited to Canada to encourage appreciation of our own local mountain areas. She suggests that it is desirable to continue this restriction in most classes, but that it would be no problem to expand the competition by adding more classes which could include photos outside Canada and "expedition" photos taken when inside or outside Canada.

I personally feel that, in view of the current number of entrants, it would be a mistake to increase the number of classes. Indeed, I would recommend merging into a single class the present Classes A, Bl and B2 (Mountain Scenes, and Alpine Features & Atmospheric Effect).

However, I would strongly recommend opening all of the classes to photos taken by A.C.C. members anywhere, inside or outside Canada. It may be desirable that certain TROPHIES be restricted to the best pictures taken in Canada.

Regarding a special "expedition" class, I think it would be preferable to merely encourage "expedition" photos in the other classes, but a special trophy might be offered to the best picture or set of pictures of a mountaineering expedition. (Don Lyon suggested that he would be willing to gather contributions for such a trophy.) May I have guidance from the Board concerning these matters, in time for the 1969 Competition, please?

Respectfully submitted,
W. R. Joyce,
Honorary Photographic Secretary.

The Calgary Section was presented with the Section Shield donated by Cyril Wates. Don Lyon received this shield in the absence of the Section Chairman The adoption of the report was moved by Phyl Munday, seconded by Rhoda Rouse. Motion carried.

Librarian's Report:

The Librarian's Report was presented by Betty Walker:

Frequent use of the Library has been made, particularly the collection of Journals. Research questions included photographic sources for a collection of pictures at Lake O'Hara Lodge; information about early climbers in the Canadian Rockies for a history of the Canadian Rockies to be published in the fall of 1968; and bibliographic assistance for a Ph.D. student on the changing geography of the Rogers Pass area.

The Club received seven books as gifts and purchased three. In addition many Journals were received on exchange. A gift of photographs of former A.C.C. camps was accepted.

In accordance with recommendations made to the Board of Management duplicate copies of books in the collection were offered for sale to the members. The list was circulated in May and all books have been sold.

The proceeds from this sale will be put into the Library Fund. It has been discovered that the interest from the J. W. Hickson bequest is at the disposal of the Library. A portion of the funds will be used for classifying the collection and the balance will be spent on books and binding.

The lease with the Vancouver Public Library where the collection is housed has been renewed for 3 years on the present terms.

Respectfully submitted, Elizabeth B. Walker, Librarian.

The adoption was moved by Betty Walker, seconded by Lillian Gest. Carried.

During the discussion on this report it was pointed out that the agreement with the Vancouver Public Library has been renewed this year for a 3-year period. However, the Vancouver Library have indicated that at the end of this agreement our Library must be removed or turned over to the Vancouver Public Library. The future location of our Library is something the new Management Board should look into in the near future. Betty Walker pointed out that as a National Club our Library is one of our valuable assets and that one advantage of its being located in Vancouver is the good back-up resources, including photocopying services. Phil Dowling asked what the proceeds were from the sale of duplicate books recently disposed of. Betty Walker replied that it was over $500. Lillian Gest mentioned that the American Alpine Club have started to build up branch libraries of books in different sections and suggested that we might wish to do the same. The President asked how these section libraries were kept and who looked after them. Lillian Gest said she would try to find out about this. The question of lending books was raised. However, it was pointed out that many of our books are irreplaceable or too valuable to let out of the Library. Most current books can be borrowed from regular library collections. Phyl Munday expressed thanks to Betty Walker for her work with our library. The President also spoke of her work with much appreciation. Those present expressed their appreciation with a round of applause.

President's Report:

This report was given by Roger Neave:

During my term of office I have managed to visit all the Canadian Sections of the Club except the Victoria Section. I hope that future Presidents will be able to do more of this than has been done in the past. I know it has been helpful to me, and I hope it has also been of some benefit to the Sections as well.

The last Section I visited was the Kootenay Section about 2 weeks ago. This Section is having some serious problems at the present time because, while it is a fairly large and active Section it is composed mainly of Section Associates, with only a relatively small number of A.C.C. members. I met with the Section Executive all one evening, and discussed their problems.

Regarding the subject of Section By-Laws, the committee which was appointed under the chairmanship of Norman Purssell to study and make recommendations for unified Section By-laws, has now brought in its report. This report is presently under review by the Board, and any action on it will be up to the new Board of Management.

I expect you will all be interested in the results of the Questionnaire, and these will be given as a separate report following this report of mine.

Last year we applied for a subsidy from the Fitness and Amateur Sports Directorate to conduct a Mountaineering Instructors Course.

Unfortunately we did not receive word that this request had been granted until the latter part of April. This left us very little time for finding instructors and organizing the course. However, we have gone ahead with it, and the Sections have nominated a total of 14 persons to participate in the course, which will be conducted at the Club House from August 18 to 24.

We also applied for and have received from the same Directorate, a subsidy of $580 to help defray the cost of travel expenses for Club Officers attending Board (and Annual) Meetings.

I would like to point out that we are only able to obtain these subsidies because we are a National Club, and they must be applied for on an annual basis.

Betty Walker has already mentioned the renewal of the Library Agreement with the Vancouver Public Library. What will be done with the Library after this agreement expires is something which the new Board should give consideration to in the near future.

The Board has been working with the Association of Canadian Mountain Guides regarding the best methods of qualifying and examining applicants for Guides Licences. This is still being worked on, and it is hoped that it can be finalized shortly.

During the latter part of last year the Board discussed the need for setting up a Publicity Committee. This was followed up to the extent that discussions were held with various people and an interim report has been presented to the Board.

A most interesting letter was recently received from the Canadian High Commissioner to India, in which he extended an invitation from the Director of the Western Himalayas Mountaineering Institute to members of the A.C.C to visit the western Himalayan mountains. The Institute will make all the local travel arrangements, supply porters, set up camps, provide food, and rent equipment if necessary. By our standards the costs for these services will be quite moderate. This is one of the few areas open for climbing.

I believe that this covers the main activities of the last 12 months which have not already been covered in the Committee Reports.

In closing this report I would like to thank the other Members of the Board, the Committee Members, and others, for the great amount of help they have given me throughout my term of office. I particularly want to thank Cam Ledingham for the great amount of work he has put in during this period, and for the very prompt manner in which he has always provided me with information which I have requested. The work that falls on the Club Manager's shoulders has grown a lot in recent years, and I know that his wife, Jean, helps him out frequently at peak periods.

I wish the incoming Board every success, and if I can be of any help to them in an unofficial capacity, I will be most pleased to do so.

Respectfully submitted, Roger Neave, President.

Adoption of the report was moved by Roger Neave, seconded by Lillian Gest. Motion carried. Phyl Munday moved a vote of thanks to Roger Neave for the tireless way in which he carried on the business of the Club during his term of office. A standing ovation greeted this motion.

Questionnaire Report:

Results of the questionnaire which was circulated to the Members earlier in the year were reported on by Roger Neave. The direct answers to the questionnaire were tabulated in June, but time did not permit a complete analysis or consideration of the many comments and letters which accompanied the questionnaire. It was recommended that the new Board carry out further analysis of the returns and also review the many suggestions contained in the comments and letters. It was suggested that the final results be published in the Gazette. Eric Hopkins suggested that they be put in percentage form. A new Member who had not received the questionnaire asked to have his feeling recorded that lie had found the Club not "stuffy" but very friendly. A Member asked if the Club House could be used by non-members and it was pointed out that friends of Members were

very welcome and that it would be most helpful if all Members would direct their friends to the Club House if they are staying in the Banff area. Phyl Munday reminded Members that our revenue can only come from Members and their friends since we cannot solicit the general public.

The adoption of the questionnaire report was moved by Gertrude Smith, seconded by Eileen DesBrisay. Carried.

Presentation of Y.A.CE. Medallions:

David Fisher made a presentation of mounted Y.A.C.E. Medallions to the Edmonton and Calgary Sections. These were the last of these medallions to be given out and were received by Fran Losie and Don Lyon respectively.

Appointment of Auditors:

The President explained that questions had arisen which it would be desirable to discuss with the auditors before re-appointing them. It was moved by Jack Cade, seconded by Bob Hind and carried that the Board of Management be given the right to appoint next year's auditors at a future date.

Report of Nominating Committee:

The report of the Nominating Committee, chaired by Franck Britton, was read by Cam Ledingham. As no further nominations for office were received at the closing date of May 20, 1968, the slate of officers for the 1968-1970 term as presented by the Nominating Committee are declared elected.

President:	P. J. Dowling, Edmonton, Alta.
Eastern Vice-President:	R. S. Thomson, Scarborough, Ont.
Central Vice-President:	E. M. Mills, Calgary, Alta.
Western Vice-President:	W. P. Broda, West Vancouver, B.C.
American Vice-President:	Dave Wessel, Bozeman, Mont.
Board Members:	D. R. Fisher, Scarborough, Ont.
	Scipio Merler, West Vancouver, B.C.

Roger Neave, the retiring President, expressed his thanks for the ovation acknowledging his work over the past two years and called on Phil Dowling to take the Chair. Phil Dowling introduced himself as the 20th President of the Alpine Club of Canada. In his comments he said: "The new Board is a young Board with an average age of 40. I will work hard and expect the other Board Members to do the same. If any have comments regarding the way the Club is being run, address them to me, and if criticism is involved a proposed solution of the problem should be provided and the person advancing the criticism should be prepared to work on it. I would like to see an increased growth in membership and the first overseas expedition by the Club during my term of office.

New Business:

Molly Beley raised the question of untidy campsites. Dorothy Peck offered to put an item in the Gazette to remind Members that Campsites should always be cleaned up and left neat and tidy- Lewis McArthur made a motion that the President refer to an appropriate Standing Committee, or

appoint a Special Committee for a study of the provision and maintenance of summit records on the commonly climbed peaks. Bob Hind commented that 100 copper canisters had been prepared for leaving on the tops of mountains. These have now been used up and we probably should order another 100. The meeting was advised that plastic containers are now available. A unanimous vote favoured this motion.

Dave Fisher moved a hearty vote of thanks to Ted Mills, Chairman of the Climbing Committee, and stated that Ted Mills had done an outstanding job. This was seconded by Roger Neave.

Dorothy Peck moved a vote of thanks to the kitchen staff and the girls who served and washed the dishes.

Gertrude Smith moved a vote of thanks to the retiring Members of the Board and Chairmen of the Standing Committees who have done a tremendous job on the Club's behalf.

Bob Hind pointed out that this was the first annual meeting held at Camp since the Yukon Expedition. Since the last annual meeting was held at the Club House, this was more widely representative than last year's annual meeting. He wished to move again a vote of thanks to Dave Fisher for the organization work he did on the Y.A.C.E. Expedition and for the success he made of it. Ralph Forster commented that we should include Dave's long-suffering wife.

The President was asked to introduce his new Board, which he accordingly did.

Mary Read moved a vote of thanks to the rope leaders.

Motion for adjournment was made by Scipio Merler and seconded by Bob Hind.

OBITUARIES

William McKnight Docharty, M.C., F.R.G.S., (A.C.)

The night closes, the shadows soften
On granite mountain and heather hill
And the climbing feet that came so often
Are still, are still And they will not come again.
—HILTON BROWNE

Mr. William McKnight Docharty, a member of the Scottish Mountaineering Club, the Alpine Club and the Alpine Club of Canada died in Glasgow, Scotland, in July 1968 at the age of seventy-two. Mr. Docharty first visited Canada in 1966 when, at the invitation of our President, Bob Hind, he attended the summer camp at Assiniboine. There, his sincere enthusiasm for nature and his reverent devotion to the mountains endeared him to all who knew him.

So impressed was he by the Canadian Rockies that he immediately became a life-member of the A.C.C. and so inspired by the concept of the Yukon Alpine Centennial Expedition that he attended the 1967 camp in the Yukon. There, at the age of seventy-one, he was delighted to make the ascent of a 10,050-foot peak, of which the first ascent had been made only a few days earlier. After climbing all the great peaks in the Alps, he devoted his latter years to his beloved Scottish hills. He had set foot on the summit of every hill in the British Isles over 2500 feet and had documented these in his carefully kept logbooks, laying the foundation for his trilogy, "A Selection of Some 900 British and Irish Mountain Tops", a copy of which he inscribed to the A.C.C. Extremely interested

William McKnight Docharty

in mountain photography, he had perfected the technique of the panoramic picture of which he had mounted and framed more than one hundred. He had also preserved and mounted a fine collection of wild flowers. Willie was enthusiastically planning ten days in the Scottish hills last summer when he was suddenly taken ill and did not recover. His sentiments about the "mountains are best summed up in his own words:

"Thus, at the closing of the day as I nodded and watched the play of flames in the ample fireplace, more and more pictures from the press of mountain memories, like gold from the dross, would take shape to pass in cavalcade before my eyes. As I relaxed among these souvenirs, how gratefully would I acknowledge all those spacious and generous days as priceless part of my share of the heritage, which Almighty God has 'bound in the bundle of life' for His people in this beautiful world of His making."

A.G.P.

James Stewart Hudson 1903-1969

Jim was born in Portage La Prairie, Manitoba, but he spent his boyhood in Vernon, B.C., and moved to Vancouver in 1919. His interest in mountaineering was started in 1924 by Mr. Reg. Knight who had been climbing with the B.C. Mountaineering Club. Jim was a very enthusiastic climber from the beginning and in 1926 he joined the Alpine Club of Canada, Vancouver Section, along with several other members of the B.C. Mountaineering Club.

He established his own optical supply business in 1930 and developed it into one of the largest in this field in Western Canada.

He attended most of the annual camps from 1938 to 1958 but after that date attended only occasionally as he could not do as much active climbing as in earlier years. Jim had a driving energy all his life and possessed a real flair for knowing the important things that were happening round about him whether it was in the optical business or in mountaineering. In later years he did a considerable amount of travelling principally for the purpose of developing his optical business. His only other important interests were his family and the Baptist Church.

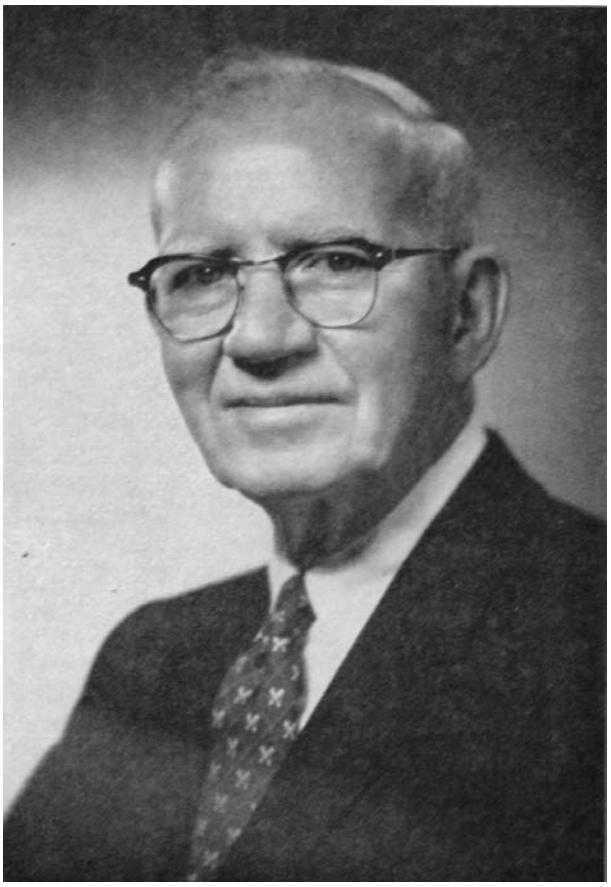
He leaves his wife Dorothy, a son Donald and a daughter Lois to whom we extend out deepest sympathy.

M.W.

Henry S. Kingman, Sr. 1893-1968

The Alpine Club of Canada lost one of its most faithful and beloved members in the death of Henry Kingman on December 12, 1968, in Minneapolis. He was the first American Vice-President of the Club, when that office was created, being the almost unanimous choice of the members at that time.

Henry was born in Minneapolis on Christmas Day in 1893. He graduated from Amherst College, Mass., in 1915 and later attended the Harvard School of Business Administration. He was



Henry S. Kingman

in the American Red Cross Ambulance Service in Italy during World War I and also served as an artillery officer in the French army, for which he was awarded the Croix de Guerre by the French Government. He was associated with the Farmers and Mechanics Savings Bank in Minneapolis since 1926, serving first as Secretary and from 1939-1957 as President, being Honorary Board Chairman at the time of his death. He was active in many businesses, civic and welfare activities in Minneapolis, and was also well-known throughout the United States through offices held in national organizations. His connections are too many and varied to list here..

Henry was a member of the Alpine Club (London) and of the American Alpine Club, serving as Vice-President from 1940-1943. He joined the Alpine Club of Canada in 1930. He was a regular visitor to the Canadian Rockies, having made his first trip there in 1906, at the age of 13. He returned in 1909, 1915 and 1929. During those years he also climbed in the Swiss and Italian Alps. He made many trips to the Canadian Rockies to ski and took part in 1930 in a ski trip from Jasper to the Columbia Icefields and return. From 1929 on he became an annual visitor in the West, either for skiing or for climbing. He attended many of the Camps; made at least seven first ascents.

In 1936 he brought his wife Josephine and their two small boys to the Rockies, and with Lillian Gest and the guide Christian Hasler made the first ascent of Mt. Weed on the Lake Louise-Jasper Highway when that road was just being constructed. In 1943 he was an instructor at the Army Training Camp in the Little Yoho Valley.

In later years he and Josephine often spent their vacations at Lake O'Hara. It was after a very pleasant two weeks there last summer, 1968, with many old-time friends, that Josephine died very suddenly some ten days after they had arrived home. This was a great shock to their many friends. Later in the fall Henry planned to attend the American Alpine Club dinner held in Philadelphia on December 7, but had to go into hospital instead. Two weeks later after very serious surgery he passed over the Great Divide. He will be greatly missed by his many friends who remember fine climbs made with him and very pleasant days up in the mountains together. To his three children who share their father's love of the mountains and climbing, and their families, the Club extends its heartfelt sympathy.

L.G.

Bernard Thomas Royal

Banff was shocked and saddened by the sudden death of 23-year-old Bernard (Bernie) Royal who was killed April 10th when his plane crashed in the mountainous area west of Golden, B.C.

Bernard was born in Calgary and received his primary education in Lethbridge, Alberta, completing high school after moving to Banff in 1952. He was held in high esteem by all who knew him and excelled in all he undertook.

During his teenage years he was actively involved in the local Boy Scout movement and was honoured as a Queen's Scout.

After working for the Parks Department as a radio technician for 2 years, he took a course in skiing and mountain guiding to become a fully licensed mountain guide. In 1967 he was a member of the Yukon Alpine Centennial Expedition.

He was an accomplished photographer. His other interests included amateur radio, mountain rescue, first aid and flying.

To his father William Royal and brother Walter of Banff we extend our sympathy.

Corinne Smith

Corinne Smith was born in New Westminster, British Columbia, and was educated there. In 1939 she married Ernest E. Smith of Vancouver.

Before becoming a member of the Alpine Club of Canada, Mrs. Smith had in 1942 joined the British Columbia Mountaineering Club and had attended (several of that club camps and had climbed many of British Columbia's mountains

When Mrs. Smith became a member of the Alpine Club of Canada in 1955 her husband was already a well-known mountaineer and together they took an active part at many of the Club camps, as well as the affairs of the Vancouver Section.

Mrs. Smith was a keen and active climber until she suffered a knee injury while curling. This injury did not preclude her from taking part in other sport. She was a popular member of the Point Grey Golf and Country Club and played in many tournaments.

She died on December 17, 1968, after a short illness. The sincere sympathy of her many friends is with her husband.

H.A.V.G.

BOOK REVIEWS

A Woman's Reach: Mountaineering Memoirs.

By NEA MORIN. London: Eyre and Spottiswoode, 1968. 228 p. illus.

Nea Morin's memoirs span an era in mountaineering during which she was to witness a phenomenal increase in the numbers of climbers and a significant development in climbing techniques.

In an eminently readable book, she ranges from the classic climbs in the Alps with the Croupe de Haute Montagne to rock climbing in Britain and ultimately to an expedition in the Himalayas. Always sensitive in her description, she succeeds in evoking the essential atmosphere of a region—be it the Dauphine, The Cuillins or the Himalayas.

As an instructor, she took an interest in young climbers regarding change with tolerance, in the belief that "climbing is for everyone to enjoy in his own way".

Although she is not a feminist, there is no denying her interest and pride in the achievements of women climbers and she lists some notable feminine ascents in Appendix 2.

"A Woman's Reach" is an eloquent evaluation of climbing experiences and a justification of mountaineering as a way of life—teaching "how the body can adapt itself to conditions that one would normally consider crippling". It is one woman's tribute to the mountains as a source of joy and comfort.

A.G.P.

Men and the Matterhorn.

By GASTON REBUFFAT, Translation by Eleanor Brocket!

New York: Oxford University Press, 1967. 224 p., 118 illus. (23 in colour), $12.50.

Readers of Gaston Rebuffat's books have grown to expect an extremely high literary and photographic standard and his latest book shows that he, like good wine, certainly improves with

age. This book will be a delightful evening's entertainment for both future Matterhorners and seasoned campaigners wishing to renew their acquaintance with this famous peak.

Gaston's own description of his ascents by several different routes indicates his undisguised admiration, even reverence, for the Matterhorn, which he calls "The most Beautiful Peak in the World." The book covers the full history of the early attempts by Whymper and Carrel culminating in Whymper's final

success by the Hornli Ridge and the tragedy of the descent. Most of this information is extracted from Whymper's diaries. Gaston later gives accounts of the ascents of the other ridges, then the faces, until the only new route left was a helical ascent covering all of the faces; so naturally, climbers being what they are, it was done in 1941.

The photographs by Gaston his friend Pierre Tairraz and Bradford Washburn are first class and would constitute a fine book on their own. One disconcerting photograph for future climbers shows a rather lengthy queue waiting their turn at the Moseley Slab as the Hornli Ridge grows in popularity.

One small criticism I would make is the absence of a map showing the different ridges and arêtes. A small map of the pull-out type would have been an asset to anyone meeting the Matterhorn for the first time.

R.M.P.

George Mallory.

By DAVID ROBERTSON. London: Faber & Faber, 1969.279 p., illus., $11.00.

Mallory is of course inextricably linked in our minds with Everest, where, in June 1924, he was last seen "going strong for the top". A biography that sets the man in his proper perspective, and tells us what he really was like, is therefore to be welcomed.

The story of his life is told chronologically. He was brought up in a country parsonage near Manchester. His education was that of the privileged in England in those days: public school (Winchester), followed by Cambridge University. His first trip to the Alps was when he was still in school. At this stage the story expands to take into account the many factors which shaped his character and paved the way for his future. The reader is introduced to his friends, many of whom became well known as mountaineers or in the literary or artistic fields. These included Geoffrey Winthrop Young, Rupert Brooke and G. M. Trevelyan, to name but three. After Cambridge he became a schoolmaster at Charterhouse, and married. Then came the war. He served in the Artillery in France. Finally comes the climax of the story: the Everest Expeditions in 1921, 1922 and 1924, which took up most of his time for four years and ended in his death.

About half the text consists of letters or contemporaneous articles written either by or to Mallory, or about him. This creates an image of him and the society in which he lived, which no biographer writing 50 years after the event could hope to create. Many of the letters are from Mallory to his wife. Many others are extracts from correspondence with his close friend Geoffrey Winthrop Young.

The various facets of Mallory's character are well presented. One is the sportsman: physically good looking, an oarsman, a man who delighted in physical activity, and who on rock was a "natural" with ability unsurpassed in his time. Another is the intellectual: a student of history who wrote a book, a man of literary and artistic tastes. Yet another is the schoolmaster who disagreed with the teaching methods of his time. (He tried to make his pupils think for themselves!) There emerges as one reaches the end of the story the impression of Mallory as a man of great determination, particularly under adverse circumstances as when climbing high on Everest.

The reader at times is tempted to wonder if this image is too good to be true. He must have had faults, but what were they? The book does hint that he had difficulty controlling his temper; and in this connection the suggestion is made that the famous comment: "Because it is there", delivered to an audience during a lecture tour in America, was not the result of profound pre-meditation, but an impatient reply to a question he had perhaps heard too often!

All in all this is a book to be recommended, both to the student of history who will revel in its wealth of detail, and to the casual A.C.C. reader who will enjoy the story of this fascinating yet unsophisticated man whose name has become a legend.

D.J.N.

The Mountains of My Fear.

By DAVID ROBERTS. New York: Vanguard Press, 1968.146 p., illus., $5.95.

This book is the account of the second ascent of Mt. Huntington, a pyramid of granite, ice and snow, rising to 12,240 feet near Mt. McKinley.

The west face was unclimbed and David Roberts' small expedition of four members of the Harvard Mountaineering Club surmounted the difficulties with great skill and determination. The book is a most vivid account of the group's action. The reader participates in the cold of the snow cave, the dangers of the exposed route, the joys of success as well as the terrible loss when Ed Bernd falls to his death.

David Roberts also conveys his thoughts as to why men face hardship and death to climb mountains—or do they climb in order to face death? I quote: "What vision of malignity can equal the darkness of that of a universe that is running down, of a cosmos that neither orders nor obeys man's yearnings but blindly collapses toward a final motionlessness? Death, our only glimpse of that entropic end, has its seductive fascination."

I have read and re-read the philosophies expressed but am no nearer to an answer. No doubt many mountaineers will add this book to their collection.

J.B.

The Mountaineering Handbook

By C. W. CASEWIT AND D. POWNALL. Philadelphia & New York: J. B. Lipincott Co., 1968. 222 p., illus., (price not stated).

One's first impression on leafing through this book is that its two authors have tried to cover too much material in too little space. Sub-titled "An Invitation to Climbing" it starts by introducing the reader not to climbing but to hiking, then proceeds with breathtaking swiftness through various aspects of climbing technique, including direct aid, until at the end it offers tips on how to ascend such peaks as Snowpatch Spire and Mount Waddington. Obviously the climber who is ready for the latter ventures will have no need for instruction in how to hike, and vice versa, while much that might benefit the intermediate student of the art has had to be omitted for lack of space.

Closer examination, however, reveals a great deal to merit the attention of mountaineers of all degrees of proficiency, presented in an informal, almost conversational style by authors who clearly know their subject. They have not hesitated to quote at length from other authorities, including one telling how to make sure that mail-order boots will fit properly, and such excerpts provide valuable additions to their own writing.

Useful appendices list climbing schools, mountaineering clubs, sources of equipment, and include a good bibliography. One wishes that the authors would try again, this time treating their

subject in less breadth and greater depth. Meanwhile the reader looking for the definitive work on mountaineering technique will do better with "Mountaineering: the Freedom of the Hills" or even Winthrop Young's hoary "Mountain Craft".

I.B.K.

Medicine for Mountaineers.

Edited by JAMES A. WILKERSON, M.D. Seattle: The Mountaineers, 1967.

Written by eight physicians who are also mountaineers, this book is meant for anyone who might face a medical emergency far from trained help. While acknowledging the dangers of amateur doctoring, the authors realize that something more than first aid is sometimes necessary. Besides the more common diseases and injuries, they discuss those peculiar to mountaineering, i.e. frostbite, exposure, and altitude sickness. Correct diagnosis prior to treatment is stressed.

The book also offers suggestions for building up medical kits as opposed to first aid kits. For expeditions which have no medical personnel, this book should prove invaluable.

Exploring Mount Rainier.

By RUTH KIRK. Seattle: University of Washington Press, 1968.104 p, illus, maps. $1.95.

The author who lived for five years in the Rainier area while her husband served there as district ranger, evidently came to love the mountain. Her well illustrated book gives a concise account of the Park's geology, weather, plants and animals; and outlines its history from Indian days to the establishment of the Park. The last section is devoted to information for tourists, including accommodation, roads, trails and suggested climbing routes.

The illustrations comprise high quality photographs, line drawings of flowers, and maps. This guide is highly recommended for anyone intending to visit Mt. Rainier.

J.M.

30 Hikes in Alaska—Western Chugach; Talkeetna; Kenai.

Edited by WILLIAM E. MAUSER. Seattle: The Mountaineers and The Mountaineering Club of Alaska, 1967. 80 p, illus., maps.

Published jointly by the above clubs, this a valuable guide book for those intending to hike, but not climb, in Alaska. Each hike description is accompanied by a good map. Helpful hints about clothing, camping equipment, and organizations to contact are also included.

NEW (CANADIAN) ASCENTS AND EXPEDITIONS[25]

Compiled By Don G. Linke

St. Elias Range, Yukon

MT. KENNEDY (ca. 13,900 feet). New ascent via the north face; July 1968. Dave Seidman and Todd Thompson. Rated Alaskan VI, F8, A3.

During the summer of 1968 a scientific expedition consisting of Jim Underwood, Joseph C. LaBelle and Del Smith made the first crossing of the western plateau of Mt. Logan and made ascents of eight of Logan's major peaks including the following which were first ascents (see article on page 12):

"NORTHEAST PEAK" (18,100 feet). First ascent: July 22, 1968. "A1NA PEAK" (18,400 feet). First ascent; Aug. 1, 1968. "NORTHWEST PEAK" (17,000 feet). First ascent; Aug. 4, 1968.

Logan Mountains, N.W.T.

LOTUS FLOWER TOWER. Ascent of the "Wall of Forgetfulness" on the southeast face; Aug. 1968. Sandy Bill, Tom Frost and Jim McCarthy. Rated grade VI, A4, 5.8.

During the summer of 1968 a party comprising Ted Maden, Peter Rowat and Nona Okum climbed the following peaks in the Southern Logan Mountains: "Reconnaissance Peaks", "First Guardsman", "Sunset Peak", "Nightwind Peak" (highest point between Peaks 21 and 22), "Promontory Peak" (Peak 23), "Thunder Dome", "Storm Point" (Peak 17), "Symmetry Spire" (Peak 16), "Lonely Spur". (See article on page 1.)

Coast Mountains, Alaska-B.C. Boundary

CHILKOOT RANGE:

See article on page 5 for the following first ascents made by Dr. Lawrence E. Nielsen, George Barnett, Russell Batt, William Bendy, Jurgen Meyer-Arendt, Dan Reeder, Thomas Stengle and Charles Warren: "Sparrow Peak", May 24, 1968; "Mt. Steacie", May 25; "Mt. Service" (Boundary Point 101), May 28; "Bicorn Peaks", May 29; "Mt. Hislop" (Boundary Point 103), June 4; also:

MT. POLETICA (7620 feet, Boundary Point 102). First ascent; May 19, 1968. Larry Nielsen, George Barnett, Jurgen Meyer-Arendt and Tom Stengle. Second ascent; May 31, 1968. Russ Batt, Bill Bendy, Dan Reeder and Chuck Warren.

MT. CANNING (Boundary Point 105). Second ascent; June 7, 1968. Bill Bendy, Larry Nielsen, Russ Batt, Chuck Warren and Tom Stengle.

Coast Mountains

Mt. Waddington Area

MT. WADDINGTON (13,177 feet). First winter ascent; Feb. 21, 1969. Dick Culbert, Dr. Barry Hagen and Alan Steck. Second winter ascent; Feb. 23, 1969. Bob Cuthbert, Bill St. Lawrence

25 Names of features shown in quote marks are either unofficial or are pending acceptance by the Canadian Permanent Committee on Geographical Names.

and Les Wilson. In 1968 a total of 30 persons reached the main summit, including 3 of a party of 7 members of the Japanese Alpine Club on July 3, and 13 members from the B.C. Mountaineering Club camp later in July. (See articles on pages 30 and 38.) The following were also climbed during the latter camp:

"FIVE-S". New route; July 1968. Ken Williamson, Don Wilson, Ron Facer and Roger Timmis.

CLAW PEAKS. Traverse of seven peaks, three previously unclimbed; July 1968. Brian Howard and Gernot Walter.

"THE GNAT'S TOOTH" (ca. 8600 feet). First ascent; July 1968. Dick Culbert and Alice Purdey.

"PHANTOM TOWER" (ca. 10,500 feet). First ascent; July 1968. Dick Culbert, Alice Purdey, Bob Cuthbert and Barry Hagen.

CLAW PEAK. New route up southeast ridge; July 1968. Dick Culbert, Alice Purdey and Bob Cuthbert.

Homathko Snowfield Area:

MIST PEAK. First ascent; Aug. 1, 1968. Ascent via north ridge and descent via south side. George Cummings, Stanley Adamson, John Hall, Bruce Peterson and Daniel Hinckley.

ST. JOHN PEAK. First ascent; Aug. 1, 1968. Ascent via west side. George Cummings, Stanley and Lucille Adamson, John Hall and Bruce Peterson.

"REED PEAK". Approx. location—Lat. 51° 04.5', Long. 124° 29.5'. First ascent; Aug. 4, 1968. Ascent via steep snow and rock of northeast side and descent via west side. George Cummings, Stanley and Lucille Adamson, John Hall and Bruce Peterson.

PLATEAU PEAK. First ascent; Aug. 8, 1968, via easy south ridge. George Cummings, John Hall, Daniel Hinckley and Bruce Peterson.

"MAZAMA PEAK". A prominent nunatak located in the middle of the snowfield 3 1/2 miles from Cambridge Peak at a bearing of 259°. First ascent: Aug. 9, 1968. George Cummings, John Hall and Brace Peterson.

CLOISTER PEAK. First ascent; Aug. 10, 1968, via the southwest side. Lucille and Stanley Adamson, John Hall and Bruce Peterson.

MT. GRENVILLE. Second ascent; Aug. 7, 1968, from a camp 31/2 miles north of the summit up the very broken icefalls of the glacier which descends the north side of the mountain to the lowest point of the east ridge of the peak, then via this snow ridge to the summit.

Mts. Raleigh-Gilbert Area (See Article On Page 20):

MT. FILER (ca. 8900 feet). First ascent; Aug. 3, 1968, by entire party consisting of Jim Petroske, Bill Eubank, Chris Eubank, Dallas Kloke and Harry Hibler.

MT. FILER. Southeast summit (ca. 8880 feet). First ascent; Aug. 10, 1968. Jim Petroske. Bill and Chris Eubank.

"THUNDERS BIRD PEAKS". North and south peaks. First ascent; Aug. 4, 1968. Dallas Kloke and Harry Hibler.

"POTLATCH PEAK". First ascent; Aug. 4, 1968. Dallas Kloke and Harry Hibler.

"SQUAW PEAK" (ca. 8400 feet). First ascent; Aug. 5, 1968. Jim Petroske and Bill Eubank.

"NORTHEAST CHIEFTAIN" (ca. 9100 feet). First ascent; Aug. 7, 1968. Jim Petroske, Bill and Chris Eubank and Dallas Kloke.

"SALISH PEAK" (ca. 8300 feet). First ascent; Aug. 8, 1968, by entire party.

TAVISTOCK MTN. First ascent; Aug. 8, 1968, by entire party. "KWAKIUTL PEAK" (ca. 8900

feet). Peak located 2 miles west of Tavistock Mtn. First ascent; Aug. 8, 1968. Dallas Kloke and Harry Hibler.

"LITTLE CHIEF TOWER" (ca. 8750 feet). First ascent; Aug. 9, 1968. Dallas Kloke and Harry Hibler.

HUMMING MTN. First ascent; Aug. 11, 1968. Dallas Kloke and Harry Hibler.

"THE FANG". First ascent; Aug. 11, 1968. Dallas Kloke and Harry Hibler.

"PERSEVERANCE PEAK" (ca. 8500 feet). First ascent; Aug. 11, 1968. Dallas Kloke and Harry Hibler.

Tchaikazan Valley Area:

"CAREFREE MTN." (9400 feet). First ascent; July 1968. D. Naylor, N. Purssell, R. Purssell, F. Foster and F. Kennedy.

Tantalus Range (See Article On Page 76):

ALPHA MTN. New route up northeast ridge; June 1968. Bob Cuthbert and Alice Purdey. MT. TANTALUS. New route up west face; July 1968. Bob Cuthbert, Alice Purdey and Gery Kozel.

MT. DIONE. New route up west face; July 1968. Bob Cuthbert, Alice Purdey and Gery Kozel.

MT. LYDIA. New route up east face; Aug. 1 968. Bob Cuthbert and Gery Kozel.

Harrison Lake Area:

CAIRN NEEDLE. Second ascent; 1968, by a party of the Vancouver Section, A.C.C.

Vancouver Area (See Article On Page 79):

WESTERN LION. New route up the main wall (north face); 1966. Dick Culbert and Alice Purdey. New route up the northeast buttress; 1968. Dick Culbert and Doug McRae.

"THE FLIP'S BUTT". New route up the main northern buttress of "Harvey's Pup"; 1968. Dick Culbert, Alice Purdey, Bob Cuthbert and Gery Kozel.

"THE SQUAMISH CHIEF". New route on "The Prow"; 1968. Dick Culbert and Bob Cuthbert.

EDGE MTN. New route up the north wall of the east peak; 1968. Dick Culbert, Dave Harris, Brian Moorehead and John Ranee.

MT. HABRICH. The Gambit Grooves. New route; 1968. Dick Culbert, Bob Cuthbert and Tom Hall.

CO-PILOT. New route on the north face; 1968. Dick Culbert, Bob Cuthbert and Tom Hall.

A new edition (1969) of Culbert's "A Climber's Guide to the Coastal Ranges of British Columbia", published by the Alpine Club of Canada, contains an approximately 110-page Supplement listing many first ascents and new routes made since the first edition (1965) was published. These are too numerous to repeat here. For availability of the new edition, see the notice on one of the forepages of this issue of the Journal.

Northern Selkirks, B.C.

MOUNT SIR SANDFORD (11,590 feet). New route via east ridge; July 1968. Chuck Loucks, Art Fitch and Ted Church. (See article on page 75.)

S1LVERTIP MTN. New route via northeast ridge from Belvedere Col; July 1968. Robert and

Harriet Kruszyna and Leigh Andrews. (Page 74.)

EAST (BIG) BLACKFRIAR (10,580 feet). Route via the south ridge; July 1968. Robert and Harriet Kruszyna and Leigh Andrews. (Page 74.)

QUADRANT MTN. (9700 feet). New route via the northwest ridge; July 1968. Robert and Harriet Kruszyna, Leigh Andrews and Robert Burns. (Page 74.)

ADAMANT MTN., TURRET PK., AND AUSTERITY MTN. Traverse; July 1968. Robert Kruszyna and Leigh Andrews. (Page 74.) (See also article on page 104.)

Rocky Mountains, B.C. - Alberta

UNNAMED (ca. 9500 feet). West of Mt. Clemenceau. First ascent; Aug. 1968. Dave Wessel, Scipio Merler and Jack Cade. (See article on page 51.)

"SLUMP MTN." (ca. 10,100 feet). 4 1/2 miles ESE of Mt. Stewart in the Cline River area. First ascent; Aug. 12, 1968 Howard and Sue Stidham, and James and Dianne Robbie. (Page 61.)

"MICHAELIS-MOUNTAIN" (ca. 9750 feet). 51/2 miles ESE of Mt. Stewart in the Cline River area. First ascent; Aug. 13, 1968. Howard and Sue Stidham, and James and Dianne Robbie. (Page 61.)

MT. TEMPLE (11,626 feet). First winter ascent; Jan. 3, 1969. James Jones and Dave Haley. (Page 68.)

DELTAFORM MTN. (11,235 feet). New route via Wenkchemna and Deltaform Glaciers; June 22, 1968. Glen Boles, Joe Farrand, Charlie Locke and Brian Greenwood. (Page 68.)

THE THIRD SISTER (9600 feet). New route via north face; June 1968. Bob Cuthbert and Alice Purdy. (Page 73.)

"MT. STEACIE" (ca. 10,000 feet). 4 miles NNW of Mt. Aylmer. First ascent; Sept. 7, 1968. Dr. T. W. Swaddle, Dr. Michael Benn and Dr. Ted Sorenson. (Page 58.)

MT. WINTOUR (9150 feet). First ascent; Sept. 1968. Glen Boles and Ed Peyer. (Page 71.)

CORRECTIONS TO THE 1968 VOLUME OF THIS JOURNAL

Apparently an unnoticed Gremlin assisted in the editing and production of last year's Journal. We are always glad to be advised of errors, and the following have come to our attention:

Page ix, footnote—For "see pages 73-77" read "see pages 104-120".

Page 50, caption to picture—For "Klauns Hahn" read "Klaus Hahn".

Page 116, last line—for "John Hopwood" read "Ron Naylor".

Page 118, line 12—for "August 8th" read "August 9th", and in line 16 for "August 9th" read "August 10th".

Page 131. Dave Parfitt, listed as leader for an ascent of "Peak 4B" has informed us the party did not finish the ascent. Dave Fisher states he therefore has no record of a complete ascent of this peak.

Page 132, above illustration, in fourth line from foot of page, and on facing panorama—For "Mount Samson" read "Mount Sampson". (The spelling is correct on the map on page 106 and its facing panorama.) In the third line from bottom, for "John Hopwood" read "Ron Naylor".

Page 216—The last two lines under the heading "MT. ROBSON" belong under the preceding heading "MT. ASSINIBOINE".

Page 233, caption to picture—The author's expression "a Graminger rescue seat" has been questioned by a correspondent who suggests that the equipment shown is what people familiar with mountain rescue call simply "a rescue toboggan".

Page 269, boxed notice at top of page—for "page 269" read "page x". Page 272, first entry under "S"—For "Samson" read "Sampson".

—Editor