

The
Canadian
Alpine
Journal

The Canadian Alpine Journal Volume 63, 1980

Published by The Alpine Club of Canada

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1980 ISBN 0-920330-10-X ISSN 0068-8207

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Eleven Thousand Plus

This story is of an “Ordinary Joe” as we know him. His philosophy of life and mountaineering never change. In another sense he is no “Ordinary Joe” but a remarkable, superior individual. Many people may know that there are 51 peaks in the Canadian Rockies which exceed 11,000 ft or, if you want to be up to date and go metric, about 3350 m. Most of these mountains are on or near the Divide. They stretch from Mt Harrison in the Kootenay country to Mt Whitehorn north-west of Mt Robson, a distance of 275 miles. Some are readily accessible, especially in the Lake Louise area, but most are in more remote areas. Many pose problems just to approach. When a map of the complete range is disclosed the truth hits home as to how the peaks are situated and the scope of the area. To climb all of these mountains scattered as they are is a huge task, especially when one considers the short climbing season, accessibility, weather and various other limitations. Only a dedicated mountaineer could accomplish such feat.

On 19 August 1979 at twelve o'clock wisps of cloud clung to Mt Assiniboine's summit while far below the green waters of Gloria Lake shimmered in the midday sun. Don Forest stepped on to the summit of Lunette Peak followed by Leon Kubbernus, Gordon Scruggs and me. We all shook hands then gave Don an affectionate hug, for we were as happy as he was. He had just mastered number 51. The first to accomplish this extraordinary achievement. He wanted to leave an easy one until the last he said kiddingly to me one time when we talked about the possibilities of doing such a thing. I count myself very fortunate to have stood with Don on half of those summits and I would like to relate the climbs, some highlights, the failures, and point out how much sweat, pluck, perseverance, grit, or whatever we may call it, needed to climb all 51.

Don always pursued a lot of outdoor activities but quite a change came in 1963. Son, Ken and daughter, Kathy came home one day wanting to attend outings and learn to climb with a junior group organized by the ACC. The parents were asked to help by driving the youngsters to the mountains. Waiting all day was not Don's cup of tea — he likes to participate. It was love at first try, for he took to climbing like a duck to water. He was no youngster himself but in his early forties at the time.

That year, in the select company of Bob Hind and Leo Grillmair, with 12 juniors rounding out the party, Don climbed his first eleven thousander, Mt Temple (11,636 ft) by the standard route from Sentinel Pass. In September, again with Grillmair as leader, Ken, Kathy, John Mowatt and Don climbed Mt Huber (11,051 ft) from Lake O'Hara. Climbing numerous other smaller peaks, Don was well on his way. Gathering experience and confidence, he began to branch out on his own.

The following year, 1964, he climbed Mt Hungabee (11,457 ft) with Don Gowans. This was the year he became a member of the ACC. In 1965 he attended the GMC at Glacier Lake, climbing Lyell 1 (11,505 ft), Lyell 2 (11,520 ft) and two days later Mt Forbes (11,852 ft). It was around this time that I began to hear of Don Forest.

Don again attended the GMC in 1966, this time at Magog Lake. His main goal was Mt Assiniboine (11,870 ft). This he climbed in company with guide Hans Schwartz of Jasper. A month later with daughter Kathy and three others, Don knocked off Mt Hector (11,135 ft). Late in this year I finally met Don Forest.

Don started 1967 off with several Calgary Section stalwarts by spending July first weekend bushwhacking in to climb Mt Cline (11,027 ft). A week later he was on his way to the Yukon as a member of the Mt Manitoba team, participating in the Yukon Alpine Centennial Expedition (YACE). This was one of the big disappointments in Don's climbing career, for atrocious conditions denied them the summit after numerous gallant attempts, (see CAJ1968:55-58).

Back in the Rockies he climbed Mt Edith Cavell (11,033 ft) by the classic east ridge with a Calgary Section party in August. He likes to tell the story of them sitting on the summit eating lunch when an ice axe then a rucksack then a head appeared above the ridge crest from the north face. A lean figure covered in hardware approached and was asked to join them for a bite. His first want was water. When asked if his companions wanted to join them he replied that he had none. Royal Robbins had just soloed the north face.

Weather wise 1968 was a bad summer in the Rockies but Don did succeed in climbing quite a number of smaller peaks. He set out to climb only one eleven thousander that year. In early August, upon gaining the top of the Woolley Shoulder, Mt Alberta was plastered in snow. His party bivouacked then retreated in the morning after spending a miserable night, buffeted by a driving storm.

In 1969 Don made a ski ascent of Mt Hector in March and in August climbed Edith Cavell, making it a second time for both peaks. Up until this time Don was getting in a lot of climbing but not so much on the higher peaks. In 1970 his pattern deviated. Up to now he had been climbing mainly with friends with their own goals and he was happy to climb with them. But now he had goals of his own and they were the bigger mountains. Another reason for the change — he thrived on long hard trips to more remote parts of the range and a lot of the higher peaks presented this kind of a trip. In early July Mt Joffre in the Kananaskis Lakes area was a failure because of bad weather and mixed-up plans but the remainder of the summer proved to be the opposite. In mid July his party found Mt Alberta (11,874 ft) in great shape and Don will tell you it was one of his best trips. Mt Andromeda (11,300 ft) was next. Two weeks later Don persuaded me, fresh from the Alps, to go to Mt Woolley with himself, Harold Kuesnig and daughter Kathy. After climbing a smaller peak on Saturday we climbed Mt Woolley (11,170 ft) and Diadem peak (11,060 ft) on Sunday and were back to the Sunwapta River by early evening. The following weekend he climbed the main (south-west) peak of Mt Bryce (11,507 ft) as well as the east summit.

In mid May 1971 Don set foot on the Columbia Icefield for the first of many trips to come. After two days of whiteout weather the party retreated. A week later he was back with the yearly May 24th Section trip. All the members of our large party, succeeding in climbing Mt Columbia (12,294 ft) on a beautiful weekend. Don was hungry for number one, Mt Robson. On the way to the Forster

Don and what he considers to be the main challenge of all the 51 peaks.
Glen Boles



Don on the main peak of Mt Bryce, just prior to putting on crampons for the umpteenth time. Glen Boles



Don the cook. Glen Boles



Don thrives on long hard trips. Here he is leading the way across the
Castleguard River on the way to Mt Bryce. Glen Boles



Don Forest, the mountaineer. Glen Boles



Hut in early July it started to snow very heavily. Lucky to find the refuge, the party sat out two more days of snow (18 inches) then departed. On the way home they climbed Mt Athabasca (11,452 ft). In mid July Don, Gordon Scruggs and I, climbed the northwest face and a new route on Mt Sir Douglas (11,174 ft). It was a great trip (CAJ 1972:84). We had set out to do the normal route but the peak was plastered in snow with no avalanche action discernible. We picked a good line but falling debris on the very hot day made us veer out to the top of the east side. We traversed the summit and had a few anxious moments descending the heavy snow of the normal route.

In earlier years Brian Greenwood talked to me on several occasions of traversing all three peaks of Mt Bryce. That project never left my list of things to do. When I questioned Don how it would be I found he had the same thing in mind and was disappointed that the previous year when climbing the main summit, the party had skirted the once climbed centre peak. In August Don, Murray Toft and I traversed all three peaks of Mt Bryce, thus climbing Mt Bryce Centre Peak (11,100 ft) by a new route, the north-east ridge. The unique thing about this traverse was that the rock ridges were interspersed with sharp, hard ice ridges, forcing us to put our crampons on 13 times that day (CAJ 1972:39). Nevertheless we all agreed it was a fine trip not soon to be forgotten. Don finished off two more eleven thousanders from Abbot Pass in mid August. Mt Victoria (11,365 ft) by the classic normal route and Mt Lefroy (11,230 ft).

The year 1972 started off much the same as the previous one with Don back on the Columbia Icefields with an ACC party. Two days of bad weather didn't help but Don, the opportunist, managed to ski up Snow Dome (11,340 ft). The first weekend in July, with a party of his closest climbing buddies, he made the third ascent and a new route on little known Mt Harrison (11,100 ft) between the heads of Bull and White Rivers. Later that month an attempt on Mt Athabasca failed in bad weather. At the ACC Climbing Camp in the Clemenceau area Don climbed Mt Clemenceau (12,001 ft), the Rockies fourth highest peak, and seldom climbed Mt Tsar (11,232 ft) plus a host of other smaller peaks in one of the Rockies finest alpine areas. On Labour Day weekend Don and friends bushwhacked up Fynn Creek to the Royal Group and were successful in ascending the spectacular looking Mt King George (11,266 ft) which he had viewed many times from peaks to the east. Don had at this stage climbed 26 of the 51 mountains over eleven thousand and a good many smaller ones.

In 1973 it was back to the Columbia Icefields in May but after two days of whiteouts in a tent below Snow Dome the Icefields were abandoned. July 1st an attempt to get to Mt Willingdon was thwarted by deep snow. In July Don and friends had a good plan but things didn't pan out exactly that way. Upon arriving at the Lyell meadows one evening Don came face to face with a grizzly. What could have been a serious episode ended up as a humorous joke between the four of us. From a camp at the head of Lyell Glacier, in bad weather and wind, Lyell 1, Lyell 2, and Lyell 3 (11,520 ft) were climbed. A heavy dump of snow that night all but levelled the tents but under clear skies the next day Lyell 5 (11,150 ft) was climbed. Another heavy snow dump and a whiteout the next day retired this group to the meadows. Thus a traverse of the Lyells and a crossing of Oppy, Farbus and Douai to Mt Alexandra

were not realized. Don was not satisfied and the next day he and Mike Simpson made an attempt to get up Lyell 4 but heavy snow and rain turned this effort around. Mid August saw Don on the Icefields with the rest of the Grizzly Group. The first day they climbed South Twin (11,675 ft) and North Twin (12,085 ft). They hoped to do Twins Tower but time didn't permit. The following day it was West Stutfield (11,320 ft) and Stutfield East (11,100 ft). The next day Mt Kitchener (11,500 ft) and back to the highway in the afternoon. A lot of distance covered in a short time but this was typical of Don. He took very short strides and we could never figure out how he left us all behind.

In early March 1974 Don had designs on a winter ascent of Mt Willingdon but appalling snow conditions frustrated this attempt. After missing out on Twins Tower the year before he was determined to try it again early in the year but on two successive days his party was turned back by whiteouts and strong winds at the headwall of the Athabasca Glacier. This set the trend for the weather that year but Don still managed to climb seven, eleven thousanders. The first one for the year was Mt Brazeau (11,380 ft) from a camp on Coronet Creek in very bad weather. Two weeks later Don climbed Mt Athabasca for the second time. Next came the Mt Robson GMC where he climbed Mt Whitehorn (11,130 ft), came within a few feet of Mt Resplendent's summit, and topped The Helmut (11,160 ft). By the time Robson got into shape and he was ready a heavy snowfall came and rendered the peak unfit for a few more days. Disappointed, Don, Gordon Scruggs and Mike Simpson left the camp early and travelled south to ascend Mt Fryatt (11,026 ft) from the Vallance Hut. The next weekend an attempt on Mt Deltaform petered out but he was successful on Mt Victoria North (11,160 ft) the following weekend.

Lyell 4 still bugged Don and in mid August he and party hiked all the way in to the Lyell meadows. The Lyell 3/4 col was reached in a whiteout the following day so they retired to their camp in the meadows, only to find their tent collapsed and contents immersed in water. It was a wretched night. They retreated the next day.

In glorious late September weather Don again headed for Mt Willingdon (11,066 ft) with daughters Sylvia and Kathy, and this time was successful. Don will tell you it was one of his finest fall trips. The great expanse of enticing meadows around Clearwater Pass was a tonic to Don after so much contemptible weather that summer.

In February 1975 Don took a few days, hoping to try a winter ascent of Mt Goodsir (North Tower) but bottomless snow turned this trip into more of a reconnaissance. His next trip to an eleven thousander was more rewarding when on the July 1st weekend he trod Mt Joffre's (11,274 ft) summit. In mid July in the Goodsirs, much rain and snow higher up rendered Mt Goodsir off limits. But Don and party did succeed in getting to the 10,800 ft level before snow, verglas and bad weather turned them around. The following week Don and party traversed Neptuak Peak to climb Mt Deltaform (11,235 ft). August that year was very wet and very few successful climbs were done in the Rockies that month. From the ACC Camp on Habel Creek Don got to the top of Mt King Edward (11,400 ft), a remote and seldom climbed peak west of Mt Columbia but that was the only one.

In 1976 Don still had Twins Tower high on his list of priorities and in April was already on the Columbia Icefields again. After three days of bad weather, this try was nullified. Back again in May with a larger party they got to the summit of North Twin but bad weather dispensed a bid to carry on to Twins Tower. Don persisted; trying again in early July but two more days in whiteout was enough. He turned his sights to Mt Robson but again bad weather set in. It was turning into a frustrating year but in mid July Don did climb Andromeda for the second time. Then in mid August after five days of bushwhacking and rain he got to the summit of Mt Alexandra (11,214 ft) with the Grizzly Group, hardly able to see each other in the mist on the top. It was a tough trip but trips like this weld friends together. I will always remember Don picking the countless berries along the way. Sweat streamed down his brow and blue juice stained his chin but a smile of pleasure always creased his face.

Don started 1977 on the Columbia Icefields. In May he climbed Twin West (11,000 ft), a snow domed summit west of the Twins Col. On the following day his party skied up on to the top of Snow Dome and he climbed this one for the second time. On July 1st he and the Grizzly Group packed into Recondite Peak but a combination of camping too low in the valley, sitting out snow storms and tough bushwhacking delayed this party so much it ran out of gas only about 200 ft from the top, sitting on a tower looking across a gap at the summit. Three weeks later Don finally climbed his biggest prize. In company with the Grizzly Group and several others he climbed Mt Robson (12,972 ft) by the Kain Face. It was a magnificent day and luck was with him, making up for the other wet trips. The party was lucky, for they just hiked into the area and climbed the peak in flawless weather. An Edmonton party which had climbed it the day before had waited 18 days. After Robson that weather again stepped in. Trudging all the way up Zinc Creek to climb Mt Goodsir, a few days of heavy rain nullified this attempt. Not deterred, a week later he was back with the Grizzly Group to climb the South Tower of Mt Goodsir (11,686 ft). Then late in August, with two young ACC members, he was eager to finish off Lunette Peak but this trip got rained out. The few he had left to climb were coming harder all the time.

Again on the Columbia Icefields in May 1978 he finally succeeded in crossing over North Twin and ascending the sharp snow ridge to the crest of Twins Tower (11,800 ft). Much caution was needed on the knife edge of snow. In July he made the long trip into Recondite Peak but again was washed out by bad weather. Late in July Don turned his sights back on Lyell 4 (11,160 ft). The long trip back to the Lyell Glacier paid off and, in great weather, he stood on the top. Bad weather through most of August scuttled a lot of his plans but he looked forward to another year with, foremost in his mind, four more mountains.

In 1979 Don looked ahead and planned his weekends methodically. Not happy with reaching within a few feet of the summit of Mt Resplendent in 1974 he went back in early July with the late Gary Pilkington, Rick Hoare and daughter Kathy and stood on the summit (11,240 ft). This proved to be quite a trip for two days later the party crossed Snow Pass and came back out to the highway via the Moose River. Next came Recondite Peak (11,010 ft) in late July. In early August he was back in the Goodsirs again with Pilkington and Rowe. They got too far east on the North

Tower so they ascended the unclimbed peak between the Goodsir Towers. This sub peak touches the 11,000 ft contour on the topo maps. The next day they climbed the North Tower of Mt Goodsir (11,565 ft) and a day later made the first ascent of Sentry Peak (Little Goodsir). One more remained—Lunette Peak (11,150 ft) and on 18 August he proudly stood on its shaly top.

This is a fine achievement and a milestone in Canadian mountaineering. Although some of the 51 peaks are very easy only a skilled and dedicated mountaineer would persevere to climb them all and Don is a fine all around mountaineer. When asked which was the toughest he'll not hesitate to answer Mt Alberta. But any of them could be difficult, given bad weather or conditions. We congratulate Don and wonder what he would have done if he had been introduced to climbing at say, age 16. For while he was busy climbing these larger peaks his vibrams also topped close to 250 others and you can be sure there will be many more.

Officially there are 51 but there are two other summits which touch the 11,000 ft contour on the 1:50,000 topo maps. Whether these two can be described as separate mountains depends on the criteria used to define a mountain. The first is situated north-west of the col between North and South Twin. The other nestles on the main spine of the Goodsir Range between the North and South towers. The former was first climbed by Dave Waterman (AAJ 50:469) while this past year Don Forest, Ian Rowe and Gary Pilkington climbed the Goodsir summit for the first time.

Glen Boles

- 1963 Mt Temple, 11,636 ft; Mt Huber, 11,015 ft.
- 1964 Mt Hungabee, 11,457 ft.
- 1965 Lyell 1, 11,505 ft (again in 1973); Lyell 2, 11,520 ft (again in 1973); Mt Forbes, 11,852 ft.
- 1966 Mt Assiniboine, 11,870 ft (again in 1979); Mt Hector, 11,135 ft (again in 1969).
- 1967 Mt Cline, 11,027 ft; Mt Edith Cavell, 11,033 ft (again in 1969).
- 1970 Mt Alberta, 11,874 ft; Mt Andromeda, 11,300 ft (again in 1976); Mt Woolley, 11,170 ft; Diadem Peak, 11,060 ft; Mt Bryce South-West Peak, 11,507 ft.
- 1971 Mt Columbia, 12,294 ft; Mt Athabasca, 11,452 ft (again in 1974); Mt Sir Douglas, 11,174 ft; Mt Bryce traverse, Centre Peak, 11,100ft; Mt Victoria, 11,365 ft; Mt Lefroy, 11,230ft.
- 1972 Snow Dome, 11,340 ft (again in 1977); Mt Harrison, 11,100ft; Mt Clemenceau, 12,001 ft; Mt Tsar, 11,232 ft; Mt King George, 11,266 ft.
- 1973 Lyell 3, 11,520ft; Lyell 5, 11,150ft; South Twin, 11,675ft; North Twin, 12,085 ft (again in 1975 and 1978); Stutfield West Peak, 11,320 ft; Stutfield East Peak, 11,100 ft; Mt Kitchener, 11,500 ft.
- 1974 Mt Brazeau, 11,380ft; Mt Whitehorn, 11,130ft; The Helmut, 11,160ft; Mt Fryatt, 11,026 ft; Mt Victoria North, 11,160 ft; Mt Willingdon, 11,066 ft.
- 1975 Mt Joffre, 11,274 ft; Mt Deltaform, 11,235 ft; Mt King Edward, 11,400 ft
- 1976 Mt Alexandra, 11,214 ft.
- 1977 Mt Robson, 12,972 ft; Mt Goodsir South Tower, 11,686 ft.
- 1978 Twins Tower, 11,800 ft; Lyell 4, 11,160ft.
- 1979 Mt Resplendent, 11,240 ft; Recondite Peak, 11,010 ft; Mt Goodsir North Tower, 11,565 ft; Lunette Peak, 11,150ft.

Mt Logan: Amenity Ridge

Procrastination — that word made the summer of 1978 a mediocre summer in climbing terms. Mike Down and I decided that 1979 would be different — a trip to the St Elias a first priority. Eventually we decided satisfaction could only be gained by an attempt on one of Mt Logan's classic unclimbed ridges. Innumerable meetings allowed us to form and reform both the climbing party and food and equipment lists. Sometime around Christmas five enthusiastic and committed climbers decided that the early summer of 1979 was going to be spent on Mt Logan. We were in motion!

May, Whitehorse, and our arrival at Kluane Lake came at ultra speed. A brief pause to catch our breath and drown out the prospects of a month without liquid prompted oblivion. Oblivion turned to obnoxiousness and our arrival at Kluane Lake saddled us with the completely undeserved title of 'animals'.

Days passed with the help of Robert Service, climbing on the ice flows and super competitive soccer games with the bunny people and other assorted members of the Kluane "hang around and wait" set. The BCMC Catenary Ridge Expedition left one of their members behind. Ross became a vital member of our soccer team for the following two days and we almost had him talked into joining our party.

Finally after five days we were on our way. Our proposed ridge grew not only in relative size but also in beauty as we drew nearer. On the first pass by our route Logan gave a respectful reminder of its size in the form of an avalanche off the plateau — a screaming grind down the 2000 m wall above our proposed base camp and approach! We established a pretty cozy base camp about one mile from the base of our ridge and during the following four days contemplated the consequences of the next blast of avalanche spindrift and watched avalanches roar by.

Our route consisted of a mixed rock and ice spur approx 1250 m in height, with no visible camp sites till near the top. Once on the main ridge what appeared to be the technical crux, a comb of very steep, crested ice later named the Cock's Comb, had to be overcome. From this point on the climb appeared to be a fairly direct steep ridge up to the icefall bordering the summit plateau.

The first four days we pushed fixed rope up to what we thought would be a good spot for camp 1. The surrealism of leading and fixing rope in the beautiful sunshine on a route of this scale was often shattered by grunting loads and jumaring up infinite polyprop — punctuated by occasional screamers in the honeycomb garbage that teased its way through our route. We had only five pins and these somehow got eaten up in two of the first major belay stations. This resulted in some slightly unorthodox anchors, i.e. a few Greyhound bus size boulders mixed with an occasional screw tucked in some semi-stiff snow.

Camp 1 was exceptionally beautiful, providing much needed relief from the strain of the avalanche hollows surrounding base camp. Perched against a 'schrund on the top of a sérac about 1000 m above the Logan glacier we really began to appreciate our

surroundings. The weather deteriorated into a windless "greyout" with light snow and poor visibility for the next four days but we were still able to haul loads and push ahead.

Our quest was not always straightforward. Occasionally it went sideways or even backwards and, just to keep us honest, it would blow up in our faces now and then! The first mishap was on day five. It had been a long day and, like all long days, refused to end. Four of us had finished our dinners and were waiting for Mike who had done his carries a little later than the rest of us. John W decided to heat up Mike's dinner. The Phoebus could be quite finicky at times and on this night it was really being obstinate. It blew out in the draught from the tent door. John quickly relit it — not only it but the whole bloody tent! Flames everywhere! We hauled stove, sleeping bags, and flaming ensolite from the tent. Does ensolite ever burn! The fire turned out to be mostly gas vapour explosion. The only damage was to my left hand and facial hair. Losing our only large tent would have really been a drag!

Things were back to normal for the following four days, most of our time spent hauling loads and pulling up fixed rope. The weather was still poor but adequate for the tasks at hand and by the third day we had positioned ourselves for the move to camp 2.

Camp 2, situated in a large bergschrund where our approach spur met with the top of the main ridge, gave us our first good look at the crested centre of the ridge as well as the upper sections. Leading up to camp 2 had involved a fair bit of steep ice as well as the crossing of a large steep snow face. This face provided the second gasp of excitement. John W set up a pretty bombproof belay at the start of the face and then I led out across and up. Just as I was reaching the top slope transition "whoomp" — the snow layers collapsed and I was screaming (literally!) downslope on several tonnes of hard slab! The polyprop went taut, ripped me off the slab and deposited me about 50 m downslope — just above a 1000 m face. The heroes were one large snow fluke (buried about 2 m into the névé) and one strong belay!

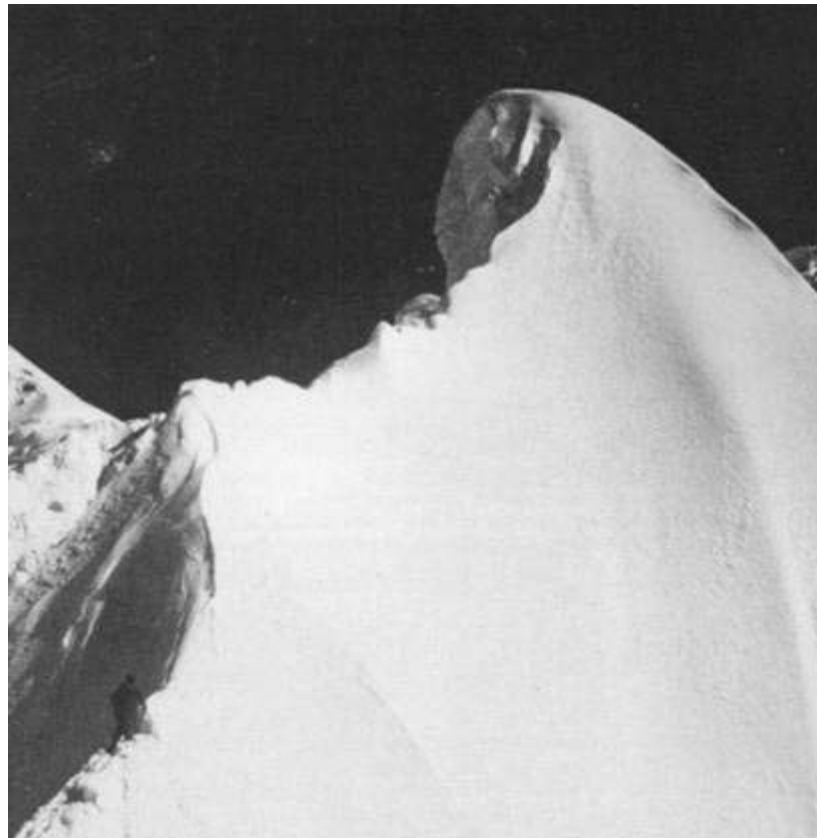
Two more days of bad weather at camp 2 and then an ocean of white below and only warm blue above. The following two days were the most triumphant as well as strenuous we had encountered. Changing leads and hauling loads we climbed almost non-stop (well almost!) as we fixed rope across what we affectionately named the Cock's Comb. Leading consisted of shovelling and cutting away snow and honeycomb until some sort of anchor could be placed and then carrying on — shovel first! The uncorniced side would slough away in small to slightly large avalanches — your belay was always 'miles away'. Protection was always a big problem. We were using 600 and 1200 ft sections of polyprop and rope drag could be unbearable. Snow flukes appeared to provide the best anchors with pickets being only moderately useful in even the best of positions; screws were great but decent ice was hard to come by.

In a style that was becoming our own we decided to move to camp 3 before we had finished leading the last section to the proposed camp site. A short "two hours at most" lead turned into an extremely strenuous all day affair, leaving us with no camp to return to and an afternoon storm approaching. Trying to out hustle the storm we carried loads up the newly led section of the

Last section of "Cock's Comb" with the upper ridge and icefall in background. Reid Carter



One of the many crests on the "Cock's Comb". Paul Kindree



Base camp with initial spur and Amenity Ridge in background. Reid Carter



ridge and started digging like crazy. The wind howled most of the shovelled snow into icy spindrift. With a suitable platform finished John Howe decided to take a closer look at the cornice — we were hanging out in space by about 40 ft! What to do? We took a compromising mid position and as a psychological precaution fixed ropes through both sides of the camp.

Ah, off to sleep — warm and semi-comfortable — suddenly the tent starts to shake. Someone screamed, we all flew out of bed — then it stopped! Wait. Nothing. The surrounding Logan walls roared with ice fall and avalanche but nothing near us — only an earthquake.

We moved camp two days later, pushing a long way up an easier section. Endless grunting carries up steep snow slopes and over a few tricky corners but after two days we had moved camp again and were established in a gully in the lower icefall — a Disneyland of surrealistic beauty. Ice blocks of whole new dimensions in size and shape towered in every conceivable direction. The definition between the sky and rugged ice was spectacular and to top it off everything below swam in a sea of clouds.

It took four days to route find through the icefall and get most of our gear up to the base of the plateau. The terrain would appear to be totally consolidated and then quickly swallow a leg or occasionally a body. Movement slowed down as altitude began to take effect — distance/time relationships no longer had any predictability.

Our route actually involved two major icefalls, separated by a large ice and snowfield. Paul led John Howe and me up through the icefield and really put on a show, most done on hands and knees with an occasional wild leap across a potential crevasse site. Cruising along behind, John and I took full advantage of the entertainment.

Our entrance to the main plateau was through a spectacular crevasse — at least half a kilometre long and a few hundred feet deep. The walls were crystalline, the slicing sun penetrating each crack and irregularity in the upper edges.

In many respects our climb was over. We had been out for 19 days and our ridge was now behind us. What remained was dragging loads the full length of the summit plateau and then trundling down the King Trench. Names for our route were bantered back and forth every few days — usually during dinner. John Howe remembered pilot Phil Upton saying that Logan seemed to have all the amenities of a good route and good climbing so he suggested we call our route “Amenity Ridge” because it certainly seemed to have everything we had hoped for. Eventually we all agreed and our ridge had a name.

Nineteen days is a long time to climb upward on only a small part of one mountain. Personal conflicts had been almost non-existent but we had begun to feel the need for new faces. The urge to push forward and off the mountain was only overpowered by one factor — the need to gain the peak. We had heard talk concerning other expeditions that were successful, except they had only reached a secondary peak — we just couldn’t handle those words only and except!

The summit plateau goes on forever. Route finding was no

problem — we just weren’t sure where we were going. Three days later after a near epic in a whiteout, screams into crevasses and a look at King Peak and the southern edge of the St Elias Range, we managed to find the High Altitude Physiology camp.

New faces, news of what’s been going on both on and off the mountain and a HEATED outhouse! Culture shock. Somehow we didn’t feel quite right sitting in such heated comfort — it was too soon — we weren’t finished yet. We eventually hauled ourselves away and made camp about 1 km off towards the peak.

Early next morning it was clear and still. At 5.30 am talk was limited to “wake me up when the water bottles are all full and breakfast is ready”. Somehow by 8 we had started off on the five mile journey to the main peak.

We hadn’t seen half! Logan went on forever. The east peak, twin west peaks, and the main summit form a complete range on the east end of the Logan plateau. When we first saw the east peak we thought it might be the main peak. Far worse — John Howe, Mike and I climbed to within 20 m of the West Peak — only to discover we weren’t on the main peak. It was still a mile away. This destroyed morale. We had been climbing above 18,000 ft for five to six hours and been working really hard — now we had to descend from about 19,200 ft to 18,500 ft and travel over the plateau for about a mile before climbing the main peak.

Paul felt he would have to bivvy if he climbed the last 1000 ft up the main peak and John Howe seconded him. After a rather awkward and upsetting rest the two of them headed back while Mike and I headed up after John Wittmayer. It was windy, snowing and cold on the peak. Almost no view — only the top of Hummingbird Ridge. Anticlimactic but satisfying. Snap pictures — smile. Zoom — chase each other off the peak and start back.

The following day we lazed around until just after noon then packed up camp and headed off for a visit with the research station crew. The warm drinks and friendship offered by our plateau friends will always be remembered. We departed for our cache in the late afternoon. We had left much of our gear, gas and food in a col about two miles west of King col. The col provided a shortcut down a very steep snow slope to a large flat section of the trench known as the Football Field.

The following four days offered gorgeous sunshine (with the exception of one stormy day) and spectacular views of King Peak and surrounding rocky peaks in both the Logan area and neighbouring Alaska. They also almost drove us around the bend! Finally on 24 June we received radio news that the plane was on its way. John Howe and I left for the landing area first. Then Paul came down and told us the plane had experienced engine trouble and almost hadn’t made it back to Kluane. Just a bit depressing when you want to go home. We did however all manage to fly out that day. Kluane Lake looked pretty nice, green with familiar almost forgotten smells — fantastic with hot baths and Whitehorse bars being, well, let’s just say an “experience”.

Reid Carter

Participants: Reid Carter, Mike Down, John Howe, Paul Kindree, John Wittmayer.

The South-West Buttress of Mt Logan

Many people may have already heard more than they'd like about this route so we thought we'd let the pictures tell the story. A few words about the publicity it received though.

The South-West Buttress of Mt Logan. J Elzinga just below the west summit pyramid. J Lauchlan



Publicity can be two things — an end in itself or a means to an end. In the past few years the dominant ethic in Canada has been to put down any public show, news, etc, on the grounds that you were, a — a liar, b — an egomaniac or, c — both if you wrote about what you did (ie an end in itself). This was particularly the case if you made any money off it. This wonderful little ethic has had several admirable side effects.

1 — It's kept a lot of expeditions from getting off the ground and a lot from being planned.

2 — It's kept a lot of potentially excellent climbers from putting as much effort as they could into training, etc.

3 — It's allowed the ACC to spend the bulk of government subsidies given it on family camps and other more general appeal activities rather than giving the high standard climbers a reasonable share. Time people knew that there actually are some Canucks doing big things.

4 — It's allowed us to sit back and bitch about Americans doing guide books of Canadian mountains, "first ascents" of routes we've already done — because we've never actually put our heads out

on the block by writing — committing ourselves as climbers and members of the climbing community. We just sit back in the bar and pass judgment.

5 — It's allowed those who aren't in the inner circle of a particular area to develop the notion that if you were a Canadian climber you weren't for (or to) much.

Sure egos can get out of hand. Of course the general public has no yardstick to measure mountaineering achievements — they won't unless we give them one. And who's the bigger egomaniac:

the one who makes some money to spend on a bigger trip next time or the one who writes in the mountain mags for the joy of lookin' at his own name? Let's recognize that publicity can be a tool, albeit one to be used with care.

John Lauchlan

Mt Logan south-west buttress. A 16 day alpine style first ascent, F8, A2, Scottish grade 4 ice, 11,000 ft vertical rise. Al Burgess, Raymond Jotterand, Jim Elzinga, John Lauchlan. Thanks to Canadian Himalayan Foundation, Gerry Wilson, Jay Straith, and the ACC.

Logan Side Effects

I appreciate John Lauchlan's philosophical sentiments and the general thrust of his comments. However with regard to item 3 first, government subsidies are for administration and leadership, of equal benefit to all ACC members. Second, ACC camps are

Traversing at 15,000 ft through bottomless snow as the sun sinks into the Pacific and a storm recruits its forces for the strike. The point of no return is reached, passed, and the tension mounts. R Jotterand



The south-west buttress as seen from the Seward Glacier, rising up almost 11,000 ft to the west summit. U. Kallen



self-supporting, paid for by participants. Expedition expenditures on the other hand are not recoverable. The expedition fund was originally set up out of general funds and donations. More recently it has been augmented by a sizable contribution from general funds. So the “high standard” or expedition climber is now getting more than an equitable share. Most members probably feel, as do I, that the ACC should support expeditionary climbing and wish that the support could be more substantial.

Gil Parker

That Logan Rock

Oh path into the distance —
“Tom Pearse, Tom Pearse lend me your grey mare!”
... then Widdicombe Hill and Dartmoor
home of the pixies, tors
and logan rocks
That one, “The Nutcracker” I remember
open to the sky in Devonshire.
... but later, 1935 on BC’s tortuous coast
I climb Mount Albert’s western peak
— from snow to rocky crest
an easy climb like arm-chairs made of stone,
and near the top,
the sheerness of the mountain’s northern wall,
I grasp the final monstrous chair — it yields
That boulder’s balanced on the brink —
another logan rock!
This sudden trauma
then the flash of distant blue and white,
a poem’s born —
and terrified, I write
“Her eyes
brilliant as the ice beneath
Just one false move —
a thousand feet, and death!
I fear her hate. . .”

Roger Prentice

Torngat Mountain Expedition 1979

It has been said the Torngak, the great god of the Torngat Mtns likes his privacy. Certainly he will tolerate some activity in his mountains but there is a limit. I suppose the Torngat Mountain Expedition (TME) of 1979 crossed that limit!

In 1978 Ray Chipeniuk led a very successful, Ottawa-based climbing expedition to Nachvak Fiord in northern Labrador. This expedition made many first ascents in the area and ambitious plans were made for the following season. And thus the TME-1979 was born.

Ray was again the leader, supported by several veterans from the previous year. The strength of the team was greatly boosted

by the addition of Marc Blais, an exceptionally talented climber from Val David, and several of his climbing companions. As well, Ray organized various forms of financial support for the expedition, including a contract with MANITOU Productions Ltd, who wanted to film the trip as part of their television special on Labrador. Everything seemed set for a grand assault on the Torngat Mtns in August, when Torngak struck.

His first blow was a hard one. On 22 June Erik Sheer, a veteran of TME-78, was killed in a motorcycle accident in Norway. A mountaineer of remarkable strength and endurance, Erik’s good nature and determination had been a vital part of TME-78 and his death was sorely felt by all his companions.

After this Torngak began a series of less spectacular interferences that were to plague the expedition almost continually. During a bicycle race one of the climbers fell over a dog bone and broke his arm thus eliminating himself from the roster. Another of the TME-78 veterans got himself involved in an intricate business deal and was forced out, while still another landed a cushy government job. And so the team was slowly whittled away to almost nothing.

But Torngak underestimated the determination (or obstinacy) of the climbers. In the end a much reduced team left for Labrador at the beginning of August. Obviously indignant, Torngak determined to get tough with we intruders. He struck a double blow in Goose Bay and the three Quebec climbers found themselves without both floatplane bookings and a trunk of climbing gear sent up in advance. But still the mountaineers persisted and, having chartered two Cessna 185’s, they arrived in Nain on 3 August.

Not to be bested, Torngak immediately attacked again. With devious cunning he poisoned the food of our Eskimo skipper, Paul Nochasak, landing him in hospital. All this supernatural intervention was new to the Labrador debutants and indeed the strain proved too much for Normand who perhaps wisely decided to flee south. Never one to miss an opportunity, Torngak hid our climbing ropes and various other essential pieces of gear in Normand’s luggage. Sure that he had finally won against the southern invaders, Torngak retreated north to his lair, leaving Nain and all of Labrador bathed in sunshine.

So it was when our little fishing boat chugged unnoticed out of Nain bay, our speedboat/liferaft combination in tow. Where one year before we had shivered in our down parkas this year we stripped down to the waist to preserve our “southern” suntans. For the whole of August 7th and the morning of the 8th we steamed merrily northward, enjoying the dead calm sea and the beautiful scenery. Then, as we decadently chewed through our lunches we were spotted. A black whale which we would come to know as our deadly enemy surfaced nearby, took stock of the situation and immediately set off to alert Torngak.

Our punishment for persisting was quick and devastating. Paul Nochasak had gone ahead in the speedboat to reach Napaktok, a small fishing camp, after which he planned to catch us up. A strong wind came up, limiting the visibility on the water’s surface, and Paul, without ever seeing it, hit a small piece of ice known as a growler. Miraculously the boat remained intact but the outboard was completely ruined. Nursing our wounds, we retreated to

Napaktok to devise a strategy. Sensing total victory, Torngak called forth his greatest weapon and kept us stormbound at Napaktok for four days.

Beneath the cover of a heavy fog left over from Torngak's storm we managed to sneak another half day's travelling unmolested. Camping on Big Island in Saglek Bay we planned another big push the next day, hoping to utilize the fog bank to the fullest. We left before dawn on the morning of 11 August, towing our now unserviceable lifeboat, in an attempt to reach Nachvak Fiord that day. All went well until our friend the whale sighted us again. Almost immediately the fog lifted and we were again in plain view of Torngak. We huddled together, waiting for what would surely be the final blow. Farewells were said, notes were hurriedly stuffed into bottles and then, like true mountaineers we bravely awaited our fate. Would it be a tidal wave? Or a school of killer whales? We waited. And waited. And nothing happened! Cautiously we brave mountaineers extracted our heads from our rucksacks and peered about. Apart from the ever-present swell that sweeps the shore, the sea was calm and peaceful. The sun shone warmly, the ducks circled the boat and the seals bobbed merrily in the water. It seemed that Torngak had finally given in. But of course, you and I know better.

Torngak waited until we were rounding Gulch Cape, the final obstacle before Nachvak Fiord. As mentioned, the swells sweep forever against the coast and Gulch Cape has to be the most precipitous, forbidding section of the entire shoreline. And, as also mentioned, our lifeboat had no engine and oars would have been useless against the relentless swell. So Torngak waited until we were rounding the very tip of the cape, a mere 400 yards from shore, to blow the rings out of one of our cylinders on the boat. On a two cylinder diesel engine this can have disastrous results. Three times the engine failed, only to be restarted with us all too close to the reefs and shoals that are Gulch Cape. It is a great tribute to the skill of Paul Nochasak that Torngak was thwarted once again.

Once inside Nachvak Fiord Torngak couldn't really hope to kill us all. Nachvak, with its green valleys and sheltered harbours was like sanctuary. But Torngak is a spiteful little god and he had a final bit of mischief up his sleeve. As we sailed up the fiord Torngak split the diesel engine's fuel tanks, causing the fuel to spill in the hot cylinder block, making the risk of an explosion considerable. Engulfed in a cloud of black smoke, we limped into our chosen harbour on the north shore of the fiord, our boat emitting its final protesting splutters before expiring altogether.

That was the last we were to see of Torngak. And after all, why should he have done any more? He had achieved his goal, he was completely successful. You see we were camped in a beautiful meadow, with loads of firewood and fresh running water, on the north shore of Nachvak. Our problem was that all the mountains worth climbing were on the south side of the fiord. Our camp had been intended as a base but, without any functioning boat engines, it ended up a comfortable but secure prison. With our nemesis the whale patrolling the mouth of the bay, Torngak retired to his lair.

We had been in contact with a group of Dartmouth geology students who were nearing the end of a month's stay on the south shore of Nachvak. Having managed to temporarily seal the leak

in the gas tank, Paul Nochasak and Brian Baxter travelled the approximately five miles to the Dartmouth camp and picked them up, along with their belongings. They had arranged to split the cost of chartering a sea plane with the Manitou productions film crew, who were flying into our camp site that day. As it turned out the Geology students had done their share of mountaineering along with their field projects. They made three first ascents of large mountains and the second and third ascents of two others. This hardy group also made two attempts to climb "L1" by new routes but were stopped by highly exposed, technical sections for which they were neither equipped nor trained. The general impression gained from speaking with their leader, John Stix was that the Dartmouth expedition had thoroughly enjoyed themselves and were most impressed with the countryside.

About an hour after arriving back at our camp site with the Dartmouth party, the musical sound of a Twin Otter's engine was heard echoing down the fiord. Scarcely able to contain ourselves, we pressed forward to greet what we hoped would be our outboard motor. Unfortunately, Labrador's atmospherics being what they are, our friends in Nain had decided that we didn't really need an outboard after all. Making a quick decision, Paul Nochasak boarded the plane to Nain, promising to return with all that we needed for the boat engines when the plane flew up to collect the film crew. No sooner had the spray settled from the Otter's take off than we heard the drone of the Monster Helicopter piloted by the indomitable Dave Fogie. The climbing team was to come to fear this very likeable Ontario native. He manoeuvred the "Sea-Land" helicopter with the precision of a surgeon, landing on minute ridges or steep snowfields. It was exhilarating but we were always relieved to get two feet on the ground again.

With the help of this helicopter Torngak's prison was temporarily breached. Quickly assembling their gear, Brian and Ray left on 16 August to attempt the "Aguilles Ridge" on Mt Razorback. For reasons known best to the camera crews, they ended up obliged to descend the ridge rather than ascend it. Nevertheless it provided some very exposed, very enjoyable climbing, up and down innumerable needles and towers. Technically the climbing averaged about 5.3 with a few slightly more difficult patches. Upon reaching the col in the ridge, Brian and Ray descended the south face, down climbing all the way except for one brief rappel. Reaching the Razorback glacier they were met by their chariot which whisked them off into the sunset or, more accurately, to the bivi on the glacier at the foot of the west face of "L1". Ray then returned to base camp, leaving Brian with Marc and Paul.

On 17 August the three climbers left the camp on the glacier at 6 am and began to climb towards the west face of "L1". Crossing a large bergschrund at the edge of the glacier proved problematic but the team was at the base of the rocks by 8 am. They found the difficulties to be concentrated in the first three pitches giving climbing up to a 5.6 to 5.7 standard. The iced rock and cold made these first pitches quite exacting. Above was easy climbing over unstable rock, leading onto the north ridge very near the summit. The route was rated overall, NCCS III, 5,6 (pitch 1, 2, 3), 5.0 to 5.3. This quite unspectacular climb was made more dramatic by the rapidly changing weather which brought sunshine, rain, snow, and strong winds. After leaving a karabiner belonging to their dead companion Eric Sheer, the team descended the "Minaret Ridge"

under the watchful eye of the movie cameras and in the customary style were swept away to base camp on the fiord.

If this has been sounding all very nice, don't worry, it didn't last! Next day the film crew left, the helicopter left, and we were left alone. Paul Nochasak had been unable to bring back a new outboard but he had brought two old wrecks which we could cannibalize for parts. As well he managed to bring back a new fuel tank for the diesel. For the next three days Brian served as an apprentice mechanic to Paul who tried every possible combination of parts from the three deceased motors. They would spend several hours working on the unyielding beasts then give up and stroll dejectedly over to the tents to eat, muttering darkly about Evinrude motors and the Holy Trinity. Then after the meal they would trudge back to the "workshop" to spend the afternoon peering into the intestines of an engine that cried out for Euthanasia.

And so it came to pass that on 21 August we boarded the large boat with its new gas tank and functioning though unrepaired cylinder rings, towing again the inert outboard. In this condition we had no choice but to beat a hasty retreat for Nain. It is just as well that we did too for we were chased the whole way by an angry looking storm front and a semi-operative ship with no lifeboat is not an ideal platform from which to battle the elements. The bad weather continued right up until the day of our departure from Nain, so preventing us from attempting any of the fine rock walls that abound in the area. We left Nain on 28 August and all were safely installed in their respective homes by 30 August.

So what lessons can be gained from this tragic expedition wherein we climbed only two days out of 28? Well, we feel that all Labrador travellers should take at least two large boats and two lifeboats — as we had on TME-78. But more important, the intrepid Labrador climber should begin making sacrificial offerings and supplications to the great god Torngak, in an attempt to win his favour. Without it, no expedition can succeed!

Brian Baxter

Participants: Brian Baxter, Ray Chipeniuk, Marc Blais, Normand Cadieux, Paul Lapperiere.

The Chehalis Range: A Climbing History

Tucked between Stave and Harrison Lakes at the head of 40 kms of logging road lie the fine granite peaks of the Chehalis Range in southwestern BC. While the major peaks, Mts Grainger, Clarke, and "Ratney" were climbed 30 to 40 years ago, it is only within the past decade that a more open philosophy on the part of Cantor, the local logging company, has allowed today's climbers access to the great potential of the area. Many new routes have been opened and, judging from the number of fine possibilities remaining, this trend will continue.

The most northerly peak, Mt Grainger (2197 m), was first climbed at the beginning of August 1942 by John Booth, Walter Cadillac,

Art Dellow, Tom Fallowfield, and Les Harrison. They spent four days approaching from the Twenty Mile Creek logging works on Harrison Lake, crossing over from Mystery Creek and following up Eagle Creek before climbing north-east to a pleasant tarn on the ridge above the head of the creek. From this camp they traversed the slopes to the south and west of a pair of bell-shaped peaks blocking the ridge crest and set off up the east ridge of Grainger. High on the ridge they were forced to the snow slopes on the north-east flank, which they followed to the mist enshrouded summit. The following day they explored the country to the south and west of Grainger but did not climb either of the minor summits in those directions. These points appear to have remained untrodden until 1976 and 1977, respectively. Finally they bushwhacked three days back out to Twenty Mile Creek and civilization, having explored a major valley and climbed the highest peak of the range.

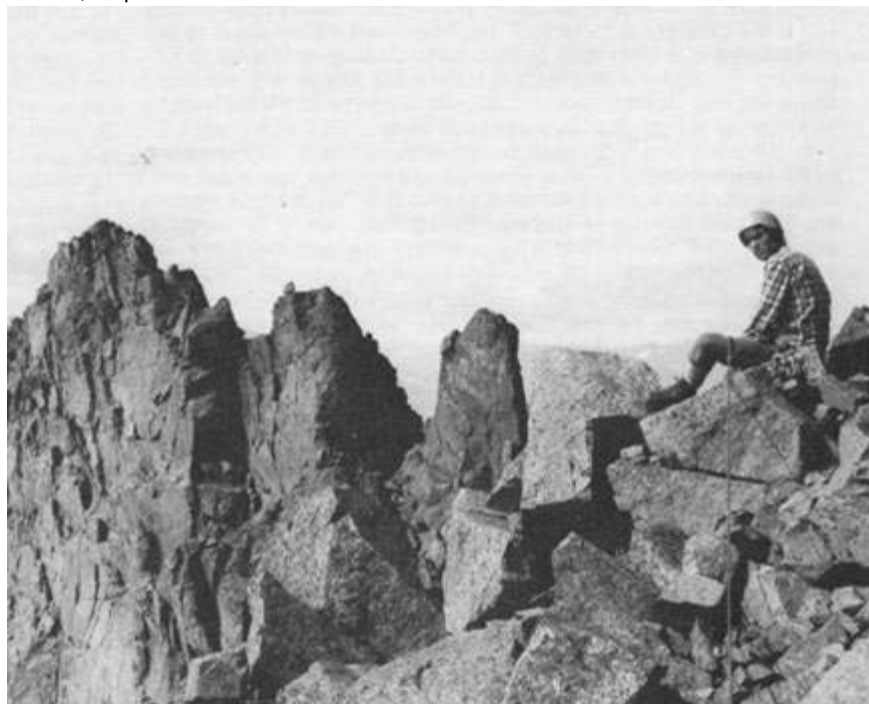
The Grainger area saw little further climbing activity until the late '70's. The bush seems to have defeated the weekend mountaineers who tried to penetrate the Eagle Creek drainage before 1977. In the spring of that year Neil Grainger, brother of Frank Grainger, the Coastal Command serviceman who perished in WW II and for whom the peak is named, put a concerted effort into climbing the peak. He, Jack Bryceland, and several others from the Chilliwack area hacked out a trail into the basin southeast of Grainger. In late May six of them used this trail to approach the peak. A previous air reconnaissance had revealed the problematic gap in the east ridge, so they climbed the steep snow gully which bounds the south-east face on the right, finally following the upper east ridge to the summit. Only Neil, Jack, and Ken Dickson completed the climb, establishing a second route on Grainger while fulfilling Neil's ambitions.

The trail greatly enhanced the level of activity on Grainger. That same summer, on 21 August, John and Phil Bates, Karel Balik, Phil Kubik, and Ed Zenger used the trail to approach the climb of the lovely south ridge, with Fred Douglas soloing a line farther left on the south-west face. Since then numerous parties have taken advantage of the reasonable access. The south ridge seems to be the most aesthetic route on the peak, with solid rock and moderate climbing to 5.6 or so in a warm, sunny position. The easiest way up the peak however remains the original route.

The obvious challenge on Grainger is the south-east face. A couple of recent probes have yielded minimal progress but this striking 250 m wall will surely be done soon. There seems reason to hope that much of it might go free, although the open corners and soaring cracks that characterize the face will demand excellent abilities and careful route finding.

There are other possibilities on the west and north sides of the mountain. The face which develops out of the north-west ridge looks to offer interesting climbing and the west pillar might give a hard route. The mountain, though not particularly striking, will undoubtedly attract reasonable traffic because of its height and isolation as well as its fine rock.

Mt Clarke massif, 6 kms south-south-west of Grainger, barricades 3 kms of Chehalis skyline. The western peak is a buttressed trapezoid extending 2/3 km east-west at the 2100 m level, with the highest point at its east end. This was first attained



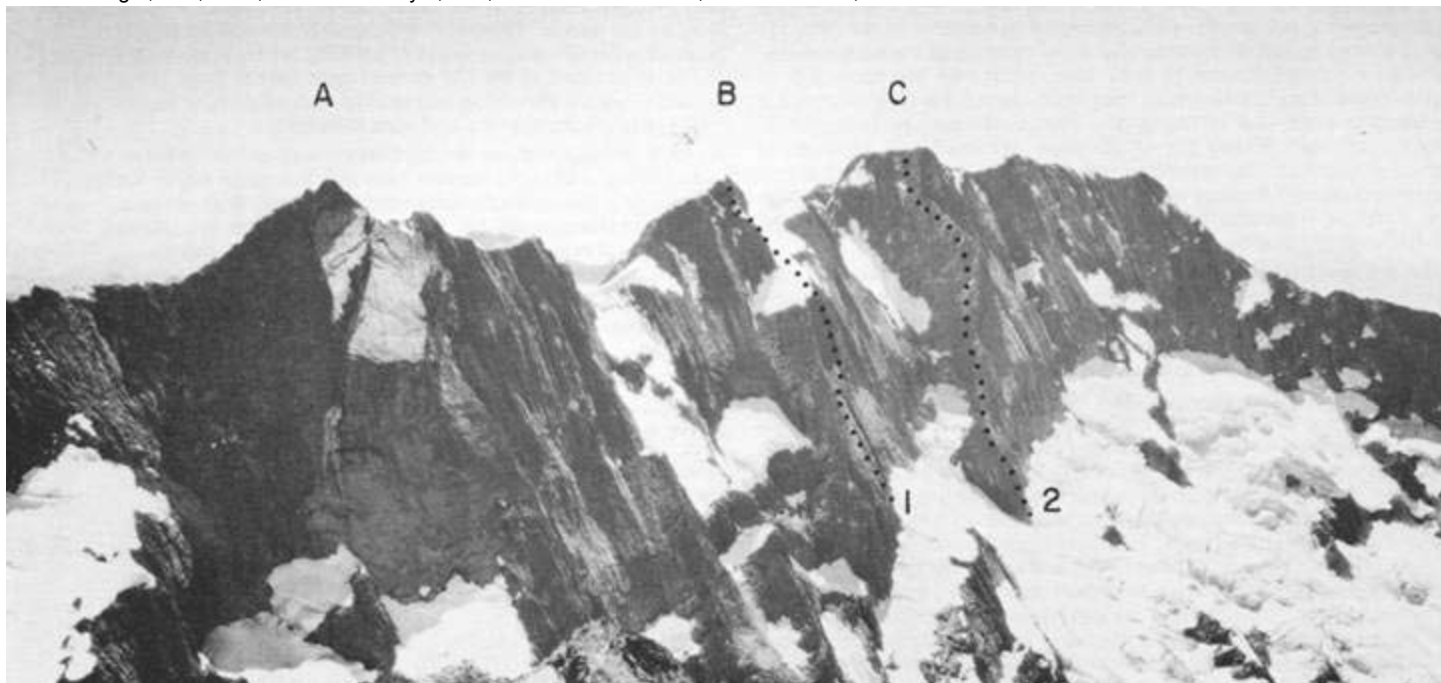
The north faces of "Mt Bardeen" (left) and "Mt Rainey" (right).

Route 1-Kubik, Halliday, Zenger, Soet, 1978; route 2-Jones, Wittmayer, Serl, 1979; route 3-Dudra, Rode, 1950. D Serl



The northern faces of the Mt Clarke group.

Route 1-Knight, San, 1976; route 2-Wittmayer, Serl, 1979. A-Viennese Pk, B-Recourse Pk, C-Mt Clarke. D Serl



Mt Grainger from the north-west in 1942. The righthand skyline ridge is taken by the 1977 south ridge route. A Dellow



by Ian Kay, Alan Melville, Fraser Miles, and Howard Rode on 2 July 1949. After a trying day and a half bushwhack from Stave Lake to “Stump” (now Winslow) Lake they broke out of the valley onto the open ridges to the north-west of the peak. A problematic chimney which “contained loose rocks, small patches of snow and ice, and a loose chockstone” nearly stopped them high on the north-west ridge but finally Ian, “the long one”, forced it and the summit ridge was gained. The main summit was thence quickly and easily reached, nine hours up from the lake. The party named the mountain for Cliff Clarke, a logger from Twenty Mile Creek on Harrison Lake who, accompanied by his wife, Pearl, and daughters Betty and Eleanor, had hiked across from Harrison Lake to Stave Lake for recreation, returning via boat to Stave Falls and thence back up Harrison Lake.

A month later Mary and Clare Willis, Doris and George Rose, John Booth, Rod Pilkington, and Bill Peters approached Mt Clarke from Statlu Lake, the now normal route. Two and one half days were spent bushwhacking from the Mystery Creek logging road system. Two attempts were made on the peaks above, one reaching the little lake to the south-east of Clarke via a long ascending traverse, and the second attaining the 1680 m ridge 3 kms east of the summit via a long scree gully above Statlu Lake. Both attempts sputtered out far short of the summit. The scree fields and bush still combine with the intricate topography to make these approaches surprisingly time consuming and tedious. Their failures also leave us with a mystery. Who finally made the first ascent of Clarke from this side and when?

The next recorded activity on this side of the group was in July 1972. A 16 member BCMC party led by Paul Binkert attained the col between the central and eastern peaks of the group and split to do what are likely the first ascents of both these peaks. The central summit (Recourse Peak, 2100 m) is nondescript but the eastern summit (Viennese Peak — named after an inscription on an intricate old carving found at the west end of Statlu Lake — 2130 m) is a dramatic tooth of rock with a delightfully exposed traverse ledge high on this original west ridge route.

Paul had, as usual, flagged a route into the peak and Ross Wyborn, Clao Styron, and I were able to put it to good use when we approached the group in September 1975. We had a thoroughly enjoyable morning on the 14th putting up a route on the east ridge of Viennese Peak and in the process became aware of the huge chasm to the north. A cirque worth investigating!

In July 1976 John Knight and I set off for this face. The most prominent feature in the cirque is the arching north ridge on Clarke but we were rather over-awed by the apparent difficulties of its lower sections and cast about for an easier way back to the crest. We finally climbed the northwest face of the centre peak on the 26th, rather as a last recourse (thus Recourse Peak). The climbing was hard and enjoyable once we exited from the initial chimney but the face was streaming wet and abounding in lichen and moss and thus not highly aesthetic.

It was several years before the north ridge was eventually climbed. I had returned to Clarke to climb the south-west ridge with John Wittmayer on 18 October 1976 but it was only on 15 July 1979 that we finally got the long sought after prize. We certainly

confirmed the “apparent difficulties” previously mentioned. Five of the first seven pitches were largely aid climbing but above that 18 excellent fourth and fifth class leads awaited. This route is undoubtedly the plum of the entire Chehalis and easily worth the long day’s walk in.

Meanwhile others were beginning to focus on Clarke. Bruce Fairley and Harold Redekop climbed the east ridge, which rises out of the Clarke Recourse col, in a long day from Statlu Lake on 19 May 1979, the lake being regained at 2 am. They encountered 5 or 6 pitches of mid 5th class on the ridge as well as considerable snow because of the early season. The same pair returned on 16 to 17 June to make the first traverse of all three peaks of the Clarke group. They first traversed the 1770 m summit 2 kms south-south-east of Clarke and then continued up the complete south-east ridge, finding bits of 5th class low down and some pretty scrappy krumholz. After reaching the main summit they rappelled the east ridge and climbed the easy west flank of Recourse, finally bivouacing high on Viennese Peak after climbing its west ridge. The following morning they completed their traverse down the east ridge.

Just one week later the south-east ridge was the scene of another new route. While the upper ridge is normally gained from the glacier to the east, John Halliday led a BCMC party onto it from the western flank. They encountered considerable loose rock on this side, evidence that there has been minimal glaciation on this exposure to clean the debris away.

On the Thanksgiving weekend John Knight, Paul Stoliker, and Marcus Seyward did the traverse in the opposite direction. They camped in the lovely meadows 1 km east of Viennese Peak and on 7 October crossed it and Recourse Peak to Clarke, regaining their camp via the snowfields and boulder slopes below the south faces. The following day they dropped into the basin to the north-west and put up a route of half a dozen pitches near the left end of the cirque. The route topped out at the saddle at the base of the east ridge on Viennese Peak and was rather surprisingly easy; only the first lead was 5th class, the others going to 3rd and 4th.

This low grading is indicative of the well fractured, rough textured nature of the rock in the Clarke massif. Imposing looking walls hereabouts are typically found, upon at-hand inspection, to offer good climbing and since imposing looking walls abound there is plenty of potential for good climbing. Especially attractive are the northern walls of Viennese Peak, over 600 m of soaring ribs towards the western side with a pair of improbably suspended slabs perched directly below the summit on the north. Farther west the north rib of Recourse Peak, while not especially prominent, would give a good 500 m route.

The northern flanks of Mt Clarke are over 600 m across, tapering from a height in excess of 500 m at the north ridge to about 350 m at the western shoulder. Possibilities abound with the direct north-west face on the main summit and the north rib of the minor summit immediately to its west being perhaps the most obvious and exciting.

There is really only one striking feature on the south side of the massif, the south face of Viennese Peak. This 300 m wall is

easily visible from as far away as the freeway east of Chilliwack. It is remarkably broken and blocky and will undoubtedly give excellent climbing.

A further 5 kms to the south lies "Mt Ratney" and its neighbours, Stonerabbit Peak to the west and "Mt Bardean" to the east. "Ratney" (1950 m) was first climbed on 3 September 1950 by John Dudra and Howard Rode. They bushwhacked in from the north end of Stave Lake and climbed the north-west ridge to the peak. That the final corner is impressively hard is attested to by the fact that Phil Kubik and Ed Zenger, who finally repeated the route this summer, by-passed the corner by the face to its left.

The next known activity in the group was in 1970 when Fred Gazeley and Don Crowhurst climbed the east peak of "Ratney" (1920 m), naming it "Bardean" for their wives Nadean and Barbara. Unbeknownst to them "Ratney" had 20 years earlier been similarly named after Irene Rathenbury and Mary Ney (now Rode)!

Gazeley and Crowhurst were not a part of the local mountaineering fraternity and consequently their ascent went without notice until 6 October 1974 when the ubiquitous Paul Binkert and his BCMC companions repeated the Skwellegil Creek approach and east side climb. They found an aluminum tag on top reading "Mt Bardean 6160 (sic) Gazeley, D. Crowhurst, by land 21 /8/70". The original ascent thus came to light.

In July 1975 Esther and Martin Kafer found a better approach from a kilometre farther up Skwellegil Creek and together with a 12 member BCMC group successfully reached the main summit of "Ratney" on the 6th via the easy south-eastern slopes. They continued along the ridge to do the first ascent of Stonerabbit Peak (1830 m), 1 km to the south-west, named because the summit cairn "sported two huge ears".

The north faces of the "Ratney" group and of "Mt Bardean" in particular are spectacularly visible from Statlu Lake and Mt Clarke and soon evoked interest. On 5 August 1978 Phil Kubik, John Halliday, Ed Zenger, and Len Soet climbed the 500 m north-east ridge which prominently bounds this face on the left. They traversed in right onto the ridge crest well above the vertical toe and then scrambled to the base of the final arête, which gave three pitches of mid 5th class climbing on rough, clean granite. The descent proved messy, with a traverse over the next bump east and then very bushy down climbing and rappelling to the north. They took over five hours to regain the valley, only slightly less than the climb had taken. Much better choices would be either to leave a car in the Skwellegil valley or to traverse to "Ratney" and descend the original route.

On 11 August 1979 John Wittmayer, Davey Jones, and I made a second route on this side of "Bardean". We bivied on the summit after about five hours of approach and six hours of climbing on the north-west buttress. The lower sections of the 350 m route gave typical Coast Range mixed ground — granite alternating with heather — but the upper third consisted of delightful cracks, corners, and walls to about 5.7.

A couple of major features remain to be climbed on "Bardean"

— the 350 m north-west wall of the eastern peak and the lovely 400 m tuning fork buttress which falls directly north from the summit. Both would appear to require considerable aid but one can never tell with the Chehalis rock; much is possible which would call for pegging on smoother rock.

A final possibility for new routes is in many ways the most imposing. The walls of Stonerabbit Peak fall 600 m to the north and 750 m to the west in sheer sweeps. Scale and remoteness and the bushiness of the approaches will likely keep these walls virgin for several years, although the recent wave of activity in the Chehalis may wash in that far. It would not be overly surprising.

D Serl

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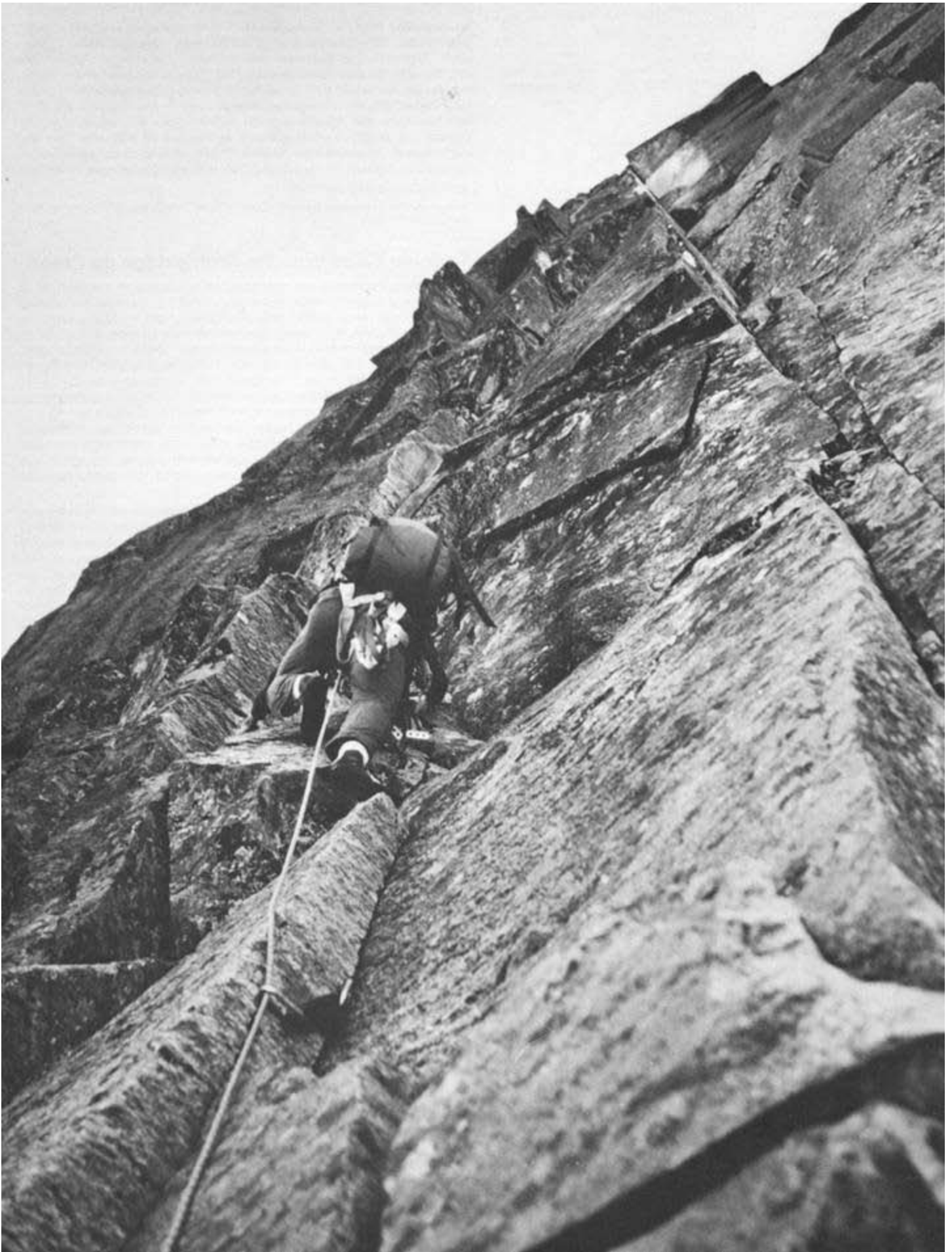
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Mt Clarke: The North Ridge, At Last

In the dead heat of August 1979 Don Serl and I were once again bumping along dust rippled logging roads into the heart of the Chehalis Range in the Coast Mtns. We had come to renew our attempts on the north ridge of Mt Clarke. This time we hoped to at last attain our goal. We quickly hiked the well trodden fisherman's trail to Statlu Lake. Here we paused before setting off into the scree and bush beyond.

In the freshness of the morning we were as pilgrims on an expectant journey. My mind spun like a drop of water flung at the sun as we danced across the talus above the lake, sparkling blue-green below us. Lazy insects punctuated Don's running commentary on the intermittent flagging of the ghostly trail that we were following. As the sun arched west we too began our descent from the open alpine ridges into the perfect granite fastness of the elusive north face. Nine hours from the road we happily bivied on a patchwork of red heather growing hospitably atop a long polished rognon.

Above us loomed the vertiginous, lichen stained walls of the face. The graceful central ridge was the outstanding feature. In the fading light we could trace many possible lines but one in particular came into focus, etched by the growing shadows. It began with a very steep pillar which relented into easier rock that angled back, then swept in a bold curve to the summit. The last orange rays washed over the peak as the sun faded beyond the hazy purple ridges to the west. We lay awake awhile, counting the shining satellites as they whirled soundlessly through the deep black cushion of space, then our excitement gave way to sleep and soon we were numb with dreams.



The morning chilled us to an early start and by 7 am we were climbing the initial mantle of our route. A series of thin cracks, slanting grooves, and vertical corners stretched above. Too steep for free climbing! Relentlessly we aided our way through the difficulties. We had taken only the minimum gear in order to reduce our loads on the approach so the aid pitches were short and our progress slow. Well past noon we pulled out onto the lower angled section. The seven pitches below had taken us eight hours.

Besides our first concern, time, it was now also clear to us that we hadn't enough water to last the day. The vision of a dry, trying bivy lurked behind our outwardly cheerful countenances. We noted grimly that the sun would soon slant behind the west peak. Pushing on, we playfully climbed enjoyable fourth and fifth class rock, drinking in the vast panoramas opening around us in lieu of our meager water supply. The route continued to be unfailingly interesting, with short, sharp problems betwixt and between long rambling passages of moderate climbing. We were somewhat dismayed however, by the enduring remoteness of the summit. As well, we were growing a bit weary after more than 20 pitches. Perhaps we were going up the down escalator! Massive blocks of warm granite, problematic corners, and comfortable jams dominated our thoughts — then a shining glint! Providentially I spied a tiny pool of tepid water in a basin of rock. Greedily we drank it nearly dry. As the evening waned, we leapfrogged our way up the remaining pitches to the flat blocks of the summit. We let go a happy chorus into the fading dusk and settled in for a summit bivy. South the great swooping buttresses on the north face of "Ratney" cleaved our imaginations. Soon we would be back, bumping along the dust rippled logging roads into the heart of the Chehalis Range.

EPILOGUE

We did come back, on 11 August 1979 in the company of Davey Jones, to climb the north-west buttress of "Mt Bardean", the east peak of "Ratney". Approach from the north side of Statlu Lake along a sketchy trail into the open boulder fields beyond. Five hours to the base of the climbing. An ice axe would help as we found on the pocket glacier below the face. Mixed ground (Coast Range style heather and granite) develops into fine slabs and corners high on the rib. Some 5.7. About a dozen pitches, six hours. Vertical corners at the top of the route can be outflanked by a catwalk right. Excellent flat granite slabs for a grade A+ summit bivy. Descent to Skwellegil Creek, and a long walk back to the car.

John Wittmayer and Don Serl

An account of the first ascent of the north ridge of Mt Clarke, 2160 m, July 1979. 25 pitches (some short), 5.8 A2, 14 hours.

Tortoise Tales from the Archipelago de Colon

The climbing literature is full of expeditions subsidized on the strength of their mythical scientific value. I have always felt that climbing is a whimsical activity that never yielded data on anything, yet I enjoy and preserve the fiction. Imagine then being

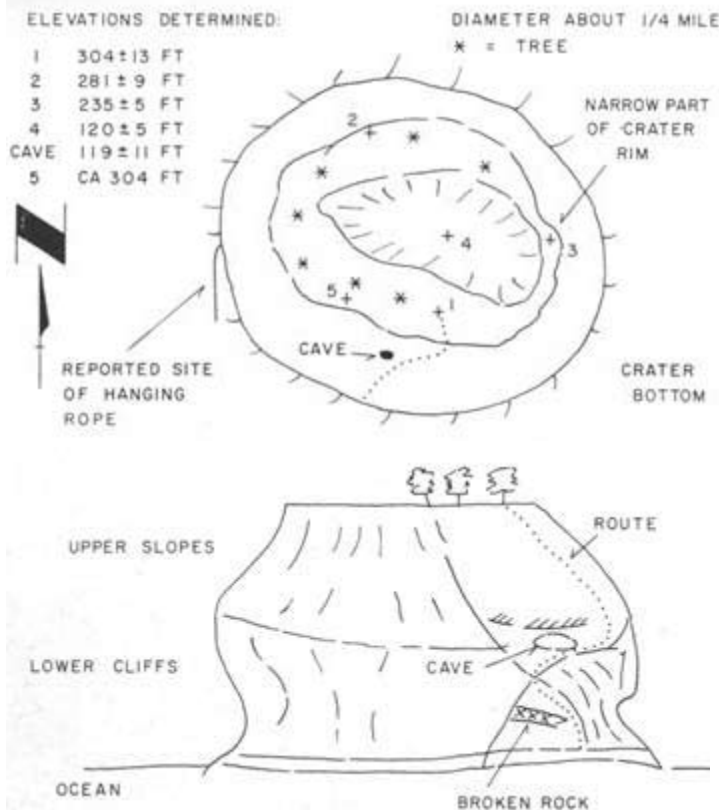
approached by a scientist and asked to attempt a first ascent onto a cliff ringed volcanic island in the Galapagos. Ecologists wanted to get onto the barren little island to study bird migration. The group led by Dr Peter Grant had worked on a nearby larger island, Daphne Major and had banded most of the Darwin's finches there. It would be easy to spot banded finches if they flitted across a few miles of ocean to little Daphne Chica but no one had been able to get up its rocky sides. Kevin O'Connell and I looked at slides of the island and it was clear that we would not be climbing on sun warmed granite. The island was made of two layers of steep rotten rock topped with guano (seabird droppings).

Reading Darwin's *The Voyage of the Beagle* strengthened the belief that we were on a classic project. The finches in the Galapagos (however they arrived) were isolated and evolved into several species, with beak shapes varying from parrot to flycatcher. These striking differences in a closely related group of birds were a key element in suggesting to Darwin the idea of evolution. A few days at the Charles Darwin Research Station on Isla Santa Cruz enabled us to teach Peter Grant how to jumal and we took in the unworldly barrenness of the place. We ignored the lousiness of the rock and pretended to be research workers in the swell of projects and jargon about turtles and seabirds. finches and iguanas.

Our base camp was on a sandy beach on Santa Cruz island overlooking the two Daphne islands some five miles out in the ocean. The islands formed fitting backdrops at sunset as the three climbers drank Peter's beer. Approaching the island by boat the problem came into sharp focus. The only weakness was an apparent easy slab of about 80 ft leading to a notch from which a traverse could be made to the easier volcanic cone above. The slab turned out to be a steep wall topped by a band of broken rock and dried mud. The notch was where the mud had fallen away. We made a slow boat trip around the island desperately looking for a better way. Seabirds and overhanging guano loomed above and we returned to our original line with some relief. Even getting onto the island was a problem; 'ashore' was a narrow rock shelf covered at high tide and slippery as snot. The ledge was home to bright red Sally Lightfoot crabs and some sea lions. A bull sea lion objected to our presence on his turf and attempted to corral me into his harem, bellowing and lunging as I stood waist deep in the waves on the greasy rock.

The lower rock was red and basaltic, hardish as cheeses go, but rotten and badly exfoliating. The Sally Lightfoots were bringing chunks down as they scuttled away from us. Our first climbing attempt began with a traverse into the notch from the left, and ended some 50 ft up at a large hollow sounding slab below a rotten ten foot wall of rubble leading to the notch. No one would lead out or even place a bolt in the slab. We rappelled off some bolts to the sea. Our second foray was up the nose of the slab we had seen from the boat. This went up the rock layer to the dried grey mud, a small traverse and a short wall leading to the notch. We made 50 ft before the 12 hour equatorial night intervened and we were boated back to camp.

Day two saw us as old salts amid the crabs and the sea lions, the smell of the ocean concentrated in a heady mixture of guano and sea lion dung. We took turns in gingerly moving up the rock to the mud wall. The mud wall close to the basalt was cooked to



First ascent of Daphne Chica, on west rim ca 300 ft looking down on San Jaun. Kevin O'Connell



Daphne Chica from the north. Kevin O'Connell



a pumice-like consistency but a foot above was loose and sandy. Kevin moved across this mud on shaky bolts and retired. I went up and was faced with having to mantleshelf onto a dried mud ledge that looked so promising from below, a real sentry box with a large chickenhead behind. Grabbing the ledge and feeling it crumble I scrabble mantled, rounding out a space with the palms of my hands. To applause from below I shakily stood in a cloud of dust and had a sling over the chickenhead; it was the size of a football and eased towards me as I set the sling. Never one for the big grip I listened to the calm voice of reason welling up as if from Neptune below,

“Rappell off the chickenhead on the second rope, we can jumar up tomorrow and finish it.” What if the chickenhead comes with me says I, the bolts will pull and you will stutter along hoping to find a good one. An unhappy rappeller, I gently lowered myself. Next day Howard Snell enacted my scenario for me, fortunately with a top rope.

The two boatmen, Bernardo and Fernin, who had spent two days a little way out to sea watching our ridiculously slow ascent, had pretty much counted us out. They dug out some greasy four inch nails which we thought might be hammered into the mud and tied off allowing a chance to climb. Kevin did just that the next morning after we had cleared a scorpion out of our rusting gear. He pummelled nails in the moment he got to the mud. We were relieved to see him vanish over the lip amid swirls of grey dust. Howard Snell followed, cleaning the route and at one point eased his weight onto the rope over the chickenhead which dissolved into a black cloud and enveloped him. Howard was left with silicosis but no immediate hurt though in no condition to continue that day. I jumared up to Kevin and hoped his cat's cradle of nails would hold. We traversed along the mud to the side of the cone and scrambled up the slope onto the island proper. A narrow rim of trees and low vegetation and a cindery central crater was all there was to the island. We saw a few finches in the trees and then a scruffy little finch with a banded leg, almost certainly from Daphne Major (it was, it turned out). There was inter-island migration. We were ecstatic. We scrambled around the island rim, conscious of taking a tiny step along Darwin's path. Peering over the cliffs strengthened our view that there were few ways up. A careful descent down the cone and a dusty rappel put us back to the sea. The ecologists jumared up the following day to confirm and greatly extend our sightings and spent three days on the island banding finches and making the most of what will probably be their only visit.

Howard Bussey

The Ontario Himalayan Expedition

After a year and a half of planning, The Ontario Himalayan Expedition formed at Lukhla, Nepal on 24 October 1979. The expedition was designed to push above 6000 m in circumstances where altitude and weather rather than technical difficulties would dominate, to climb peaks that would be high but straightforward; we also wanted to see the Everest back country. Since these plans included the Amphu Labsta pass (close to 6000 m) we arranged

with Mike Cheney of the Sherpa Co-Operatives Trekking for well-equipped sherpa ground support. Our sardar, Serki Thserung brought with him a party of 14 sherpas, base camp equipment and trekking food. We brought 35 man days of high altitude food, assault tents and all technical gear.

The trek to the foot of Everest was straightforward and took eight days, about short as is practicable for acclimatization with its headaches and loss of appetite, all of which were compounded by a bronchitis that worked its way through the party. We had one rest day at Thyangboche which, like other rest days on the trip, included a scramble up the nearest ridge. There was a magnificent view of the 3000 m north faces of Tramserku and Kang Taiga.¹

After spending the first day of November on Kala Pattar at the foot of Everest we doubled back past Periche and turned east towards Island Peak, camping at Chukhung right underneath Ama Dablam, with the Lhotse-Nuptse face on the other side freshly dusted with an overnight snow which bathed our camp in a hard, silvery light. From here, Roger and Doug, our rest day ridge runners, climbed to 5550 m on the Chukhung Ridge, a spur that drops off the south face of Nuptse.

Island Peak was climbed by the south ridge by Steve and Alan from a base camp at the junction of the Island and Amphu Labsta trails. They scrambled to snow, roped up, and climbed the long knife edge to the lower or south summit (6100 m). Although the going was slow there were no outstanding technical problems. After crossing to the higher summit (6189 m) they descended the usual route on the east side, pausing to drop off snow for water at a high camp which was then occupied by the remaining five climbers.

The following morning Roger and Doug made a fast start and subsequently climbed both peaks. Since I was moving slowly I turned back before the snow. Chad continued to the higher summit with Jim who was going strongly; the 105 m-50 degree headwall was rather soft on the ascent so Jim cut steps. All returned to the base camp well after dark, the sherpas having taken the tents at the high camp down during the day. For the party as a whole, and particularly for Steve, Jim, Alan and Pemba, who did much of the preliminary work to prepare the route, the Amphu Labsta pass (5780 m) was the hardest part of the trip. Alan and Steve (with Pemba) spent their rest day after Island Peak climbing the pass and fixing the lower ropes on it. The following day Jim and Steve again climbed the pass, working on the steps and attempting to meet up with Roger and Doug who did a recce on an alternative line to the west. Base camp was also moved up, yaks dismissed and porters and loads reorganized. Left behind were tables, stools, large tents and access to fresh foods, meat and above all tea houses! That evening we loaned our surplus clothing to the sherpas but even so many of them seemed desperately unprepared.

Crossing the pass took our party of 21 most of the following day. Because of the limited number of ropes the lowest lines across the 'schrund had to be used later on the top and steeper pitches, resulting in a considerable bunching of climbers and porters. Although the steps were good, the top pitch was about 55 degrees and there were often several on it at once. This was technically the most interesting stretch on the entire trip. Many of the climbers

Island Peak from the south-west.

The Lhotse Ridge is on the left, Cho Polu is the symmetric summit to the right. The ridge climbed is the righthand skyline ridge. The two summits are snow covered. S Langley

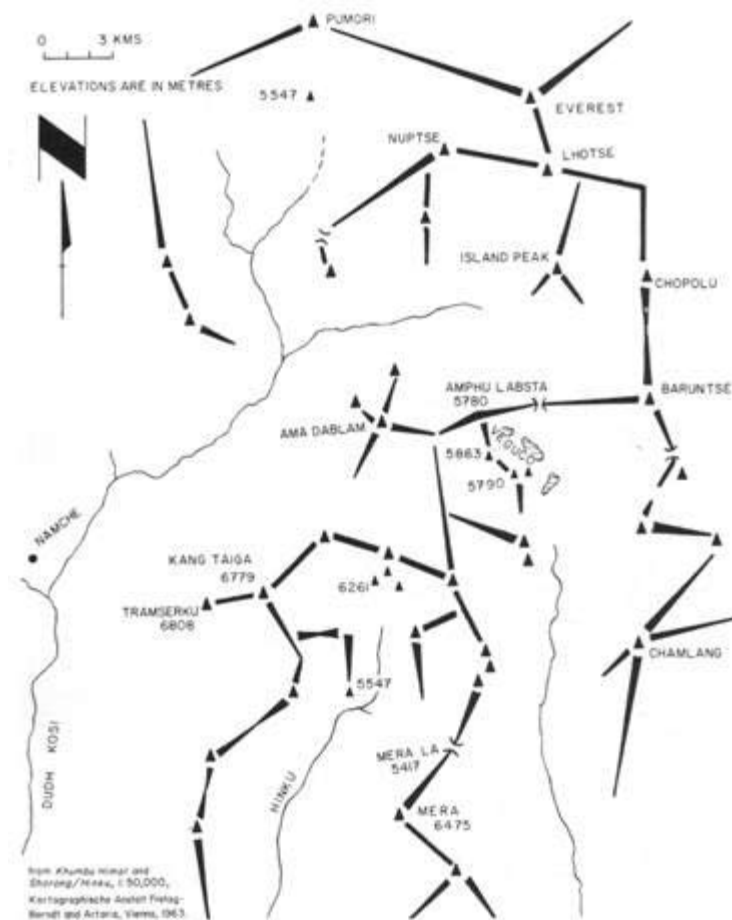


To the south of Mera's peak is Naulech but beyond that there is nothing but cloud over the plains of Nepal and India. G R Hamilton



Shooting against the sun the ascent route on Mt Mere is the lefthand snow ridge. D R Hamilton





Afternoon cloud in the Hunku valley from the Amphu Labtsa pass. Chamalang is to the left, Hunku Peak on the right and Veguco in the foreground. Base camp was located on the near shore of the large lake. D R Hamilton



and sherpas made several trips that day up and down the north side of the pass but by sundown most loads were down the long and easy southerly slope to our first camp in the wide, cold Hunku valley at about 5400 m on the east shore of the largest lake. Supper was very thin that night, for much of the food was still at the crest of the pass and that which we did have was frozen solid. Further the propane stove was burning weakly, suffering from its own mountain sickness — low propane pressure from the cold (-18°C) and lack of oxygen. The following day the sherpas cleaned the pass and brought down the remaining loads.

Just west of the lake was a set of three nice summits on the ridge between our camp in the main Hunku valley and the basin of the Hunku Nup Glacier to the west. The most southerly spur, not marked on the map, is reached by a snow climb to about 5790 to 5800 m up a glacier which drops to the beach of the lake. Somewhat reminiscent of Athabaska, this even had a “Silverhorn” route! The sherpas called this peak Veguco or the Frog. Roger, Jim and Steve climbed it with a high eastward dog-leg to the top. We were told that there was generally less snow coverage, due to a dry monsoon, but where there was snow it was often deep and unconsolidated, a foretaste of what was to come on Mera. The party set off some small powder avalanches. Jim and Steve continued the skyline traverse to the middle of the ridge, Middle Frog (5790 m) and came down along scree slope further north.

The North Frog (5863 m) is an easy walkup. I climbed it the previous day, excepting the last ten metres — a well-rotted and unstable looking westward cornice.

The Mera La (5415 m) is the major east-west pass between the Hunku valley and the drainages of the Hinku River to the west. The only difficulties at the pass itself turned out to be on the east face of the glacier where some steps had to be cut. We were all amazed that this pass is used for moving yak herds; although yaks are very sure footed it must take a real effort to get such large animals across. Our camp on the east side of the pass served as the starting point for the climb of Mt Mera.

Jim, Alan and Steve left this camp before daylight in an effort to climb Mera in a one day push. While the porters crossed the pass to move the base camp to a lovely site just over 5000 m at Khare, the remaining four climbers set up a high camp on Mera at 5850 m, following old tracks over packed snow. The other trio could be made out part of the time, roped and moving slowly in the east facing bowl at about 6300 m, just below the lower summit. Late that afternoon they returned, reporting that the waist deep unconsolidated snow under a weak wind pack crust and the rising wind had turned back their long push.

D R Hamilton

Doug and I planned on getting up at 4.30 am. When my alarm went off it was an unwelcome interruption to a poor night's sleep caused by the tent flapping in the high winds. Doug, after doing everything but take the kerosene stove to bed with him, finally got it going and breakfast was underway. On going outside to pacify nature's desires we realized that conditions had not improved so we decided to wait till daylight, hoping the wind would die down. Just before 9 am Don, Chad and the sherpa, who had AMS and was really out of sorts, headed back down the mountain, having

decided that the conditions, both weatherwise and snow depth, would make their summit attempt unwise.²

Doug and I decided to make an attempt. It would be nice if someone could make it to the top! Since the temperature hadn't risen much above its earlier reading of -17°C we re-secured our tent in hopes that it would still be there on our return and headed up. We followed the tracks of the earlier team for some 300 m above our high camp until they disappeared in the drifting snow. We had observed their progress the day before and figured they had ventured too far east. We were close to the base of the easterly centre ridge and were thinking seriously of trying to gain it when we hit firm snow and soon realized we were walking on the packed track of a German party that had scaled the peak two weeks before. At 6100 m these tracks were lost and we fought on through the deep sugar-like snow. As the slope steepened we found large patches of super packed snow in between. We were really feeling the altitude now and the 50 mph wind gusts with accompanying spindrift felt like a sand blast. We just dug in our ice axes and hung on till things subsided. We reached what we thought was the top to discover the real summit was a lot higher and farther back. At last the summit ridge was gained. What a shock was in store! To the north stood the highest mountain in the world and in between the peaks over 7000 m. To the south was absolutely nothing! The Himalayas stopped right where we were standing.

The wind pushed us up and the summit was conquered at 12.50 pm. We were jubilant. After almost two years of planning we were standing at 6461 m on the top of Mera. A quick round of camera shots of each other holding the Ontario flag and we made a hasty retreat in hopes of finding better elements lower down.

The wind was still howling when we arrived back at our tent but we didn't care; we feasted on high altitude food and slept like logs. We had hoped to take a crack at the neighbouring Naulekh the following day but abandoned this because of conditions and headed down to join the others at 4900 m in our Khare camp. Real grass to sit on, no wind and a warm sun — ahhh, ecstasy!

Roger Parsons

After Mera a four day planned camp at Khare allowed Alan, Steve and I thought for other climbing possibilities. About the best alternative was the Hinku Nup valley. A trip north up this glacial moraine valley would allow us a good look at Kang Taiga's south-east side and a chance at choosing a route up one of several other accessible high points over 6000 m. The valley started at about 4900 m and from the beginning we walked over large lateral moraine ridges. Up the west side of the valley a trail allowed east travel for several hours to camp site overlooking the Hinku Nup Glacier and the Kang Taiga icefall. We decided to cross the loose moraine covering the Hinku Nup the next day. After a miserable crossing a good camp site allowed Steve and I to recce a very aesthetic south ridge on an unnamed 6261 m peak amongst the cluster at the head of the main valley. Unfortunately the next morning, at about 5600 m, Steve became sick and unable to climb further. The ridge didn't look to hold any difficult sections so I soloed. It steepened to 50 degree hard snow and ice at about 5950 m then eased off close to the summit. A good view of the east face of Kang Taiga and its icefall made the climb worthwhile. The descent of the east ridge and glacier proved to be technically more difficult but still

feasible. With the ascent both objectives of the trip into the area were accomplished; a recce of the south-east glacier route on Kang Taiga and a good climb besides. The next day we left Khare and headed down the Hinku on our way out.

Jim Sangster

While the trio were in the Hinku Nup valley Roger did a solo climb of the west entrance ridge of the upper Hinku valley, a ridge reminiscent of the Grassi Ridge at O'Hara, only this one started at about 4800 m (near a point marked Dig Kharka) and topped out at 5541 m south-east of the peak 5641 m. Roger reported a straightforward climb until the more difficult 100 m headwall which finally yielded on its west side with some 5.5 to 5.6 moves amongst overhangs. His climb took about eight hours and the northerly descent to the west moraine of the Hinku Glacier much of the rest of the day. Climbing alone and without a rope Roger sacrificed some hardware and slings in order to complete this route.

The trip to Lukhla took only three days despite the enthusiastic efforts of one of our sherpa guides to stretch it to five. The technique is either be lost or to stop for supper and the evening camp shortly after noon! The change from high altitude tundra to rain forest was welcome, although the overnight fog at the lower altitudes was not.

The actual crossing into the Dudh Kosi valley can be either by the Zatr Teng pass at 4943 m or the longer and more southerly route via Zatr Wala and Zatr Og. These two passes at 4560 m and 4480 m are known together as the Yak Passes whereas Zatr Teng is called the Man Pass and is evidently much steeper and harder. Both are a day up and a day down, so the Yak Passes are the better choice.

Our only mishap occurred on this final pass, the Zatr Og, in sight of Lukhla, a few hours from the end of the trip. The west side of the pass was a snow covered but steep meadow — sort of rocky intermediate downhill ski country with low heather here and there. Our party had overtaken a group of four English climbers (one a doctor) and we were also travelling with a pair of trekkers and their sherpas — all in all perhaps 35 people, laughing and joking on the final miles to Lukhla. Although steps were kicked or cut, patches of ice caused four falls in quick order. The most serious was by Steve. He skidded, slipped and bounced for perhaps 200 m vertical. Luckily he was only scraped and dazed, not bruised or broken. His pack protected him to some extent. We should all have changed to climbing boots, broken out more axes and perhaps rigged hand lines for the porters across parts of this stretch, but I at least was completely lulled by the innocence of the ground and the closeness of the airfield which marked the end of the trip. Steve recovered from his damage with a few days rest.

And so the trip ended. We put people up Island Peak and Mera. We climbed a lot of other high points in between and individually satisfied our own personal needs and goals. This was a fun trip which we all agreed lacked the tension and interpersonal stress that often occurs on expeditions with a single, technically difficult goal.

D R Hamilton

Participants: the “old, bold men”, D R Hamilton, Roger Parsons, and Chad Christine; the younger set, Alan Dennis, Jim Sangster, Steve Langley, and Doug McKown, all in disgustingly good shape.

ACKNOWLEDGEMENTS

We are indebted to Mr Palmer and the staff of the Woods Canvas Tent and Bag Company who modified and donated their best down sleeping bags, duvets and expedition down pants for each member. These were used continuously as was a “Polydown” bag which proved itself under all conditions. Ridgeline Co Ltd of Toronto modified a “Bruce Trail” two man tent for high altitude use and also gave us an excellent four man tent for our base camp. The Thomas J Lipton Company donated much of our high altitude food and drink mixtures. A light weight pressure cooker from Presto saw continuous use. Snow stakes given to us by Geneva Spur Ltd were very useful as was epoxy glue in handy small packets from Vermont Ski Safety Equipment.

Finally we thank the Alpine Club of Canada for their support in the form of a grant and The Canadian Himalayan Foundation for the loan of ropes, tents and other technical gear. We also acknowledge the understanding tolerance of our wives and families throughout the whole affair.

FOOTNOTES

1. Altitudes are in metres, mainly from maps published by Kartographische Anstalt Freytag-Berndt and Artaria, Vienna, 1963, 1:50,000 Khumbu Himal and Shorong/Hinku. Place name spellings are also from those maps, excepting where subsequent common usage has changed, eg Thyangboche instead of Tengpoche.

2. In retrospect our retreat was well-advised, for I (DRH) had oedema in hands and feet for several days afterwards and subsequent eye troubles which may be related to altitude. The spherical correction required for my glasses increased approximately one diopter in both eyes from OD -1.75 to -2.75 and OS -.075 to -1.75. There was no change at all in the axis or strength of the astigmatism. My eyes had been absolutely stable for the prior decade and seemingly changed abruptly at the end of this trip, at sea level. There were no retinal or macular haemorrhages and I have no evidence of glucose intolerance.

Traverse of Princess Margaret Mtn

It was one of those typical early season or spring days in the Rockies when unsettled weather prevails in the mountains; it may be raining on one peak or ridge while leaving a neighbouring one cloud covered but dry. Snow was still present at higher elevations and in the avalanche accumulated areas of the valleys of the main ranges. To the east, in the Fairholme Range, much of the winter and spring accumulation of snow had already melted. It was on one of these kinds of days, when climbing the readily accessible peaks in the front ranges was an inviting prospect, that Dick and Rick Roe and I decided to climb Princess Margaret Mtn and start on a traverse toward Mt Sir Charles Stewart.

We had already explored the southern end of the traverse from Mt Lady MacDonald and now thought to reconnoitre the northern portion. Peter Spear had provided an additional incentive by stating that the down climbing of Bob's Knob just to the east of Mt Lady MacDonald might be challenging. We set out through the open woods of the valley floor to the south of Carrot Creek and then slogged up the usual tree and scrub covered talus lying on the truncated spurs of the mountain flanks until we were high enough to enjoy scrambling on the relatively bare limestone ribs and slabs. When the terrain steepened and the exposure increased abruptly we roped up. We continued the easy traverse to the top of Princess Margaret Mtn, down the saddle and across the Bob's Knob. That destination was reached in about five hours after leaving the car.

Down climbing the rib on the north face proved as slow and interesting as promised. We rappelled the last section to the ridge but not before having tied on several lengths of sling rope to make certain that we would be able to reach the base of the cliff without being left in mid-air. Since the rope stretched it reached the bottom without the added pieces. Enjoying a lunch on the lee side of the next knob, we could survey our ridge route. Judging by the fact that there were no indications of any previous party, such as rappel slings, pitons, or places where rocks had been knocked loose, we may have been the first to make a true ridge traverse.

The descent into Carrot Creek down the alternating scree and snow slopes was rapid to say the least. The trail back to the highway afforded several creek crossings, not all of them on logs or rocks. Back at the car we removed a few more ticks, partook of some refreshments and headed home, happy that on this particular “questionable” day the weather turned out far more pleasant than anticipated.

Herb Kariel

Maktak Fiord 1978

Because of difficulties of access eastern Baffin Island remains one of the world's last great untapped mountain wilderness areas. Like many I am free to go into the mountains only during the summer months. In Baffin this is when rotten ice and ice jams make travel from the settlements frustrating at best and impossible at worst. The following account is offered as much to suggest a solution to the problem of summer travel in these parts as to relate actual alpine experience.

It hardly seems possible that ten years have passed since I first began exploring the eastern Baffin mountain wilderness.^{1,4} My dream of having the same freedom of travel on water that I enjoy on land has had two obstacles. I lacked confidence to travel alone on freezing sea water and ice and I needed an easily portable boat of adequate capacity and durability. Finally in the winter of 1977/78 I ordered a Sea Eagle 340 inflatable canoe. As soon as the ice left the saltwater pond below my house on Cape Cod I began to practice, often under the worst conditions. Late in June I paddled out into the open Atlantic to experience my boat's performance in ocean swells and strong tidal currents and eddies.

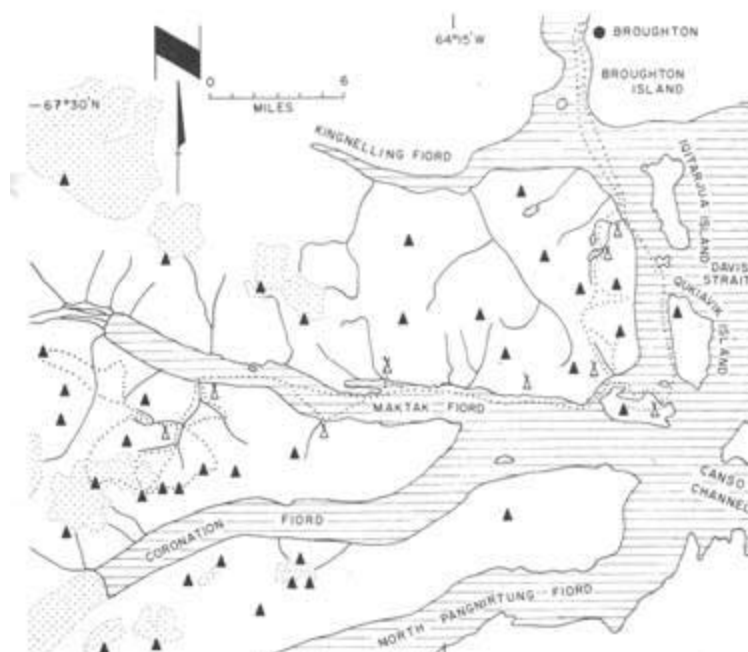
The logistics of my trips to Baffin are always mind boggling. The boat and associated equipment further complicated matters. I do not ship equipment or food ahead and have learned not to count on supplies being available in Broughton. At Montreal my gear weighed in at 130 lb — 40 lb of boat and associated equipment and 50 lb of food, enough for four weeks. My self image as a light travelling backpacker was shattered.

Reports filtering down from the north hinted at another poor summer. My worst fears were realized when I arrived in Broughton on 31 July and found only the ice in front of the settlement broken up, and even that packed in so as to make neither boat nor sled travel feasible. Elsewhere the ice was rotten and on the verge of breaking up. It appeared difficult to travel even the short distance across the harbour to the mainland let alone get anywhere suitable to begin a summer jaunt. I formulated a new set of plans. Instead of using my boat to cross the farflung fiords of Auyuittuq National Park I would use it as my principal means of transportation, closer to Broughton. I would still have ample opportunity to use my boat, visit some mountain tops and generally immerse myself in the Baffin wilderness — my primary objectives. Broughton continues to live up to its reputation as a difficult place from which to launch an expedition. Successful trips into this wilderness require a degree of flexibility and compromise that could frustrate a goal oriented expedition.

Two days after my arrival I arranged for a local man to take me as far down the harbour as he could, hoping in this way to cut a day off my own travel. On the flight in I saw the ice in both Maktak and Coronation Fiords appeared sufficiently broken up. This would be a good area to visit if I could somehow reach it. I helped my guide place a skidoo and a 12 ft kamitik (sled) crosswise on his boat and then loaded my gear. It was tricky business manoeuvring this precarious load through the closely packed ice in the harbour as we twisted and turned to force apart large pieces of ice. It was surprising how continual pressure would ultimately part even the largest pieces of ice. Several times, as my guide knelt on the edge of one piece of ice, pushing another with his foot or a board to create an opening, I expected to lose him in the sea. Then suddenly at the crucial moment I would see a new and unexpected demonstration of his understanding of the ice. This was my seventh trip with men from Broughton. On each I had learnt a bit more about sea and ice travel in these parts. Most important I had learned to exercise extreme caution when travelling on the water or sea ice.

At the “fast” ice at the south end of the harbour we pulled the boat onto the ice and off-loaded the sled and skidoo. For the next several hours I rode with my gear on the sled, pulled by the skidoo. We travelled on rotten ice, over ice hummocks, through foot deep puddles on the ice and around the black water of bottomless holes and leads. I had hoped to get to the near side of Kingnell Fiord. Conditions on the ice permitted us to go on to the far side, saving me four days. Early in the evening we stopped just off shore near the base of a steep slope near a river. The river had hastened the breakup of ice near its mouth. Beyond began the great wall of cliffs that lead to Maktak Fiord. We carried my gear ashore, jumping from one piece of floating ice to another. Before parting we enjoyed tea together, brewed up on the ice next to the sled.

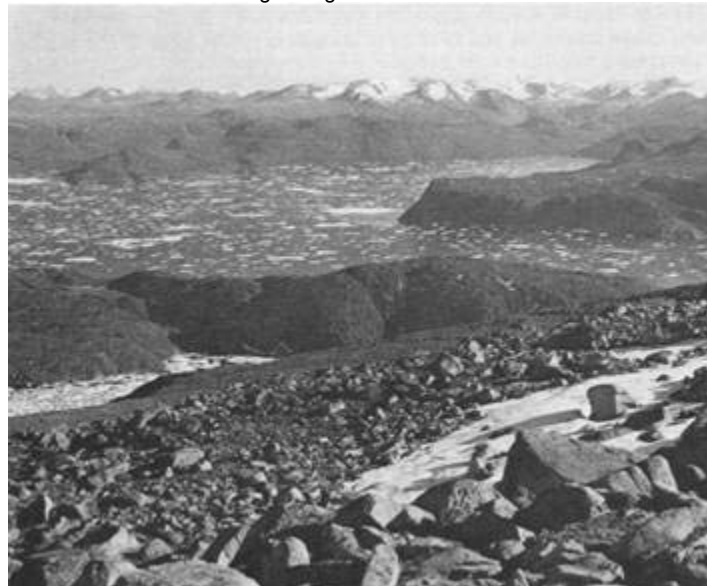
Again I found myself alone on a desolate Baffin beach. I climbed a low rise along the shore and gazed for some time at the



Coronation Glacier. David P MacAdam



The entrance of North Pangnirtung Fiord. David P MacAdam





View north up the channel from Maktak Fiord toward Broughton Island. David P MacAdam



expanse of ice that led toward Maktak Fiord. Finally I decided against dragging my boat and gear over the ice at the base of the cliffs and opted instead to carry it over a 2500 ft pass behind the cliffs. Because of my lack of boating experience in these parts it was a wise choice, though it cost me a few extra days. I have since wondered whether I might have been overly cautious.

The dark afternoon gave way to spectacular evening light. The fine evening, together with a desire to get on with my travels, provided the impetus to load all I could into my pack and climb into the hills. That night I camped between a pair of lakes within sight of the pass. The morning ushered in one of those rare, sparkling clear Baffin days. With empty pack I hastened down to the shore where I managed to pack the boat, paddles, rubber boots and remaining gear into a single load. It was a great relief knowing that everything could be carried in just two loads.

Next day I carried the boat through the pass and far enough beyond that it would not be lost under snow in the event of a storm. It was a grey, damp day. Occasionally I was enveloped in fog blown in from Davis Strait. On my return I detoured to the top of a low spur that jutted out over the channel south from Broughton. This overlook gave dramatic views back at the great cliff faces. The channel below was covered with rotten ice about to break up. Little puffs of fog came and went on the ice. Across the channel lay the two big islands, known locally as Iqitarjua and Quklavik, the former being nearest Broughton. Bands of fog clung to their dark sea cliffs a few hundred feet above the rotten ice. In the distance between bands of fog and cloud I caught glimpses of Davis Strait, Canso Channel and Broughton Island. In spite of the effort involved I was glad to be here rather than down on the ice.

Visibility of less than 50 ft kept me inactive and close to camp for a day. By noon of the next day I was back in the pass with my second load. The afternoon brought gradual clearing as I plodded through soggy gravel on a high, poorly drained plateau. Lower down I followed a stream toward a low point that marked the top of a steep gully down to the shore near the entrance to Maktak Fiord. I should have headed further west for in the evening my route descended a lot of steep slabs, each ending in a 15 ft vertical, like tiles on some giant roof. That night I camped on a heather encrusted perch 100 ft above sufficient open water for the boat.

The next morning was sunny and warm. Rather than force a route back up the slabs I went up the steep scree slope to the east, soon concluding that neither is to be recommended. I picked up my boat from the high slopes and contoured back toward the gully. At the point where I was to begin my final descent I left my pack and headed straight up the southwest slope toward the highest point (3000 + ft) on the cliffs that overlook the channel. There was not a cloud in the sky, the air was still and the slope warm, especially by Baffin standards. Bees buzzed from flower to flower among the green heather and willow. At the upper limit of vegetation I continued on up loose boulders and over several false summits. The final scramble to the summit was, as it should be, more difficult and exhilarating than the false summits. The late afternoon light provided magnificent views of the ice jammed entrance to North Pangnirtung Fiord, the Canso Channel and the mountains southwest of Padloping Island. To the north-east the ice of Davis Strait stretched to the horizon. Below the magnificent cliff on Quklavik

Island appeared as an insignificant bump on the ice. In the channel the ice was beginning to break up. My evening descent of the steep, loose slope, with the boat on my back, was even more treacherous than that of the previous evening. As I climbed lower the pinks and whites of the distant mountains and nearby ice gave way, in dimming light, to greys and blacks. I arrived at the shore just as the last colour left the mountains across Canso Channel.

The next day, 8 August, I assembled the boat and paddled it about in the ice between the island and the mainland at the entrance of Maktak Fiord. An ensolite sitting pad provided the needed insulation against the frigid water. I soon learnt to beware of shifting ice. With only paddles I could neither outmanoeuvre it nor push it aside as could my Eskimo friends with their motors.

The last big question was to be answered the next day. Could I pack myself, three weeks of food and all my other gear into the 1 1/2 by 8 ft cockpit? It was a magnificent puzzle and took a significant part of the day. First to be abandoned was the seat in the centre of the boat. Fortunately the boat performs satisfactorily when fully loaded and paddled from the stern.

It was another bright sunny day but the long streamers of fog that steamed into North Pangnirtung Fiord from the sea told me that the spell of good weather was nearing an end. By mid-afternoon I was negotiating narrow leads in the shifting ice of the channel. Once into Maktak Fiord I exchanged the ice for 3 ft swells driven by a strong north-east wind. After taking a couple of swells over the side I made a greater effort to keep the stern into the waves. Rain gear kept me relatively dry and body warmth soon made tolerable any water that got through my clothing. The wind and waves propelled me at a good rate toward the entrance to Coronation Fiord so most of my paddling effort went into keeping as close to the north side of Maktak Fiord as possible and keeping dry. By late afternoon a narrow band of fog wrapped itself around the cliffs that mark the junction of Maktak and Coronation Fiords. A short distance further Maktak narrows at an unusual peninsula that juts out from the north. A great ice floe blocked the inner fiord at this point. I landed on the peninsula for a better view of the ice ahead and immediately realized how cold and tired I was. My way was blocked and there was no water for a camp on the peninsula. I had no choice but to cross the fiord to a barely suitable camp site under the steep slopes there. Fog quickly filled the fiord once the sun disappeared.

The fog and cool, damp sea air discouraged an early start next morning so it was early afternoon before my gear was repacked. By nearly recrossing the fiord I was able to find a route through the ice. Sitting with my eyes just a few feet above the water made route finding in the ice difficult. Past the ice the swells returned but now they only hindered progress as I fought swift tidal currents under the cliffs back on the south side of the fiord. It was a tough, frustrating paddle; I appeared to move more up and down than ahead.

In the evening I landed, very cold and tired, on a gravel beach at the mouth of the large river that drains much of the high land between Maktak and Coronation Fiords. I had had enough boating for awhile and couldn't wait to get up in the mountains. I secured the boat up among the rocks and heather, cached supplies and,

carrying food and equipment for a week, set off up the slope east of the river in search of a camp site away from the cool, damp sea air. When I found my way blocked by the east fork of the river, tucked 200 ft down in a gully, I set up camp on a high perch above the junction and used what strength remained for a scramble down to the river for a generous supply of water. Dense fog and drizzle delayed departure until the next afternoon when I moved on to establish a more permanent camp near the first fork from the west. My choice was a compromise site, high enough for one day climbs and low enough for a retreat if a big snow came.

The weather during my stay in the high country was generally poor. When I could see my surroundings I often found the summits across Maktak Fiord, as well as those toward Coronation Fiord, lost in heavy cloud. Following a bad day spent near camp I left for an overlook above Maktak Glacier. The sun shone bright as I climbed along the stream above camp. To avoid the fog overflowing Maktak Fiord into the highlands I tended in a direction more south than west, into the central highlands between the two fiords, far from my destination. The sky grew threatening but sunshine in the direction of Coronation Fiord drew me up a long snowfield to the top of a great gully that led down to Coronation Fiord. Soon the sun disappeared for the day and the fiord began to fill with fog. Snow squalls appeared toward Pangnirtung Pass. In rapidly deteriorating weather I worked my way eastward up through a mixture of boulders and snow toward the 5000 ft summit overlooking the fiord. Occasionally I caught a glimpse of the water below, though for the most part I remained sandwiched between the fog below and the clouds above. I was greeted by snow squalls and poor visibility on the broad summit surface. It was too cold and blustery to remain long on the summit, so when I noticed wolf tracks nearby on the snow I decided to follow them down as long as the route seemed reasonable. I could hardly make out any landmarks to guide myself back to camp and it was too cold to stop. The tracks led me down out of the clouds to the head waters of the river. Fog boiling up from Maktak Fiord had already engulfed my camp and was moving rapidly toward me. The river provided a sure, though indirect, route to camp.

It was noon next day before the fog lifted and I could make a second attempt at the Maktak Glacier overlook. Though the sun shone brightly on the highlands all afternoon, the hill tops across the fiord remained hidden under great billowy clouds that rose high into the sky. A cold wind persisted until evening. I moved quickly across country that I had reconnoitered the day before, through the narrow split in the hill above my camp, along an ancient dry stream bed, down around a little lake, past a prehistoric cache, across a deep gully that led down to the head of Maktak Fiord, over the end of a long ridge, across a low saddle and finally up a steep, rocky slope to a low cliff top. Across the valley was the wall of cliffs above Maktak Glacier. Up the valley, into the sun, lay the great glacier, crevassed and brown. The valley on either side of the muddy braided river that led to the fiord was a text book of arctic land forms. Particularly noticeable were the tundra polygons and other patterned ground directly below. Up the valley were superb examples of soil glaciers. These mixtures of vegetation, soil and permafrost showed a clear pattern of flow out from the valley walls toward the river. Despite the sun and low elevation, 3200 ft, the wind and cold encouraged me to turn back before long. I enjoyed the light of the low sun for several more hours until I neared the

cliff top at the head of the fiord and a magnificent view out the fiord to the Canso Channel. I had hoped for brilliant colours but cloud cover in the north-west gave only subdued pinks and greys. I thought I could make out a few lingering patches of ice on the fiord but could not be sure. My return to camp was hastened by snow squalls that swept down from the northwest and by dimming twilight.

Following a particularly cold and damp day I went for another visit to the cliff tops above Coronation Fiord. My first stop was a low, 3500 ft promontory notable for jutting further out over the fiord than any other cliff north of the fiord. Superb views up Coronation Glacier, one of the largest outlet glaciers from the Penny Ice Cap and the largest on Cumberland Peninsula to reach the sea. During its gradual descent from the ice cap it passes by some of the most dramatic cliff scenery I've seen in Baffin. Its mile wide snout, rising in a wall of ice over 100 ft high, is criss-crossed with crevasses. A few icebergs spawned by the glacier drifted out the fiord. From my overlook I traversed along the brink over two higher tops and ultimately up the steep rock and ice slope leading from the east to the 5000 ft summit that I had visited previously in the snow squalls. The weather deteriorated but the scenery remained magnificent, even through the summit snow flurries. The sky was now black in every direction except toward Padloping where the sun shone brightly. The wolf had returned to the summit since my first visit. In fact, it appeared that he had brought friends. Descent was down steep rock and ice in direct line with my camp.

The next day the weather was again too grim to move. Because I was committed to making my own way back to the settlement and knew nothing of the ice conditions along my route, I broke camp the following morning, 17 August, in the finest weather I had had in this high country, and returned to the fiord, this time down through a carpet of heather and willow on the gentle slope west of the river.

The return boat trip began in sunny, warm, calm weather. Again, confusing tidal currents slowed my travel. Once I had them figured out the swells returned, along with a head wind. To avoid having later to take the swells broadside, I cut diagonally across the fiord. Without ice or shore line against which to measure my progress it seemed as if I made none at all. Eventually I reached the peninsula and just beyond made camp. The next day brought a confusing mix of sunshine and cloud, rough water and calm. Opposite the entrance to Coronation Fiord the water grew so rough that I had to stop until evening. The water grew calm while an unusual scallop sky and sunset faded in the west and a full moon rose over the Canso Channel in the east. The scene was haunting with only the soft lapping of my paddles in the subsiding swells. The spell was broken by the sound of an approaching motor. It was one of the first hunters to make it out from Broughton through the ice. We exchanged greetings across the water in the twilight. Clearly he was intrigued by my presence and my strange boat. His presence indicated that a water route back to Broughton was probably open.

A wind storm delayed departure the next morning. As it subsided I paddled my way along the shore into the little channel that leads from Maktak Fiord. Under ominous skies I searched for a good camp site on the large island at the entrance to the channel

back to Broughton. As darkness approached I set up camp on a pile of heather covered rocks in a north facing cove near the east end of the island. This was to have been a one night stop because I intended to spend the next few days on Qukivik Island. The gloomy night deteriorated into a three day storm the next morning. By noon snow was accumulating on the nearby rocks and heather. I entertained myself by baking a bannock, feasting on sardines and goat cheese, reading and sleeping.

Several attempts at exploring the island were thwarted by new snow and fog. On the third day I made my way over rugged terrain to the top of the island. From that vantage point I could see far up both Maktak and Coronation Fiords. Grey clouds with the slightest suggestion of icy pink, hung low over both fiords. Up the channel toward Broughton the mainland cliffs and the cliff on Qukivik Island were laced with fresh snow. At the head of the channel the low hills of Broughton Island were grey-white in a mixture of cloud and snow. My island was unlike anything I had visited before. It had been carved and scoured into bulbous knolls by the ancient glaciers from Maktak and Coronation Fiords as they ground their way out to Davis Strait. Everywhere the landscape was littered with glacial erratics — the calling cards of the passing glaciers.

The fourth day showed more promise. Eager to move to a spot where the rocks would poke me in different places while I slept, I broke camp and moved through the ice toward Qukivik Island. Not knowing what further delays awaited me in the channel to Broughton, I did not land on Qukivik Island but only paddled under its magnificent cliff. The ice in the channel and the island itself eliminated the troublesome ocean swells. Above me, across the channel, were the cliff tops that I had visited during my portage through the pass. Frequently seals stood in the water a few yards away to watch the silly man in the rubber boat fumble with his camera. Between Qukivik Island and Iqitarjua Island the swirling currents of the incoming tide presented new challenges. Riding its crest was the Davis Strait ice pack which swept down on me just as I reached the small island southwest of Iqitarjua Island. Travel would have been easier on the other side of the channel but I wanted different views than those afforded by my previous trips. More important I wanted a route that offered more choices for camp sites than the rubble at the base of the long wall of cliffs. From the small island I surveyed the ice. By the time I was ready to move on I was surrounded by fast moving ice. I paddled close under the low cliff at the end of the island until my way was blocked by a large piece of ice caught on the rocks. There I cautiously climbed out onto the ice. Ready to flop myself into my boat at a moment's notice, I dragged it across the ice. To my relief, the loaded boat slipped across the ice as easily as through the water. This was a pleasant change from all the pushing and hauling required to get an Eskimo canoe across the ice. On the other side I climbed back into the boat and, pushing with my hands against the ice, slid myself and boat back into the water. I spent the evening picking my way through close pack ice in drizzle. The calm water more than compensated for the complications of the ice.

Following a cold night on a cobble beach near where my guide had left me, I departed on the last leg of my journey, under grey skies. More ice had jammed into the channel during the night, much of it covered with a blanket of new snow. The cold air, pack ice and calm water hastened the formation of skim ice. This was

the worst obstacle of all, as I could neither travel through it nor across it. In spite of the conditions I was plenty warm, dry and comfortable and found paddling around in the ice too enjoyable to hurry. More ice was rushing in from Davis Strait between Iqitarjua Island and Broughton Island. I knew I should detour into Kingnelling Fiord to avoid it but decided to try for the south-west corner of Broughton Island anyhow. As expected, I lost my way in the ice close to Broughton Island. Just as I was about to climb out on the ice to survey a route, John Andrews of INSTAAR came by in a canoe from North Pangnirtung Fiord and offered me a lift into Broughton. The possibility of a good meal in the settlement that evening was too much to pass up. Together we lifted my fully loaded boat on top of his gear and headed on. I never realized how tiny my boat was until I saw it swallowed up in a 22 ft canoe. Within a couple of miles the ice proved too much even for the canoe. We landed and walked into the settlement.

The next day I paddled and dragged my boat the remaining few miles into the settlement. While landing the boat slipped off a large piece of ice that was inclined against the shore and got caught under another. Freeing it resulted in a small puncture in the bow. This was readily repaired that afternoon.

In terms of territory covered and ascents made, my trip was hardly noteworthy. What was important was the experience gained in using the inflatable boat in conjunction with backpacking and climbing. I proved to myself that, used wisely, my boat provides just the mobility needed to visit the far flung mountain areas of eastern Baffin during the summer season. In the summer of 1979 my portable boat played an important part in a more ambitious backpacking and climbing holiday near Padloping Island.

David P MacAdam

FOOTNOTES

1. MacAdam, David P. Lone Wanderer at Pangnirtung. CAJ 1972:52-55
2. E Whalley et al Baffin Island 1973. CAJ 1974:23-30
3. MacAdam, David P. From Maktak Fiord to Okoa Bay. CAJ 1976:26-32
4. MacAdam, David P. Narpaing Fiord, 1976. CAJ 1978:29-35

St Elias Ski Expedition

1979

Mid-April found us at Kluane Lake at the beginning of a 49 day ski tour. We drove to Sheep Creek, loaded our sleds, and began a rather tedious four day march up the Slims River. A somewhat earlier than usual approach of spring had left the valley a dust bowl, the only traces of winter being intermittent stretches of ice along the river. Although we tried to make the most of these, Steve's impromptu swimming lessons in the waist deep, ice choked stream soon suggested that load ferrying on drier ground would be more enjoyable than drowning. We questioned even this after staggering along for a short distance under our heavy loads.

On the morning of the fifth day, after cautiously tiptoeing across the thin ice of a small lake at the toe of the Kaskawulsh Glacier we

bid farewell to dry ground. A short haul across the glacier brought us to a large crevasse field. Negotiating this we emerged on to a flat, snow covered trench that appeared to lead for a considerable distance up the glacier — excellent for travelling, except for the fact that the snow had deteriorated under the warming sun to a knee deep layer of mush. Alternately breaking trail and pulling sleds for two days, we managed to reach the most heavily crevassed section of the Kaskawulsh, just below the junction of the South Arm and the main glacier. Dipsy doodling through this with 200 lb sleds provided a few laughs but no serious problems and gave our spirits a much needed boost.

Upon reaching the 5000 ft contour we were relieved to find perfect sledding conditions and quickly made time up the glacier, aided greatly by sunny skies and above normal temperatures. On 26 April, ten days out, we caught our first glimpse of our objective, the miniscule looking summit of Mt Logan shyly peeking at us from behind the wildly glaciated slopes of Mt Queen Mary. Two days later we began the descent from the Kaskawulsh system into the Hubbard and across to the Logan Glacier. In front of us stood a line of snowy mountains, impressive by any standards but dwarfed to insignificance by the monster that lay beyond.

We sped onward beneath the awe inspiring north side of Logan and quickly reached the Ogilvie Glacier. Originally we had planned to ferry loads through the Ogilvie icefall to King Trench but on viewing this major barrier soon decided that the Mussell Glacier would be an easier and safer approach. Crossing over the 10,200 ft col to the Quintino Sella Glacier was tiring but not difficult and on 4 May, our 18th day, in deteriorating weather, we established a base camp at 10,500 ft in King Trench. Mountain peaks soared above us and disappeared into the mists, making us feel we had entered a fierce and enchanted kingdom. So far we had not lost a single day to bad weather but now the clouds began to lower and for the next three days our little kingdom lay hidden behind a white screen.

On the fourth day the fog began to dissolve and by mid-afternoon we had shouldered our packs and begun to slowly trudge up the glacier. Our progress upward was slow but fairly steady — two days of travel, two days of storm, one day of travel, another day of storm. On 15 May we crossed over AINA col and descended onto the Logan plateau, setting up camp at 17,300 ft overlooking the Logan, Hubbard, and Kaskawulsh Glacier systems. It stormed continuously the following day and night but cleared in the morning of the 17th allowing Steve and Bob to reach the main summit of Logan in perfect conditions. Owing to mountain sickness Mel and Errol remained behind, hoping to recover and climb the next day. By the following morning Errol appeared to be getting weaker and more uncoordinated and immediate evacuation was necessary. By 20 May we were back in King Trench, resting and recovering.

Three days later we cleared the snow off the sleds, re-packed them, and began the homeward journey. We scurried down the Quintino Sella Glacier in one day, crossed over to the Columbus directly below Mt St Elias the next day, and then began heading eastward across the immense Seward Glacier. Conditions were excellent, the waxes working, the sleds becoming lighter. By 28 May we had reached Water Pass, the only break in the range of small mountains stretching between Mt Logan and Mt Vancouver.

The trip down the Hubbard Glacier, around the east side of Mts King George and Queen Mary, and over to the Kaskawulsh Glacier seemed but a moment and then a fading memory, even though it took another three days. Our senses were finally becoming jaded.

By now spring had silently crept several miles up the glacier, turning the snow into slush at 6000 ft and making it disappear altogether at 5300 ft. Small melt water streams had formed and gaping crevasses were now visible. Pulling our sleds, we made great diving leaps across these, occasionally miscalculating and suffering the inevitable embarrassing result. The pounding and scraping was hard on the equipment but preferable to slogging down a lateral moraine. Close to the glacier terminus surface debris made it impractical to pull the sleds any farther. With our sleds strapped to our backs we looked like miniature Mr Peanuts waddling along the ice. With close to 100 lbs weighing us down, the humour of the situation soon escaped us. We touched ground 3 June, at the divide between the Slims and the Kaskawulsh Rivers and were immediately overcome by a flood of half-forgotten sensations — the smell of earth and plants, the rustling of the wind in the trees, the singing of birds, the sound of moving water, even the sound of sand and stone underfoot; little things, they're hardly even noticed anymore. With an odd, unaccountable feeling of joy and sadness we reached Kluane Lake the next day, our journey finally ending. Shaw must have experienced a similar feeling when he wrote: "Man can climb to the highest summits, but he cannot dwell there for long".

We had travelled over 530 kms and had done it without air support. As far as we know, there has not been a completely self-

Bob Saunders pulling the sleigh across crevasses in the Kaskawulsh Glacier on our return in early June.
All snow has disappeared and only ice and rocks remain. E Smith



Skiing up the Slims River pulling the sleighs through broken ice. E Smith



supported ascent of a major peak in the St Elias Mtns since 1935 when Wood's party made the first ascent of Mt Steele, and the last time Logan was climbed without aircraft was the original epic ascent led by Foster and MacCarthy in 1925. We used fibreglass cross country skis with cable bindings and wore normal touring boots, and had no problems with them.

Bob Saunders and Errol Smith

Participants: Mel Hines, Steve Smith, Errol Smith, Bob Saunders.

Alberta Revisited

Two years ago Chris Jones and I struggled across the Sunwapta River, hoping to add another interesting chapter to Alberta's colourful history. "We came so far called by this charming great mountain," left by Yuko Maki on Alberta's summit some 54 years ago heralded a new level of achievement in North American mountaineering. Historian Chris and I quickly learnt that after 54 years the skills, effort and luck required to climb this enormous and foreboding prize had not diminished. On our only clear glimpse Alberta had appeared enveloped in storm, like a battleship at war with the elements. And so, after a few hundred rounds and a drenching bivouac that night, we had retreated without regret.

It took only two years to forget the worst parts of the experience. So when Gerry Dienel called from New York with thoughts about visiting sunny California for a week's vacation, "Well, that's a great idea Ger, but how about Alberta instead? It's northern ridges are still unclimbed and a worthy summer prize." Emphasizing the excitement and adventure, Alberta's history and remote beauty, and ignoring mention of the fears, the struggle, its loose rock, the exposed summit ridge . . . and most of all, the expected weather . . . Gerry hung up mildly interested. And so big commitments with friends are made. After all, in the excitement to have a go at the great mountains there are always a few details overlooked.

July 23. After a nonstop drive from California and the usual "hike" over Woolley col, Gerry and I exhaustedly established ourselves at the foot of Little Alberta, facing an incredible view of the great unclimbed northeastern ridge. Somewhere between the soup and the jello there was an agreeable mumble that the Japanese route would suit just fine, thank you. As for the unclimbed north-eastern ridge ...another generous prize to be left for future generations.

July 24. Which way to the base of the black tower? If we had only looked at those old accounts in the AAJ we might have avoided what became an entire day of sightseeing on delicate third class rock. The sort of undesirable realism where, "if you slip, you die". But the view from the cave that we found at the base of the rock tower, overlooking North Twin, Columbia, and King Edward, was stunning. Our first bivouac.

July 25. The guide says "8 hours up from the bivouac". By 10 am the next morning, after climbing at least six unnecessary pitches on loose ledges, we find ourselves on climbable rock. A veritable museum of old rappel slings lead up to the bottom of the second

notch along the ridge (the current Putnam guide mentions the first notch which is in error). How the earliest ascent parties wandered up this tower without using protection made Gerry and I conclude there was more to those early climbers than just their climbing. On the ridge by 4.30 we have a spectacular view of the Athabasca River some 7000 ft below but it looks like we have a long way to go. By 6.30 we clearly have no chance to make it up and off the tower before nightfall. The interesting philosophical aspect of moments like these is that through mountaineering one's choices get simplified into a very simple, purifying individual question — UP or DOWN? Midst a spectacular cloud show over Columbia, Gerry and I decide to stick it out.

Reaching the famous snow notch, we carve out a rocky windbreak in vertical scree and tie ourselves off rather gloriously to an ice axe belay for the evening.

This night was to be our most memorable "huddled summer bivouac" — we've had a few too many already. Shortly after 11 pm an interesting display of St Elmo's fire began to emit from my gloves. Then rotating orange-yellow balls appeared glowing along the ridge and began MOVING OUR WAY! A thunderous CRASH and white light suspended our normal breathing (and shivering) for over a minute. Then it started to snow. Under such conditions we forgot our minor discomforts and earlier concerns — no food, no shelter, no water. Clearly by the next morning we need not worry about the water.

July 26. Shaking the snow off and struggling with our crampons an incredible sight rose with the sun to greet us. Across the bottomless gap and above glistening snowy black buttresses, the sculpted corniced ridge led toward fulfillment of our dream. Still alive to enjoy the sight, future weather or no, we just had to go for it!

After 45 minutes of rappelling, traversing, and balancing our way upwards, there is much to reward a climber arriving on Alberta's guarded summit. The legendary silver ice axe is gone but its memory lingers. No names have been added to the summit register since George Lowe and Jock Glidden's ascent in 1972. How many ascents so far? Eight certainly, including ours. Alberta has an ascent record to respect.

Getting off was not any easier than getting up but once you know the route you do make better progress. After nine rappels we arrived back at our first bivy spot at the south-eastern base of the tower. By midmorning on 27 July we finally arrived back at our Little Alberta base camp. As for the "eight hours up from the bivouac", you'll put your soul into climbing Alberta before you're finished with it or, more honestly, Alberta's finished with you.

We do have two suggestions to the next party climbing the mountain: take up another summit register — after 15 years, the shoe polish can and contents are in an advanced state of wet; and don't forget to read a few prior accounts before getting on the beast. The weather can change if you dally. Canada, it seems, has a built-in mechanism for converting great expeditions into unfinished business.

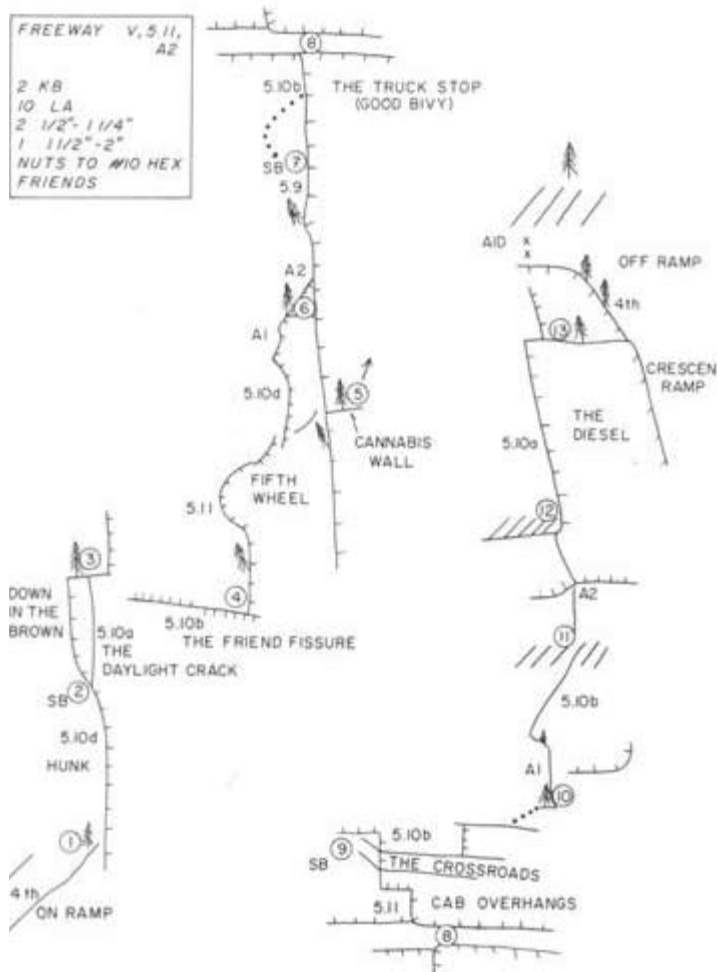
R D Caughron

Freeway, Squamish Chief

Located between Down In The Brown and Cannabis Wall, Freeway is a very sustained wall route with a lot of wild free climbing. All but ca 80 ft is free and of the 14 pitches, 8 involve 5.10 climbing and two are 5.11. A real endurance test.

Freeway has the same start as Down In The Brown. Ascend 4th class ramps (the On Ramp) to the highest tree and belay here. Dirty, difficult and unenjoyable climbing goes up the Down In The Brown corner to a hanging belay at a point where a hand size crack (the Daylight Crack) shoots off to the right of the corner. Jam up this crack to a small ledge with a tree. Climb down and right to a horizontal groove, the Friend Fissure (so-called because it is too rounded and flared to accept anything but large Friends unless you want to hang around and stack bongs). Make a scary hand traverse right to where the fissure widens into a ledge below a left facing inside corner. The next pitch is the crux. Climb up the corner to a large, round flake (the Fifth Wheel Flake). Undercling out left,

Freeway, Squamish Chief. Robert Rohn/M Irvine



palm up the side of the flake, and hand traverse back right. Follow more steep flakes until you can step right onto a ledge with a tree (one of the ledges on Cannabis Wall). Move back left to an arching, left facing corner. Free climb to the top of the arch and then nail the corner above to more cedars and a ledge. Nail the large left facing corner above this ledge to a large tree and then free climb up the corner to a hanging belay. Avoid a bulge in the corner by face

climbing around to the left on beautiful chickenheads. Rejoin the main corner and follow it to a long ledge in a cave beneath a large black roof (the Truck Stop) — an excellent bivouac spot. Climb the Cab Overhangs at a point just left of where the corner below came up onto the ledge. Pull up over the first roof into a short, left facing corner, traverse left under the next roof, then climb up to hanging belay under the third roof (5.11).

Traverse around the corner to the right on the overhanging face, following a pair of horizontal cracks (the Crossroads). Keep traversing above the lip of the roofs and climb up to a small ledge with a tree (one of the finest pitches anywhere). Nail a short, overhanging crack above the ledge and move left to a rightward diagonalling finger crack which is followed to a large sloping ledge. Climb a crack up to a large roof. Aid out the roof crack and continue up to a sloping ledge below a huge left facing corner (the Diesel). Climb the offwidth crack in the corner to a large ledge. From the right end of the ledge follow the Crescent Ramp to another ledge and two aid bolts which lead to the top.

Robert G Rohn

First Ascent: Rob Rohn and Tom Gibson, July 1979. V, 5.11 A2.

Suggested hardware- 2 KB, 10 LA., 2 x 1/2 - 1 1/4". 1 x 1 1/2," - 2", nuts to 3" (# 10 hex), Friends.

The Zilarating Zillertal

The difference between exhilaration and excitement is probably one grade beyond your ability, so those who sleep with a North Wall hammer in one hand and an Eboc in the other can skip this in favour of Messner's latest exploits. However there could be a fair sized body of the no dice type who might be interested in the very civilized yet stimulating climbing to be found in the Austrian Alps. Quite possibly it is lack of information that has caused this area of the Alps to be neglected by the Anglo-Saxon climbers from both sides of the herring pond — a fact attested to by the hut registers.

The Austrian Alps are very easy of access both by air and rail and Innsbruck is undoubtedly the best jumping off place for the main ranges. Dave and Joan Boon and I opted for the nostalgic approach by night train from London. It was a case of how nostalgic can you get. Before the war I used this route on my pilgrimages to Switzerland and couldn't afford to eat — this time there were just no facilities. Even though we arrived late in Innsbruck, the Information Centre next to the station immediately booked us into a reasonable pension. We always found that the Info Centres would go to great lengths to ease our progress and the pensions and Zimmer freis (bed and breakfast places) were very modestly priced and spotlessly clean, which goes for the huts as well. It's only about 20 miles on the Brenner railroad to St Jodok, right on the doorstep of the Zillertal Alps. We detrained in an almighty deluge that would have put even Vancouver to shame. In July the rain and shine are batting about 50-50. We splashed nine miles to the end of the road in a VW bus and then hoofed it, still in the rain, up a typically well engineered trail to the Geraer Hut at about 7600 ft. Austrian trails are very well made and are colour coded and numbered which makes them easy to follow. In fact we tended to sneer at the frequency of the markings until we



The Gross Glockner: a typical AAC hut. Joan and David Boon in foreground. Hugh Neave



got socked in a few times when it became apparent that it was a good idea since trail walking between huts attracts a lot of people without mountaineering experience.

The Geraer was our introduction to the Austrian style hut — actually they are more like do-it-yourself hotels. There are about 575 of them scattered throughout the Austrian mountains and they are spaced so that there is always one or more within a day's march. The large huts will accommodate vast numbers of people in either Matratzenlagers, ie communal sleeping quarters where your lebensraum decreases inversely to the increase in population, or in rooms that will sleep a small party as a unit. Each sleeping slot is provided with mattress and two blankets, the latter carefully labeled Fuss-ende so you won't get athlete's foot in your mouth. Consequently you just need to pack a sheet sleeping bag if you are fussy. Like our own huts there is little segregation of the sexes despite some of the Matratzenlagers being labelled

Dames and others Herons. In fact Dave and I had a disappointing stay in a bunkroom mark Dames at the Geraer Hut. All the large huts have a resident caretaker, often with family, and very good meals are provided. There is usually a choice of soup, goulash, weinerschnitzel, etc for dinner and since the powers that be assume all climbers are impecunious, the wardens are required to serve a special mountaineers dish called "Bergsteigeressen" which must weigh at least 500 g and has a very low price. Almost any kind of booze is also available at the huts. If you want to live on the cheap you can bring your own food and just buy hot water. We found that by buying some of our food in the valleys and paying for an evening meal at the huts we could get by on about \$10 a day including hut fees. The latter were reduced a little because we had joined the Austrian Alpine Club.

Unless you're a decadent non-Continental, mass psychology dictates that you leap out of bed precisely at 4.30 am and indulge in the pre-departure melee which to a phlegmatic foreigner looking forward to another two hours in the fleabag seems to resemble the horrors of Victoria Station on a Bank Holiday weekend. Actually I couldn't see the point in the crack of dawn syndrome for the Olperer, so Dave and I ambled off around 7 am but just retribution had lined up delaying tactics. Paths, snow slopes and an icefall took us easily to the col whence the sharp rock spine soars to the summit of the Olperer. A guide and two clients were already on the rock ridge having reached the col by lift and skis from the other side. I like to think of my progress up a steep snow slope as being majestic, however I have heard irreverent youngsters refer to it as making slugs look like bloody lightning. So it was nothing new to find a lone Teutonic gentleman rapidly overhauling us on the steep snow slope that preceded a short traverse across a bergschrund and hard ice to the rock ridge. We assumed he was the arse-end Charley of the guided party, so always courteous when it comes to crossing a doubtful snow bridge, I let him through while I donned crampons for the ice. I suggested he do the same but he didn't understand English so my two German words of Gruss Gott took on a supplicatory tone as he reached the ice. A moment later his ice axe was performing a parabola and he was shooting down the ice ventre a terre. Fortunately his speed carried him over the bergschrund to a soft landing on the snow slope with no damage except to morale. The passage to the rock rib was easy enough with crampons so I secured a good belay and Dave chunked the free end of the rope down to our snowbound friend. We then watched incredulously as he proceeded to fasten the rope around his neck. Not wishing to be a party to a lynching Dave descended and tied him on in a more orthodox manner but it was obvious he hadn't a clue as to how to use a rope. So we retrieved his ice axe, escorted him to safe going, and then headed up into the clouds which were now moving in fast. As a footnote the chap's ice axe still had its sheath on.

The climbing was delightful — good solid rock with a variety of pitches completely devoid of our usual overload of ballbearings. Of course, like many of the regular Austrian routes there are iron stanchions fixed in the rock at strategic places which will offend the purest, however most of them have been there since before the war so you can either ignore them or use them according to your ethics. We'd missed the best part of the day aborting the potential suicide, so all that was visible on the summit was scudding clouds and a rime encrusted cross. We were late so ethics went by the

board and we used the fixtures to dance down in a series of 75 ft rappels that enabled us to reach the hut just as darkness and Joan's rescuing posse were complete.

We had originally planned to do high level routes between huts as we moved east but the contaminating influence of nearby civilization and a really long day with heavy packs over the Olpererscharte (9700 ft) weakened our resolve, so we ended up using buses along the main valleys and then getting transportation as far as possible up the side valleys toward the Venediger Group and the Gross Glockner.

There was always somebody at the huts or in the towns and villages who knew enough English to bail us out of any language difficulties. As examples of helpfulness, the chap at the Info Office in Wald closed up his office and drove us as far as possible toward the Venediger when we couldn't get hold of a taxi, and some days later an itinerant policeman drove us back.

The Kursinger Hut (8330 ft) is the best centre for the Venediger group and is blessed with a primitive cable car that carried our packs up the final steep haul to the hut. After casing the joint we decided the Gross Venediger was just a long snow plod. Being more interested in climbing than kudos clout we headed for the Gross Geiger (10,830 ft). This isn't a very popular climb as it starts with a descent of 1600 ft to the glacier. Going was easy. A few non-belligerent avalanches had to be crossed to reach the south-west ridge where unstable rock interspersed with hard ice at a steeper angle made things much more interesting. The weather had been perfect — a blue sky with just the highest summits in the clouds. We entered the clouds about 150 ft from the top when, Wham! — we were suddenly struck with gale force winds driving a dense curtain of wet snow that obliterated every feature. The temperature plummeted as did our desire to make the summit so we beat a very careful retreat, giving the right-of-way to numerous avalanches generated by the heavy snowfall. It was a typical Austrian storm and by the time we reached the glacier it was bright and sunny again.

From the Kursinger Hut we headed down to the fleshpots of Zell am See where we were wine, dined and pampered by some Austrian friends and then driven in a suitably deconditioned state up the spectacular toll road which ends at the Pasterzenkees Glacier. The end of the road was one of the bigger and better tourist traps we saw and, to effect our escape, we had to descend by cable car to the glacier and then break out of the roped corral that a benevolent authority had established to combat the natural urge of man in the mass to self-destruct. After crossing the glacier Joan peeled off for the Hofmanns Hut while Dave and I started the 4000 ft climb to the Erzh-Johann Hut, at 11,300 ft one of the highest AAC huts. There is nothing difficult about the route, mostly over moderate névé slopes and easy to follow. The snow was in reasonable condition, something I appreciate as I can guarantee to break through where these lean big-footed greyhounds skim along like snowshoe rabbits. We didn't enjoy the night at the hut, packed like sardines in the Matratzenlager except that the Fuss-ende business kept everyone pointing the same way. Every time I got up and opened the door or a window some halitosis lover would promptly shut it. It was a relief to be off for the Glockners in the morning despite being hemmed in by cloud. Steepening snow

slopes giving way to ice mixed with rock took us to the summit of the K1 Glockner, then a short rock pitch down to the col and another ridge of rock mixed with patches of ice and we were on the summit of the Gross Glockner, at a bit under 12,500 ft. The highest mountain in Austria. We had a superb close-up view of scudding clouds and that was all. The descent just required care but don't assume that you have territorial rights to the belay points. At one place the two other parties on the mountain and ourselves were strung from one permanent belay like a bunch of yo-yos.

Apart from our luck on the summits the scenery was magnificent throughout and all the creature comforts that go with climbing in this part of the world are well worth sampling.

Hugh Neave

The High Tatras — The Little Big Mountains of Central Europe

The Tatras, the highest mountains of the Carpathian system, are situated in its most northern part. The mountains are of Alpine type and are the most attractive in the area between the Alps and the Caucasus and Urals. There are three massifs — the Western Tatras, the High Tatras, and the Belanske Tatras. All three are part of Tatra National Park (TANAP). This National Park is situated mostly in Czechoslovakia and only one fourth of its area lies in Poland.

The High Tatras have 24 granite peaks which are over 8202 ft. The highest peaks of the Tatras, and of Czechoslovakia, are Gerlachovsky Peak (8711 ft) and Lomnický Peak (8645 ft.). Rysy Peak (8199 ft), the highest Polish Tatra peak is situated in the main ridge which makes the border between Czechoslovakia and Poland. The High Tatras consist of 97 important peaks but there are over 1000 named mountains and rocky towers. The frontal ridges to the main range make very deep and long valleys. Access to the valleys is from south or north.

The climate of the High Tatras is strongly continental with typical factors of big mountain weather. The snow lies there seven or eight months a year but the Tatras have no permanent glaciers. The most precipitation occurs during June when the winds blow mostly from the west and south.

Tatra National Park is very rich in flora and fauna. Twenty plants are Tatra endemics. There is a quite large area of forests of spruce and oak. The most beautiful tree is the mountain type of pine. There are many animals as well — red deer, roe deer, boars, foxes, lynxes, wild cats, etc, but the most interesting are the European bears, marmots, chamois and wolves. The rock eagle lives here too.

The area of Tatra National Park is a popular recreation area. There are several little towns and spas in the lower section of the mountains with many hotels. Strbské Pleso and Starý Smokovec

The south-west face of the Ox Tower (7785 ft).
A popular peak for its good rock. M. Novák



are the most interesting towns with their traditional architecture. The only large town, Poprad, has a railway station and airport.

The great number of visitors (over ten millions a year) has had influences on wild nature of course and there are certain restrictions in the Park. Camping is prohibited outside official camps which are situated at quite low elevations but mountaineers can use the chalets higher in the valleys.

The High Tatras are the only big mountains in Czechoslovakia and they are very important for the Czechoslovak mountaineers, as well as climbers from Poland, East Germany and Hungary. They all visit the High Tatras very often. Despite the fact that the High Tatras are lower than the Alps, there are many interesting faces and routes of all difficulties. There are many routes on every mountain. For the well prepared climbs do not generally take more than one day in good conditions.

How to end? One English climber said he found in the High Tatras all except the glaciers he saw in the Alps but in very little area and very concentrated.

Jiri Dvorsky

Mt Aberdeen in June

Jim LaSage and I had as our goal Mt Aberdeen, above Lake Louise. The route was totally alpine in nature, up the Aberdeen Glacier, and done at a time when the mountains were still shedding their winter snow. Again the Rockies were to prove that although not always difficult, they are always dangerous.

On 27 June 1979 we left the Lake Louise parking lot at 3.30 am. After moderate uphill hiking, much of it through snow, we arrived at the Saddleback. To the left Mt Temple's icecap was the fiery orange of the rising sun, as was the east face of Haddo Pk.

We left the trail and after forcing through ankle grabbing tangle entered the scree and moraine that would lead around the side of Haddo to the Aberdeen Glacier. The going was fairly level. When it steepened we kicked up snowfields that offered easier access to the high country.

More scree and talus brought us to the base of the ice tongue that extends downward from the Aberdeen Glacier. Here we roped up for glacier travel and began the actual ascent. This would be Jim's first snow and ice climb.

At first the snow yielded to my kicking boots, allowing for a quick gain in elevation. But then we were confronted by over 80 m of ice, some of it 40 degree. We stopped to put on crampons. The frontpoints bit into the blue ice. So did the picks of our ice axes and hammers, giving firm handholds. Since this was Jim's first experience with crampons he was a little apprehensive. He caught a crampon point in his knickers and tore them. I laughed at his inexperience and proceeded to do the same thing. I decided we should protect the climb with screws. We had them, we might as well use them. With my hammer I got the screw started, then twisted it in with the pointed end of my hammer. After it was in we both felt a lot safer. Up until now we had been a team only on rock, much of that solid Colorado granite.

The elation of reaching the top of the steep ice was tempered by the view that revealed itself beyond a flattening in the glacier. A steeply angled snowfield provided a way past the ice cliffs that blocked the glacier to the centre and right. Countless breaths above stood the summit. We still had a long way to go.

Crossing the glacier felt like walking on egg shells concealing bottomless pits. We came upon the footprints of other climbers and I thought it might be a good idea to follow in their tracks. As we crossed the bergschrund in their tracks I began to sink. For a moment I was being swallowed alive but then my feet reached firm ground. I drove my ice axe shaft deeply into the slope above the 'schrund and pulled myself over the top edge.

Still mostly in cooling shadow we trudged up the snowfield, wondering how anybody had the endurance to do Everest. For this exhausting moment Aberdeen had reached that stature in our minds. Finally we stood on the Aberdeen-Haddo col. After a quick drink we shed our packs and crampons. With rope and axes only we climbed the last snowfield that separated us from the summit. Just below the top the snow narrowed to a knife edge. Here the sun burned intensely and made the footing less secure.

From the summit we could again appreciate the awesome beauty that is the Rockies. Countless peaks rising in midday haze; green carpet-like forests, each tree a single strand fiber; blinding snowfields and ice castles burning as brightly as the sun; and Lake Louise, a pool so turquoise that it couldn't possibly be real.

Back at the col we had a quick lunch before an easy hike along the ridge to the summit of Haddo Pk. Then it was time to worry about our descent from the col into Paradise valley. The crest of the col was corniced and did not look inviting.

After we got around the left side of the cornice I rolled a rock down the snowfield that covered the south side of the col. It triggered an avalanche. As we contemplated this event more avalanches began to cascade down the face. Meanwhile thunder clouds were pushing in from the west. We decided to down climb a band of rock that avoided the unstable snowfield. I climbed first, looking for the best way while Jim belayed me. Then he would

Front pointing on Aberdeen Glacier-tired ankles and a long way to go. Jim La Sage



follow, belayed from below and accepting most of the risk. Below this band of rock, dark grey cliffs forced us toward the natural funnel through which the avalanches tumbled. We knew we would have to wait for evening when dropping temperatures would lock the face in ice and make it safe.

It began to thunder. We found positions that gave us a measure of safety from lightning and put on our ponchos. After a short prayer against the weather, Jim managed to fall asleep. I continued to plot the avalanches in an effort to determine a safe route. Three bands of dark rock had to be descended to reach easier slopes below. All were covered with running melt water and various degrees of ice and snow. It looked as though we could down climb the first two bands on the left side, thus avoiding the greatest danger. But the third band would require a traverse across the worst spot.

By 6.10 the clouds had passed. The last snow slide had come down over an hour ago. A crust was beginning to form on the surface of the snow. With nervous, dry mouths, we decided it was time to take our chances and go. I climbed down the first rock band, my hands and feet working carefully in a steady flow of cold water. Then Jim climbed, the rope offering him little protection. He went slowly, cautiously. At one point his hands slipped and only a quick reach with his right hand to an undercling saved him. The second band was easy. But below it there was a sloping mass of ice covered with snow. We both lost our footing on this and saved ourselves with self arrests and an assist from the belayer.

Now came the part I dreaded most. I was forced to lead across the centre of the funnel over mixed ice, snow, and rock. Two large torrents of water passed under the ice and snow, causing me to wonder if I might break through and be swept along in them. In

spite of my concentration on this traverse, I kept looking upward, expecting at any second to be hit by an avalanche. God willing however, we crossed safely. Some climbing on rock brought us to the final snowfields. We all but ran down these to reach the valley.

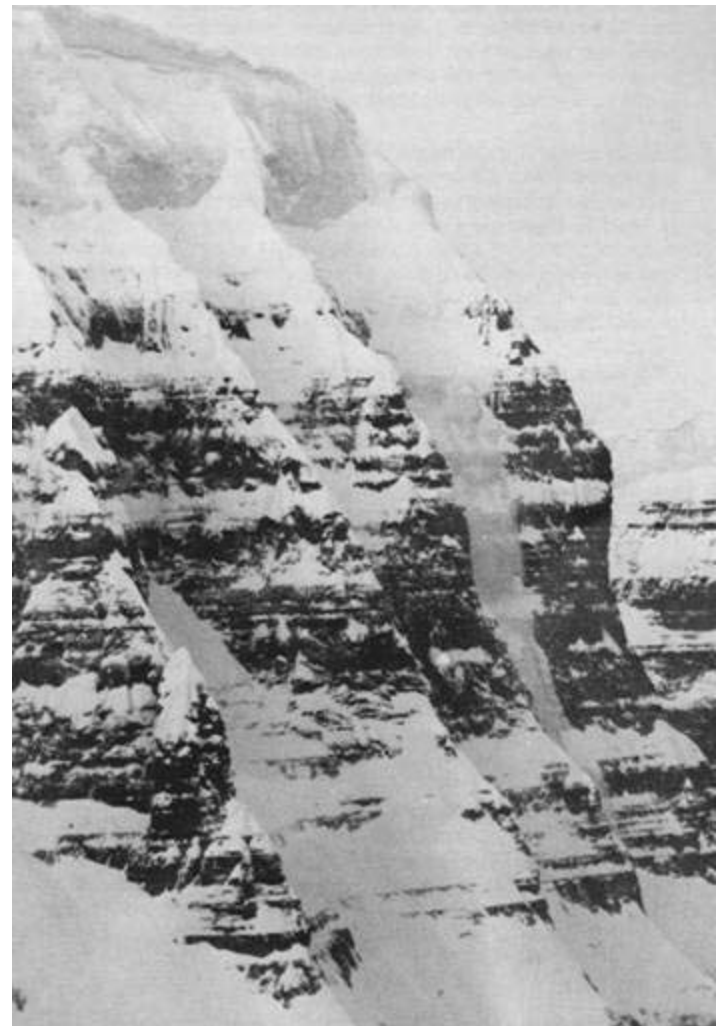
As the sun set we entered the forest. Once in a while a spruce grouse startled us along the trail. They seemed aware of us and nervous but refused to run away. Perhaps they sensed that we were too tired to bother them. A 20 hour day was nearing its end. At midnight Jim's headlamp shone on our rental car. Already the bull elk were grazing along the edge of the highway, waiting for our headlights to light up their eyes as they watched our passing.

Rich Albrecht

Slipstream

On 27 December 1979 Jim Elzinga and I left the Icefields parking lot and walked the two odd miles up the Dome Glacier to the east face of Snowdome. The next two days were spent climbing a route that is by far the best quality classiest ice climb I have ever done. The route parallels the line taken by Don Vockeroth and Charlie Raymond in the '60's but goes up the gully to the left of the rib they climbed. In the winter this gully is filled by a beautiful blue

Slipstream: the upper half of the route. John Lauchlan



stream of ice flowing from the sérac at the top to the glacier 2000 ft below. We climbed through constant light spindrift avalanches (hence the name). The route goes up a small, broken glacier to the base of the waterfall. The bottom 1200 ft is easy rolling steps of ice of varying angle, which were soloed. The first night was spent to the right of the base of the steep section, on a platform large enough to get my light tent upon.

The second day we crossed to the main ice pillar, doing six pitches, five of them being very high quality waterfall leads. We hauled on the first pitch (the steepest) but because it took so much time, avoided it higher up. We both discovered that leading with an overnight bag on your back is more than just a little exhausting.

We managed to stamp out another good tent platform at the top of the main ice pillar and on the third day moved together up the easy snow slopes and a surprisingly straightforward sérac. We stood on top at noon. Beautiful views, incredible location, demanding climbing, and a super easy descent all point to this route becoming an absolute classic. Our first alpine waterfall.

John Lauchlan

SUMMARY: 'Slipstream', east face Mt Snowdome. 2500 ft, Scottish grade 6. First ascent, 27 to 29 December 1979, John Lauchlan and Jim Elzinga.

The Snowbird in Winter

The east face Snowbird Glacier route on Mt Patterson.

Early one January evening Bob Brock and Mark Nissen hunkered around an ice screw 100 ft below as I scratched with my front points at the brittle top pitch of the ice tongue. The left toe wouldn't bite; again I kicked and then heard a funny clanking noise. With a sigh of despair I glanced quickly at the dangling fragments of broken crampon and then lowered myself precariously down to the belay. There we sat out the long, gloomy night, listening to séracs crashing down between the ice tongue and the rock.

Armed with new crampons, gladly authorized by my wife who figured they were cheaper than a new husband, I returned in March 1979 with Mike Paine. We strapped on snowshoes after driving 12 hours straight through from Pullman, Washington, and slugged our way up through the sugary snow below the moraine. The ice tongue was lovely climbing, not too steep and plenty dramatic; we swung leads and collected the debris from January's rout. Leading wasn't bad, with the omni-present trickle of adrenalin, but following with a heavy winter pack was a wobbly and lumbering affair. Mike took us over the top and I kicked steps in the dark to a bivy right beside the second icefall.

Rosy fingered dawn clenched her fist, turned grey and began to snow as we started up the cleft between the ice and the rock band. Spindrift washed over us constantly, even after we moved left out onto the rocks. We climbed several poorly protected pitches and then traversed right on very steep crusted snow — a hollow shell with rock behind — to the top of the icefall.

Chest deep powder at the foot of the final couloir slowed and unnerved us but we finally broke out onto crampon crunchy styrofoam. The second-to-last pitch got very steep and flakey — I stemmed between ice and rock and finally belayed with a screw up into the ceiling of the cornice. Mike thrashed up, tongue dragging, left his pack in my niche and crawled up through a crack to the summit ridge.

From the top we watched the snow clouds dissipate, leaving a grand vista over Barquette Glacier and the peaks to the west. We were exhausted, deeply chilled, but exultant. As the sun set we tramped down to a level spot and pitched the tent under brightening stars.

The next morning's jolly snowshoe ramble down the Barquette Glacier to Mistaya Lake very nearly turned into disaster. In the narrow gorge cut by the glacier's outlet stream Mike broke through the ice shell and was swept far downstream under the ice. Only several minutes later did I see his axe very deliberately chop its way up through the floor of the gorge. Mike stood in belly deep glacier melt for 15 minutes, wrestling the current and his unbelievably sodden pack, before I could get secure above him with a looped rope.

Later, as we walked across the lake towards the road, I thought how easy it is for us, confident in our equipment and experience, to forget that the mountains are more than an entertaining climbing gym. Whymper wrote that "courage and strength are naught without prudence, and that a momentary negligence may destroy the happiness of a lifetime". Like anything else worth doing, mountaineering is never entirely simple, safe, and satisfying. Somehow this sombre thought enriches and makes more real those moments of beauty and elation for which we always return.

David K Coombs

Baffin Island ACC Alpine Climbing Camp 1979

In 1978 the Camps Committee suggested that it was time to have an Alpine Climbing Camp in Baffin Island and asked me to organize it. We had previously climbed in the summer of 1973¹ around Swiss Bay on Sam Ford Fiord and in the late winter of 1977² in Stewart valley between Sam Ford and Gibbs Fiords, about 110 to 120 kms west of Clyde River. In 1973 we had flown in past the north-east end of Ayr Lake, known locally as Tasealuk, about 40 kms west of Clyde River. We also saw the fine Ayr Lake mountains from the west when we climbed around the head of Eglinton Fiord. The invitation from the Camps Committee was a good opportunity both to fulfill our promise to visit these mountains and to take a party into an area in which hardly anything within easy reach had been climbed. The next problem was how to get there.

In some early expeditions we reduced air costs by flying at least one way between Frobisher or Resolute and the nearest settlement by scheduled or semi-scheduled flights. Between the settlement and our landing site we had chartered the same airplane. The trouble with this arrangement was that if the charter could not land at our

site we either had to wait until another sched flight was nearby or charter all the way from the principal airport. This caused many anxious moments in 1976.³ In 1978⁴ we used snowmobiles from Grise Fiord to Makinson Inlet. It took two days of discussion to organize five snowmobiles, komatics, and drivers for the advance party, another day to organize three for the Ottawa party. Most of the reliable snowmobiles of the settlement seem to have been used, severely taxing their resources.

To avoid all these problems and at the same time to have snowmobiles with us so that we could travel anywhere on Ayr Lake we decided to buy two and fly them to Clyde River. This was done about three weeks before we left, long after the snowmobile season had finished, so we were able to obtain substantial discounts. We also shipped two very substantial 16 ft long komatics or Inuit sleds, expertly built in Ottawa by Mike Frame during the winter. They were fitted with runners made of ultra high molecular weight polyethylene. These are much slipperier over the snow than the usual steel runners and we hoped that they would help us sell the kabloona komatics to the Inuit after the expedition.

There were fourteen of us. All except Kevin met at Montreal Dorval Airport at 0530 hours on 4 May and flew by Nordair scheduled flight to Frobisher Bay. A DC-3 chartered from First Air was awaiting us. It was already loaded with our skidoos and komatics and some other gear we had shipped to Frobisher two weeks earlier. We landed at Clyde River at about 1600 hours and several trucks from the hamlet carried us and our gear to a camp site on the beach. It was about -15°C, and the coldest day we had during the whole trip.

During the next 24 hours we collected the gear that we had mailed ahead, picked up a large order of food and utensils from the Bay, bought gasoline and naphtha from the Co-op, bought a gun and a permit, settled our business with the Hamlet Council, arranged with Peter Akaloudjuak for two skidoos and komatics to go to Ayr Lake, and strung our own komatics. Les Walford, the assistant at the Bay, was very helpful in many ways. He offered to come with us and carry a load with his own skidoo and komatic.

At 1800 hours all was chaos. Peter said he could find only two skidoos which was not enough to carry us all. Eventually another and then a fourth arrived. We finally left at 2115 hours, the four locals leading, going eastwards between the two 2000 ft Sledge Pointers. The night was cloudy and it took all our concentration to follow their tracks as the Inuit had gone far ahead. Our own two skidoos were driven by unskilled and inexperienced drivers — an exciting night for them and their riders. The driver had the better of it over the riders on the komatics as the windshield protected him somewhat. Even so, driving the skidoos was not pleasant. The main trouble was the komatic, a total load of well over half a ton attached to the skidoo by a rope. It had its own ideas of where to go and that was usually far to one side or the other. On a downhill run it often tried to catch up with the skidoo. To prevent it running into the driver's back the skidoo had to be driven faster and faster. It was a great relief to find an up-slope to bring the speed down, even if it meant turning around.

The route we were following was well-known to the Inuit, who sometimes used it to reach their caribou grounds between Cormack

Arm on Clyde Inlet and the south end of Ayr Lake. We reached the lake at the east end of the bay immediately south of the outlet to the Kogalu River. The going on the lake was easier except for two problems. First much of the ice was snow free and patches of snow had to be driven over from time to time to keep the track sliders cool. Second the ice was very smooth and appeared to have been highly polished, perhaps by blowing snow. This greatly reduced the tracking power of the komatics, causing them to oscillate wildly from side to side unless the skidoos were driven very steadily.

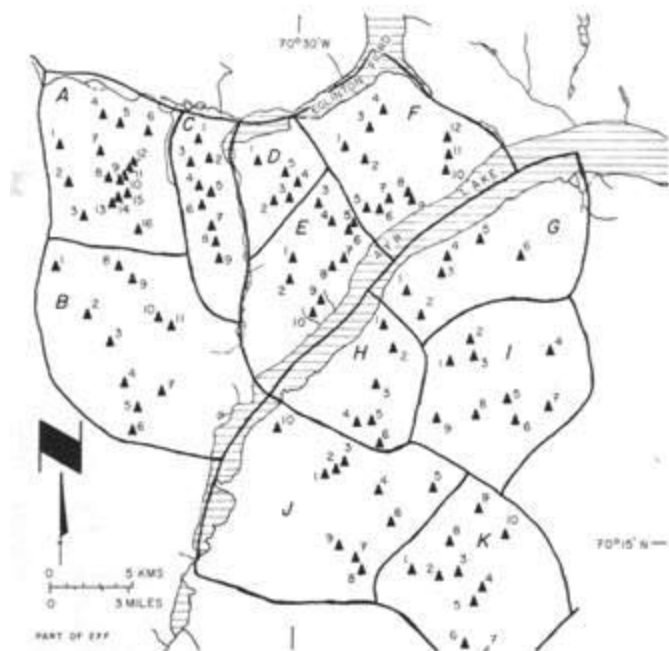
The ice was about two metres thick and was clear enough to see bubbles far down in it. Later, when the sun had been on it for some time, it became opaque, apparently because melting occurred at the grain boundaries and the water re froze to form imperfectly matched crystallites. Skates would have been excellent for travel on the lake, particularly in the early part of our stay.

From the air photographs I had chosen the south-west outlet of Glacier H106 as a possible camp site. We arrived at about 0330 hours on 6 May and it proved much better than we had thought possible. The glacier, which had floated well out into the lake when the air photographs were taken about 30 years ago, had retreated about 250 m and the two lateral moraines formed fine windbreaks. We made dinner, paid off our Inuit friends, and arranged for them to bring Kevin, expected at Clyde River on the 8 May sched flight, and the rest of our gear. In fact, Kevin did not arrive until the 14 May, having been held up by flu and by bad weather in Frobisher. So Les and two Inuit brought out our extra gear on 8 May.

The following day was brilliantly blue and this weather continued almost steadily until we left. Our two communal tents, one for cooking and being social in and one for storing food and other items, were set up. The food — about 4500 kilocalories or 19,000 kilojoules were provided per man day — was divided into five 5 day piles. The first was left in the tent for current use and the rest was stored and a pile brought out every five days. There was more food than could be eaten and we ate when we liked and as much as we liked, guided by a posted daily allowance list. This system worked very well and considering the highly irregular hours we all kept, was perhaps the only workable one. The lake was at about 175 ft according to Kevin's measurements and the mountains rose to over 5000 ft. Climbing days were therefore usually long. The continuous daylight allowed several mountains to be climbed once the high plateaux had been reached and so 15 or 20 hour days were common. The mountains were labelled with an alphanumeric system so that they could be easily identified. The nomenclature is given on the accompanying marked map.

Where we were the lake has steep rock walls about 1200 m high on all sides and the height of land is close to the lake. A few glaciers have broken over the barrier and flow down towards the lake but most do not provide easy access to the snowfields as they are too broken. The principal ones that do are H53, opposite our camp, H51, H56 which was ascended by Klaus and Matt, and the north-east branch of H106. Several gullies also provided easy ways up the walls, and the principal ones used were the E5-F5 and F7-F8 gullies on the north-west side of the lake, the two gullies leading up from part way up glacier H53, and the gully between peak G1 and glacier H52.

Baffin Island Camp: the mountains around Ayr Lake.
 G indicates glacier, numbered after the glacier Atlas of Canada Area
 46203. E Whalley/M Irvine



First ascent of Peak E4. Cockscomb Peak in background over left shoulder of John. Kevin O'Connell



Air photo looking approx east. Eglinton Fiord on left, Ayr Lake in centre, Clyde Inlet in upper right.
 Dept of Energy, Mines, and Resources photograph T318R-163



There are also many steep narrow gullies that probably provide some difficult ice climbing. One was on the wall of G1 opposite our camp. It was never illuminated by the sun over its whole length at the same time and the sun shone into the bottom for only a few minutes each day. The danger of such gullies is well illustrated by an avalanche that occurred in the gully between E8 and E9. It seems to have been started by a stone fall from the east side of E9 and the avalanche swept down the gully and out over the lake, mostly airborne. It would have swept down anything in its path.

That avalanche was the only one we saw. There were few evident remains of avalanches but many slopes had the crown of a shallow slab avalanche. Kevin dug a snow pit in the catchment basin of glacier G36, in the bowl between peaks E3 and F5. The total accumulation for the year was only 37 inches. As might have been expected, some of the snow had been converted to depth hoar, but it was nowhere as well developed as it was in 1978 in Makinson Inlet.” The snow was strongly wind packed and we could walk almost anywhere on the glaciers without skis, usually without sinking in. We had intended to do ski mountaineering but many of us hardly used skis at all. In 1977 in Stewart Valley² and in 1978 in Makinson Inlet⁴ we had excellent skiing on powder snow on most mountains. Whether strong winds at Ayr Lake were usual or not I do not know. Avalanches are at least sometimes more dangerous than we found. A group climbing near Sam Ford Fiord in April 1978⁵ was struck by a slab avalanche with more than a 1000 ft shear line that flowed at a depth of over 15 ft.

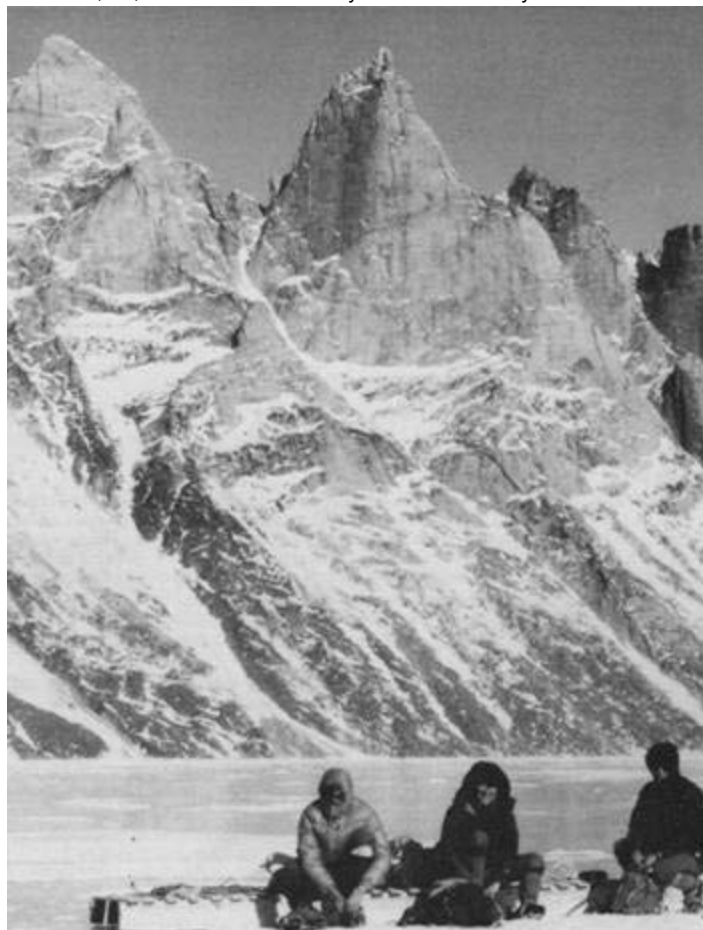
The weather was excellent with bright sun on all days but three. On at least two days the tops of the clouds were well below the mountain tops and the adventurous had their reward. The winds were usually light on the mountains but we had an almost continual east wind on the lake. However our camp was well sheltered from it by the moraine.

About half-way through Kevin was brought in by an Inuit who introduced himself as David. Kevin had found him by putting out a call on the local radio station as soon as he arrived in Clyde. It turned out that he had a camp on Eglinton Fiord and when Roly heard this he said “You must be David Iqaqrialu”, and showed him a map we had been given in 1977 of the camps around Stewart valley.

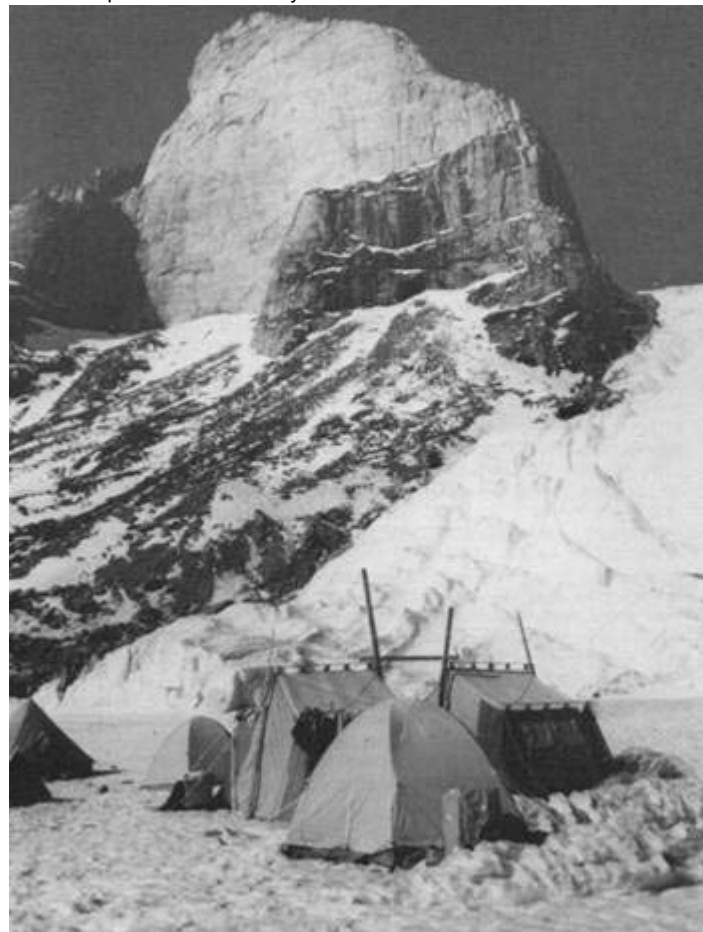
Most climbing was done from the base camp but several excursions were made further afield. On 13 May Jo-Ann, Ursula, and Fran set up a fly camp at the foot of the very wide glacier H45, and on 14 May left at 1130 hours for the east face of 15. Skis were used for about 19 kms to a rocky col just east of the summit snow slope and then crampons to the summit which was reached in a gale. It appeared to be higher than Mt Wordie. The descent took about 5 1/2 hours.

Roly, Mike, and John set up a camp on 16 May on the summit of Ayr Pass, which runs off the main pass between Ayr Lake and Eglinton Fiord to Revoir Pass. On 17 May they ascended Glacier F30 to the col at the head and climbed A1, 3500 ft, by the snow and boulders of the south-east ridge. On 17 May they climbed easy snow and boulder slopes to the south ridge of C9, 4500 ft, which was followed to the summit, and the traverse continued to 08, 4500 ft. They returned the same way.

Peaks F5, F6, and F7 from across Ayr Lake. E. Whalley



Base camp and E7. E Whalley



On 16 May, Klaus and Matt set up a camp in the unnamed pass between the end of Ayr Lake and the end of Eglinton Fiord, on the shore of a small lake. On 18 May they walked up Glacier G58 and up steep rotten snow to the south ridge of Peak 05, which had been unofficially called "Damocles" by the 1950 Swiss party. After some difficult rock sections they reached the summit at 1700 hours. Matt returned to base camp on 19 May by the low route while Klaus skied up Glacier G41 to Peak D2 and through the saddle between the south end of E3 and E1 to Glacier H106.

On 18 May Fran, Ursula, Jo-Ann, Dave, Ted Anderson, and Paul made a circular tour from Ayr Lake to the south-east arm of Eglinton Fiord, the end of Eglinton Fiord, and back along the Eglinton-Ayr pass. They left by skidoo at 1430 for the unnamed pass north of the F Peaks. Eglinton Fiord was reached at 1900 hours and their camp site at the east end of Reservoir Pass at midnight. The three women hitched a ride with David Iqagialu who was travelling along the fiord by skidoo. On 19 May Dave made the third ascent of Eglinton Tower, varying the route by reaching the south ridge from the west instead of from the east as was done in the first two ascents.

There was special interest in Mt Wordie, named to commemorate Sir James Wordie, a wealthy professor of geology at Cambridge who spent many years exploring the arctic using his own money. Pat Baird was on his 1934 voyage, an attempt to make the north-west passage. There was too much ice and he had to be content with exploring parts of the Baffin Bay shores of Greenland and Baffin Island. Sailing up the Baffin Island coast the ship was driven into Eglinton Fiord by ice. As the official map of the time, based on Parry's survey of 1820, did not show the end of the fiord, the party decided to explore. Eventually the names Kogalu River and Sledge Pointers were suggested by Wordie. On 21 August Pat Baird and M Ritchie made the first ascent in the whole eastern arctic, climbing Pioneer Peak (the mountain immediately south of the one so labelled on NTS sheet 27F). Later the same day Tom Longstaff and John Hanham climbed Eglinton Tower. Many years later Longstaff's visit was commemorated by naming Mt Longstaff, a sharp spike between Sam Ford Fiord and Stewart valley which we had climbed in 1977." We had therefore a strong interest in climbing Mt Wordie.

Unfortunately Pat Baird could not come with us as he had hoped. However he brought a scroll to me commemorating Wordie because Wordie had introduced him to arctic exploration. The scroll was to be left on the summit and a toast drunk with Mortlach, also provided.

Wordie was climbed for the first time on 9 May, Roly, Mike, Dave, and I had set out to climb H2 and had reached the snowfield below its northeast face by Glacier H53. It was a glorious day, all blue sky and bright sun. There was Wordie to the south-east, not so far away and very tempting. So the objective was changed. The climb was quite straightforward. The west ridge was reached between Wordie and I1 and the ridge followed to the summit which was a narrow snow ridge. From the summit a hundred unclimbed mountains could be seen, many ideal for ski mountaineering, and many that were more challenging. Pioneer Peak was clearly visible so Pat probably saw Mt Wordie in 1934. The west ridge

was descended and I1 climbed. The south-west ridge of I1 was a pleasant walk on a narrow ridge until a steep tower forced a rappel. A pitch of moderate rock climbing followed and the glacier was reached down the west side. H3 was reached, with no difficulty other than gravity, just as the sun was rising from Baffin Bay. We were too tired for H2 and so skirted round its east side and descended to the lake by the gully north-east of Glacier H53.

The second ascent was made on 22 May. Mike, Paul, and Roly, starting from Ayr Lake at 1430 hours, skied up Glacier H49 and up the north side of the north-east ridge of I2, the last 300 ft to the col being on foot. A small peak on the north-east ridge of I2, 40 m above the col, was climbed. The ridge to I2 was followed over mixed rock and snow and ice to the summit, 5000 ft, at 2200 hours. Mike and Roly continued along the ridge to I3, Mt Wordie, at 2300 hours. They returned to Ayr Lake by the same route and reached it at 2300 hours on 23 May.

The scroll and whisky were taken on neither ascent — the first was made after a change of plan and on the day of the second another party set out to repeat the first ascent route but was foiled by cloud over the glacier. However Sir James was well toasted by the whole party at the base camp.

We had arranged for Peter and his friends to pick us up in the afternoon of 23 May but they turned up shortly after midnight when almost everyone was out climbing. Packing was hectic but by 0300 hours everyone was in camp and we were away by 0500 hours. Clyde River was reached at 0900 hours and everyone collapsed into bed almost immediately and stayed there until evening. That evening and the following day was spent selling our skidoos, komatics, base tents, surplus food, cooking equipment, etc, and putting all our affairs with the hamlet in order. An extra section of the sched flight was due for us at 0800 hours on the following day. We left at 0750 hours and among our last views was of several hundred square miles of almost wholly unexplored mountains — mountains we must come back to another day.

E Whalley

Participants: Fran Allen, Ted Anderson, Matt Babicki, Rod Blais, Jo-Ann Creore, Mike Frame, Klaus Haring, John Leedale, Paul Martinson, Ursula Maydell, Dave McMullen, Kevin O'Connell, Roly Reader, Ted Whalley.

FOOTNOTES

1. CAJ 1974:23.
2. CAJ 1978:51.
3. CAJ 1977:11.
4. CAJ 1979:22.
5. CAJ 1979:109.

SUMMARY OF ASCENTS

Kevin O'Connell had two aircraft altimeters which read accurately to 10 ft which he had borrowed from the Aviation Electric Co. He used them to measure several heights and corrected them for the effect of temperature on the density of the air and for the base pressure, using both his own measurements and the meteorological records of the station at Clyde River. He claims an accuracy of about 20 ft. All except the rounded heights in the summary of ascents are his measurements. A13, DJ324150, 5000

ft. First ascent, Frame, Leedale, Reader, 17 May. From high camp at summit of Ayr Pass, via Glacier G57 to col at head, and up easy snow and boulder slopes to summit. B11, DJ357074, 4500 ft. First ascent, Blais, Haring, 12 May. On skis via east slopes. Skis carried for last hour.

C5, DJ383155, 5000 ft. First ascent, Babicki, Haring, 18 May. From valley east of peak up Glacier G58 and steep rotten snow to the south ridge which was ascended over some difficult rock. C8, DJ384126, and C9, DJ388116, 4500 ft. C8 is the higher by several hundred feet. First ascent, Frame, Leedale, Reader, 18 May. From camp at summit of Ayr Pass over boulder and snow slopes to south ridge, which was followed to the two summits.

D1, DJ413175, Eglinton Tower, 4000 ft. Third ascent, McMullen, 19 May, first ascent from the west.

D2, DJ422150, 4500 ft. First ascent, Haring, 19 May, on skis from the west by Glacier G41.

E1, DJ433118, 4500 ft. First ascent, Allen, Creore, Maydell, 9 May, after ascending E3.

E2, DJ430102, 4500 ft. First ascent, 13 May, Haring. From Glacier H106.

E3, DJ447142, 5000 ft. First ascent of south summit, Allen, Creore, Maydell, 8 May, via Glacier H106. Second ascent, 9 May Haring, Martinson, by same route. First ascent of higher north summit, 5380 ft Leedale, O'Connell, 20 May, via east face after ascending E4, north peak.

E4, DJ457137, 5081 ft. First ascent of south summit. Anderson, Blais, McMullen, 7 May, via east face. Second ascent and first ascent of higher north peak, DJ458140, 5175 ft. Frame, Leedale, O'Connell, Whalley, 20 May, via west face of summit tower.

E5, DJ470135, 4158 ft. First ascent, 20 May, Frame, Leedale, O'Connell, Whalley, via north-west face after ascending the E5-F5 gully to the south-west exit, 3599 ft. The lower summit, 4124 ft, was also climbed.

E6, DJ467134, 4209 ft. First ascent, Blais, Anderson, McMullen, 7 May on return from E4 north summit. Second ascent, O'Connell, Whalley, 18 May after ascending F5.

E7, DJ461112, 4000 ft. First ascent, Babicki, Frame, Leedale, Martinson, Reader, Whalley, 12 May. The E7-E8 col was reached via Glacier H106 and steep snow slopes. The north-west face was ascended over ledges and cliffs and a chimney in a dihedral climbed to the summit plateau.

E9, DJ450093, 3500 ft, E11, a small peak east of E9, and E12, a separate peak west of E8 were ascended by Haring on 9 May.

F2, DJ477175, No 50 of the 1973 expedition, 5000 ft. Second ascent, Anderson, Martinson, McMullen, 14 May, by the south face from the F6-F7 col. Third ascent, Blais, 14 May.

F5, DJ479145, 4941 ft. First ascent, Babicki, Haring, 7 May. The right most branch of the E5-F5 gully system was ascended to the col 4106 ft. A north-east traverse led to a snow gully, and the north-west face was reached over rock and snow and led easily to the summit. Second ascent, 14 May, Anderson, Martinson, McMullen, by the face after ascending F2. Third ascent, O'Connell, Whalley, 18 May, by first ascent route.

F6, DJ485144, 4941 ft. First ascent, Martinson, O'Connell, Whalley, 16 May, by steep snow, ice, and rock of north-west face.

F7, DJ491150, 4449 ft. First ascent, O'Connell, Whalley, 16 May. Over rock and snow from saddle between F6 and F7, 3961 ft, to two summit blocks. The first, 4412 ft, was ascended by a difficult crack on the east side, the second by a crack on the left side. After ascending F6.

F8, DJ505153, 3000 ft. First ascent, Frame, Leedale, Reader, 14 May, by F7-F8 gully. Second ascent, Blais, 16 May.

F10, DJ527168, F11 DJ529177, and F12, DJ530188, and towers east of F10. First ascent, Allen, Haring, Maydell, McMullen, 22 May.

G1, DJ504095, 5000 ft. First ascent, Babicki, 8 May by Glacier H52 and moderate rocks of the east face. The lower south peak was ascended by Frame, Leedale, Martinson, Reader, Whalley by the second gully to the south-west of the peak, and the west face and south ridge. G2, OJ513080, 4867 ft. First ascent, Babicki, Leedale, O'Connell, 22 May. Via the gully south-west of G1 and the south-west face of G1-G2 to the saddle between G1 and G2, 3842 ft and the northwest ridge. The peak was traversed by descending the north-east ridge.

G3, DJ522108, 4500 ft, G4, DJ526116. 4500 ft, and G5, DJ547126, 3500 ft. First ascent, Babicki, Leedale, 8 May. Via glacier H52. A subsidiary peak on the ridge of G3 was also ascended. H2, OJ494058, 5000 ft. First ascent, Babicki, Haring, 14 May. Glacier H57 was ascended on skis through a spectacular rock canyon and both H2 and H3 climbed.

H3, DJ485038, 5000 ft. First ascent, Frame, McMullen, Reader, Whalley, 9 May. From the east after climbing Mt Wordie (see text). I1, I2, see text.

I5, DJ564055, 5000 ft. First ascent, Allen, Creore, Maydell, 13 May See text. J10, DJ423015, 3000 ft. First ascent, Blais, Haring, 20 May. On skis via the south branch of Glacier H59.

A Short Walk in the Muskwa Range

The Muskwa Range in the Northern Rockies remains almost unexplored. In 1960 Captain Richard Jones led an eight-man Army team to the Wokkpash Lake area (CAJ 1961) and in 1966 six people climbed peaks over a wide area at the head of the Racing River (AAJ 1966). In July 1979 Hugh White and I went to the Muskwa Range because it seemed to be an isolated area and in this we were not disappointed for we saw nobody during our 14 days. We chose the northern part of the range because it is the only part that is mapped in adequate detail for a small party unassisted by aircraft.

Our plan was to take the bus from Fort Nelson and get set down at mile 433 to start the walk in but since the Alaska Highway had been recently washed out we were forced to persuade a bush pilot to take us to the other side of the wash-out. Then we walked along the highway to the outlet of 150 Creek. The lake at the head of 150 Creek, which we named 150 Lake, was covered by small ice cubes of regular size and shape which tinkled in the breeze. From 150 Lake we climbed up the snowfield which hung steeply on the north side of the col between Mt Socrates (reference 586124) and Mt Plato (599126). (These and other names have been submitted to the Canadian Permanent Committee of Geographical Names.) From the col south of Mt Plato we followed the obvious ridge south-south-west. This ridge, Academy Ridge, was taken directly on the top, with climbing varying from easy walking to class 4 scrambling. In places the rock was very loose, the exposure serious, and there was a crumbling knife edge over 50 ft. After about four

miles of climbing we slid down a scree slope to camp, finishing a wonderful mountaineering day.

Next we made our way to the Yedhe Lakes area, using the east branch of Yash Creek to connect to the Yedhe watershed. The Yedhe Lakes meadows are guarded on the north by two waterfalls and a band of steep but passable rock. We tried Yedhe Mtn by its north-west ridge but got turned back near the glacier by some ugly overhanging sawteeth on the ridge. Next we tried the south-west ridge and came to within 700 ft of the summit. The easiest way is a rock climb of about 5.4 standard but we had difficulty arranging protection because we had not brought nuts or pegs wide enough for the cracks. The rock on this band is quite sound and we were disappointed to leave Yedhe Mtn unclimbed.

We continued south to Delano Creek and then west to the abandoned Churchill Copper mine in Magnum Creek. Here we encountered a period of bad weather but during breaks in the cloud we climbed neighbouring peaks and reconnoitered for a trip to unclimbed Dieppe Mtn (also called Peak 9381). There is a lake at about 7000 ft in a trough one mile southwest of the summit and from here the ascent looks feasible via a stiff scramble or easy free climbing. At the head of Delano Creek are the unclimbed Arnhem and Scheldt Mtns as well as several others between Arnhem and Dieppe. There are several fearsome hanging glaciers blocking the easy routes to these mountains but they look climbable by other ways.

Our march back to the highway went down a subsidiary of Yedhe Creek to another abandoned copper mine (buildings in very good condition). We followed its access road out to mile 442, fording the Yedhe with difficulty. This access road has no bridges left, except the bridge over the Toad, and so is navigable by car only for a few miles. It remains the easiest way in to the Muskwa Range, especially since the access road to Churchill Copper, which crosses some major rivers, is washed out in places.

July is the worst month to travel in this area because it is the month of flooding. Travel on the banks of dry riverbeds is very easy, battling the scrub beside the flooding river is very discouraging. Late August would be much better, despite the cold and the shorter day length. The mosquitoes were not a problem at all, although they are quite serious at lower altitudes. We saw eagles and mountain goats, and copious evidence of bear and lynx.

Doug Hutchinson

South American Odyssey

Our expedition began as one of those on again off again events — never quite ready to collapse but always just on the verge. A glimmer of light appeared at the end of the tunnel after several months of preparations, required whether we actually went or decided to stay home. As time wore on it became clear that half the original participants would probably be away on their own trips, all of doubtful duration. Never one for counting on rendezvous in the mountains under normal circumstances, I was even more dubious of one in Peru late in July 1979. The news of the death of a climber friend in Peru during May did little to clear my head of

Yedhe Min, west face and south-west ridge. Doug Hutchinson



all the other uncertainties of the trip. This event in particular cast a sort of personal gloomy fatalism over a good part of the summer. Somehow, amid all this uncertainty, it became clear that we had a group ready to go regardless of obstacles. Our final party was smaller than planned and our objectives had to be scaled down but the desire to climb in the Cordillera was certainly there. In the end we formed two parties, three climbers and three trekkers. All members were prepared to spend from three weeks to a month in Peru.

As we left Montreal on 30 June our main concern was to get to Lima. First our airline bumped us. After a day in Miami and many tries we managed to get everyone aboard a LAN Chile flight for Lima. Later that same day we arrived in Huaraz in sunshine, our spirits now uplifted with the sight of the Cordillera. Having spent a good deal of time in this area the past summer, Chris and I felt elated that we had managed to return to familiar places and faces in so short a time. We spent the next five days adjusting to the altitude, purchasing supplies and renewing old contacts for transport. We even managed to obtain the services of Luciano, our camp guardian from the previous summer who by now seemed an old friend.

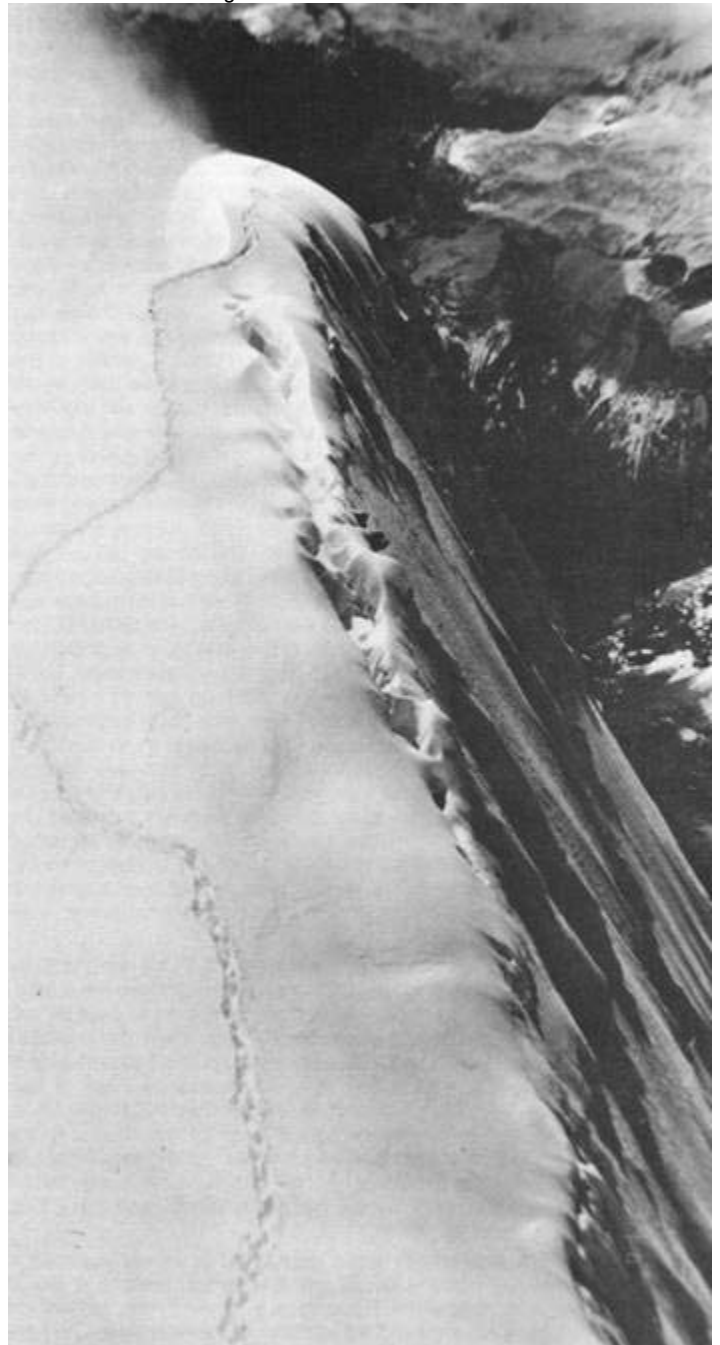
We reached the entrance to the Honda on 7 July as planned and, our enthusiasm overcoming our judgment to a degree, marched our entire party from one end to the other of the Quebrada. We had not planned to cover this distance in one day but nonetheless managed to settle our arrieros, burros and selves comfortably at Lago Pukaranra (ca 4445 m) just as the last rays of light disappeared. We arrived just at the tail end of a period of unsettled weather. The views of the peaks in the mists on the way in were more than matched by the spectacular view all around us when we awoke the following morning, surrounded on all sides by spectacular snow and ice covered giants. We were particularly interested in Chinchey so pushed around the end of the lake to discover an Anglo-American party attempting a route up through the icefall to the Chinchey/ Pukaranra col. Their lack of progress plus our own observations convinced us that we might be attempting something a little too ambitious for our party. On 9 July we scrambled up the side of Pallkaraju where Luciano and I managed to reach the 5110 m level for a better look at the peaks and routes in the area. We were rewarded for our efforts though somewhat chastised by what we saw. Soon after we decided to attempt North Portachuelo some way down the valley from our present camp. We climbers

thought this would be a good training climb and it would also give the others a chance to hike over a high pass and explore other areas near the Honda. Packing a light camp we all made it over the Portachuelo Pass (ca 4785 m) in one day from our base camp but only by promising the arrieros not to take the burros to the summit! We set up a camp below the pass in the Quebrada Huitush at about 4500 m. In the early hours of the morning of 11 July Martin, Sylvia and I set out alpine style to Portachuelo and immediately ran into some class five bog in the dark. This turned out to be one of the harder parts of the climb as we easily made the summit icefields from here. As we roped up on the glacier the shadow of a large condor passed over us suggesting that we would be his next meal. Caution overcoming her climbing instinct, Sylvia decided to wait on a rocky perch while Martin and I made our summit bid. To my chagrin the altitude turned out to be the greatest problem of the day as Martin ground to a halt just below the summit shoulder at 4945 m. We lunched 400 m from the summit and I contemplated continuing on alone but decided that the condor probably knew better and so we returned to camp. Next day we crossed the pass back into the Honda and returned to our base camp and Luciano. A short distance down the pass, Maureen and Hazel, along with one arriero and several pack animals, took the branch to Rinconada and hiked out to the entrance of the Quebrada to explore more of the country. No sooner were the four of us back at the Lake than two Americans from the party camped below us passed through on their way for another attempt at Chinchey. We cheered them on and anticipated a good rest day for ourselves. On 14 July we managed a successful one day ascent of nearby North Chaco (5320 m) under near ideal conditions. We easily climbed the steep but grassy north-east slopes and intersected an old mining trail which led upwards to the 500 m level. At this point we made our way up the north ridge reaching the summit ice easily and the summit. Martin, Luciano and I rested comfortably on the tiny summit, the second Luciano and I had climbed in as many years and Martin's first Andean peak. We all marvelled at the views around and felt suitably rewarded for our efforts.

Later that evening we discovered that the two Brits we had met after our Portachuelo attempt had failed as well in their summit bid. They had not got as high as Martin and me. On the 15th our two American climbers returned from their attempt on Chinchey. At least we weren't the only party having problems! On 16 July we decided to move our base camp down the Quebrada to a point on the valley floor (ca 4230 m) below the Vlna Tomolomano. This was a good location from which to observe the plentiful Andean geese, condors and hummingbirds and to allow one of Dur burros to recover from intestinal problems. It was also an excellent spot from which to place a high camp to allow easy access to the many Peaks of the Qopap Icefield. We established camp above the mine at 4765 m just below the ice and directly in the water supply to the mine. The excellent weather we had been enjoying for the last 10 days was about to come to an abrupt end. We woke the following morning to some really miserable and deteriorating weather. Soon after the clouds settled in the snow began to fall and as we had only brought one novel between us it was clear that our situation would soon become desperate. We would have to climb on the 18th or die from boredom. The following day the weather improved so we broke trail up the glacier to the Qopap. The route was not too difficult, although with fresh snow on the steep upper sections we had reason to pause more than once. By late morning we had reached Peak 5205 on the Qopap. The many peaks poking through

From summit of Ranrapalka, Cordillera Blanca, Peru, looking back along ascent route.

Quebrada Ishinca on right. Kevin O'Connell



the mists were tantalizing to say the least. To my dismay, Martin was again feeling the effects of altitude. I briefly considered going off by myself but the thought of disappearing permanently into those mists and the deteriorating weather convinced me otherwise. Later the same day, as we returned to the valley floor, our worst fears concerning the weather materialized. With the rain, snow and cloud, it was time to move on. The weather mirrored our spirits for the next few days, the only break in the monotony a chance encounter with our two American friends who were returning from an unsuccessful attempt on Portachuelo. We packed out of the Honda on the 21st in still miserable weather, returned to Huaraz and settled all our business by the 22nd when Martin and Sylvia left via luxury bus to the fleshpots of Lima, Cuzco and Macchu Picchu leaving Chris and me to a final nostalgic night in Huaraz. Early next morning we flagged down a bus going towards the

airport at Anta and to our amazement were able to take a flight to Chimbote and Lima that same day. A marvelous parting view of Huascan and the Huandoys from the air reminded me of all the climbs awaiting a future trip. We reached Lima later that day and met up with Maureen and Hazel for an unforgettable farewell dinner at Los Trece Monedas, the effects of which I felt several days later in La Paz.

Chris and I were soon on our way to new climbing areas but nothing had prepared us for the sight of Lake Titicaca, the Cordillera Royal and the great gash in the Altiplano that is La Paz. Only slightly less spectacular was the high cost of living in the lower regions of the city. We soon reorganize ourselves and after a day touring the ancient ruins of Tiwanaku, pack for a climb on Huayna Potosi. We manage to arrange some common transport with a party of Swiss who are equally skeptical that the transport will arrive. It does and we are off to the Zongo reservoir at 4700 m, the usual starting point. Chris and I, in our enthusiasm to reach the Campimento Argentina, miss part of the route up and arrive a little later than planned. We settle in for the night and witness a lightning storm in the distance from our perch. Chris doesn't feel up to the climb the following morning so, mindful of lost opportunities, I decide to go alone. There are only a few anxious moments along the well-trod route and soon I am at the summit pyramid base and catch a glimpse of three French climbers finishing off the final pitches on the ice wall. My turn comes soon enough and I am soon totally absorbed in the climb on icy 45 degree slopes. I carefully measure each step on the featureless face and reach the summit crest (6088 m) at about the time the French have returned to their packs. They see me and wave, my silent and distant companions. I am soon lost in the sight of Titicaca to the north and Illimani to the south. The great, brown Altiplano stretches out below. I catch a peek at Sajama in the distance in the clear -7°C air and discover that I can traverse to the south peak of the mountain along a knife edge ridge. A few anxious moments as I ease out onto the east face then back again onto the ridge, across a 'schrund and I am at the col (ca 5970 m). Here I discover that the south peak is easily reached at 6020 m and soon after am traversing below the main east face back to my ascent route. Back in camp by mid-afternoon I watch the clouds billow up and am treated to a view of two French climbers on the south-east face of the south peak. As clouds continue to billow up, Chris and I are treated to a fine sunset. The sky-diamonds of the southern constellations come into view against a backdrop of jet black and lights from below reveal the location of La Paz. In the morning we pack down to the Zongo and are not surprised when our transport fails to show. Neither are the Swiss. We have all become resigned to South American timetables. Soon we are treated to bowls of hot soup and, as night falls, a full-course meal. It is delicious and we can't imagine any finer fare. Our reverie is soon broken as a Land Rover arrives and we are offered a lift.

In the next few days we try to work out arrangements for a trip to Illimani but strikes and political unrest halt all transportation and we are forced to cancel plans. We manage to hire not one but three cabs to drive us out of town so we can get back to the mountains. Fortunately only one shows up and he agrees to drive us to Chacaltaya. Chris and I scramble up the two peaks (5300/5320 m) and spot a third seemingly close at hand. Perhaps I can make it there and back in an hour. Two hours later Chris is still convincing

the driver that he should wait for me. The only thing holding him back is the unpaid fare. I return from Cerro Charquerini (5224 m) still breathless. Later the driver tries to hit us for more money but he's been well-treated and paid. We tell him mañana and walk back to our hotel from the edge of the Prado.

We make several attempts to rent a jeep to get to Illimani but none are available. Even the trekking outfits are reluctant to arrange a trip. We spend a day obtaining some topographical maps at the Military map office. Everyone is on edge and we are escorted everywhere. The hassle with the military is hardly worth the effort as they politely but firmly hand us black and white photocopies. The political situation continues to deteriorate as the government deliberates over who will lead the country. Friends advise us to leave ... if we can. We realize that it's time to go and spend an anxious few days arranging transport.

By the time we arrived back in Lima it had begun to seem like home. Our fortunes brightened as the normally drab skies were replaced by sunshine and soon we were on our way to Ecuador. An early morning flight put us into Guayaquil and soon after a connecting flight was arranged to Quito. It was the day before the inauguration of the civilian government and every hotel in town was booked. In the end we did find accommodations but were not so lucky confirming our return trip via Air Panama, the same airline that had bumped us on the trip down.

On 10 August we did a one day ascent of Pinchinca from Quito after several false starts. I continued on to the main peak (4725 m) by myself and battled the Independence Day hoards stuck to the 4th class sections of the summit ridge. On 11 August we reached the Jose Ribas Hut (4920 m) on Cotopaxi and wished we had brought our ACC membership cards for a discount. We stayed only one night and managed to escape the weekend mobs. Early the next morning I prepared to climb this majestic volcano and found that I had a full moon to guide me up the lower ash slopes. I reached an ice wall as the sun broke over the horizon and soon met a surprised group of locals descending the upper sections. I continued to climb, cautiously avoiding the many crevasses. Soon I was working my way through a fantastic névé penitente field on the slopes below the summit. I reached the highest point on the crater (ca 5925 m) without further difficulty. A strong breeze was blowing in the cool (68°F) summit air and Chimborazo was clearly visible to the south. It was a beautiful place to be at 0900 and I could only think of other peaks I wanted to climb before I left. I returned to the hut in what I thought must have been record time, arriving at 10.15. I think that few of the earlier party I had met on the mountain believed that I had actually been to the summit. Chris and I left early that same day and continued south to the town of Ambato and eventually Chimborazo (6272 m). We discovered a great new highway leading in the right direction but soon discovered a guardpost across it. Chris managed to convince them to let us by and so, with glimpses of the great peak poking through the cloud we eventually arrived at Pogyos. Shortly thereafter our half ton pick-up quit on us, a victim of altitude and sand drifts. It began to appear that we might not be able to reach the new Edward Whymper Hut after all. We eventually arrived late that evening in an advanced state of exhaustion only to find it was completely shut. Chris refused to believe that there was no one home and remarkably, by means of a series of shouts, threats

and banging on the door, managed to get someone to answer. As the door opened, we rushed to it and came face to face with a military rifle. It seemed that hut guardian is a national guard duty, another one of those details overlooked by the Tourist Office in Quito. We managed a friendly introduction, ate and hit the lofts, leaving our rifle toting friend to finish off our freeze dry food. This would either make him a friend or enemy for life but at this point we didn't much care. On the 14th we did a recce up to 5400 m while our hutman used the mountain for target practice. This was a dangerous mountain alright! This, combined with the generally poor weather, did not seem to augur well for a solo ascent. With little time remaining before we had to return to Quito, the morning of the climb proved to be a disappointment. Not about to vanish into the summit mists and leave Chris to the mercy of the guardian of the hut we reluctantly returned to Quito. The return trip was as exciting as one could imagine—a complete circuit of the mountain via Guaranda and Riobamba. On the return we stopped off briefly at Banos to have a look at Tungurahua which will have to wait until some future trip. Our troubles were far from over however, as we continued to battle with the airline representative in Quito about our return trip. An anxious night's stopover in Guayaquil made us all too willing to return to Miami which we managed to do with only a few other delays. Arriving back in Montreal on 19 August Chris and I had the distinct impression we had been away for a much longer period of time. Certainly, we had seen enough mountains to last a lifetime—or at least until next summer.

Kevin O'Connell

Participants. Climbers: Kevin O'Connell, Sylvia Segers, Martin Taylor. Trekkers: Hazel Lee, Christine McNamara, Maureen O'Hara.

Greenhorns on the North Face

Terry and I were just that, complete, low-form, neophyte alpinists. And here we were ready to stick our necks out and make an attempt on the north face of Mt Andromeda. Oh well, what the hell, life is for living,

The drive up from Bellingham is something I would rather forget. We passed through several states of delirium during that 5.11 drive, determined to make it in one massive blitz. Finally dawn's light renewed our enthusiasm. The Rockies came into view. Wow! These were really mountains. They made the gentle Sierras look like hills by comparison. Gulp. I got that feeling in the pit of my stomach that tells me I'm scared, and I was. Had we bitten off more than we could chew?

At long last we pulled into the Columbia Icefields. The constant roar and stench of snowmobiles filled the air. Too bad Terry had forgotten to bring the bazooka. We set up camp in the parking lot and sat in awe of the mountain we were going to climb. The summit rose over 4000 ft above. Cascading glaciers poured from its flanks. The steep walls of rock and ice called out but, at the same time, repelled. A strange set of emotions were running through my mind. Our experience? That was the biggest joke. We had spent three days on Baker trying to build Rome in a day. We had thought: how

Huayna Potosi, Bolivia, from lower south summit.
Shows route taken in traversing from north to south summit. Kevin O'Connell



hard could ice climbing be compared to 5.9 rock climbing? Terry worried about his still recovering sprained ankle. I worried about the glaciers. We both tried not to worry about screaming into a crevasse. We spent the afternoon sorting gear. What a mess! A few hours of thrashing produced a somewhat more organized pile. We crashed out in the back of the wagon.

"What climb are you guys waiting for?" said someone peering into the back of the wagon. Our secret was out. Someone knew we were climbers. We staggered out and introduced ourselves. It seemed that Chuck and John were here to climb the north-west bowl of Andromeda. After talking for a while we decided to rope up for the approach next morning. It would be easier to drag a person out of a crevasse with three on top. Besides, now we didn't have to worry about the approach.

We tried to get more sleep but the alarm screamed at 1.30 am. I pound it into silence. We choke down a couple of Fruit 'n' Nut pemmican bars but are slow getting our gear together and so are 30 minutes behind. The night hugs us like a blanket. Only my head lamp pierces the darkness. Terry didn't have one so ended up holding a flash light in one hand. A little tricky when climbing 60 degree scree held together with mud over ice! We did a lot of sweating on that approach. Finally a moderate slope leads to the edge of the lower glacier. After a few minutes spent fumbling with crampons we join the others on the firm ice. It felt fantastic after all that unnerving talus and scree. We climb, crawl, swim and in general grovel our way up the glacier. I hear laughing and look up to see Chuck up to his hips in a crevasse. He swims out quickly and wades to firmer snow. We all follow with the utmost care . . . ZIP! I'm up to my armpits in the same crevasse! Luckily it's a narrow one and I can chimney out. We continue the approach only are more cautious. Shortly we come to the parting of our ways and we wish them luck as we wade through the avalanche debris to the base of our climb.

We are in a huge amphitheatre the head of which is the brooding north face. We rope up and prepare to start. The words of a song by Kansas float through my head. "The path that I have chosen now has lead me to a wall . . . The symbol and the sum of all that's me. It's just a travesty." Well, this climb could very well turn out to be a

fiasco but we will never know unless we try. I lead up over the first 'schrund, sink in up to my knees and wonder if we should even be on the wall in these conditions. Oh well, it can't hurt to go just a little higher. I climb a steep bulge past the second 'schrund (moat?) and belay Terry up. My version of a boot axe belay seems to work alright. Since the step kicking looks better above we decide not to belay any longer. This will also let us climb faster. "Speed is Safety" someone once said. Just don't fall! The wall is really steep, almost 60 degrees and getting steeper. The exposure keeps us on our toes. After a few hundred feet Terry took over the lead. While switching leads I drop one of my overmits. We watch it skitter down the face. Not to worry, we can return for it later. The snow conditions seem OK but I feel something is wrong. We traverse left to a small ledge for a rest. The ledge is a fantastic place. So this is alpine climbing? Pretty great stuff. A guy could get hooked on this. The walls about us are steep and we enjoy watching our friends creep up the steep ice of their route. The ice clad walls are slowly being ignited by the coming day.

Yes, I was meant for the mountains. We sit and enjoy nature's greatest creation, drink water and let the joy of the mountains fill our hearts. Already I have grown to love these mountains almost as much as my native Sierras. I vow that I will return.

The morning is cool but relatively warm and I worry about the actual strength of the snow. We can linger no longer. It is my lead and I relish it. There is something especially exciting about being the first on the rope. Sure there is the responsibility of finding the correct route and the danger of a longer fall but these all add spice to the game. Without these problems and the danger involved the game wouldn't have its greatness.

The wall at this point is most certainly 60 degrees. It only looks steeper above. The exposure is fantastic and I shake the idea of an unbelayed fall from this place from my mind. All of a sudden I realize the problem. I dig down less than a foot and the snow is watery mush. There is nothing we can do but keep moving. I climb as carefully as possible and try not to rip out the steps. Cotton fills my mouth and the adrenalin is flowing. I climb on, wondering when the whole house of cards is going to come down on our heads, the white death taking us on a swift ride to oblivion. The air beneath my feet is of little consequence. All my thoughts are focused on the task at hand. There is no room for outside thoughts. Whack! Whack! My axe hits something solid. It's ice! I have been leading non-stop for over 500 ft and my legs are burnt. The ice is over 60 degrees and I don't feel like leading this next section. I screw in a bomber Chouinard tube and belay Terry up. Avalanches have been coming off the walls all morning.

We're only 300 ft from the top. All we can do is go for it. Terry flies up the ice pitch, cursing loudly while trying to set a belay in the soft snow above, wonderful, this soft snow, it's so secure. I start up resolving not to fall. I meet Terry at the "belay", calves burning. The final pitch looms above and, joy of joys, it is my lead! It looks as if it will be the hardest of the climb. The crux is in my hands. I lead off with utmost care on 70 degree snow. Step follows step as I slowly gain height. I'm 90 ft out, no pro, no saliva. I climb on, trying to ignore the latent menace of the 2000 ft void. I traverse under the summit cornices and up to the final 15 ft, set at an angle of 80 degrees and pure mush. After a lot of nervous sweating I

Terry topping out. Scott Wayland



The summit from top of climb. Scott Wayland



manage to plant my axe in the summit slush. I try to pull over but my foot holds rip out and I'm left hanging from my axe. I flail desperately until finally something sticks and I wallow onto the summit like a seal. We've done it! A rush of relief. The entire face was in shade but now I am in the glorious sunshine. It burns my eyes. I sink my body into the snow for an anchor and belay Terry up. He breathes a conspicuous sigh of relief. We quickly put on our sun glasses and rejoice in the splendor.

After a few minutes of basking we notice a cornice with a very prominent fracture line. I comment that some day it will break off. No sooner said than the entire formation collapses! The roar of the avalanche fills the air and the mountain seems to tremble with its force. We peek over the side to see huge blocks of snow cascading down the wall we've just climbed! The cornice has touched off the entire slope. We jump back from the edge trembling with fear and just sit for a few moments, not knowing what to say. Just a little

slower and we would have been killed. We decide it is just a little too warm to be doing alpine climbs in the Rockies at this point. As for my overmit, it is buried under several tons of snow. We begin the descent.

Coming down off the mountain was an ordeal in itself. We slogged for hours. At times we sank in up to our hips. Finally we reached the lower Athabasca Glacier. We gladly walked past the sad fools who waste their money on those incredible snowmobile tours. One of the mad fiends who drives the horrendous machines had the gall to ask if we wanted a ride all of 50 yards back to the parking lot. We vehemently refused. Terry even managed to make the driver look rather foolish through the use of certain gestures and expressions. I laughed loudly and climbed the final section back to the car. A damn good climb.

Scott Wayland

Logan's East Ridge — Kluane and Back in 47 Days

With our skis incongruous on our packs, we set off from Kluane on 19 June 1979 and hiked in to the Kaskawalsh Glacier on the south-east side of the Slims River. After a few days we could begin to use those skis, lightening our 85 lb loads a little. We were glad to be out of the mud and moraines and onto ice and snow. Soon we had to rope up. The rope became the symbol of the bond that developed between us as we advanced up the Kaskawalsh. Despite the cloud, fog, and occasional rain, we did the 90 miles in 9 1/2 days. For three of the days we had to navigate with map and compass in what Kelly called "Get Lost Land". When the weather cleared we were relieved to find ourselves where we wanted to be, just west of Mt King George with Logan just ahead.

We reached our cache at the base of Logan on 29 June. The location of our air drop had been marked with a good sized spruce tree but we still spent two anxious hours locating it. At base camp, named "Christmas camp" in honour of our tree, we changed strategy. On the ski in we had used tents. Now we began to construct snow caves. Having a series of these large snow caves in which we could be together was a main factor in developing the strong bond between us.

We began an attempt on the south-east ridge but after two tries were turned back by the avalanche conditions. Back to "Desperation Dump", our advance base camp. After a few hours rest we shuttled our supplies to the north side of the east ridge and by 10 pm on 2 July were moving loads onto that ridge, an all snow and ice route. Camp 1 was set up at 8500 ft. To camp 2 at ca 10,500 ft the route was mainly scrambling on rock interspersed with many sections of snow and ice. Our pace slowed due to the many times we had to put on and take off crampons.

It was a great relief to get onto the continuous snow above camp 2. We continued up the ridge, putting in camp 3 at 12,500 ft, camp

4 at 15,000 ft, camp 5 at 16,500 ft. Most of the ridge had deep snow and trail breaking was exhausting. We put in over 4000 ft of fixed rope. Some sections had to be traversed three times by each man to supply the next camp. Above camp 4 the combination of deep snow and altitude began to take its toll, sapping our energy and slowing our pace. The great food did a lot to keep our spirits up. Our 432 lb supply of dried food had been lovingly purchased in California by Brian. Now we were enjoying gourmet meals built around such standbys as pasta, dried beans, lentils, and rice, supplemented by canned bacon, cheese and powdered whole milk. Not a scrap of freeze dried food was to be found. With a pressure cooker and two stoves, a 111 B and an MSR, we enjoyed our meals on the mountain.

Our pace up the ridge was dictated by our assault technique and, farther up, the altitude. In the 20 day push up the ridge we spent four days in camp. Although the weather was usually at its worst on the days planned as rest days, until our summit day we had not

"Christmas camp". Left to right, Kelly, Doug, Brian. Mike Strong



Looking toward east ridge from near "Christmas camp". Mike Strong



one completely clear day. Summit day was a long one, with a 4 am start. We reached the east summit at 7 pm and arrived back at camp 5 (16,500 ft) at 9.30 pm. Kelly said, in retrospect, that reaching the summit was great but just being there and enjoying the whole experience was the real thrill. A feeling shared by all of us.

The fine summit weather held for the duration of the three day descent and for several days afterward. When we got to the snow slope we had ascended to the ridge and found it had avalanched. Massive blocks of snow jumbled in a chaotic mass, one of the evidences of the danger involved in a Logan climb. All of us had minor encounters with avalanches. A couple of times our snow caves were covered by small powder slides due to the heavy snowfall above 10,000 ft. In this way and in many others the snow caves fulfilled their purpose and then some. We were secure from storms and avalanches and could cook, sleep and eat together instead of fracturing the group.

After cleaning the ridge we reached base camp and prepared for the ski out. Our total weight load was even heavier than on the ski in since we were bringing back all our climbing gear. We also had the pieces for a prefabricated sled. At the base of Logan "Fred the Sled" was born, a platform of plywood mounted on an old pair of skis. He served us well on the ski out although he did have a mind of his own, wanting to plunge into crevasses. The worst part of our 47 day journey was the uphill slog to the pass at the head of the Kaskawalsh. But we enjoyed this time together. We had begun this trip in a spirit of friendship and by the time we reached base camp on our return from the summit we felt rather a spirit of kinship. Despite over a month being within 120 ft of at least one other member of the team, we were even closer than when we had begun, an accomplishment foreign to many expeditions.

Mike Strong

Participants: Doug Dalquist, Kelly Kissack, Brian Maclean, Mike Strong.

An APE in Peru (The Alberta Peruvian Expedition)

The panic stricken crowd surged down the narrow cobble stoned street directly towards Rich and George who jumped into a nearby doorway to let the mass of humanity swarm by, escaping from tear-gas and water cannons. Only 24 hours before we had boarded an airplane in Calgary. Planning had started in April. For two of us it was an attempt to climb to high altitudes (22,000 ft) in preparation for Everest in 1982. APE was almost grounded by the cancellation of the Aero Peru Los Angeles to Lima charter flights in May but we travelled Braniff instead for more money and less time in Peru.

After our early morning arrival in Lima we took an airport bus to the Ancash bus depot to make connections to Huaraz, some 500 kms to the north. Since the bus did not leave until 5.30 pm, we

stacked our 40 kg loads into a pile in the corner of the bus depot, placed two of us on guard duty, and the other three group members toured the town. Clouds of tear-gas stung our eyes as we drank in the sights and sounds. Avocados the size of grapefruit cost only 80 soles (about 40 cents) and street vendors made it almost impossible to walk on the sidewalks.

As we left Lima it was dark. The headlights of the bus picked out approaching vehicles with no lights, one headlight, and the occasional cyclist and pedestrian. We were amazed that no one was hit. Two police check points later and over a mountain pass (ca 13,500 ft) found us in Huaraz at 2.30 am. We located the Hotel Barcelona, woke the night watchman, staggered upstairs with our loads, and finally found some empty space on the floor to sleep.

The morning view of the Huandoy and Huascaran was breathtaking. The busy streets were our entertainment for the day as we strolled about back street markets and sampled the local food. It was most pleasant to be in the warm sunshine and blue sky after the smog of Lima. After breakfast next day we bargained about for a collective (local cab) and finally got one at 7000 soles. It took the five of us and our loads north to Yungay, then on to Caraz and up a precipitous mountain road into the Santa Cruz valley. The collective squeezed along a goat path that wound up a steep, narrow gorge for miles until we emerged at 12,000 ft on a rocky meadow at Cashapampa near Lamacorral.

The next three days involved travelling over two passes of over 15,000 ft, passing through spectacular valleys and viewing awe inspiring ice fluted peaks. On this popular trekking route we saw only three other parties but many local herdsmen, burro caravans, and several picturesque villages full of noisy laughing children. From our last high pass we had an incredible view of Huascaran, the four Huandoy, Chacaraju, and Chopicalqui, and Pisco east and west, all within 10 miles. Then it was down the Inca trail (instead of the road) to the valley bottom to camp before attempting Pisco west.

The following day we climbed 15,000 ft onto a meadow at the base of a glacier near Pisco. Next day we were away by 4 am in the

Huandoy group from a high pass. Peter Spear



moonlight. The chaos of the rock strewn glacier was crossed in just over an hour and then up onto the ice. There was a well-defined path left by previous parties as it had not snowed for several weeks. Slow plodding put us on the summit of Pisco (19,500 ft) before noon, the intense heat making it a real sweat. The view of the Cordillera Blanca surrounding us was incredible. Descent was rapid and we regained our camp site after an 11 hour day.

The next morning was a rush as we broke camp and descended to catch a truck which regularly went to Yungay. It had blown an outside dual so George and Eric and our packs rode down the valley and the rest of us began walking. We were picked up by another truck and rode down the rest of the Langanocha valley through the new farms that had been built on the remnants of the ice avalanche disaster in the early '70's. Except for enormous boulders scattered throughout the fields, the populace has rebuilt the farming area. A short ride on a local bus took us back to Huaraz.

The town was in turmoil due to protest marches in support of a teachers' strike and we had to detour through back streets to reach our hotel. Since cleanliness was more important to us than soldiers with submachine guns we crossed the main intersection that was now cleared except for 20 soldiers armed to the teeth. We were glad to make it to the public showers and back without incident.

After an evening and day of feasting to regain lost pounds we hired another collective to take us north to Mucho and an attempt on Huascaran (22,250 ft). We hired a porter to assist us in carrying gear on the mountain. Again through police checks, up steep roads, and past rural houses to the National Park headquarters where we hired a burro driver, two burros and a mule to take our gear up to 13,500 ft where we established camp.

With an early start next day we climbed up the last of the moraines and onto the ice at 14,000 ft where there was a major base camp, complete with a chicken on a leash that was waiting for the cooking pot. The glacier travel was straightforward up to 17,000 ft where we camped as the sun set. This was to be our home for the next two nights as the weather closed in and visibility was poor. The weather improved as we set off the next morning for a camp at 20,000 ft. Mike had suffered from headaches for two mornings in a row and felt a bad cold was developing so he descended with another party. We climbed under enormous ice walls and séracs that made the objective dangers high, although the technical standard was moderate. Our camp in Garganta was safe from hazards and commanded a view that almost went to the Pacific.

After a cold night we left camp at 8 am and were in the col (6019 m) in 30 minutes. The route up the south peak was steep and we had a few problems getting over a major bergschrund at 21,000 ft. The French group that was ahead of us had to turn back due to mountain sickness. At four to five breaths per step we plodded upwards and at 2 pm we were on the summit in cloudy conditions. It was a very emotional time for all of us as we reached our goal. The descent to our camp was slow and careful as we rappelled over the bergschrund and climbed down to camp. Eric chose to descend to 17,000 ft with the British that evening.

Our descent next day was 10,000 ft vertical as we moved from the cold to the insufferable heat and sore feet in the lower valley.

Arriving back at National Park headquarters, we were fed wieners, beans, eggs and French fries by the park ranger for a nominal fee, and swilled down a few cervezas. A boy was sent to a lower village on a bike to summon a collective and, after a volleyball game with two school teachers, we motored back to Huaraz in the dark for meals at the different restaurants, more cervezas and entertainment at Pepes new disco.

The trip wound down quickly as we caught a bus for the eight hour trip to Lima (this time in daylight) through country reminiscent of the foothills, down into luxuriant valleys with crops of sugar cane and bananas, and then onto the "Going-to-the-Sand-Dunes-Highway" where the Atacama Desert met the ocean. After a flight to Cuzco, a sidetrip to Macchu Picchu and many gourmet meals and shopping trips, we regrouped in Lima at the Trece Monedas for a farewell meal before our midnight flight.

Peru has not yet been "discovered" by many North Americans but there are European climbers and trekkers there by the 747 load. By using iodine crystals to treat all our water, and avoiding uncooked vegetables, four of us stayed completely healthy which made the trip enjoyable. It was nice to land back in Calgary, away from the military atmosphere which had made us feel uneasy for the previous three weeks. Our thanks to the Alpine Club for a grant to aid in covering some of our expenses.

Peter Spear and George Kinnear

Participants: Eric Karlstrom, Rich King, George Kinnear, Mike Newson, Peter Spear.

Hickson: A Climb

First ascent, north face Mt Hickson, Coast Mtns.

A final twist to set the screw in the highest of the good ice then wash the head lamp beam across the cornice above. There! Ten metres to the right, ooze up to the block, brace in, flail a slot above. A couple of kicks, plant the axe high, bridge away from the block, a brief scrabble, and suddenly, a soothing breeze in my face with a star filled sky above. It was over.

Three or four hours ago I had bared my mounting apprehension to John. Ragged clouds had begun to cloak the face and to sift a few wet flakes onto us. The day was waning, the summit remained vaguely distant — and the route up was uncertain. Now the sky bristled with light.

The focus of getting clear of the face had closed off all peripheral input. The weather had been nearly disregarded. We had been determined not to get caught out on the face. And now 18 hours after roping up there was finally flat ground beneath my feet and I could walk the rope around a block and untie and whoop my elation into the night.

It had not seemed so far the evening before. We had worked our way up a narrow glacier and the couloir above to a grand bivy site, replete with flowers, running water, a spacious platform, and easy access to the ridge bounding the left side of the upper ice face. The

three of us had brimmed with easy confidence, joking about being back for late lunch with Frank, nursing his bum knee in the col.

It had begun to seem a touch further in the morning. Cascades of stones bounded down the ice with disconcerting frequency, forcing us to set off directly up the initial towers on the ridge. Immediately the route finding became complex and the climbing difficult and

Davey moves into the side gully which gives access to the upper ice face. D Serl

The north face of Hickson.

The route follows a hidden couloir in shadowed face on the right into the crest of the arching sunlit arête, which is followed to its top. D Serl



Difficult rock halfway up the upper arête. Davey follows while Don waits below. J Wittmayer



demanding of intense care. A couple of hundred metres were gained reasonably quickly, but then the towers tapered out into rotten snow overlying sky blue ice and we slowed as we belayed up several strenuous pitches. John finished this section with some truly desperate mixed ground, as hard as anything we had ever confronted. There was harder yet to come.

Above blank buttresses barred the rib crest and forced us to the left, out into the north-east face. There followed hour upon hour of unrelenting difficulty. We climbed corners and slabs and icy runnels and cold overhangs in bewildering succession. The rock continued to push us farther left. Each upward possibility seemed more and more tenuous. Obsession began to fill us. A crucial pitch up a vertical ice choked chimney allowed John to break through one barrier but above the walls sloped out into icy slabs. The crampons went on again. Delicate nicks led up around a corner and then the crampons came off for the overhanging wall on the right. A spark of hope flashed that we might find a way through after all but almost immediately it was snuffed out as a second leaning wall forced me to back down. We belayed to take a rest and to get command of the situation.

Damp walls loomed above but just below our stance an edge led right again to a pull over a bulge onto a wedge of rock where the crampons could be refitted for the icy smear that followed. Snowy blocks and corners then allowed easier upward and rightward progress and we soon broke out onto a snow arête, once more on the crest of the rib.

We still had to gain the upper ice face and some frightening climbing remained. The arête curved around the head of a little subsidiary couloir and butted against a wet, lichen sheathed wall. The crampons were removed once again. A thin ledge crossed to the rim of a snow filled chimney. Fumbling fingers sent a peg spinning down to join the stones on their course to the glacier below, so a drive-in ice piton had to be whanged into the only available crack. With this dubious inspiration a wild bridge was undertaken to gain entry into the chimney. Once insecurely lodged in its frigid depths there seemed to be no alternative but to flail on up the slot, hacking enough snow out of the front to allow progress while leaving enough in the back to give purchase. At last, shattered and cold and puppy weak, I flopped out onto a good ledge with a solid block belay and let waves of relief wash away my tension. The ice face was at hand and we were high enough to avoid most of the rockfall. The top looked to be only a couple misty leads above.

We ate and put on a layer of clothing then Davey had a pair of ice tools pressed upon him and was urged upwards. Above the ice first ran very steeply up a little side gully till it gave out onto snow plastered, shattered rock which finally opened into gentle flutings. Davey reached a cozy belay ledge nearly 100 m above us and John and I jumared. The top still seemed a long way above. Letting down had obviously been ridiculously premature.

The final leads to the cornice drifted like sequences from a dream. Darkness closed around us leaving only shadowy ribs and great sweeps of ice vaguely illuminated by the head lamp. Each lead demanded intense care and precision on the long passages of steep ice, painstaking caution when moving onto the loose stances and while wearily fumbling with belay anchors and tie-ins. The

cornice always seemed to recede into the black heights but on the third double length runout we at last attained it. We stumbled down into the boulders on the south flank of the ridge brewed up and then slipped into the depths of sleep, draped over the angular blocks. We had broken the spell of the peak. We were up.

Don Serl and John Whittmayer

First ascent of the north face of Mt Hickson, 28 to 29 July 1979 by John Whittmayer, Davey Jones, and Don Serl. The face rises nearly 1500 m from Scimitar Glacier to just west of the summit. The party, which also included Frank Baumann, flew into the Waddington-Combatant col by Whitesaddle Air Services from Bluff Lake. (Two passengers plus all necessary gear for three weeks made a comfortable load). After a few adventures and misfortunes on Waddington and Combatant the Hickson climb was made. The entire party then descended to the Scimitar (stay fairly high on the south-west shoulder of Hickson then descend directly west down easy snow and scree) which was followed to the entrance of Pocket Valley (a day and a half to here). A cache of superfluous gear was left on the glacier at this point for later helicopter pick-up, enabling a pleasant jaunt out to Twist Lake via Bifrost Pass and the west and north sides of Twist Creek. Four days from the col and highly recommended but take care with the grizzlies!

Instructions to Contributors

All material for inclusion in the Canadian Alpine Journal should be addressed to Moira Irvine, Editor CAJ, 1565 Haywood Avenue, West Vancouver, BC V7V 1W4.

All business enquiries should be addressed to Ron Matthews, ACC Manager, Box 1 026, Banff, Alberta T0L 0C0.

The deadline for submissions is 15 DECEMBER 1980. It is most helpful to receive material as soon as the ascents are made. Contributors who wish to read their mss after editing must submit them no later than 10 November 1980 and must return them no later than 9 January 1981. This does not preclude further editorial changes if there is too much copy. No changes can be made on galleys — only typographical errors can be corrected. Contributors who wish to see their edited mss should indicate as such with the submission.

Submissions should be typed in normal letter fashion (upper and lower case), DOUBLE SPACE, with a 1 1/2 inch margin on the lefthand side, on 8 1/2 x 11 paper, on one side of the paper only. If forced to submit a hand written mss please write on alternate lines, ie double space. If necessary to make corrections to a typed mss please make these in pencil and not in ballpoint pen. Maps submitted should include a north arrow, latitude and longitude, and a scale. Photographs should be sharp and clear, minimum 5x7, glossy finish. Black and white prints should, where possible, be made from colour slides. If marking routes on photographs either include a separate unmarked print or mark route on an overlay. Please list photo captions on a separate sheet of paper and when numbering the backs of photographs do not press hard, do not use ball point pen. In naming peaks or other geographical features it would help if the outlines in Principals and Procedures, Canadian Permanent Committee of Geographical Names, were followed.

Proposals concerning new names should be submitted in writing to the Executive Secretary, Canadian Permanent Committee of Geographical Names, Geographical Branch, Dept of Energy, Mines and Resources, Ottawa. Proposals should be accompanied by

adequate information on the origin or usage of the name or names, and be identified on a map, sketch or airphoto. The Committee welcomes reliable information concerning corrections or additions to nomenclature appearing on Canadian maps and charts.

Obituaries

Neil Colgan

Journal entry 1 to 10 June 1979: "Colgan, do you realize that in the past year you've been in the Freshfields, the St Elias, Yosemite, Death Valley, the Canyonlands, Texas, the Wapta Icefields, Kokanee, the Andes of Bolivia and Peru, the volcanoes of Ecuador. You've done more, seen more and experienced more in a year than most people do in a lifetime. Colgan — do you realize how fortunate you are?"

Neil often talked to himself like this; in his ever present journal he carefully and faithfully recorded his impressions and feelings of people, places and ideas. He lived in the Banff area for many years and worked as a park naturalist and, finally achieving a long-sought ambition, as a park warden. He was active in the ACC and as well as attending various camps and courses, he was camp manager for the ski mountaineering Leadership and Kokanee Glacier camps, in 1978 and 1979 respectively. He had recently transferred from junior to senior membership in the Club. Neil contributed writing and photos to the Journal in 1979.

Neil died on the shores of Douglas Lake in late July 1979. He had been patrolling the Red Deer Valley and had ascended the Valley of Hidden Lakes when an accident occurred with his horse and he suffered internal injuries. He walked a distance and made a small fire. He extinguished it, wrote his last words, and settled down to watch the mountains. For Neil that was the place to die — in the mountains he loved with all his heart and soul.

We miss our friend . . . and we remember skiing all the steep trails, climbing in the hot sun, slogging in the rain, sharing in the wonder and awe. We carry these things with us, in our hearts and memories, and Neil shares our adventurous paths right alongside us.

Neil's friends

William Porritt

Bill Porritt joined the ACC in 1979. He was an assistant guide with the ACMG. Bill and J P Cadot were last seen at 2 pm on the afternoon of 25 May 1979, ascending the north face of Kitaraju, about 200 m below the summit (see Foreign Reports: Some Notes on the Disappearance of J P Cadot and Bill Porritt, Alpamayo Area, Cordillera Blanca, May 1979 this volume).

Catharine Whyte. The Calgary Herald



Catharine Robb Whyte 1906 to 1979

Catharine Whyte, ACC member since 1950, was a well known patron of the arts in the Banff area. Catharine and her husband Peter, both painters, came to Banff in 1930. From 1931 till 1933 they managed Skoki Lodge, the first commercial ski operation in the Rockies. After the war they became involved in a movement to save some of the Banff area history. This eventually became the Peter Whyte Foundation — now the Peter and Catharine Whyte Foundation.

Catharine contributed to the construction of the Archives of the Canadian Rockies (present home of the ACC library), including the Peter and Catharine Whyte Gallery. She also contributed to the construction of the Bow Hut and Peter Whyte Shelter.

Catharine had a long standing attachment to and connection with Japan, receiving many Japanese visitors. Her grandfather, Edward Morse, is revered as the founder of archaeology in Japan. In 1877 Morse, a noted zoologist who gave some of the first malacology



lectures at the University of Tokyo, took a train from Tokyo. The new railway cutting went through a shell mound — which Morse recognized as an archaeological site — the Omori shellmound, which he excavated.

It is not possible to recount all Catharine's accomplishments. She reached many people. They will all remember her with love and affection.

Joyce Irvine 1906 to 1979

ACC member from 1931 till 1938 or 1939. Rejoined in 1960. As Joyce Packer, active with the Calgary Section in the 1930's. Part of a group that climbed with Lawrence Grassi. In 1933 member of a party that did two first ascents with Grassi — Mt Inglismaldie in June and Mt Ishbel in September (CAJ 1933:212).

CMI

Tom Fyles 1887 to 1979

I never met Tom Fyles. I wrote him once, in the early spring of 1979, asking if I could visit him. But the reply came from his son, explaining that Tom was too ill to receive visitors. A few weeks later, on 19 March, he died.

I had written Tom Fyles because I was working for the Provincial Archives, collecting interviews on early mountaineering in British Columbia. Tom Fyles' name had come up everywhere: all the older climbers I spoke with told me that the one person I must interview was Tom Fyles. From before the First World War until at least the middle Thirties, Tom was the best mountaineer in the province. As one early BC Mountaineering Club member said: "In the old days, Tom was the club. He led every trip."

In Vancouver, Tom spent his working life as a postman and by most reports, he was an unimpressive man — quiet, plain-spoken, without ambition. But in the mountains, Tom Fyles seemed to expand. He became a man whom other people instinctively recognized as a leader. It wasn't just that Tom could climb anything, or outwalk anyone, or find his way out of anywhere. It was that Tom seemed never to be afraid or discouraged. He had an ample, natural confidence that pervaded the people around him. With Tom people felt safe.

In 1973 Dan Bowers, who was then working on a history of the Garibaldi area, interviewed Tom Fyles. The interview is now held by the Aural History Division of the Provincial Archives of British Columbia and, with the permission of the Archives, some excerpts from the interview appear here. The interview covers Tom's introduction to mountaineering in BC and his first ascent of The Table, a rotten volcanic mesa just north of Garibaldi. There is no mention of his many other first ascents. He climbed Dione, Pelops and Omega in the Tantalus range; Judge Howay, Widgeon and American Border Peak up the Fraser Valley; the north peak of the Black Tusk in Garibaldi. Many of the first ascents now credited to "a large BC Mountaineering Club party" were likely led by Tom Fyles.

There is one story about Tom Fyles that seems best to illustrate his qualities — his skill, his good humour, his modesty. Sometime in the early Twenties Tom was leading a group up the Camel's Head. The Camel's Head is one of the peaks of Crown Mtn on the

Tom Fyles. Pen & ink and crayon on paper. Alec Dalgleish, 1933



north shore of Burrard Inlet; though it is good rock, with interesting routes, the Camel's Head is now rarely climbed because Crown lies within the restricted Vancouver watershed area. Tom had successfully brought the group up to the summit by the usual route and was investigating a new route for the descent. He noticed a gully and climbed down it (without a rope) to the base of the Camel's Head. He climbed back up the gully to report to the other climbers on whether it would make a feasible descent route. When he reached the summit, Tom shook his head and told the party, "Nope. It won't go."

I was born in Bolton, Lancashire in 1887 and I came to Canada in 1910. I had a friend in Vancouver, a chap I'd palled with in England. So we got a room on Smithe Street in Vancouver. My brother and I arrived first. Then the rest of the family followed along.

It was all so new. I can remember going down Granville Street looking at the stores. They were all so different than what they were in Bolton. I particularly noticed the mountains the first time we were on Powell Street. It was a beautiful, bright day, breezy and the mountains across the way. We thought it was wonderful, and we were quite sure we were going to go up there.

I didn't know anything about how to get up [to the mountains] but we went across on the ferry and got on the street car at the terminus and then we walked. First time we didn't even get to Mosquito Creek. But we soon got over that. There was a man in the Post Office — I worked in the Post Office not long after I came here, 1912 — and he was a member of the Mountaineering Club. He suggested I went up with him to the cabin on Grouse, which I did on a snowy Saturday evening . . . and that was the start. I joined the Club.

In '14 I went to Garibaldi with the Mountaineering Club. We came out just [at] the beginning of August, just when war had been declared.

The party went in on the weekend and I couldn't go till the following Tuesday. The PGE was just being built but the trains

only went as far as Cheakamus, 'bout 12 miles up from Squamish. But you could get a coach to there, and then I walked along the Pemberton Trail and found my way in to Garibaldi. I had a little confusion getting in but I got there. I was all alone. I hadn't been beyond Squamish before that. But I knew the looks of the mountains when I saw them from up above. I could tell what they all were because I'd read about them. And of course, I joined the party. We did a number of things and then decided that we might have a look at The Table.

We went round the Panorama Ridge and down to the Barrier and over to The Table. We spent some time lookin' at The Table.

The Table is a flat-topped mountain made of basalt and it has a rather peculiar opening at one end that's an archway. The whole area looks like an inverted cup with a handle. It's not very high. It's quite abrupt, and quite steep and loose rock. Whilst we went most of the way around and looked at different chimneys, we didn't do anything more on that trip. We were camped at Black Tusk Meadows and so it made an all day journey going round [Garibaldi] Lake.

I climbed The Table in 1917. There were two other men went along with me, but because of the loose rocks they didn't follow me. They stayed and waited on the ridge whilst I climbed to the top. I had a long rope. The Mountaineering Club only had two ropes in those days. One was a hundred feet: the other was sixty feet. I think I had the hundred foot rope. So I pulled this with me, and I intended to be able to help another man up with the end of the rope. I went up all the way alone and then traversed across the face a little towards the west and managed to get into another gully which led to the top. The top of course, was the big more or less level area, just one or two bits of scrubby trees and a few flowers. I walked all over it and I was able to talk to my friends who were there on the ridge below. They were makin' tea for the time when I got back. I was quite happy to have got to the top because it had been a challenge for some time to different members of the Club. I got down without any great difficulty. There were loose rocks but by having two handholds and two footholds at the same time it was possible for the odd piece of rock to give way. But we got down and had our tea and enjoyed it and walked back around the opposite side of the lake by Guard Mtn.

Tom Fyles was 92 when he died. He is survived by three sons and ten grandchildren. Mt Fyles, in the Bella Coola area south of Ape Lake, was named for him.

Susan Leslie, with the assistance of Mills Winram

H A V Green 1888 to 1979

The Alpine Club of Canada lost a distinguished and respected member with the death of Harry Green at the age of 91.

Harry studied law at Edinburgh University and graduated with honours by being awarded 'Writer to the Signet'. He emigrated to Canada in 1912 and joined the legal department of the CPR with headquarters in Winnipeg. After over 50 years service with the Railway he retired as Senior Legal Advisor for the Western Division but was retained by the Company as Special Counsel with offices in Vancouver.

Besides his mountaineering pursuits Harry was active in many other fields. He was founder of the Winnipeg Little Theatre. He received the Canadian Drama Award for his plays and short stories and published a book of poems. He was a long time and much loved member of the Alpine Garden Club of British Columbia and remained an active gardener to the very end. Harry's and Fiona's delightful alpine garden with its precious specimens bear witness to their painstaking and loving care.

Harry's love for the hills came early in life — "as a boy I ridge walked on Cruachan and the Five Sisters of Kintail and, guided by my Highland mother, looked down on the Hidden Falls of Glomach." But it was not until relatively late in life that this love of the hills blossomed into serious climbing and became an important part of the joyous enthusiasm with which he lived.

His favourite climbing area centred around Lake Louise and Lake O'Hara. where at that time the CPR Swiss Guides Edward, Ernest, and Walter Feuz were stationed. With these "peerless mountaineers and good companions" Harry accomplished the classic routes on Victoria, Lefroy, Bid-die, Hungabee, Deltform, etc. In the 1950's Harry also climbed with his friend Walter Perren, recently arrived from Switzerland, who practiced the modern climbing techniques. Together they made some notable climbs and in 1951, when Harry was well over 60, they completed a sporting new route on Mt Cathedral. When in 1954 the tragic accident occurred on Mt Victoria, in which four members of a Mexican party lost their lives, Harry helped organize the rescue operations and assisted in bringing the three survivors down to safety.

Although his climbing achievements were impressive his self-appraisal was always modest. He tells a little story against himself of how when climbing along a steep narrow arête on Mt Victoria with Walter Perren he felt nervous and asked, "Are you holding me Walter?" The reply came, "Jump off Harry and you'll soon find out."

Harry joined the ACC in 1948 and was a popular and valuable attendant at many camps in the 1950's. In 1956 he was elected Vice-President, and took on the Presidents position in 1957 on the death of Rex Gibson. Later he served two terms as President until 1964. Harry's sharp mind and logical thinking contributed much to any discussion and his counsel was always valued in Club deliberations. For the many members who were associated with him in the mountains there remain happy memories of a reliable and competent climbing companion and a cheery, kindly friend. For those who were privileged to spend an evening with the Greens and to engage Harry in discussion on such wide-ranging subjects as mountaineering, history, politics, alpine gardening, or the theatre, the occasion was always stimulating and enjoyable. His ready wit and timely puckish charm, enhanced by the lilt and cadence of a true Scot, will remain as a happy reminder of a worthy gentleman.

Harry's journey through life was long and fruitful, and his search for happiness found fulfillment 'on high hills'. Sic Itur ad astra.

Eric Brooks

Eckhard Grassman

Last summer Eckhard Grassmann died on the north face of Mt Edith Cavell. Gary Pilkington also died in the same accident. Some time on or about 31 August they were nearing the top of the north face on the east buttress route (Chouinard, Faint and Jones, 1967). Evidently a long fall occurred. When found they were still roped together.

Eckhard will be greatly missed. Tall and gangly, with dark warty skin and black piercing eyes, he was full of fun and had a warm sense of humour. He was unfailingly kind, tolerant, and generous.

Eckhard Grassman was born in Frankfurt, Germany on 6 December 1942, in the midst of the Nazi madness. After the war the family moved to Switzerland. Eckhard's affection for the mountains developed at an early age. When only nine he climbed a 4327 m peak in the Alps, the Nadelspitze. In his teens he was already doing some of the harder climbs in the Alps: rock routes on Bockmattli, north pillar of Schlossberg, Salbitschien, Zinalrothorn, Schreckhorn. And also winter ascents: Pitz Bernina, Dufourspitze, Lyskamm north face and the Gletschhorn east ridge (first winter ascent).

In 1963 Eckhard did the first winter ascent of Dent d'Herens north face. This climb turned into a horror with seven bivouacs and one death. The ascent party consisted of two Poles, two Germans and three Swiss, including Pierre Monkewitz. Unusual conditions on the Welzenbach route made the climb more difficult than expected. Also two members of the party were inexperienced in modern direct aid climbing and held the others back. As a result the party was too slow and had to bivouac three times. They ran out of food and fuel. Another cold bivouac on the summit took what remained of their strength. On the descent, over verglas covered rock, one of the Poles fell, breaking both his legs. Three remained behind with him and these four then endured four more bivouacs. Eckhard was among the ones who went to Zermatt for help. The Pole with the broken legs later died of pneumonia in a Zurich hospital. A second frostbitten member of the party eventually lost both feet. A third lost toes. Eckhard lost parts of his feet and spent nearly a year in a Zurich hospital, undergoing the amputations. Eckhard's frostbite injuries would plague him for the rest of his life. He always suffered terribly in the cold, though few knew it because of his cheerful disposition. In fact this was the real reason behind his clown antics and front-flip ski stunts during rest

stops on ski trips.

In 1966 Eckhard completed his Diploma in Mathematics at the University of Zurich. Later he returned for a PhD. In 1967 he came to Canada and began teaching mathematics at the University of Calgary. Eventually he became an associate professor. Weekends Eckhard went climbing. The first winter he climbed Mt Athabasca east ridge with Jon Rokne, using cross country skis. In fact Eckhard and Jon were among the first to make extensive use of this kind of ski in the Canadian Rockies. They taught many others to ski this way.

In Canada winter ascents became Eckhard's specialty. In 1967 he made the first winter ascent of Mt Assiniboine with Don Gardner and Chic Scott. They had to bivouac on the summit. In 1968 Eckhard, Brian Greenwood, Don Gardner and Charlie Locke made the first winter ascent of Mt Victoria by the north face. Later, in 1977, Eckhard also made the first winter ascent of Victoria North Peak with Peter Zvengrowski. During the winter of 1969 Eckhard and Urs Kallen climbed Stanley Peak north face. At the top they had to tunnel through a big slab which threatened to come off while they were on it. Later, on the descent, they found that an avalanche had wiped out 1000 ft of their route. Eckhard also did the first winter ascent of Mt Joffre (11,316 ft) in the Kananaskis. The other members of the party were Archie Simpson and me (Jim Jones). Later Archie Simpson was killed in an avalanche on Mt Cook in New Zealand.

Another winter climb Eckhard wanted very much to do was the north face of Robson. He tried it twice. I was with him on his 1973 attempt. At Helmet col we sank in to our waists on skis. It snowed continuously and avalanches as big as freight cars swept the route. We didn't get any higher. Eckhard's second attempt went similarly. It has still not been done.

Eckhard's first ascents include the north face of Mt Bryce with me in 1972, a new route on the south-west face of McKinley with Jon Jones, Bugs McKeith and Allen Derbyshire in 1977, and the Floe Lake Wall with Greg Spohr in 1976.

Eckhard also did many short fierce little ice climbs. His first ascents here are Louise Falls, Cirrus Gully, Professor's Gully, Carlsberg Column and Pilsner Pillar. These were done with Jack Firth, Mike Bailey, Laurie Skreslet, John Lauchlan and Peter Zvengrowski.

Besides new routes and winter ascents, Eckhard repeated many notable classic routes such as Temple north face with Urs Kallen, and Assiniboine east face with Rob Amann. He also did Athabasca north face and north face of Fay with Rob Wood and me. His climbs in the Bugaboos included Bugaboo east ridge, South Howser and two or three routes on Snowpatch. Eckhard also climbed many peaks in the Ghost River area and did numerous routes on Yamnuska, including Forbidden Corner with George Homer. He also climbed in the Cascades, Yosemite and the Hindu Kush.

Eckhard was not only a first class climber he was also a wonderful mountain companion. He had a carefree happy-go-lucky attitude towards the mountains. I can still see him coming

Eckhard Grassman



along behind laughing, telling stories, discussing always something unconnected with the climb. On Bryce it was the warden's dog, a grotesque bull terrier, stiff and ugly from crossing rivers. It made a wonderful topic for conversation.

Anecdotes about Eckhard's forgetfulness would fill a book. On the winter ascent of Joffre he forgot his crampons. On the winter ascent of Victoria main peak he forgot his sleeping bag. He then had a -38° bivouac on the summit ridge. On Bryce we also bivouacked on the summit; Eckhard forgot his sleeping bag, also his foam pad. In the morning we were stiff and ugly. On the winter ascent of Joffre Eckhard brought only a sack of apples for food. Asked about this he said that he "hated shopping". This was true. In fact Eckhard couldn't bear to go into a Woolco or similar store.

It was said that Eckhard had nine lives — like a cat. He often daydreamed while belaying. Once, on Yamnuska, John Martin fell 15ft before Eckhard woke up. I saw Eckhard use up another of his nine lives on the Columbia Icefields. It was winter and we were ascending the Athabasca Glacier, alone, on skis, stupidly out in the centre. It was the worst error. The centre, below the icefall, is criss-crossed with two foot wide crevasses. No sooner had we roped up than Eckhard fell 60 ft into one of them. I was pulled violently forward. Eckhard was hanging upside down and also wedged. There was nothing to tie him to except skis, precariously half-buried in loose powder. It took hours to get him out and one of his skis is still down there. (I am told that a certain diligent warden still carefully directs everyone to go this way.)

Mostly as a result of this forgetfulness Eckhard routinely did easy ice climbs in old cross country boots. I remember being like this on the summit of Mt Baker (10,407 ft on the Wapta Icefield). It was winter. The ice was so hard that one had to kick furiously to make the slightest dent. We had no ice axes. Yet Eckhard was completely nonchalant with only a ski pole.

A certain type of climber was sometimes put off by Eckhard's lack of concern, especially those who couldn't go anywhere without a lot of gadgets, avalanche pieps and "10 essentials". It was funny to watch Eckhard tease them. Once we met such a person boasting about his new space blanket. Eckhard told him "The only way to keep warm in a space blanket is to light it on fire".

With 20 years of climbing experience Eckhard had acquired an intuitive wisdom and the sort of sure knowledge born of experience which is impossible to obtain from textbooks. While Eckhard taught many people to climb, it was always by personal example. He saw through the stupidity of teaching climbing as an "academic" subject, with lectures. Usually he was too kind to say anything about it, but once something of this sort was too much for him. He received some kind of sociological questionnaire (from a university professor) which asked all sorts of questions and demanded to know 'why he climbed?'. Eckhard's response was predictable, very funny, and unprintable. Expletives deleted, it was something like 'because he couldn't dance'. Certainly Eckhard will be remembered long after this sort of phoney ersatz science has been forgotten.

Jim Jones

Sydney R Vallance 1890 to 1979

With the death of Syd Vallance, on 24 May in Victoria, the Club lost one of its long-time and valued members. Sydney R Vallance was born in Warwickshire, England and came to Canada at age 17, with little formal education. He was with the 63rd Battalion of the Canadian Expeditionary Force during World War I. After the war he was solicitor to the Soldier Settlement Board in southern Alberta. He articulated with a law firm in Lethbridge, was called to the Bar in 1920, and was active as a lawyer for over 50 years. Syd established himself in private practice in 1929 and lived for many years in Calgary. Upon his so-called retirement he moved to Banff where he lived for a number of years, continuing his law practice there and in Calgary. He later moved to Victoria and remained there until his death.

Syd's wife Doris was his companion on many outings. She was a competent artist and tinted many slides for his use in illustrated lectures on the mountains. His children, Jean and Peter, also accompanied their parents on many outings and gained a lasting love of the mountains from those early experiences.

As a climber Syd was well known. He joined the ACC in 1932 and served in many executive capacities at both Section and National levels. He was President from 1947 to 1950. He made over 100 ascents during his climbing career, climbing with the Swiss Guides and with Lawrence Grassi on many occasions.

In addition to his service to the Club, Syd held office in the National Parks Association, the Calgary Color Photo Club, the Skyline Trail Hikers, and was a prominent Mason and member of the Scottish Rite.

Syd was a kind and generous man. I do not recall ever hearing him say a bad word about anyone. He tried to see some good in everyone. He made a host of friends on the long trails of a long life. We shall miss him.

RCH

The Fairy Tale of the Mountaineering Assessor

Once upon a time in the far off land of Britain the bureaucracy ruled and protected the people from each other and themselves. Everything in the human's world was ordered safe and all were duly qualified and certified in their respective roles in the perfect society. Alas there was a young man who was not happy in this world and he left the protective womb of society and went up into the mountains to find himself. The mountains were not part of the human world but were ruled by the mountain gods. They did not care if the humans lived or died and played carelessly with the lives of the few who ventured into their domain. Now the young man found freedom in the mountains and met other humans, young and old, who were similar unto him. After many years of adventure and enjoyment the young man became a 'climber' and he was fulfilled and happy.

Now it came to pass that the bureaucracy saw how happy the 'climbers' were and they looked to the mountains as the source of the happiness. "We must use them to make all our people happy but first we must make the mountains safe and orderly." The mountain gods saw this and smiled and did nothing. The bureaucracy gathered the climbers together and told them they must regulate the people and certify leaders so that the mountains may be enjoyed by all. The young man who loved the mountains was hired by the bureaucracy to 'assess' and 'certify' leaders in the mountains. Years passed by and he became famous and more and more people were assessed and certified. It was difficult work and he worked hard to keep the high standards. Often people were injured as they learnt the skills required for the mountain kingdom but the 'assessor' knew that this was necessary to save future lives. Soon there were so many people coming to the mountains that the original climbers were lost in the crowds and became confused and disorientated. Many assessors were appointed and the young climber who was older and wiser now was made the 'head assessor'. The head assessor had power for he was a certifier although he himself was not certified for one must begin somewhere. The mountain gods saw this and smiled and did nothing.

One day one of the certified leaders was in the mountains and the mountain gods slew six of his party as they are occasionally wont to do, for the mountains were their land and did not belong to the humans' bureaucracy. The climbers were tolerated because occasionally they died and accepted their death as part of the price to pay for enjoying the mountain kingdom. Now a great surge of unrest went through the land and the bureaucracy redoubled their efforts to tame the mountain kingdom — there were more assessors and rescuers to help the people who could not help themselves when the mountain gods played with them.

The chief assessor was deeply worried and he asked of himself, "What have I done wrong; am I not a good assessor, do I not test my people even unto injury so they may be skilled? Am I not the chief assessor in all the land with my legion of assessors which I have created in my own image?" He pondered and went up into the mountains. Now it came to pass that the mountain gods saw him and took pity on him. Occasionally they lapsed into human ways

with the climbers who they secretly admired for challenging their mighty domain with such paltry resources. Moreover he was still a climber who climbed for himself and loved the mountains deeply. "Chief assessor you take too much upon yourself — no man can see into another's mind nor can he forecast the future conduct of that man. The human rules are not for the mountain kingdom and it is wrong of you to try and apply them." Now the chief assessor thought long and deeply and was very distressed.

After many months of thinking he resigned as chief assessor and he travelled across the ocean to the land of the beautiful princess who was his wife. Now this new land was far greater than his native land with far fewer people and the mountain gods were mightier and the bureaucracy weaker. For a while he was very happy and he climbed as in the old days and taught climbing to young people according to the true spirit and purpose of the sport. Yet all was not well in the new land which was called Canada, for the bureaucracy was growing in power and there were ambitious men who worked to build new empires. Once again it came to pass that the chief assessor was called for his fame had spread even into the new land. Let us certify so that the mountain be safe for our children and we may have more power over the destiny of men. And the ex-chief assessor was rarely worried and sought refuge in the mountains. The mountain gods took pity on him yet again, for he was still a climber at heart and they were angry with the bureaucracy for dividing their land up into people's parks and introducing human rules into their kingdom. They spoke to him and said, "Go in peace my son, we have forgiven you your transgressions and know you do not wish to repeat them. Go down to the land of men and speak to all the climbers for they are men who are true and know the ways of the mountain gods. Tell them to rise up and oppose the bureaucrats who do not understand the mountain kingdom and legislate their laws in ignorance of its realities. No one is totally safe in our kingdom and he who enters it must do so at his own risk. We will continue to exact our toll, it matters not that you be certified for it is written that man must control his destiny in our land by exercising his judgment. Each man knows of himself what is within him and his life is ultimately his responsibility."

Henceforth the ex-chief assessor was filled with joy and a great weight was lifted from his shoulders. He lived happily ever after in a land of free mountains and no certification.

Bill March

Some Thoughts on the Expedition Climbing Game

A qualitative shift in the games analysis of climbing is becoming increasingly apparent, particularly in our approach to the big hills. During the 1978 post monsoon season in Garwhal Himalaya alone there were four small British parties attempting objectives traditionally the preserve of much larger expeditions. The north-east face of Nanda Devi West, the south face of Changabang, the south face of Kalanka, and our attempt on the south-west face

of Nanda Devi East and the Nanda Devi Traverse, are all major Himalayan objectives in the modern idiom. What is significant is not the fact that any one of these objectives was attempted by a small group but so many of them, at the same time in such a relatively small area. As we know, this type of activity was not confined solely to northeast India.

The historical mainstream of mountaineering is predicated on deeds such as Mallory's on Everest, Welzenbach's and Cassin's in the Alps, Buhl's on Nanga Parbat, and more recently those of Messner and Habler on Hidden Peak, Boardman and Tasker on Changabang, and Messner alone on Nanga Parbat. But noticeably in the last few years these tactics have been consciously adopted by those other than mountaineering's elite vanguard.

It is this increase of small groups on big mountains, the percolation downwards of elite standards, which argues for a qualitative shift in the climbing games typology. It was Lito Tejada-Flores who first analyzed climbing into a hierarchy of games in his seminal paper *Games Climbers Play*. Flores sees seven discrete games, ranging from Bouldering to the Expedition game, each characterized by its own set of rules,

The higher one goes on the scale, the more inaccessible and formidable become the climber's goals, and in consequence, he need apply fewer restrictions to conserve the full measure of challenge and satisfaction inherent in the climbing-game he is playing.

To ensure the full measure of challenge, the rules are more complex at the lower end of the scale. As Flores explains:

For example, it would be an absurdity to use a ladder to reach the top of a boulder in Fontainebleau, but to use the same ladder to bridge a crevasse in the Khumbu Icefall would be reasonable since Everest defends itself so well that one ladder no longer tips the scales toward certain success. Thus the basic principle of a handicap is applied to maintain a degree of uncertainty as to the eventual outcome, and from this very uncertainty stems the adventure and personal satisfaction of climbing.

These rules provide us with a dynamic framework in which to consider climbing; the application of rules from a lower to a higher game being the way the sport develops. As the complexity of rules shifts upwards the number of climbing games will decrease, and the first to go will be the Expedition game.

Flores realizes this when he writes:

The eventual victim, of course, will be the expedition game which will disappear completely as super-alpine climbing takes its place. This is not only the newest but, in a sense, the most creative climbing-game, since here the nature of the obstacles encountered is so severe that it will be a long, long time before technological advances even begin to encroach upon the climber's personal satisfaction. The possibilities, on the other hand, are immense. One can even visualize the day when, equipped with ultra-modern bivouac gear, a climbing party of two sets off to do an 8,000 meter peak just as today one sets off to do a hard route on the Grand Teton or on Mont Blanc.

What I don't think Flores quite realized was how quickly the complex of rules would rise. We now have examples of a significant number of climbers attempting the most difficult, serious and ambitious of routes. Messner may be the doyen but, as I have argued, there are many others not far behind.

Has this any practical significance for those of us who attempt to use super alpine techniques in the expedition arena? Reflecting on the death of my friend Ben Beattie on Nanda Devi in summer 1978, and of those many others who died in the greater ranges that year, I think it has.

Flores argues that the complex of rules will move slowly upwards as a significant mass of the climbing community adopt the style of ascent that the creative nucleus of elite climbers have been using. Good style being the application of a more complex set of rules to a higher game, such as Messner applying the rules of the alpine game to his recent ascent of Everest. When the majority accept the feasibility of the actions of the elite and do likewise, is when the rules change and the movement from one game to another is confirmed.

Is this what is happening to the Expedition game? It certainly appears as if a significant mass of the climbing community are adopting super alpine rules while playing the Expedition game, if what happened in the Garwhal in 1978 is typical. However the other glaring fact is that a lot of people died while doing so. Although the statistics are not yet available my guess is that expedition fatalities are on the increase.

There could be a number of reasons for this. More people are going on expeditions and therefore proportionately more will die. It could be that with the increase in the number of expedition climbers, the quality will be diluted and the number of deaths from incompetence rather than 'bad luck' will increase. OR it could be that the generalized application of rules up the spectrum is premature, that the climbing community does not quite understand the implications of such a shift. Perhaps Flores is correct in his assumption that the assimilation of new rules by the climbing community is a slow business.

We are in the age of the democratization of achievements — the media encourages us to believe that everything is within our grasp. Indeed it is true that psychological barriers all too often inhibit the fulfillment of potential, and the more we realize that the better. But this implies a degree of responsibility, a more exact appreciation of what is possible and what it is in reality, I can do. The balancing of this equation is fundamental if our aspirations are not going to lead us to dissolution. What I am trying to say is that our aspirations must be militated by application. That to climb Everest without oxygen, to do the Nanda Devi traverse alpine style, requires preparation, conditioning and experience of a degree not previously associated with traditional expedition climbing. The margin is so severely reduced that even with technological innovation only the fittest will survive. The most ambitious goals and the highest mountains are essentially undemocratic and we are naive to assume otherwise.

This may all seem unduly pessimistic, overcautious and

unadventurous — a rationalization in the face of failure, or an overreaction to the death of my friend. But it does seem to me dangerous and glib to adopt the rules of super-alpinism on expeditions, without fully realizing the responsibility and preparation they require.

Walking back down the Rishi Gorge, having just buried my friend and facing the prospect of telling his wife and family of the event, I began to realize that the application of alpine style techniques to major Himalayan objectives is a difficult, dangerous and committing business. Far more so than even we had imagined. Although we were all competent, fit mountaineers, with plenty of high standard alpine experience, we were not in the Messner class, neither by skill, temperament or commitment. Yet playing the game by alpine rules requires his type of dedication. Perhaps we (Ben) were unlucky — whatever; our experience (and now it seems that of many others of the 1978 season) provides a salutary warning to those of us who search for the hard ways up the high hills.

David Hopkins

Rehabilitation of Meadow and Trails Adjacent to Elizabeth Parker Hut, Lake O'Hara Area, Yoho National Park

O'Hara meadow has received a great deal of visitor use through the years. At one time it was a popular area for both group and individual camping although this activity is no longer permitted because of the associated environmental damage, as documented by Landals and Scoffer (1973). Trails through the meadow however, continue to be heavily used. Visitors coming only to use the facilities at the Elizabeth Parker Hut located within the meadow also generate a significant amount of localized traffic.

The need for rehabilitation of some of the trails and meadow, particularly in the vicinity of the hut, prompted Herb Kariel, chairman of the ACC Huts Committee, to contact Frank Stevens, superintendent of Yoho National Park, in autumn 1978. Herb suggested that with the assistance and support of Parks Canada the ACC could undertake a programme of rehabilitation the following summer. The goal would be to help rectify possible past oversights by the ACC and to work with Parks Canada toward sound management of the area. Herb included several suggestions for trail and meadow improvement in his letter to Frank but added that an on-site investigation and further discussions with Parks Canada personnel would be necessary before final plans could be made. Frank wrote to say he was very pleased to grant us approval and offer assistance in our venture. Herb then asked for a volunteer from the Edmonton or Calgary Section of the ACC to organize and co-ordinate the programme. Joey Jacks offered her assistance and was promptly drafted for the job.

Rehabilitation at Elizabeth Parker. John Shaver and Kathy Calvert unload another one. J Jack



With just one hour's work the stone path from the auxiliary hut to our water supply is complete. J Jacks



During conversations with Parks Canada personnel over the next few months we learned this project would be a 'first', not only for the ACC but also for Parks Canada. This was to be the first time a citizen's group would be allowed to work on lands within the national parks of western Canada, and possibly even within the entire national parks system. With the importance of this venture firmly entrenched in our minds we were determined it would be a success.

Joey contacted Bruce Leeson, head of natural history for the research division of the western region of Parks Canada, in late spring of 1979 and arranged to meet him in Calgary on 18 June. She and Bruce and Gail Fitzmartyn, a botanist with Parks Canada, discussed the steps we should take before we would actually appear on the site with our crew of volunteers. They arrived at the following timetable: an on-site evaluation on 3 July, followed by our submission of a proposal to Frank Stevens no later than 15 July outlining in some detail the work we intended to do. Allowing for the usual delays, we decided to schedule our project for the weekend of 18 and 19 August. If we did not manage to complete the work in one weekend we could return in early September.

Joey met with Bruce Leeson and Yoho Park wardens Alan Knowles and Don Mickle at O'Hara meadow on 3 July as planned. The four decided on a scheme to close and reseed some trails and restore others. When they had ironed out the details, Joey and Bruce drove to the Yoho Park headquarters in Field to discuss their plans with Frank Stevens and Ian Donaldson, head of visitor services for the park. Frank and Ian agreed to arrange for vehicles, supplies, equipment and extra manpower. All we needed now was to send in a proposal to Frank with our detailed plans and round up our crew. In a moment of exuberance Joey had promised a skeptical Frank we would have between 15 and 20 volunteers at the trailhead the morning of 18 August. Finally, after many weeks of planning, the anticipated weekend had arrived!

The morning of 18 August began ominously in heavy cloud cover as our group of 16 waited at the bottom of the Lake O'Hara fire road for a once-in-a-lifetime ride up to the lake in Parks Canada vehicles. At the top we piled our personal gear, along with the communal food, picks, rakes, sledge hammers and shovels into several wheelbarrows and trudged along the path to the hut. Several jobs awaited us and we quickly broke up into small groups to begin. Two crews set to work moving two large signs to more appropriate locations; one group dismantled a bridge and moved it to a crossing nearer the hut; several hardy members filled wheelbarrows with flat rocks from the remains of the old cook shelter and laid these along the path from the auxiliary hut to the creek where the ACC obtains its water supply; others were engaged in transplanting willow shrubs to block trails we wished to prevent the public from using. When these tasks were complete we joined Bruce Leeson and Yoho Park wardens Kathy Calvert and Alan Knowles. These three were already hard at work on the main trail from the creek to the hut realigning logs the regular Parks Canada trail crew had set out for us the previous week. With a natural reserve of sand and gravel at our disposal from the woods nearby we continued to work steadily through the day, transferring loads onto the newly aligned main trail.

Most of the work was completed the first day. On Sunday the group wandered off to enjoy the scenery leaving Alan and Joey to post our handpainted signs requesting the public not to use specific trails. The one job remaining is the application of topsoil and seed to the newly abandoned trails, but this will be left for the regular Parks Canada crew to tackle at a more appropriate time next spring.

The weekend was most definitely a success. We achieved our goals and had fun at the same time. Who could ask for more? Our volunteers are eager to take on an even more challenging project next year. With increased federal budget cutbacks and staff reductions in our national parks prompting a recent comment from Al Davidson, assistant deputy minister for Parks Canada, emphasizing the need for volunteerism in our parks, who knows what schemes the new year will bring?

Johanna E Jaks and Herbert G Kariel

REFERENCES

M Landals and G W Scotter 1973 Visitor impact on meadows near Lake O'Hara, Yoho National Park. Canadian Wildlife Service Report. 184 pp.

Avalanche Transceivers

The use of avalanche transceivers has increased in the past few years due to their proven ability to save lives. In a typical accident in Utah recently, three ski tourers wearing these devices were quickly located and dug out alive by a fourth member of the party who had emerged on top of the large slide that had overwhelmed them.

The use of these devices should not be overrated however. All seven victims in a recent helicopter skiing accident in British Columbia were also wearing avalanche transceivers but were killed by the sheer force of the slide. This stresses a fundamental fact of avalanche safety: most people buried in an avalanche do not survive. A transceiver will make it easier to locate a buried victim but should not be used as license to travel in terrain that would otherwise be considered too dangerous.

There are currently at least five brands of transceivers on the market. When purchasing a unit, look for the following features:

1. A unit with a UIAA approved frequency of 2275 Hertz.
2. A one piece combination transceiver rather than a separate transmitter and receiver.
3. A unit with a foolproof transmit-receiver switch that cannot be accidentally turned off or switched to the wrong mode. Units with interlocks that do not permit quick and easy switching from the transmit to the receive mode should also be avoided.
4. A dry cell rather than rechargeable battery unit if you are planning to use the device for multi-day trips.
5. A rugged construction.
6. A range of at least 20 m in the transmit and receive positions.

Since the cost of these units is still quite high, clubs or other groups should consider purchasing several and then renting or lending them out to individual members.

There is at present a lack of precise instructions on the most efficient use of transceivers. The following is a detailed list of instructions that have been used successfully by the Mountain Rescue Group and the First Aid Ski Patrol in the Vancouver area

The units are combination transmitter-receivers. When travelling in avalanche terrain the device is kept in the transmit mode. If someone is buried, rescuers switch their sets to receive. Since the signal strength increases as one approaches the transmitter, a rescuer can quickly home in on the buried unit.

PRE-TRIP TESTS

1. The leader takes his transmitting unit and moves 15 away from the rest of the group. Everyone else switches to receive and checks whether their unit is picking up the signal.
2. The leader now switches to receive and turns his volume down. Individuals switch back to transmit and walk, one by one, past the leader who checks to make sure each unit is transmitting.
3. The leader switches back to transmit and ensures that the group has at least one avalanche probe and snow shovel for use in case of a slide.

RESCUE

1. Check for further slide danger. Pick an escape route in case of another avalanche.
2. Rescuers switch their units to receive (maximum volume) but should be ready to go back to transmit if another slide occurs. Double check to make sure that each unit is in the receive mode.
3. Spread out across the most likely burial area and grid search using a spacing of 25 m. Note that the spacing may vary depending on the type of transceiver used. Check the range of your instrument and adjust accordingly.
4. Constantly change the receiver orientation as you move (see Figure 3) since the signal strength also depends on the receiver-transmitter alignment. You may pick up a signal at one orientation but not another.
5. When a tone is heard, the rescuer calls out "Signal" and continues without deviation, along the grid line until the signal fades (see Figure 2). Only two people at most should track the signal down; the rest should assemble the rescue gear or close ranks and continue the search if there is more than one person buried.
6. Return to the signal strong point, turn 90 degrees, turn the volume down until the signal can just be heard and continue searching in the new direction. If the signal immediately fades, turn around and walk in the opposite direction (see Figure 2).
7. As you get close, turn the receiver through all three planes (see Figure 3) until the maximum signal strength is obtained.
8. Keep the unit in this orientation while continuing the search. Keep narrowing down the search area (walk until signal fades, return to strong point, turn 90 degrees, turn volume down and re-orient for maximum signal strength), eventually sweeping the receiver right over the snow to find the point where the signal is strongest. If the victim is deeply buried it will not be possible to define one point of highest signal strength. In this case bracket the zone of maximum signals and dig in the middle of this bracketed area.
9. Use a probe to locate the victim and dig. leaving the probe in place. When the head is uncovered, clear the mouth and begin artificial respiration if needed. Turn the victim's transceiver off if there is more than one person buried.

Figure 1 -search patterns for, a-one searcher, b-more than one searcher. Frank Baumann

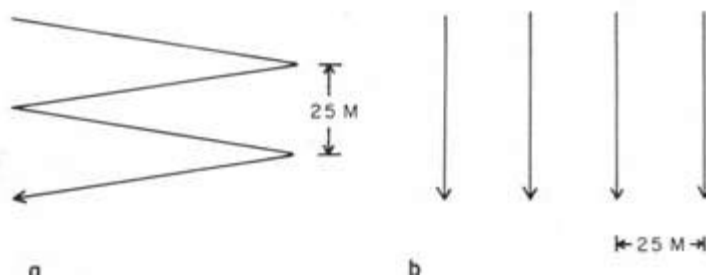


Figure 2-transceiver search. Frank Baumann

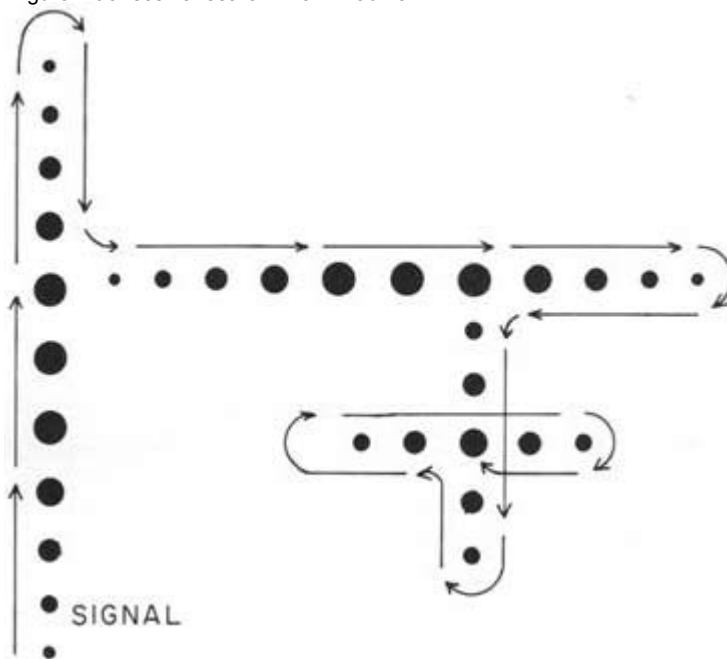
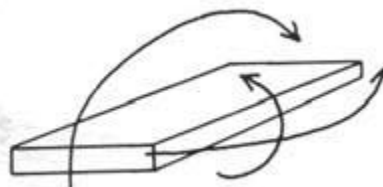


Figure 3-turning the receiver through all three phases. Frank Baumann



Transceiver search-ski patrollers at Whistler Mtn home in on a buried transmitter during a practice session.

A systematic search pattern is the key to success. Frank Baumann



PRACTICING

Place the unit in a protective wrapper (glove, ensolite, etc) and make sure it is transmitting. Never throw the unit around. Practice until each party member is able to locate a buried unit in less than five minutes. Stress the importance of a systematic search.

OTHER POINTS

1. Replace the batteries every season or after about 40 days of use. Replacement is also necessary if the unit can no longer receive or

transmit 15 m or about half the rescue spacing used. Use only the best alkaline batteries.

2. The unit should be turned on before venturing into avalanche terrain and kept in an inside pocket (not your pack) to keep the batteries warm and ensure that the device is not ripped off in a slide.

Reviews

Escalades Dans Les Cantons De L'est

Bertrand Côté. La Haute Perche Inc, Sherbrooke, 1979. 12 photos, 3 maps, 56 pp. Paper. \$4.50

The rapid growth in the popularity of climbing over the last few years in the Eastern Townships area called for the publication of this excellent guide book. Prior to this guide the only information available was a limited edition pamphlet that needed updating. Not to mention the fact that the 100 copies printed disappeared quickly. So, to the local or visiting climber, this book is more than welcome.

To the regular Journal reader this will probably ring some bells. All sites described were, at one time or another, pictured in different editions of the CAJ. For instance, Mt Pinnacle (400 ft at its apex) known for the beauty of its lines and the scenery it provides (CAJ 1977:89), Lac Larouche, an 80 ft cliff more renowned for the variety of routes it has to offer (CAJ 1978:113), and last but not least, Marble Mtn, appreciated for its water ice flows and wild surroundings (CAJ 1979:102). The routes compiled by the author, one of the leading local climbers, all appear to be accurate. Photographs of action are very good except for one that is too dark. Photographs of cliffs are equally good, taken from the Quebec climbing repertoire *Parois d'escalade au Quebec* by Jean Sylvain (reviewed CAJ 1979:47). Layout is ventilated and pleasing to the eye. Binding by Chicago screws is a very interesting feature, allowing for easy updating. The size is also adequate (4'2" x 6'2") to fit in your back pocket.

It is interesting to note that due to the relatively recent development of both rock climbing sites covered, they have never seen the extensive use of pitons. Thus the locals implore all nuts ascents, leaving the fixing of pins to first ascenders or local maintenance (except for the few aid routes, naturally). Personally, I feel that due to the quality of the rock of most climbing sites in Quebec, this practice should be standard everywhere! That is, the necessary pins should be left in situ on first ascents. The only drawback that I can come up with is the price, but then again, in these days of inflation, the mountains are the only things that are not getting any higher. . . .

Bernard Mailhot

Kananaskis Country Trail Guide

Tony and Gillean Daffern. Rocky Mountain Books, (106 Wimbledon Crescent, Calgary), 1979. 72 black & white photographs, 14 full page contour maps, 6 sketch maps, 160 pages. Paper \$5.95

This guide is the result of two year's intensive exploration into an area covering 4000 sq kms, a fact which accounts for the authors' lack of participation in Club events of late. I think it is safe to say that they have found every existing trail, from boring logging roads redeemed by leading quickly into alpine areas to old Indian crossings of remote passes. The authors dug up some hitherto unpublished information about Indian trails and other little historical tidbits. The book also describes a large percentage of trailless hikes which, despite a pitch or two of scrambling, can be described as ridge walks. Kananaskis Country, aside from being a remarkably good climbing area, is also an area sans pareil for training walks or places to go in fall and spring when trails in the neighbouring National Park are out of condition. And the cross country skiing can be superb.

Mike Mortimer

Rocky Mountains Of Canada South

It is unfortunate that there are numerous small errors in the new edition, most not of a serious nature. However, one picture is in the wrong location and there is a very serious mix-up in the routes on Mt Goodsir. I did not see the final draft and as the typed versions which I last perused were correct, I can only assume the mistakes were made by the publisher. For these I sincerely apologize.

The picture of Mt Fisher taken by Pat Morrow on page 123 has been included in the Fisher Range with Fisher Peak. It should be with Mt Fisher (page 86) in the Hughes Range.

The routes on Mt Goodsir are another matter. The correct version is given at the end.

THE NORTH TOWER This has only two routes which we are aware of, the original 1909 route mostly incorrect in the new edition and the South Face (1961) route (# 4 in new edition).

THE SOUTH TOWER The 1903 first ascent route, described incorrectly in new edition. There are two traverses, one in 1915 and one in 1933. In the new edition these are shown on the North Tower. The 1971 northeast face route is shown as being on the North Tower as is the 1974 south-west couloir route which is also incorrectly described. The 1910 South Face route is correct.

Glen W Boles

MT GOODSIR (N TOWER) (3525 m)

1 1/2 km NW of S Tower at heads of Goodsir and Zinc Creeks.

FA Aug 1909; A Eggers, J P Forde, P D McTavish, E Feuz. From camp in Ice River valley at 1550 m near base of N tower,

gain SW ridge as soon as possible and follow it until forced to leave on account of perpendicular bluffs. Traverse a rock slide to S to reach another SW ridge overlooking the valley between the N and S towers. Follow this to base of N tower at 3140 m; traverse along narrow ledge covered with snow and scree (the upper leg of the V of snow distinctly visible from Ice River during summer months), ascending W face close to SW ridge. On arrival at a snow-filled couloir, ascend rocks to right (good holds) for 105 m, then cross to avoid a difficult cliff and continue ascent close to the couloir up steep ledges to summit snow. Ascent from camp, 9 hr (CAJ 2, 2-63; 22-95).

2. S Face, July 1961; G Boles, R Dawnay, C Fay, R Kruszyna. From high camp near tree line in Zinc Gulch up open slopes, then traverse around base of S Tower to amphitheatre between towers. Up over scree, then hard snow to a spur at 3050 m; thence sharp snow ridge to base of S face. Here a broad scree band (lower leg of V) led up to the left of apex of the horizontal V of Rte One. Upper leg of V followed as in Rte One but party stayed to right of icy couloir (falling rock) all the way to its top (very rotten rock) coming out on top of a subsidiary pinnacle. Steps were cut across notch to main summit block. Party then made a short traverse left on steep rock, then easy scrambling to summit; 10 hr. Descent by same rte, 5 hr (CAJ 45-182).

MT GOODSIR (S TOWER) (3562 m)

Highest peak of massif between Ottetail and Ice River valleys. The mountain is visible from many parts of the Rockies and Selkirks (App 9-377; 10-9).

July 1901, incomplete ascent: C E Fay, J Outram, J H Scattergood, C Häsler. The rte of the first complete ascent was followed, the party not crossing the final sharp ridge because of dangerous cornices.

FA July 1903; C E Fay, H C Parker, C Häsler, C Kaufmann. Camp at 2100 m in upper Zinc Gulch and ascend the basal W slopes of S tower over grass and scree. Ascend broken rock of SW buttress toward a conspicuous snow shoulder to E and via its narrow ridge to the base of a steep cliff at 3260 m 5 hr. The cliff was ascended over poor holds for 30 m and the narrow S arête followed for 150 m to the summit, heavily corniced on Ottetail side. Ascent from camp, 8 hr; descent 6 hr. (App 10-285; CAJ 1-72).

The peak was traversed from SW to NW Sept 1915 by J W A Hickson, E Feuz Jr following the above rte in ascending. The wall of the summit crest was skirted to the right and the summit snow gained. Descent to the N proved difficult and required a bivouac (App 19-236; CAJ 7-41). In 1933 the traverse as made in the opposite direction by Miss K Gardiner, Miss L Gest, E Feuz Jr. C Häsler Jr. Ascent 9 3/4 hr; total time 14 1/2 hr (CAJ 22-94).

NE FACE Aug 1971; T Auger, C Locke, L MacKay, D Vockeroth. Approach from Lake O'Hara over McArthur Pass, down McArthur Creek to Ottetail River, then up Goodsir Creek. Bivouac below glacier. Party then crossed glacier, climbed 150 m of good limestone to a hanging glacier, then continued up on good ice and snow. Above the second glacier is a long, drawn-out climb on very rotten rock, up chimneys, gullies, sloping ramps and open faces to the summit ridge and upper part of the E face. Easier going to summit, 10 hr. 2000 vertical meters from bivouac; pitons and ice screws used. Descent via SW ridge to Zinc Valley. V/F6 (CAJ 54-85).

SW COULOIR, Aug 1974; J Darragh, D Lahoda, J Lucas. From camp at 2255 m on the NE fork of Zinc Cr party ascended open

slopes along creek bed to prominent snow couloir. This was climbed to 3050 m, thence over rotten rock of left hand rock couloir to SW ridge. (At this point the FA rte is joined below the steep summit cliff.) The wall was skirted to the right, the ridge regained, then to summit 10 hr. Descent via same rte 4 1/2 hr. Much rockfall can be experienced on this rte late in day. (Most direct rte to summit.)

S FACE; Aug 1910; J A Allan, F J Barlow. Recorded climbing SW face, but it is thought maybe they climbed a more southerly face route as their approach was made from Upper Zinc Gulch.

Exploring The Stein River Valley

Roger Freeman and David Thompson. Douglas & McIntyre, Vancouver, 1979. Maps, black & white photographs. 164 pp. Paper \$6.95

This book is a major contribution to help the cause of the many conservationists who view the Stein watershed as a beautiful unspoiled area which should be allowed to stay that way. The appeal to save the Stein from exploitation is very clearly defined. In addition there are very good trail descriptions and several chapters covering history, geology, vegetation, fish, wildlife, hiking hints, and a Stein River boating guide. The message is buy the book and help save the Stein. The authors are contributing royalties to the "Save the Stein Coalition".

N Purssell

Peruvian Trail Guides: Cordillera Blanca North; Cordillera Blanca Central; Cordillera Huayhuash

4 1/8 x 6 1/2 inches. 1979. All three available from Rocky Mountain Books (106 Wimbledon Crescent, Calgary). \$3 each.

Anyone who has planned a trip to Peru for climbing or trekking will realize that up-to-date and accurate information is often hard to come by. While getting to one's climbing objective may be half the fun it can also take more than half the time and effort. Bartle's three guidebooks may not make the trip any easier but they should give one a good idea of what's ahead, though there is no substitute consultation with the local guides, park people, and trekking outfitters. Most trail descriptions include an introduction, listing attractions, level of difficulty, and trail conditions: tables of distances, altitudes, and connecting trails; and detailed route descriptions, including elevation profiles. Each booklet has a list of conventions and definitions used, a metric conversion guide, notes on the Cordilleras, and a page of common Spanish and Quechuan words. One should also carry a copy of the maps provided in Ricker's Yuraq Janka and other topographical maps whenever possible. Topos are usually only available at the Instituto Geografico Militar in Lima. Prices quoted should be used as a guide only — and as the basis for a good bargaining position. In general the booklets provide useful and timely advice on the duration of the trip, difficulty, transport to and from, time saving route selections, and so on. Although written for the trekker they will be invaluable to both trekker and climber alike. Regarding Bartle's comment on the water in the quebradas, one note of caution is necessary. Treat all water in the Cordillera with iodine. No water is safe.

Cordillera Blanca North

Four sketch maps, 3 tables of distances and altitudes, 3 profile graphs showing the relation between altitude and distance along a particular route. 56 pp. Treks covered include Laguna Safuna,

Pyramid of Apamayo, Llanganuco to Santa Cruz, Quebrada Yanapaccha, and Laguna Peron.

Llanganuco to Santa Cruz, one of the three 4 to 7 days treks described, is presently one of the most popular in this range. Laguna Safuna and Pyramid of Alpamayo complete the trio. Quebrada Yanapaacha is a shorter trip, 1 to 2 days at most, depending upon the start (Yungay or the upper end of the Quebrada Llanganuco) and transport arrangements. Laguna Peron is a short trip by car, truck, or collective for an unforgettable view from one of the most beautiful lakes in the Cordillera Blanca. Well written and with good information, though some names mentioned in the descriptions may not be found on the maps.

Cordillera Blanca Central

Six sketch maps, 7 tables of distances and altitudes, 7 profile graphs. 67 pp. Treks covered include Pasaje de Uta, Quebrada Honda, Quebrada Ishinca, Laguna Llaca, Pitec (4 trails), Olleros to Chavin. These range from easy to moderate with a few occasional difficulties thrown in for excitement.

On Quebrada Honda trek note that on the Honda side of the Portachuelo Pass the trail branches not far from the pass itself. One branch leads up the Honda, the other down to Rinconada. It is possible to miss this, especially in poor conditions. Snow can be found on the Honda side south of the pass and the trail is steep on both sides, perhaps more so on the Honda side. One can camp within 1/2 to 1 hour on the Quebrada Juitush side near a small pond but better camping is found further down as suggested in the guide. The trail into Quebrada Escalon starts directly below Nevado Esparta. Nevado Akilpo/Esparta is not marked on the map in the guide.

On the Quebrada Ishinca trek it should be noted that the locations of Laguna Akilpo and Nevado Urus are missing on the sketch maps, which makes it difficult to understand the inclusion of a possible side trip to the Laguna Akilpo. From my experience on Urus Este in 1978 I would recommend not only caution but mountaineering experience and a roped party before attempting this trip. The section on the treks around the Pitec connection is well done and to be recommended for both the natural beauty of this area as well as the lack of mobs of trekkers.

Cordillera Huayhuash

Two sketchmaps, 4 tables of distances and altitudes, 4 profile graphs. 40 pp. The circuit of the Huayhuash and the trail to Laguna Jahuacocha. This region has only one very long (12 to 14 days) and strenuous circuit, and one hike to only the western portion. A number of interesting side trips are described which can be reached from the main circuit. The main sketch map is not as helpful as it should be. For instance villages such as Janca are mentioned but not shown on the map. The second trip described takes in part of the main circuit only, namely the western part, and should take about 4 days.

Kevin O'Connell

The Fool's Climbing Guide To Ecuador And Peru

A Work of Fiction and Plagiarism by Michael Koerner. Buzzard Mountaineering, 1976. Available from Rocky Mountain Books, Calgary (106 Wimbledon Crescent, Calgary). 29 sketch maps, 8 short but useful appendices. 4 1/2 x 6 7/8 inches. 92 pp. \$2.50

This is an interesting guide which should be taken seriously, though not for its section on climbing in Peru which consists of nine words on page 73! There is good advice on weather, equipment, transport, accommodations, and restaurants. It would appear now that no maps are available from the Instituto Geografico Militar although one can have a look at the master copies. Prices quoted for car or jeep rental are quite out of date. In the summer of 1979 jeep rental was about \$800 US per month. Gas cost about 14¢ per gallon.

While written mainly for the mountain scrambler, access information is generally quite useful. Climbers will be interested in the description to Cotopaxi Park which is accurate. Generally the road is not in good condition and one will usually have to park below the first Refuge (ca 4550 m). The second and main hut is the Jose Ribas Refuge (ca 4920 m) at 40 sucre per night. It is cheaper if one is an ACC, AAC, or UIAA member and has a card to prove it. The description of the usual Cotopaxi ascent route from the hut is more or less correct. There are crevasses and a rope is recommended.

Care is required on the access to Chimborazo from Quito and Ambato. There are two ways into Chimborazo. Both routes begin from the police control station south of Ambato. The first goes west towards Guaranda along a new road. Once officially open this road will be the shortest route from Quito. The bus travels this route but private vehicles may not be allowed to continue beyond the beginning of the road. Once past the military at the entrance gate it is 63 kms to Pogyos (ca 4270 m), best identified by a white, abandoned concrete building at the point where the power lines cross the road. The guide's route description is at best out of date. From the building a well-travelled and contoured road to Riobamba leads towards Chimborazo and Las Cruces. A four wheel drive vehicle is recommended. At Las Cruces (ca 4600 m), there are several buildings and a number of roads. After the buildings there is a very new and good road which goes up to about 4800 m. The new Edward Whymper Hut is at about 5000 m. There are shorter ways to the hut from Pogyos if you know the location of the hut. With a good vehicle the road is the shortest way to the Refuge.

The second route noted in the guide is via Riobamba. From Riobamba continue south until the turnoff on the right to Guaranda (ca 20 kms from the outskirts of Riobamba). Again a four wheel drive vehicle is recommended. This route presently is the most popular and certainly the road from Las Cruces to the Hut is most easily visible from this side. The Hut is about 30 sucre per person. Guardians may be armed National Guardsmen. The Tourist Office in Quito, while helpful really does not know a great deal about routes. Road maps are generally hard to come by. The standard route description seems to be accurate and certainly easily found at the start.

One cautionary note should be added to the climb description of Tungurahua. While the mountain is easily accessed from Banos it is also developing a reputation for accidents. These mountains should not be underestimated.

The final section of the guide includes a list of peaks with altitudes in the Western, Eastern and Transverse Ranges, conversion

graphs for altitude, and temperature, and data on wind chill, slope angle, animal tracks, heat exhaustion/stroke, mountain sickness, pulmonary oedema, and emergency first aid. All in all, *The Fool's Guide* is an entertaining and useful book.

Kevin O'Connell

The Southern Cordillera Real—Mountaineering And Skiing In Bolivia

R Pecher and W Schmiemann. Plata Publishing, Ltd, Switzerland, 1977. Available from Rocky Mountain Books (106 Wimbledon Crescent, Calgary) or in La Paz, Bolivia (at Los Amigos del libro). 14 sketch maps, 16 black & white photographs, a useful appendix of names and places, a bibliography, and a place for personal notes. 5 x 7 1/2 inches. \$7

The two authors worked, climbed, and skied extensively between 1967 and 1974 in Bolivia and this guide is based upon their experiences. There is a brief review of the Bolivian Cordillera from the Apolobamba in the north to the central Cordillera Real, including a detailed description of the southern Cordillera Real. All descriptions have La Paz as the ideal starting point. The advice given is useful but some caution must be used. For example maps are available in limited numbers from the Instituto Geografico Militar in La Paz, generally only as black and white copies. Current sources of information would include the Club Andino (Bolivia 6000, off the Prado on Calle Colombia 133, telephone 324148) and perhaps TAWA, Andinismo Mesli (Casilla 8662, telephone 325796). Transport can be a problem. Jeep rental can be attempted at Kolla Motors, Rent-a-Car (502 Rosendo Gutierrez, telephone 341660). While the access and approach descriptions are good, as are sketches of the peaks, ascent routes have often changed. Consult with local clubs or trekking outfits who can often provide updated sketch maps of the more popular climbs. On the peaks of major interest often the standard route will be; well stamped out. Main climbs described in the Cordillera Real include Condoriri, Huayna Potosi, Chacaltaya, Hampaturi-Chicani, Yankho Huyo, Mururata, and Illimani, totaling 21 climbs in the Southern Cordillera. The second part of the guide deals with skiing in the Cordillera Real and in a brief six pages describes as many ski routes, mainly in the Chacaltaya, Huayna Potosi and Hichucota groups.

The Appendix contains information on access to peaks in other ranges and a good bibliography. Access to all routes described is reasonably good but a good deal of transport planning is required. Few lie along bus routes and even the most visible peaks, seemingly near to La Paz, take a good deal of time and effort to get to and return from.

Kevin O'Connell

The International Directory Of Mountaineering Clubs And Organizations

George Griffin, Jim Peavler and George Pokorny. Mountain Press Publ Co, Missoula, Montana, 1979. 162 pp. Paper. \$5

The usefulness of this unique book may be inferred from its title. It contains names and addresses of mountain clubs and mountaineering associations throughout the world. Whenever possible date of founding, number of members and name of publications are also listed. There is an additional section on

rescue groups. Included are 985 clubs and associations and 122 rescue groups.

It is unfair to point out that a certain Spanish club is not listed or that some addresses have already become obsolete. The authors claim no completeness for their work and, realizing that this book is indeed the forerunner of a more perfected reprint, they appeal in their Preface for help to point to errors and omissions. By helping to improve this useful work of reference we all stand to gain.

E Echevarría

The Ice Experience

Jeff Lowe. Contemporary Books, Inc, Chicago, 1979. 111 black and white photographs, 211 pages. Cloth \$9.95, paper \$5.95

At first glimpse *The Ice Experience* may appear as another "formula" book on how to get started in the ice climbing game. It certainly covers the range of tools, techniques, and tenacity necessary for entry into the sport. From ice bouldering to McKinley scale expeditions, cutting ice bollards to placing deadmen, moving piolet ramasse to using the monkey hang, the book is a first rate compendium of reference material for ice climbers. So far it is the most complete text on the subject, specifically orientated to the North American scene.

Jeff's choice of title is a precise definition of its contents. In these pages he reveals his intensely personal quest for a total experience that has become, for him, a lifelong commitment to climbing. This commitment has driven him to research every ice climbing backwater in North America. *The Ice Experience* is a book within a book, providing valuable insights into the game itself and also guidebook type information as to where to climb in the mountain states, the east, the Canadian Rockies, the St Elias, and Alaska.

Jeff Lowe is a climbing romantic and identifies with ice pioneers such as Kain and Fuhrer on Robson, Charlie Bell on Rainier, and John Bouchard on the Cannon Cliff, New Hampshire. Throughout he risks his obvious egocentricity to relate endless personal accounts of the most difficult ice routes in North America. He does this only to be true to his Self and the sport and to tell it like it is. For some readers his writing style may appear as that of a prima donna. But Lowe must be respected for his willingness to bare his ego in order that newcomers gain a true perspective of the intrinsic rewards of the ice experience.

The last two pages of the book, Afterwords, underline Jeff's personal love affair with ice. Here the reader can identify strongly with Jeff the poet-philosopher and understand why he has written what and how he has. He uses strong words — death, truth, purity, spirit, satisfaction — to entice the reader into "seeing" that the ice experience "... is a path of approach to a world apart."

Murray Toft

Collins Guide To Mountains And Mountaineering

John Cleare. Collins, London, 1979. 129 black & white and 18 colour illustrations, 66 line drawings and maps. 208 pp. Cloth \$25

The author's name will be familiar to many for his work as cameraman for *The Eiger Sanction* and for his book *Mountains*

(1975). His new book purports to be “a complete guide to the principal mountain ranges in the world”. There are as many chapters as there are continents and each is subdivided into sub-chapters for selected mountain ranges. Each range has an introduction describing its orography and climbing history, a survey of its major peaks and passes and other significant data like huts, access, maps, guidebooks and bibliography. Three appendices deal with the mountaineer’s equipment, terminology, and a basic bibliography. The selection of mountain ranges responds solely to the author’s inclination. One could dispute the inclusion of unimportant mountain areas in Australia or Southern Africa while magnificent ranges in western Canada, Bolivia and West Irian are left out. Coverage of ranges selected is also uneven. The Caucasus and the Garwhal-Himalaya receive a more reduced treatment than, say Scotland or Colorado. Still another remark concerns a preference to list British expeditions in detriment of more meritorious ones from other countries (but fortunately without the extremes reached by Ronald W Clark in his books). Errors were kept to a tolerable minimum.

Despite these remarks, the book is worth its price. Its main asset lies in its illustrations, found on almost every page. Some of those in colour are as delicate as a watercolour painting. It is satisfying to say that the most attractive pictures are the author’s. Quality then, in text and plate, is there. One can only hope that a new edition will offer a reasonably complete guide to mountains and mountaineering, one that will live up to its ambitious and enticing title.

E Echevarria

Classic Rock

Ken Wilson. Grenada Publishing, Hart-Davis MacGibbon Ltd, 1978. 170 black & white photographs, 256 pp. Cloth.

Classic Rock is the second volume of what is shaping up to be a series entitled Great British Rock Climbs. Classic Rock follows the format of its predecessor Hard Rock — a personalized essay on each climb accompanied by excellent photographs of the climb.

Classic Rock presents a selection of 80 routes of up to Hard Severe (5.5) grade selected from virtually all of the major climbing areas in Britain. The selections vary from big Scottish routes, such as Tower Ridge, to small crags with each climb possessing one or more attributes that go to making a great climb. All of the climbs selected are “classic” in the sense that they form an important part of the fabric of British climbing history. There are bound to be disagreements with Wilson’s selection of routes with readers arguing that some climb should have been included or excluded but this is the inevitable result of any selection.

While a volume dedicated to climbs of a difficulty of 5.5 or less might seem anticlimactic or out-of-place in a day when the limits of rock climbing are being pushed to 5.11 and 5.12, this is not the case. Not all climbers are capable or even desirous of climbing at the very limits of what is possible. In an era where the emphasis in the climbing world in general and the world of climbing publications in particular has lauded the accomplishments of the super-climber with his chalkbag, taped hands, sky-hooks and rurs, Classic Rock successfully conveys the challenges and pleasures of climbing at a more modest standard which can be attained with no more

than a handful of slings and which can be enjoyed by virtually any climber. In short Classic Rock is a testimony to the fact that climbing even at a modest standard retains its mystery, pleasure and power.

Understandably the essays on the selected climbs in Classic Rock do not exude the same degree of excitement or exuberance as those found in Hard Rock — to have done so would have been inappropriate having regard to the grading of the classic climbs. The essays do nonetheless convey clearly the not inconsiderable difficulties of the routes which faced those who pioneered them — some of the routes being awesome accomplishments of their time and representing major steps in the development of British climbing.

Classic Rock should be a welcome addition to a climber’s library whether as a guidebook, history or coffee table adornment. It will be particularly appreciated by Canadian climbers who have in mind to go to Britain primarily to sample the beers, ales, ciders, and hospitality of British pubs but who just might like to take in a “classic” climb or two in some of their sober moments.

Doug McLean

Alpine Canada

Colour Photographs by JA Kraulis, text by Andy Russell. Hurtig Publishers, Edmonton, 1979. 144 pp. Cloth \$27.50

Alpine Canada is the latest in Hurtig’s series of picture books on Canadian mountains, of the same format as last year’s The Mountains of Canada. The colour reproduction seems much improved, although both books were printed by York Litho; perhaps because the separations were made by Artercraft Engravers instead of Empress or perhaps because the photographs were of better colour quality to begin with. Unfortunately it is a rather pedestrian book and somewhat lacking in focus. Janis Kraulis is a competent photographer but somehow his images fail to move one. He is at his best in fragmentary views or details of the landscape and indeed, these predominate throughout the book. Few of the broader views evoke the mood and spirit of the mountains — they lack that edge that makes one catch one’s breath. This is another unpeopled book and as such tends to give a calm and peaceful view of mountain country, losing a dimension of the alpine experience. The drama and struggle are missing, leaving a residue that is somehow too clean, too soft.

No relationship exists between the photographs and the libretto by Andy Russell which is organized on the theme of the four seasons. Of Russell’s turgid prose the less said the better. He is at his best describing animal action, such as the evocative piece on the grizzly’s waking at winter’s end. His writing is not equal to his power of observation and we are often treated to large helpings of overripe mushy prose which makes for poor story telling. He needs to develop an economy of style which would convey more of what were obviously great experiences, rather than getting in their way.

One can’t help wondering why Hurtig seems unable to bring off a really first-rate mountain book, but let’s hope they keep on trying — who knows, maybe it’ll be third time lucky!

Andrew Gruft

Himalaya E Karakorum

Mario Fantin. Club Alpino Italiano, Milano, 1978. 250 pp. 97 black & white illustrations, 32 line drawings & maps. Cloth.

No book more useful than this in the field of Asian Mountaineering history can be found. Almost 650 peaks are indexed and no less than 1580 expeditions reviewed, each with its main accomplishments and several sources of information. The book is divided into four major parts: the Himalaya proper, the Karakorum, illustrations and the cartography of both ranges. Pictures are large and impressive. There are also several double paged maps. The text is in Italian, no handicap for understanding the massive data it contains. No work like this can be free of errors and this has several — for example, Baghirati II, listed in the Garwhal-Himalaya section, reappears in the section for the Punjab. Such errors represent only a minor weakness considering the vast quantity of information stored in these pages. What matters is that for the first time we find now gathered into a single, well illustrated volume all the useful information hitherto scattered in many books and journals and in many countries.

E Echevarria

Wheeler

Esther Fraser. Summerthought, Banff, 1978. 28 black & white photos, 164 pages. Cloth. \$15.95

Regardless of the recreational function of the recently extended Wheeler Hut in Glacier National Park, BC, it serves to commemorate in a tangible form and appropriate place the enormous contribution of Arthur O Wheeler to the Alpine Club of Canada. Not only was Wheeler one of the main founders of the Club but he served as its President and later Director for 20 years, initiated and edited this Journal, ran numerous mountaineering camps and expeditions, and continually promoted the Club and its activities.

His contribution to the Club is clearly evident in its past records and Journal. Likewise his books stand as records of, and monuments to, his important professional work as a surveyor of the Rockies and Selkirks. However such sources are relatively inaccessible and do not cover Wheeler's earlier or later life or place his work in context. It is in this respect that Esther Fraser's book on Wheeler makes a real contribution to our understanding of the man and his work and his key role in the development of the mountains in the early decades of this century. Fraser portrays Wheeler, certainly with justification, as a man of energy and purpose. His background gave him a sense of social position, self confidence and leadership. However some people, as Fraser points out, found him, especially in his later years, to be imperious, crusty and prone to outbreaks of temper. His authoritarianism and rage were presumably offset by his charm, especially in the eyes of the ladies, and by the example he set. He undoubtedly had lots of admirers and was able to persuade people to get involved in activities and to pursue them with the utmost drive. Thus while readers may be left with mixed feelings about Wheeler's personality few would deny the sincerity of his actions and the enormous contribution he made to the Alpine Club of Canada and to the knowledge, development and appreciation of the Rocky and Selkirk Mtns. The book not only helps to fill a gap in the documentation of the life and work of one of the largely neglected second generation of Canadian explorers but, as with most historical works, implicitly raises a number of questions relating past to present. For example, do we presently need the sort

of leadership in Club and conservation activities demonstrated by Wheeler? Should the Club again address the broader objectives, espoused by Wheeler, of developing appreciation of the mountains, fighting for their conservation and stimulating scientific research? Are trails with huts and guided walking tours a thing of the past or should they be encouraged to enable a broader spectrum of the public to appreciate the backcountry of the mountains? Should groups such as the ACC, the National and Provincial Parks Association, and the Youth Hostels Association not receive greater assistance from government agencies — even VIA Rail? The absence of a Club conservation chairman in recent years suggests the way the Club has been going in this respect, as does the content of the Journal in other ways. This book should certainly stimulate readers to think about Club and conservation objectives in future. While recognising the enormity of the task confronting the biographer of such a long lived, energetic, and public minded individual as Wheeler, and generally applauding Fraser's efforts, I feel bound to express some reservations about the resulting book. While the book, like her previous one *Early Travels and Explorations*, makes no pretension to be a scholarly work and is aimed at the popular market it could have been a little longer thus enabling the author to provide more information on some aspects of Wheeler's work as well as providing some evaluation of his long term achievements. One is left wondering for example what the final maps produced from his surveys were like, how they compared with other work of the period and today. What impact did the information collected have on government decision making? Did the work set a precedent for similar surveys elsewhere? The book would have been enhanced by an excerpt from one of his survey maps and certainly by the inclusion of more survey photographs, many of which are of excellent quality yet few of which have been displayed to the public. A list of the coverage of his photographs and details as to where the collection is now housed and its availability to public inspection would be of interest. A map indicating the location of places referred to in the text would also have enabled greater appreciation of the extent and difficulty of the survey work. A list of his publications would also have been useful for those wishing to probe his work and character further.

Even within the present scope of the work improvements could have been made. The style, probably because of a wish to cover as much material as possible, is "bitty". This also results from the author's wish to include numerous quotes, many of which are inserted in the text with difficulty. The above average number of typographical errors also is distracting. Despite these criticisms of scope and style I would recommend the book to a wide range of readers from members of the ACC to western historians and cartographic history specialists. The story of Wheeler's life provides a useful theme for linking many strands of mountain history, geography, and land use management. Undoubtedly future works on these topics will refer to his activities. Like his contemporary, JB Harkin, Commissioner of National Parks, AO Wheeler was dedicated to the exploration, appreciation and recreational development of the Rocky Mtns. This book, like the Wheeler Memorial Hut, is a fitting and welcome tribute to the "Grand Old Man of the Mountains" but his contribution to the Canadian mountain and ACC scene still merits greater analysis and recognition.

John Marsh

The Mountaineers: Famous Climbers In Canada

Phil Dowling. Hurtig, Edmonton, 1979. Black & white photographs. 258 pp. Cloth. \$13.95

This book presents one story told ten different times. Like Harlequin Romances only the names of the characters and the places involved change, the plots remain the same. That is not to discredit the ten individuals whose climbing careers are outlined in the book but rather the staid way in which their stories are told.

The format of the book is the same, chapter by chapter. The ten people whose careers are outlined are presented in a chronological order based upon the year of their birth. Each vignette has a few opening paragraphs describing an event in the subject's career. These introductions concern: a — climbing during a storm, b — bivouacking during a storm or, c — escaping from a death defying situation: choose 1 — avalanche, 2 — rockfall or 3 — other. After the hero or heroine has escaped from one of those episodes we travel back in time to the subject's birth. Dowling then moves us forward, allowing us to learn a little of their earlier background and the point at which they became involved in climbing. Once there we proceed from one climbing expedition to another, from one summit to the next. By the end of the tales the first four are dead, the next two are doing very well and the final four are wondering what the future will bring. The book is constructed with such a rigid format and sameness of style that *The Mountaineers* makes for a tedious read.

Phil Dowling's aim was to invite "the reader to share in some personal adventures of nine men and one woman who have achieved fame for their climbing activities in Canada". Obviously with the long and outstanding careers of these people any capsulization would result in some loss. Here the people themselves become lost behind the list of first ascents, the essence of their personalities hidden among the climbing descriptions.

Dowling offers us little personal insight into these ten, burying the individual under an impressive collection of accomplishments. This results in little differentiation between the chapters; one is much like the next. By examining their careers the basic development of Canadian mountaineering is seen and yet Dowling does not state for the reader where these individuals fit within the overall history of the sport in Canada. *The Mountaineers* however does have some redeeming qualities, The illustrious careers of Charles Fay, Val Fynn, Albert MacCarthy, Conrad Kain, Ed Feuz, Phyl Munday, Fred Beckey, Hans Gmoser, Brian Greenwood and Dick Culbert reminds one just how rich Canadian mountaineering tradition is. Too often we tend to forget this when looking at climbing history in other parts of the world.

A map of British Columbia is provided on the book's inside covers with triangles representing the major peaks described within the text. The addition of more larger scale maps of specific areas accompanying the stories would have been a bonus, especially for those unfamiliar with the regions discussed.

The book is provided with 15 photographs that are poorly reproduced and tend toward the formal portrait rather than the action or scenic shot. On a separate page a list of illustrations is provided but no captions are located directly with the photographs. One

has a choice of either writing in the captions oneself or constantly referring back to the list, a real pain in the ass. One noticeable aspect of this book is its low price with regard to the cost of similar hardcover books these days. But then again considering what one receives for the money perhaps it is not.

Geordie Howe

Mountain Passages

Jeremy Bernstein. University of Nebraska Press, 1978. 9 articles, 15 illustrations and photographs, 2 sketch maps, 278 pp. Cloth. \$12.50

All nine chapters of *Mountain Passages* were previously published as articles in *The New Yorker Magazine*, *The New York Times*, and *Mountain Gazette*. Bernstein is a physicist, a staff writer for the *New Yorker*, and has written several books, among them *Ascent* (1965) and *Einstein* (1973).

Most of the climbing adventures are centred around Chamonix. There are some delightful sketches of Chamonix climbs and guides. A recurring theme is guided mountaineering. The author's background as a scientist comes through in many places, with some interesting parallels between the physicist's and guide's professions. Bernstein is at his best when describing the joy of climbing, the feeling of being alive and happy in the mountains. Unfortunately some of the climb descriptions are not easy to understand and often unrelated to photographs and illustrations. I found the book both interesting and entertaining, though some sections lost my interest. There is something here for everyone but the hard climber will be disappointed. It's fair to say that it is not an easy task putting together a book from a series of essays. If you are familiar with any of the essays or any of the author's previous mountain writing this may well be the book for you. I personally feel that the Chamonix guide approach to mountaineering is somewhat limited. *Mountain Passages* is quite an appropriate title and the reader will hopefully find most of this mountain pot-pourri to taste.

Kevin O'Connell

Gervasutti's Climbs

Giusto Gervasutti. Translated by Nea Morin, and Janet Adam Smith. Daidem Books Limited, London, 1978; *The Mountaineers*, Seattle, 1979. Black & white photographs. 201 pp. Paper. \$6.95

First published in 1947 as *Scalate Nelle Alpi* and translated into English ten years later, *Gervasutti's Climbs* is a remarkable account of mountaineering during the pre-Second World War years. Giusto Gervasutti was at the forefront of the European climbing community during those years and his memoirs add much to our understanding of this period. Along with such climbers as Boccaslatte, Chabod and Devies he produced new routes of such a standard that many are classics today. Gervasutti describes vividly the first ascents of the east face of Tacul, the south-east ridge of the Pic Gaspard, the north-west face of the Olan, the east wall of the Grand Jorasses and the second ascent of the Croz Spur of the Grand Jorasses among others.

After a span of 33 years it is something to say for Giusto Gervasutti that his book still reads well. (This may be in part due to the excellent translation.) As a result of both the style of

his prose and the way in which he did his climbs this book has become a classic. Granted his somewhat militaristic approach to the mountains may be at odds with some readers today but he still comes across as someone deeply involved with the mountains.

From this reader's point of view the book has one major fault. While an excellent account of Gervasutti's climbing reminiscences, as an autobiography it falls short. Gervasutti's adventures in the mountains are filled with great passages of an extremely personal nature, especially his last chapter, but the book as a whole allows us no insight into the man himself. He provides us with basic aspects of his life as a mountaineer, from how he feels about climbing to the nature of his place in the mountains and alpine history. This unfortunately is the only facet of his personality that we are allowed to see.

This sort of writing makes for a good story but in no way for good autobiography. Gervasutti has provided us with a chronological account of his alpine career but little if anything of his life away from the mountains. Surely the eleven years which are presented in the book contained more than the brief climbing adventures he describes. Gervasutti obviously gave up so much for the mountains and their way of life and yet he has little to say in regard to these sacrifices. What of his life when he was not climbing?

Gervasutti's *Climbs* provides one with hints of life in the military but little else. Historically the years from 1932 to 1939 were filled with the rise of fascism in Germany and Italy and this was Gervasutti's world. Would not these events and others have affected him? Of course, yet we get no mention of them. On a more personal level Gervasutti spends a few seasons climbing with Lucian Devies. He describes the closeness of this friendship. Yet when 1939 comes and France falls a year later only a hint is given that a war is on. There is absolutely no mention of the effects the war had on his relationship with Devies, a Frenchman, or how the war affected him personally.

Perhaps Gervasutti thought only his life in the mountains was what mattered and all else was superfluous. This may have been the key to his drive and phenomenal career. Whatever the answer the book makes superb reading and the publishers have done well to reissue this book so long out of print and scarce in the used book shops. Well recommended.

Geordie Howe

The Rockies: High Where The Wind Is Lonely

Photographs by Shin Sugino, text by Jon Whyte. Gage, Toronto, 1978. 96 pp. Cloth \$16.95, paper \$8.95

This glossy, copiously illustrated book represents a further attempt to capture the elusive essence of the Canadian Rockies. The text, by Banff poet Jon Whyte, has a fine literary quality and skillfully integrates a variety of themes. Attention to geological, glaciological, and ecological processes and coverage of historical events and seasonal changes serves to emphasize the dynamic nature of this event. By interweaving these themes rather than separating them Whyte also manages to remind us that this landscape is a complex, interacting system of which man is a part.

The author's personal anecdotes and brief descriptions of the

exploits of past explorers and mountaineers help the reader to relate to this landscape and to appreciate the wealth of experiences it affords. The first section begins with a description of the Columbia Icefields, "a forbidding place ... at the arctic brink", and the exploration of this area. The work of such scientists as Hector and Link is placed in the context of the theories of Lyell and Dutton and thus the geological evolution of the range is explained. Then the early mountaineers are introduced, the tragic death of Philip Abbot on an ascent of Mt Lefroy described, and the successive exploits on Mts Assiniboine, Robson and Alberta discussed. The section concludes with details on the establishment of the national parks in the Rockies. While Whyte suggests that "it is as wilderness that the Rockies are distinguished" he also emphasizes that "extensive areas have been mined, dammed for hydro projects, used as rangeland by ranchers, [and] forested by pulp operations near Jasper". He also mentions the continuing conflicts between tourism and wilderness, man and grizzly, but asserts that "still it is possible for a back-country user to make his way up from the ruck of the valley and enter a private world where it does seem possible, if not probable, that no one has ever been that way before".

The second section covering the spring and summer seasons, is shorter, and stresses ecological conditions, the altitudinal zonation of climates and species, the role of fires, and the fragility of the limited areas of meadow, where "a surface scar may last a hundred years". The final short section considers the autumn and winter, when "sounds die. Odours perish. Textures disappear." It deals with the wildlife, their activities and adjustments in the shortening days. Again there is a personal anecdote, and one about Jimmy Simpson, a cultured man who chose to live in the mountains and heard music in the air. The text then, is an engaging mixture of natural history, human endeavour, ideas and personal reminiscence presented with a distinctive literary style. It does not attempt to be all inclusive and only hints at man's impact on the Rockies, the park management problems and the phenomenon that is Banff townsite. However it does reveal something of the character of the wilder parts of the Rockies and in a more integrated and dynamic fashion than other writers have achieved. It is unfortunate therefore, that the quality of the text is not matched by the photographs. The photographs, by Shin Sugino, are all in colour, some spanning two pages, others taking only a quarter of a page. They range from mountain panoramas to close-up views of individual plant species. The photographer clearly has an interest in lighting effects, there being a variety of sunsets and water reflections. Like the text the photographs cover the full range of seasons with those of winter or snow and ice being perhaps the most appealing. Views of people and wildlife are absent and like the text such areas of intense human activity and impact as the Trans-Canada Highway, Banff and Jasper are not covered. No views of species are identified.

While such omissions might be justified the quality of those photographs that are included certainly leaves much to be desired. Although readers are not again subjected to the standard views of Lake Louise and Mt Rundle many of the photographs of alternative subjects lack documentary interest or artistic value. Some, such as that of Peyto Lake, appear to have been cropped to fit the page. The overwhelming blueness, rather than being attributable to the colour of the Rockies, most likely results from poor processing or the use of slide film. While some blurring may be intended for artistic purposes, elsewhere it surely indicates poor focusing or

excessive enlargement. Certainly the scratch marks should have been avoided.

The quest to capture the Rockies on film has been a long one. Since the time of Byron Harmon we have had notable achievements but there is still plenty of scope for producing a photographic record of the Rockies that matches those created for other regions and does justice to some of the writings on this inspiring if elusive and lonely environment.

John Marsh

Another Ascent Of The World's Highest Peak —Qomolangma

Foreign Languages Press, Peking, 1975. Profusely illustrated with superb colour and black & white photographs. 120pp. Soft cover

This is an account of the successful Chinese climb of Mt Everest's northeast side in 1975. Despite the inevitable human egotism there lies in this account a truly remarkable story of a beautifully executed and scientifically valuable climb. The pictures are for the most part superb and form the bulk of the report. Occasional references to the Party, revisionism, proletarian revolutionary line and so on may seem quaint, overdone and even gross by our standards but they do make for interesting and sometimes even humorous reading.

Technically the climb may not compare with the south-west face. But the Chinese succeeded on a route that repulsed for decades, using equipment that would seem almost antiquated by recent expedition standards. Particularly obvious are old army tents, the apparent lack of fixed rope, and the paucity of oxygen sets. Although no mention is made in the report, the pictures suggest that some of the party may have even made the ascent without oxygen — or so nearly so that it doesn't really matter! Many pictures show a refreshing comradeship and almost childlike happiness on the part of the expedition, rarely sensed in other accounts. Smiling workers cheerfully make the expeditions' down clothing, colourful native dancers entertain at base camp, happy knots of climbers inspect fresh vegetables flown in from Peking. True happiness despite the lack of cassettes, unlimited beer and other trappings of western oriented expeditions.

The expedition also made valuable contributions to science not the least of which was an accurate survey of the exact height of the mountain (8848.13 m). Other work included a survey of the area's geology (they even brought back a sample from the summit!), atmospheric studies, and an electrocardiographic test that was carried out on the summit and radioed back to base camp.

Frank W Baumann

The Games Climbers Play: A Selection Of 100 Mountaineering Articles

Edited by Ken Wilson. Diadem Books Ltd, London, 1978. Distributed by The Mountaineers, Seattle. 35 black & white photographs, illustrations by Sheridan Anderson. 688 pp. Cloth. £12

The articles in this anthology touch on every possible aspect

of climbing, with sections divided into bouldering, alpine treks, style, ethics, expeditions, epics and obituaries, mountain rescue and education. Like the focus in other male-dominated activities, many articles refer to women with a lecherous twinkle, whereas only three out of the hundred treat the female half of humanity with directness — one from the perspective of politically determined policy, "Chinese Women Climbers", the second from the end of a British climber's nose, "Doing It For The Perks", and the third from the viewpoint of a woman climber struggling with her own self-assertion, "Hands". Surely the editor could have found an account of an all-women climb written by one of the participants, which would equal the drama and humour evident in similar ventures by men. Despite the criticism, Ken Wilson's anthology presents an especially comprehensive look at the climber's world.

J Oyster Hardie

Books Received

CLIMBER'S GUIDE TO DEVIL'S LAKE

William Widule and Sven Olof Swartling. University of Wisconsin Press, 1979. Line drawings and black & white photos. 200 pp. Paper. \$8.95 US

GUIDE TO THE CONTINENTAL DIVIDE TRAIL. VOL. 2: SOUTHERN MONTANA AND IDAHO

James R Wolf. Continental Divide Trail Society, 1979 (Box 30002, Washington, DC, USA). Maps and black & white photos. 236 pp. Paper. \$8.95 US

APPALACHIAN ODYSSEY: WALKING THE TRAIL FROM GEORGIA TO MAINE

Steve Sherman and Julia Older. The Stephen Greene Press, Battleboro, Vermont, second printing 1977. Line drawings. 248 pp. Paper. \$6.95 US

MODERN SURVIVAL: OUTDOOR GEAR AND SAVVY TO BRING YOU BACK ALIVE

Dwight P Schuh. Hurtig Publishers, Edmonton, 1979. Black & white photos. 182 pp. Paper. \$8.95

CROSS-COUNTRY ONTARIO

Michael Keating. Van Nostrand Reinhold Ltd, 1979. Black & white photos. 111 pp. Paper. \$3.95

ON THE HEIGHTS

Walter Bonatti. Translated by Lovett F Edwards. Diadem Books Limited, London, 1979. Line drawings and black & white photographs. 248 pp. Paper.

THE VERTICAL WORLD OF YOSEMITE

Edited by Galen A Rowell. Wilderness Press, Berkeley, California. Colour and black & white photographs. 207 pp. Paper. \$9.95 US

FROM THE OCEAN TO THE SKY

Edmund Hillary. Hodder & Stoughton, London, 1979. Line drawings and black & white photographs. 272 pp. Cloth.

ILS ONT CONQUIS L'HIMALAYA

Bernard Pierre. Plon, Paris 1979. Illustrated. 250 pp. Paper.

Medical Reports

The Big Bicycle Bash — Research on the Mexican Volcanoes

“When I got to the top I was just a basket case — I could hardly hold the screwdriver. I found out later that some of the screws I had put in were so crooked that the threads had been partly stripped.”

Such was the response of one of the students from the Faculty of Physical Education, University of Calgary who, in December 1978, was involved in reassembling a bicycle ergometer for high altitude physiological research. The research, part of a laboratory experience for a course entitled Physiological Adaptation to Environmental Stress, involved measuring selected physiological responses while the climber pedaled an ergometer (stationary bicycle) at various altitudes. The bicycle, capable of being dismantled into 12 pieces and then reassembled, was carried unassembled to the mountain. Prior testing was compared to results measured at elevations of 13,000, 15,000 and 17,800 ft.

The trip was threefold in nature: to provide a high altitude climbing experience, to continue red blood cell research and any adaptation it makes to high altitude, and to involve the students in some field laboratory situations. Laboratory exercises involved exercising on the bicycle ergometer at the previously mentioned altitudes and recording heart rates, blood pressure, respiration rate and working capacity. The actual nature of the heart's electrical activity was also measured by an electro-cardiogram. Both physiological and psychological stress were analyzed by determining the presence of certain stress by-products in the urine. This analysis involved collecting all urine from each subject for 24 hours and retaining (for later testing) a small portion of each. Further laboratories involved the collection of venous blood and the determination of haemoglobin and haematocrit. Isometric muscle contraction times and blood pressure were also examined.

We left Calgary on 8 December 1978. After a quick lay-over in Los Angeles the group were soon relaxing over cervezas in Mexico City. The next day a bus was hastily recruited and by noon we were in the immaculate Tlmacas Hut at 12,800 ft. Here the bicycle was assembled and the next day tests were given. In the afternoon everyone climbed to the Direct Hut at 15,000 ft and the bicycle was again assembled. The following day three students who were feeling poorly descended to Amecameca at 8500 ft. The others did more tests and one group carried a load of equipment up to the next camp at 16,000 ft.

On 12 December, the fourth day at altitude, 12 members climbed Popocatepetl. After reassembling the bicycle three were capable of undergoing the test. On the descent some stopped for the night at the Direct Hut. The others continued on to the Tlmacas. The following day the three who had descended to Amecameca returned to climb the mountain while the others rested and the day after the whole group travelled to Puebla.

After a night in rehydration the group travelled to Tlachichuca to begin the climb of Orizaba (Citlaltapetl, 18,851 ft). The trail to the high hut, Piedra Grande, at the 14,000 ft level, was dry and

dusty and it was not long until a thumb had secured the services of a farm truck which dropped us off at the village of Hidalgo. We hoped to reach the hut that night and set off in a blaze of enthusiasm. Four members pitched their tent in the pine trees about two miles from the hut.

The next day a number of students were fatigued and experiencing many of the symptoms of acute mountain sickness. They elected to stay in the hut while the others climbed to a high bivouac at about 16,500 ft on the shoulder of Orizaba. After scratching out small tent sites a cold and windy night was spent. The next day beautiful weather greeted us and while Bill helped another student who was not feeling well back to the camp, six of the group journeyed back to Mexico City.

The trip was a valuable experience for both leaders and students. In retrospect the ascent, particularly when done with the heavy research equipment, was too rushed — resulting in too many people becoming fatigued and ill. Two other trips, in February and May, again with climbers who were novices at altitude, were more successful. More climbers reached the summits and with fewer altitude problems. The interjection of a rest (acclimatization) day every third or fourth day, climbing very slowly from camp to camp, in conjunction with forceful hydrating appears to be crucial in the process of overall acclimatization.

George R Kinnear and William T March

Leaders, George Kinnear and Bill March; paramedic, Erich Rast; research, Pamela Simper; lawyer, Gordon Rathbone; researchers and subjects, 12 students.

The Big Bicycle Bash: measuring ECG on the summit of Popocatepetl. Bill March



Medical Problems of Exposure in Mountaineering

Exposure to risk and hazard is a thrilling aspect of mountaineering. Undoubtedly, part of that thrill is the danger inherent in exposure. Exposure to cold, wind, wetness and snow can cause significant loss of body heat resulting in hypothermia and frostbite. Excessive heat and sun exposure can cause sunburn, snow blindness or excessive accumulation of heat-hyperthermia or heat stroke. This paper is designed to help climbers better understand and prevent these problems, recognize their potential complications and begin initial therapy appropriately.

HYPOTHERMIA

Hypothermia occurs when a person loses body heat in large amounts. Both personal and environmental factors are associated with hypothermia (Table 1). In the mountains this occurs with low temperatures, wind (wind chill effect, Table 2), foul weather, inadequate clothing, wet or frozen clothing or skin, exposed skin and inadequate shelter, especially when a person is unexpectedly benighted. Overexertion leads to significant loss of body heat by panting. Inadequate food and water and excess alcohol also increase the risk of cold injury.

Early signs of hypothermia are important to recognize and treat. All members of a climbing party should watch their colleagues carefully, especially when the risk is high. Early signs may be undue fatigue, weakness, listlessness, forgetfulness, sluggishness, slow walking and confusion. Shivering often occurs and may be severe but may be absent during heavy activity. Inability to think clearly or loss of co-ordination often indicate serious hypothermia. In late stages the person will look pale and stiff with slow, shallow breathing and may lose consciousness. Unfortunately these symptoms can develop rapidly and lead to collapse in an hour and death within another two hours.

Prevention begins by knowing when hypothermia occurs and taking appropriate precautions. Provide adequate shelter, including ground insulation, wear warm dry clothing which covers the extremities including the head, have adequate food, water and salt, and avoid over strenuous exercise and sweating. Light work can prevent shivering and actually save body energy and heat.

As soon as hypothermia is recognized in any member of the party the climb should be stopped and treatment begun. First establish shelter if possible. Then remove all wet or damp clothing including underwear and replace with dry garments. This step is extremely important since heat loss may be increased by a factor of over 30 when the skin is wet or exposed to wet clothing. Additional heat can be supplied since victims are often unable to warm up by themselves. To do this put the victim in a sleeping bag with another warm person or warm objects such as warm water in bottles or warm stones. If the person is conscious enough to swallow he should be given warm liquids which will greatly speed rewarming. Alcohol however, should never be given as it actually promotes more heat loss through the skin because it dilates blood vessels.

FROSTBITE

Frostbite is a rather common injury among mountain travellers. As shown in Table 2, wind is an extremely important risk factor

for the development of frostbite. Other factors are summarized in Table 4.

Frostbite may be either superficial or deep. Superficial frostbite ("frost nip") involves only the outer layer of the skin. It usually occurs as a small patch on the nose, cheeks, ears, chin, fingers or toes. The skin looks white or waxy and is usually numb, although it may feel warm. Treatment consists of rewarming the skin with breath or contact with warm skin such as a pair of warm hands, the armpit or the stomach. Warm until the normal colour returns. Rubbing or exposure to extreme heat are actually harmful and should not be done. If frost nip is treated and the climb is to be continued, added protection (usually from wind and cold) must be provided to prevent its recurrence.

Deep frostbite is more serious. This occurs when tissue such as fat and muscle beneath the skin also freeze. The area becomes hard and woody with no softness when the skin is pressed. The skin is numb and white. Frostbite is rarely painful and may not be noticed by the victim. Treatment of frostbite with rewarming should be done only when there is no further risk of the area becoming cold

environment	personal
low temperature	inadequate clothing
wind	exposed or damp skin
wet or damp	inadequate shelter
nightfall	inadequate food
isolation	overexertion
foul weather	inexperience, unfamiliarity
	alcohol use
	slender body build
	benighted persons
	males

Table 1-factors associated with hypothermia. Eric Larson and Kathryn Zufall-Larson

Wind Speed		Cooling Power of Wind Expressed as "Equivalent Chill Temperature"																						
knots	mph	temperature (°F)																						
calm	calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60		
equivalent chill temperature																								
3-6	5	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60	-70		
7-10	10	30	20	15	10	5	0	-10	-15	-20	-25	-35	-40	-45	-50	-60	-65	-70	-75	-80	-90	-95		
11-15	15	25	15	10	0	-5	-10	-20	-25	-30	-40	-45	-50	-60	-65	-70	-80	-85	-90	-100	-105	-110		
16-19	20	20	10	5	0	-10	-15	-25	-30	-35	-45	-50	-60	-65	-75	-80	-85	-95	-100	-110	-115	-120		
20-23	25	15	10	0	-5	-15	-20	-30	-35	-45	-50	-60	-65	-75	-80	-90	-95	-105	-110	-120	-125	-135		
24-28	30	10	5	0	-10	-20	-25	-30	-40	-50	-55	-65	-70	-80	-85	-95	-100	-110	-115	-125	-130	-140		
29-32	35	10	5	-5	-10	-20	-30	-35	-40	-50	-60	-65	-75	-80	-90	-100	-105	-115	-120	-130	-135	-145		
33-36	40	10	0	-5	-15	-20	-30	-35	-45	-55	-60	-70	-75	-85	-95	-100	-110	-115	-125	-130	-140	-150		
white above		LITTLE DANGER								INCREASING DANGER								GREAT DANGER						
40 have		little								(flesh may freeze within 1 minute)								(flesh may freeze within 30 seconds)						
little																								
additional																								
effect		DANGER OF FREEZING EXPOSED FLESH FOR PROPERLY CLOTHED PERSONS																						

Table 2-cooling power of wind expressed as "equivalent chill temperature". Eric Larson and Kathryn Zufall-Larson

type	do	don't
superficial	warm by contact with warm skin; heat immediately.	rub; expose to intense heat; wait.
deep	get to a hospital as soon as possible, if possible. warm quickly in warm water.	rub; expose to intense heat; let more frostbite occur; amputate. rewarm until risk of refreezing or necessity of using injured part is no longer present.

Table 3-treatment of frostbite. Eric Larson and Kathryn Zufall-Larson

necessary factors	contributing factors
low temperature	wind (-6°C + 45 mph = -40°C + 2 mph)
sufficient exposure time	humidity
	direct contact
	lack of protection
	age and cigarettes
	vascular disease
	gasoline

Table 4-frostbite. Eric Larson and Kathryn Zufall-Larson

and when the person will not have to use the thawed extremity again. It is far safer and much less painful to walk on frozen feet to reach adequate shelter or medical facilities.

The best treatment method for deep frostbite includes rapid rewarming of the area by submersion in water at a carefully controlled temperature of 40 to 44°C (102 to 110°F) for 20 minutes. Cold water, intense heat such as by fire, or rubbing with any substance is harmful and will invariably produce more injury. Walking on thawed feet or re-exposing them to cold will also make the initial injury much worse.

Ideally this type of frostbite should be treated in a hospital as soon as possible, particularly because of the high risk of infection once thawing occurs. Amputation of fingers and toes should never be done outside a hospital. Amputations are usually carried out some time after the initial injury since there is no reliable way to distinguish viable from nonviable tissue in the early stages of frostbite.

SUNBURN

Sunburn results from excessive exposure to sunlight in the ultraviolet (290 to 320 nanometer) spectral region. In the mountains less of this light is filtered by the atmosphere and about 75% is reflected by glaciers and snowfields, thereby greatly increasing one's total exposure. High thin, cirrus clouds also increase atmospheric scattering of this light. Frequent and liberal use of sunscreens in creams and lotions help prevent sunburn. Most effective sunscreens contain P-aminobenzoic acid (PABA) or one of its derivatives. This substance absorbs light in the sunburn spectrum and also enhances skin pigment formation. Most mountaineers will also use an opaque blocking agent such as zinc oxide or titanium dioxide to completely prevent sunlight from reaching exposed areas like the nose, ears and lips. Covering extremities such as the arms with a light cloth shirt and wearing a protective hat with a visor is also advisable for persons with fair skin.

Treatment of sunburn consists of cold compresses, thick creams or ointments to soothe and prevent dryness, local application of cortisone creams, sprays or lotions to reduce more severe inflammation and aspirin for pain. Cortisone creams should be used sparingly.

HYPERTHERMIA AND HEAT ILLNESS

Three types of heat illness are relevant to mountaineers. Fortunately these illnesses are rare but one of them, Heat Stroke, is a true medical emergency. Heat cramps are muscular and abdominal cramps caused by acute salt loss. They usually occur in the setting of hot weather, exercise with heavy perspiration and little salt intake. Treatment consists of rest, massage and, importantly, intake of salt tablets or salty liquids. Heat exhaustion begins as progressive lassitude and an inability to perform work and is followed by severe headache, vomiting, shock and a rapid heart beat. The basic cause is water depletion accompanied by salt depletion. The blood and urine are extremely concentrated. Treatment consists of rest and rehydration.

Heat stroke (so-called hyperthermia) is recognized by three cardinal signs: severe disturbance of consciousness or other central

nervous disturbance; high body temperature (a rectal temperature of over 41°C is the rule); and hot, dry skin which is pink or ashen in colour. The disease is accompanied by a bounding pulse in the early stages which may progress to a thin, rapid pulse when circulatory failure and death is imminent. Bleeding, liver and kidney abnormalities are common.

Treatment consists of a high level of suspicion when persons are subject to hard physical activity in a hot, moist atmosphere and early recognition of the disorder. The two therapeutic objectives are immediate elimination of the hyperthermia (high temperature) and support of vital organs. Clothing should be promptly removed and the person cooled by any means — the most effective means being an ice bath. Massage may be helpful. Cooling should continue until rectal temperature is reduced to 38.3°C. If possible temperature should be measured frequently. In hospital the other major problems will be correcting any deficits of salt and water that exist and supporting vital signs. In the field the major goals should be to cool the person as efficiently as possible and arrange evacuation if the person is in coma, as they commonly are. Prevention rests on the principal of not overdoing it during those hot, humid days when heat stroke is likely to occur.

SNOW BLINDNESS

Snow blindness may be a serious, disabling complication of glacier and snow travel. During exposure the victim is usually unaware of any problem except a sensation of brightness. After exposure, up to eight to twelve hours later, the eyes feel dry, irritated and sandy or gritty. There is pain with eye movements and blinking. The eyes may be red with swollen eyelids and increased tearing. Often the cornea (the clear, protective covering over the pupil) will have microscopic erosions.

Snow blindness can be prevented with the use of sunglasses or goggles which transmit less than 10% of ultraviolet light. Side visors behind the glasses are recommended to prevent exposure from reflected light which is usually quite intense. Treatment consists of cold, wet compresses and can include a cortisol containing eye ointment. Eye patches which keep the eye shut may be needed for 12 to 24 hours in severe cases.

CONCLUSION

We have presented problems associated with cold, heat, and sun exposure in the mountains. Being aware of these, the conditions under which they are likely to occur, and the appropriate management, should make mountaineering from day trips to long expeditions safer and more pleasant. In all of these prevention is clearly the most desired goal. However an increased ability to recognize and treat these problems promptly can avoid disabling and possibly fatal outcomes.

Eric Larson, MD, and Kathryn Zufall-Larson, MD

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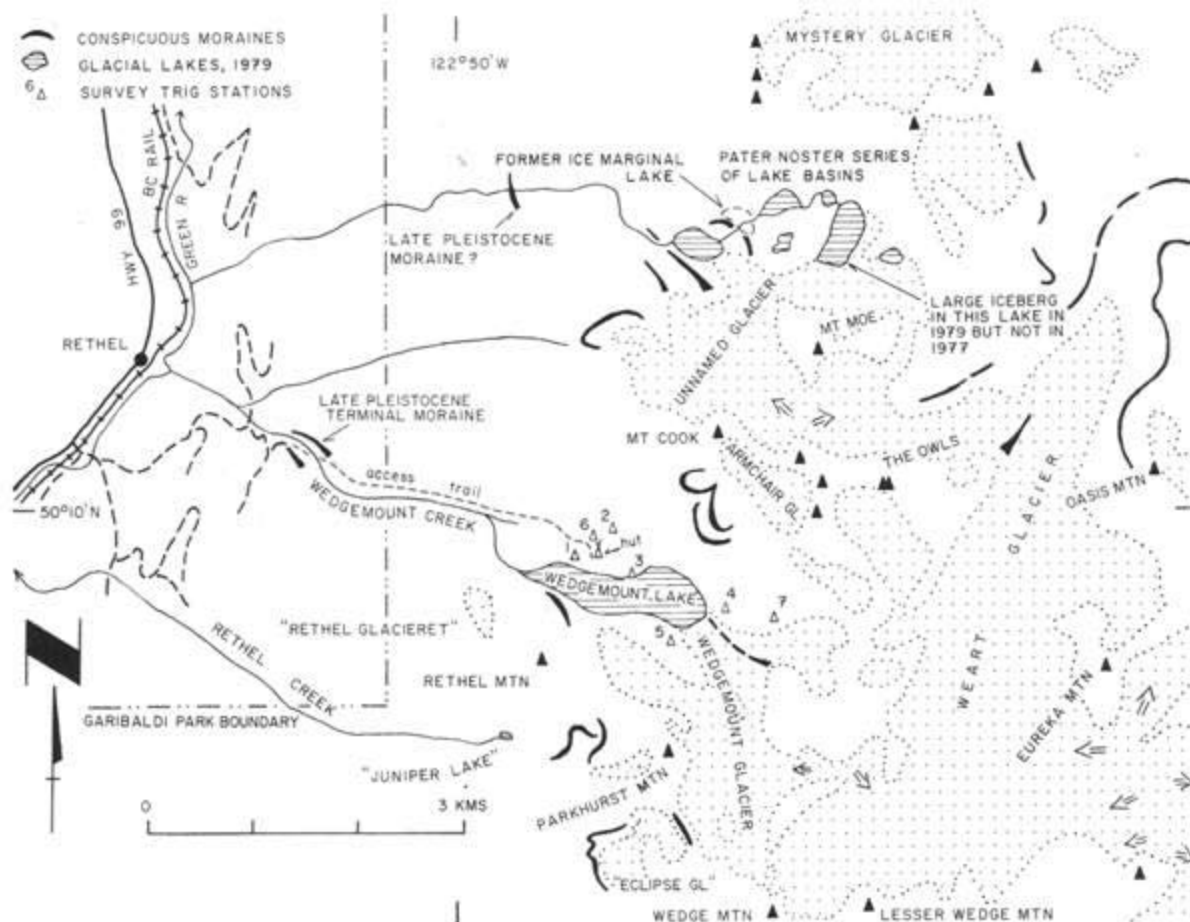
Wedgemount Lake and Glacier, Northern Garibaldi Park: 1979 Progress Report

A dry winter of 1978/79 followed by a prolonged dry and warm summer of 1979 did not augur well for the health of our glacier in northern Garibaldi Park. The same trend continued well into the autumn after our annual monitoring visit in the second week of September, when lake water levels were higher than normal (ca + 0.5 m). The colour was of Peyto Lake pea green to olive brown, never seen before in our seven years of prior visits. The snow or firn line was nowhere to be seen on the glacier, usually at this time of year between 2100 and 2140 m above mean sea level. We hiked up the hill behind the cabin to survey stations 2 and 6 and found the "line" lying rather irregularly between 2300 and 2400 m in the upper basin. Between the lower lobe of ice and that upper basin lay a morass of impassable crevasse patterns that we did not recall having been so well developed. At least two or three older firn lines from years gone by were exposed in this zone, but were best displayed on the flanks of the glacier which offered the only hope of crampon passage to the upper névé zone. It was indeed a spectacle and we realized why our hike up the trail had been so noisy and the creek so hard to cross near the logging roads. This unusual melt season would surely have a dramatic and drastic effect on the regimen of the glacier. At the glacier snout a squint across it seemed to confirm this assumption. The north side was losing its ice cliffed appearance, tapering in the melt down to meet a fan of exposed outwash gravel between it and the lake. The so-called slump zone reported and illustrated in last year's Journal was half gone, boulders and rock vaguely discernible in the murky water below the ice cliff at the mid-axial portion of the ice front. The higher ice cliff on the south side rose from an area of bedrock lined lake shore which we had observed only two years ago but could not see on this trip because of the water colour. It appeared that the lake had now reached its optimal size at the expense of a melting glacier once occupying its basin and thus the era of cataclysmic smashing of ice into the lake was drawing to a close. Icebergs were about to be a fantasy of the past and the throngs of people who hike to the lake during the summer were going to be disappointed.

The crew charged into the fray the following day. While Chris Frankich sat with instrument at Trig Stations 4-5 to hold an alignment between the two, an intervening velocity profile was set on the ice using five stations spaced roughly 50 m apart. Stone rings were built with slightly irregular 2 m diameters and centred with a tripod of laths and capping cone of plastic garbage bags on each so that Bill could find them on his terrestrial phototheodolite pictures that were to be taken on the following day from Trig stations Nos 1 and 6 (see CAJ 1978 map and CAJ 1979 photo). With one profile built the crew walked upstream to where the east and main arms of the glacier merged. The idea was to establish another profile to see if there were differential velocities between the two. The resultant medial moraine could easily be traced down glacier to the point where the east arm was virtually squeezed off to one side of the ice tongue altogether. Thus its net contribution to the flow and volume of ice at the lower transverse velocity profile will be virtually negligible, as indeed the dwindling health of its

accumulation or névé zone would indicate (see photo CAJ 1978). There was a problem of where to establish the survey end points for this upper profile. Karl scrambled up to the morainial debris onto bedrock above and found an avalanche free platform in front of a small pond, just above the lichen etched trimline of the former east arm glacier. A staggering 150 m of ice ablation since the climax ice advance was noted. We set the new control cairn (No 7) about 125 m to the north-west of Pug Pt 16894 (see map CAJ 1978) and ran a profile across the ice trending about 15 degrees of arc to the west of the main survey summit cairn on Wedge Mtn. It was the best that could be done; the geometry of the situation would not allow a closer southerly end point for the profile. Another five stone circles were constructed 50 m apart on the glacier below — a metal orange tag being placed under a central stone to mark the line to within a centimetre of error. As the profile is not visible from Bill's usual phototheodolite survey points, we will never know, spatially for this year, where the five ice stations are; three are on the east arm, another is on the main ice arm near the medial moraine, the farthest south is on the main arm and hopefully beyond the "drag zone" of the medial suture between the two ice masses. We will find out next year if the stone circles can be found.

Meanwhile Bill was painting four large targets on vertical rock cliffs near the snout of the glacier so that they could be used to "tighten up" his phototheodolite surveys. The following morning Bill and Chris set up the big camera for the photos and then surveyed in the targets with the "mountain transit". The students repeated the process with the latter. Karl clambered up to Mt Cook to obtain colour photos of the moraines and sediment charged lake. The view to the west revealed startling evidence of other unusual ice front calving activity in the upper most basin in a chain of colourful and picturesque pater noster lakes (no names on any). The lower lake (same elevation as Wedgemount Lake) is fed by a tumbling icefall of width slightly less than Wedgemount Glacier. According to AJ Campbell's surveys the lake was not there at all in 1928 but he lacked suitable nearby camera control stations to verify this. Aerial photos of recent years confirm his hunch — the ice overflowed the basin at late 19th Century climax times and probably generated a short-lived ice marginal lake to the north of the present day basin (see map). The newer lower lake was almost free of any iceberg activity on this view day. The next lake up in the basin (1950 m) was never inundated by ice while a tiny and large lake on the third tread (2100 m) were definitely inundated by ice during Campbell's time. The larger lake of the pair showed an astonishing large iceberg or detached ice shelf. It appeared to be about 100 to 200 m in length by 20 to 50 m in breadth occupying about 5-10% of the area of the lake. Thus this lake, in 1951 only 150 by 50 m (NTS J/2 1:50,000), is now as large or slightly larger than the lowest lake in the chain (450 by 250 m). With this startling revelation that Wedgemount is no longer unique and all that is needed is a good spur trail lower down on the mountain to the other lakes we departed from Mt Cook by way of Armchair Glacier, uncovering a hitherto unknown ice cored lateral moraine on the way. The survey weekend wound up with an equally hot pack out to the cars and a hurried trip to Bill's lab to develop the glass plates.



View from Mt Cook to north into valley of Paternoster Lake basins

Showing former and recent glacial inundation of the lower, recent historical ice free character of the middle, and emerging iceberg cluttered lake of the upper. Note large tilted iceberg on upper lake. September 1979. K Ricker



Western end of Wedgemount Lake from north
Showing climax lateral and end moraines (CM), huts (lines), subclimax
ice limits (dots) and protalus island located behind the midground hillock.
Note lack of icebergs in lake. September 1979. K Ricker



Wedgemount Lake and Glacier from the hut door..



Targets and stone rings set up for measure of velocity profile across the
lower reaches of Wedgemount Glacier.

Visitors are asked not to disturb these features. September 1979. K
Ricker



On Tuesday night Karl received a chagrined call from Bill, “the glass plates have been light struck.” Panic! Finally we contacted the Miller pilot at Pemberton and he was keen to go. Shamefully we were flown in for our first air supported resurvey of the glacier. It did not feel right after years of slogging it — but many valuable air photos were shot of items that we had not seen before. A quick pass over the snout of the glacier revealed that one of our velocity profile station targets was down. While Bill set up the phototheodolite Karl scurried off to reset the errant tripod, noting that others were slowly melting in nicely, despite the hefty katabatic winds. With the pictures retaken, the phototheodolite was for the second time in a week packed back down to the car — at least we were gracious enough to walk out.

The effort of retaking the photos was a rewarding and enlightening task. Though ablation is confirmed our glacier only retreated an average of 10 m on the north side and actually advanced again, for the second consecutive year, another 5 m on the south side of the snout. Thus it is putting up a gallant effort to spawn icebergs for the visitors and, by the way, to prove that casual observations about an unusual heatwave mean little about that year’s postulated position of an ice front!

Of final note we were fortunate this winter to locate the first visitors to Wedgemount Lake, Mr PHD Brock, now of Penticton. He and companions made the third ascent of Wedge Mtn in 1933 by way of the Parkhurst whistle stop - Wedge Creek trail route, stowing an assault camp at the Wedge-Parkhurst Mtn col. From the top they could not see a lake, nor could Dr N Carter in 1923. On a lark they decided to leave the area by way of Wedgemount Glacier, and encountered the glacier bound lake edge somewhere between Section Points F and G as shown on our 1978 map (CAJ 1978). Mr Brock made several more ascents of Wedge in the summers of 1934 to 1936 and on a ski trip with D Munday in May 1937 again climbed Wedge to see a much expanded lake from the top — the ice margin lying somewhere between E and F. At present Mr Brock is searching for a photograph and with luck we might have a valuable 20 year gap in our historical records on display in next year’s Journal.

Karl Ricker and WA (Bill) Tupper

Copies of the Wedgemount Lake and Glacier map (1:5000) are now available from Mountain Equipment Co-op in Vancouver.

Earth Science Features and Glacier Regimen of the Clendenning and Elaho Ranges, Coast Mtns, British Columbia

The Vancouver Section Camp in the Clendenning Creek watershed of the Squamish drainage system represents one of the few visits by man into this inaccessible portion of the Coast Mtns near to Vancouver. Stanley Smith traversed through the area in 1893. His observations on three glaciers in the valley are the valuable reference baselines for observations reported here. Smith’s geomorphic remarks on the area are astonishingly accurate considering he had no maps. Nearly 50 years lapsed before a second visit by aerial photo reconnaissance in 1940. Unfortunately the aircraft turned just shy of our area of interest thus providing only limited photographic information. In 1947 the first thorough

air photo survey was carried out. Such missions have been repeated by both levels of government and by Weldwood of Canada Ltd in 1948, 1951, 1964, 1970, 1977 and 1979. The latter have Tree Farm Licenses for the Squamish and neighbouring Toba Inlet drainage systems and, as part of the license commitments, are required to undertake inventory aerial photography every ten years. They flew the base camp area one week prior and the Clendenning Lake satellite camp area one month prior to our Section Camp visits.

Scientific work of a hydrologic and geotechnical nature was carried out by BC Hydro and its forerunner organizations on the Elaho and lower Clendenning Creek area in the 1960's as part of a hydro-electric inventory. In 1972 J Clarke passed through solo on skis, in spring snow conditions. The first on site geologic observations were not carried out until 1974 when the Geological Survey of Canada passed through with a series of hurried helicopter stops (Woodsworth 1977). The barren granitic geology was of lower priority in the older surveys but the immediate surroundings are now getting detailed attention.

Four outstanding earth science elements characterize the study area depicted by the attached regional sketch map: i — glaring exposures of monolithic broadly jointed granitic rock, typical of the Coast Mtns but as everyone imagines it should be; ii — classic geomorphic landforms typical of glaciated granitic terrain (the Yosemite type); iii — present day glaciers of several styles which for the most part are advancing, as well as concomitant development and disappearance of glacial dammed lakes; and iv — landslide and talus activity.

BEDROCK GEOLOGY

The camp operation was situated on the central axis of the northwest-trending Coast Crystalline Complex. Mesozoic age quartz diorites and older gneisses of diverse origin (and emplacement) are intruded here and there by younger Tertiary age nonolithic masses of light-coloured, bold and massive granitic plutons of generally restricted aerial extent. The camp area lay in the central zone of the younger age Clendenning Pluton (Woodsworth 1977) which is of a weakly-foliated, vertical-jointed granodiorite, radiometrically dated at 56 to 74 million years. It is regarded as post-tectonic in emplacement and thus the younger age is more probable. This could make it at least 34 million years younger than the similar appearing Squamish Batholith now so popular with the climbers. In the area of the camps a conspicuous but broadly spaced north-northwesterly trending set of joints has created remarkably high vertical faces intersected by narrow gullies. The pluton is an elongated irregular shaped ellipsoid (in plan) stretching north-westerly, parallel to the structural trend of the Coast Mtns, about 60 kms long by 20 to 25 kms wide. A small pear-shaped satellite or apophysis lies to the north in the Manatee Group. The pluton is flanked to the south-east and west by older quartz diorites, diorites and gneisses, and to the north by the Mt Gilbert Pluton (71 million years) of Tertiary age quartz diorites which are synmetamorphic in tectonic age relationships according to the detailed study by Woodsworth (1979).

Camp activities were generally confined to the Clendenning Pluton though the Clendenning Lake party may have passed through the contact to older granitic rock at the Military and Rund Glacier tributaries of the Clendenning Glacier system. The contact

was too subtle for our untrained eyes though an oxidized zone was observed at the position shown on Woodsworth's 1977 map. Throughout the area of camp activities the pluton was found to be remarkably free of older inclusion, dykes, roof pendants of older terrain, and with a minimum of veins. Only the medial morainal systems on the Clendenning Glacier provided hints of other rock

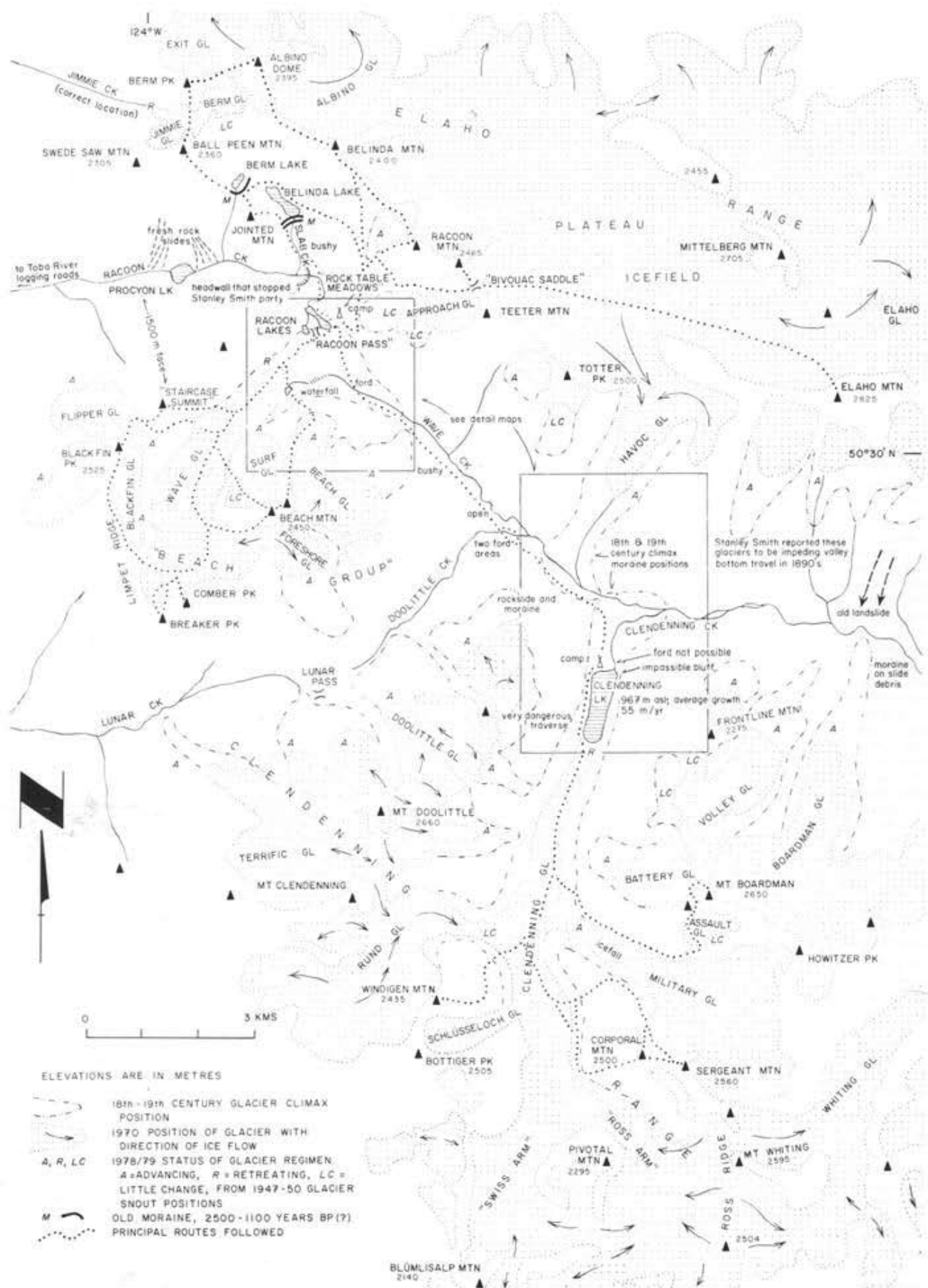
Table I-dendrochronologic and lichenometric data, Wave and Clendenning Glaciers. Karl Ricker

Sample Area	Species	Age or time interval	Notes (lichen measured = <i>Elmocarpon</i> sp)
Wave Glacier at Racoon Pass	<i>Abies</i>	beyond Moraine "A"	lichen thalli diam beyond "A", greater than 4 cm; trees 10 m high, no sample.
Moraine "A" (one sample)	<i>Abies</i>	AD 1818 1856 & 1866 1883 - 1923 1974 & 1976	5 m high fire, prolific 4 cm diam lichen thalli cool summers indicated by low density rings, tight ring spacing indicative of cool trend; also cool summers in 1888, 1911, 1912, 1914, 1917 and 1920. cool summers
Moraine "B" (two samples)	<i>Abies</i>	AD 1933 & 1940	7 m high fire, numerous 2.5 cm diam lichen thalli, warm trend beginning 1944.
Moraine "C" (two samples)	<i>Abies</i>	AD 1930 & 1937	2 m high fire, numerous 2.0 - 2.5 cm diam lichen thalli, warm trend beginning 1936 to 1944.
Moraine "D" (two samples)	<i>Abies</i>	AD 1934 & 1939	2.5 m high fire, sparse 2.0 cm diam lichen thalli, warm trend beginning 1938 to 1940.
Moraine "E" (one sample)	<i>Abies</i> <i>Alnus</i>	AD 1940	1 m high fire, very sparse 2.0 cm diam lichen thalli, warming trend beginning 1934 to 1944.
Clendenning Gl at lake	<i>Abies</i> <i>Alnus</i>	no date	Moraines A to E not sampled but similar to Wave Glacier sequence.
Moraine "F" at outer lake area (3 samples)	<i>Alnus</i>	AD 1937, 1939 and 1965	on or near 1947 ice margin; no lichen; scarce fir seedlings of less than 10 years.
Moraine "F" at inner lake edge (3 samples)	<i>Alnus</i>	AD 1940, 1962 and 1963	moraine developed between 1947 and 1951; no lichen; no fir seedlings.

Table II-historical glacier front changes, Clendenning Pluton area, Coast Mtns. Karl Ricker

Photo year and moraine designations	Wave Gl	Clendenning Gl (and post 1947 lake development)	Havoc Gl	Bern Gl	Terrific Gl
1979	(-) 190 (-5.0)	(-) 1415 (neg)	(*) 440 (+22.5)	ND (-)	ND (-)
1977	(-) 180 (-2.9)	(-) 1415 (+87.1)	(*) 395 (+18.6)	(*) 70 (+10.0)	(*) 1085 (+23.6)
1970	(-) 160 (-7.5)	(-) 805 (-99.2)**	(*) 265 (+32.3)	ca 0 (-)	(*) 920 (+14.2)
1964	(-) 115 (-3.1)	(-) 480 to 710** (-41.3)**	(*) 70 (+16.2)	ND (-)	(*) 835 (+40.4)
1951	(-) 75 (-16.7)	(-) 58 (-14.5)	(-) 140 (-35.0)	ca 0 (-23.3)	(*) 310 (+77.5)
1948	(-) 25 (-25.0)	ND (-)	ND (-)	(*) 70 (+70.0)	ND (-)
1947 (baseline)	-	no lake (moraine F complex)	-	-	-
Mor E	(-) 1880	(-) 715	ND	ND	ND
Mor D	(-) 2005	(-) 1055	ND	ND	ND
Mor C	(-) 2085	(-) 1250	ND	ND	ND
Climax Mor B (1893 yr)*	(-) 2175*	(-) 1415*	(-) 1550*	(-) 1210*	(-) 1465*
Mor A'	(-) 2195	(-) 1685	ND	ND	ND
Climax Mor A	(-) 2270	(-) 1730	(-) 1590	(-) ca 1500 (7)	ND

Notes: 1. ND = no data or photo coverage not sufficient, or data unclear or not meaningful. Neg = negligible. Mor = moraine. 2. Moraines C, D, E (Wave Glacier) are older than AD 194 (possibly 1920 in the case of E, and 1910 for C) thus implying unusually high rates of ice wastage between 1920 and 1947. 3. A climax year of 1893* is assumed based on reports of E Smith (Monday 1940) but it could be as late as 1925 based on prolonged period of retarded ice growth rate shown at Racoon Pass. The 54 year rate of retreat (1893-1947) in m/yr is as follows: Wave G -40.2, Clendenning Gl -26.2, Havoc Gl -28.7, Bern Gl -22.4, and Terrific Gl -27.1. 4. In 1964** the snout of Clendenning Glacier floated as a right angle triangle in the lake basin, thus accounting for the variable distance between ice front and the outlet of the lake (= 1947 position). An average position would be about 595 m from the outlet and annual rates of change are based on this value.



types lying near the area.

GEOMORPHIC LANDFORMS

The camp area, in the heart of the Coast Mtns yet close to the Toba Inlet fjord system, exhibits a well developed system of glacial erosional features. To the west of Racoon Pass, deep, vertical walled U-shaped valleys, associated tributary hanging valleys (eg, Berm-Belinda basin), and compound cirques have been carved by the Pleistocene Glaciers. At the pass Pleistocene age ice moved westerly to feed the vast Toba valley and inlet system as a hanging “through” valley connection. Giant roche moutonnée, and stoss and lee bedrock features show rounded “noses” to the east and plucked steeper lee slopes to the west. Apparently great volumes of water flowed under the ice on the rock interface because the ridges around the base camp show water worn topography including a few deep circular mill-holes in the bedrock itself.

In the Clendenning and Elaho Ranges, prior to the last major glaciation of 15,000 to 20,000 years ago (Late Wisconsin age Fraser Glaciation), Pleistocene ice of an Early Wisconsin or older age inundated almost all peaks in the area, leaving only those few rising above 2500 m as sharply honed nunataks. Rounded summits characterize the area below this elevation. During the late Wisconsin or follow-up period of glaciation the ice levels were apparently lower because the rounded summits of 2300 to 2500 m about the base camp show intense aeolian weathering forms, and large patches of coarse sand and grit which were found to be with ripple pattern between the two summits of Beach Peak. The waning of this ice sheet or transection glacier some 12,000 to 15,000 years ago featured downwasting of ice to about the 1700 m level whereupon a curious set of arcuate morainal furrows were pushed by ice into the outlet of the ice free Belinda Lake basin, suggesting a standstill and minor pulsating resurgence of ice accumulation. These morainal ribs might correlate with the 11,000 year old Sumas Ice Advance that is documented by terminal moraines on the floor of fjords in and several valleys about the Strait of Georgia. The glacier may have spilled over into the Berm Creek portion of the same basin as well because there is a curious field of glacial boulders lying to the north of the Racoon Chief Mtn and along the north-western shore of Belinda Lake. Final dissipation of Pleistocene ice left a landscape of steeply sloped valleys with exposed slab bedrock and clutter of morainal debris. The removal of the ice load allowed “relaxation” or rebound of the valley walls and where these were structurally weak copious piles of talus and landslide debris accumulated at especially the base of deep couloirs which have developed in vertical joint planes. Concomitant with this mass wasting an Alpine phase of glacier ice rejuvenation appears to have also developed in at least the Berm Glacier basin during the early post-glacial period.

NEOGLACIAL ACTIVITY

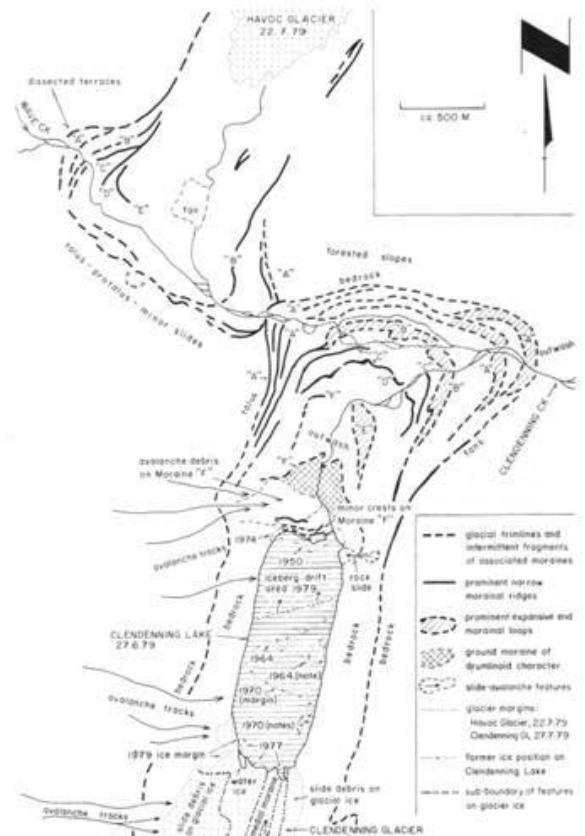
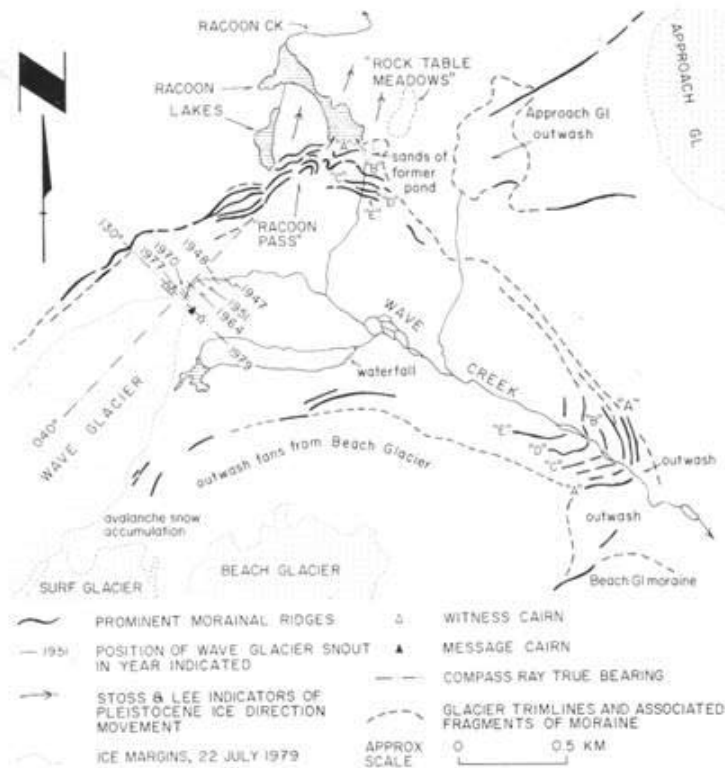
Valley glaciers of classic lines up to 10 kms in length, perched icefields with draining outlet glaciers, and small cirque glaciers of the camp areas lie just to the south of the present day icecaps of the Lillooet and Bridge River regions. The topo maps of the camp area show 1970 icefront positions on these features but it did not take the camp attendees too long to discover map irregularities to the 1979 positions of the glaciers. By comparing the accompanying map with the 1:50,000 topographic series it is apparent that a few glaciers have been missed altogether (eg the glacier on Frontline

Mtn). From base camp many of the group could see Beach and Surf Glaciers extending below their mapped positions and from the head of Wave Glacier all climbers gazed south across Lunar Creek valley to notice that Terrific Glacier had again reached the base of the mountain slopes, well beyond the position on the topo maps. For those of us also carrying the 1:250,000 scale maps, drawn from 1951 aerial photography, it was obvious that Clendenning Lake was a new arrival on the scene, courtesy of the dramatic recession of the multi-armed, medial moraine endowed, Clendenning Glacier. On the other hand base camp was located near a former ice marginal lake that was present during the climax advances of the Wave Glacier of the last few centuries and at that time drained into Racoon Creek by plunging over a rock spillway into Lower Racoon Lake — a glacier plucked basin of the Pleistocene epoch. With such diversity of glacier variations the problem was where to begin. After ten seconds deliberation the obviously handy Wave Glacier was selected for detailed morainal analysis and the establishment of control cairns to monitor the regimen of the snout. Obviously Clendenning Glacier and Lake were a close second priority. A trip into the alp meadows of Belinda Lake basin above camp quickly confirmed that the retainer wall-like moraines of the Berm Glacier cirque basin were an unusual curiosity worth some study. Later in the week our hike to Clendenning Lake involved passage over the unique rock slide-talus-moraine combination of Havoc Glacier — a major outlet of the Plateau Icefield overhead. It too was advancing from its 1970 position and the wild chaotic nature of the glacier suggested some study was warranted. The week of climbing only allowed for conscientious study of the Wave Glacier and lesser effort on the Clendenning. The rest would have to be examined by the air photo routine — six different years of good coverage and two other years of token but helpful fringe photography.

All years of photo coverage were obtained (the 1979 year through the kind permission of Weldwood of Canada) and the above noted glaciers, as well as Terrific Glacier, were systematically compared from year to year. Though photogrammetrists and surveyors would cringe at the method, the ice fronts of one year were matched to those of another and the differences in position were scaled to measured baselines on each photo, using a magnifying ocular (with internal measuring bar scaled to tenths of a millimetre) to scale the differences. The scales of photography varied from 1:15,000 to 1:70,000 with the best definition and focus being found on the 1:33,000 scale 1964 BC government series and 1:15,000 Weldwood material. While the method of measure is crude, on the flatter glaciers near the photo centres the results are probably within a millimetre of equivalent scale accuracy. That is, a measurement on a 1:30,000 scale photo is probably within 30 m of accuracy. For the steeply sloped Terrific Glacier and the tiny Berm Glacier cirque the accuracy suffers from acute elevation changes in the former and a snow covered glacier snout area on many years of coverage for the latter; both had a habit of lying on the distorted photo edges as well. Thus the measurements on these two indicate only relative changes and the numbers quoted can hardly be cited as the exact distance. For the other glaciers in the general camp areas, their ice snouts were compared on the photos noting only degree of relative changes. The results of this cursory investigation suggest that many glaciers were at their most recessed position in 1947 or 1951 though a 1940 set of photos show that Volley and Boardman Glaciers had already retreated to

"Raccoon Pass" area of the Toba-Clendenning (Squamish) divide showing features related to historic recession of the glacier. Traced from Pacific Survey Corp aerial photos 1649-121508, 1649-121448. Supplemented with field notes taken July/August 1979. Karl Ricker

Havoc and Clendenning morainal systems showing also stages in the development of Clendenning Lake. Traced from Pacific Survey Corp aerial photos 1640-119606 and 1649-121523, Karl Ricker/M Irvine



Wave Glacier (centre), Surf Glacier (left) and Blackfin Glacier (above Wave G1 into clouds) from Approach Glacier. J Bussell



near their 1947 positions. Thereafter most glaciers shown on the accompanying regional map indicate a remarkable amount to ice advance between the 1970 and 1978 (average of 1977 and 1979) years. (The 1977 photography was flown on 12 September, the end of the melt season, whereas the 1979 photos were in early summer at the beginning of the melt season, hence the reasons for stating a 1978 year of comparison.) That is the ice advances become noticeable on the 1964 photos with most but it is the comparison of the 1970 with the "1978" series that reveal the dramatic ice advances. It is apparent that only the valley glaciers with relatively low catchment areas (below 1800 to 2000 m) are still receding, but only reluctantly so if they have a few tributary arms located above this critical threshold elevation. While ice advances are noted elsewhere in the Coast Mtns for this period of time, it appears that the Elaho and Clendenning Ranges hold a disproportionate share, perhaps being accounted for by the crucial location just beyond the heads of Toba and Jervis Inlets. Detailed analyses of five glaciers in the region (Table II) are discussed to amplify on the above general remarks.

WAVE GLACIER

This valley glacier lies at the head of the Clendenning system and overlooks the Toba region. In fact during the climax advances of the 18th and 19th century small tongues of ice extended into the Upper Racoon Lake area thus providing some drainage into the Toba system (see detailed sketch). Moreover at lower Racoon Lake a rock spillway located above the east end of the lake acted as a rim for a small pond dammed between it and the edge of the ice which lies in a re-entrant relationship to the main trunk glacier. Behind this dam lies a large patch of water washed sand overlying a buried soil profile which overlies more sand. The suggestion is that the pond had two periods of past existence as indicated by the surrounding morainal sequence (Table I and detailed sketch). The sand surface is currently being moved by aeolian action though it abuts areas where there is a knife sharp transition to overlying heather slopes — the former water line, except where the pond broke over the spillway to splash into lower Racoon Lake. Attempts to establish a morainal chronology in this area are shown in Table I. The oldest moraine is obviously pre 19th century climax and with more aggressive logging beyond its margin there is a chance that its age could be confirmed as early 18th century as suggested by the lichen measurements. Our attempts on the outlying mature forest turned up only a rotten centred tree of great diameter. The specimen garnered from the crest of the moraine was by no means the largest, and thus even exploring or sawing on this avenue the age could be pushed back before the noted age of 1828. The specimen however does indicate a dramatic 19th to 20th turn of century cooling trend which corroborates Smith's note of a large glacier in this area in 1893. Thus Moraine "B" marks this newer climax and the three fold sequence of recessional moraines downslope from it apparently are close to it in age, moraine "E" being perhaps 10 to 15 years younger. Tracing each of these moraines up valley proved to be a frustrating task (see detail sketch) but it appears that each stage drained into Racoon-Toba system via one or other of the Racoon Lake basins. The moraines cannot be traced down valley along the wall because of talus and bedrock interference but near the snout the five fold system gives way to six morainal crests. The outer two crests are sprinkled with 10 m high firs and it is suggested that both are part of the earlier 18th century climax which is marked by only one moraine up valley at Racoon Pass.

Comparing the positions of these terminal moraines with the known 1947 ice front position leads to the conclusion that between 1925 and 1947 ice recession occurred at a much higher yearly rate than those indicated for more recent years on Table II. In fact it has to be well above the 40.2 m/yr average calculated for the interval between the turn of the century climax and 1947 because of the great distance of terrain lying between Moraine "E" and the 1947 ice position.

A line of four cairns was established across the snout of Wave Glacier in late July 1979. The two cairns established on the true right side are built on roche moutonnée rising about 20 to 25 m above the ice surface and should be relatively free of destructive forces for years to come. Those on the left side are on morainal rubble, one precariously placed on a 2 m high boulder of questionable foundation stability. The other could be inundated by avalanche rock fall. The exact UTM coordinates of the boulder cairn are currently being calculated by Integrated Resources Photography, which is about 30 m up valley from the 1970 topo map indicated position of the glacier snout. Future visitors are asked to line up the snout on a true 130° bearing and measure the offset to the cairns on a 040° true bearing as shown on the detailed sketch map. Because Surf Glacier is now in the process of overriding the lower portions of Wave Glacier after separation for the last few decades, we can expect renewed ice advance on the Wave Glacier within the next decade. All observations would help monitor this process.

TERRIFIC GLACIER

By far the most startling in crevassed and draped appearance, this ice tongue actually drains into the Little Toba River system. Dramatic ice advances have been characteristic since the 1947 first year of photo coverage. The glacier is not totally inaccessible but the geometry of the tongue in a narrow rocky groove does not lend it to easy field monitoring other than the photogrammetric technique which could be performed most readily from Comber or Breaker Peaks. Table II suggests that less than 400 m of continued advance are needed to bring the snout to its historic turn of the century climax position.

BERM GLACIER BASIN

The glacier is now tucked into an elevated cirque position though it has had a turbulent history of advances into the lower Berm-Belinda basin. The photo shows an upper and lower set of lakes dammed by moraines, the upper behind a fresh and thin retaining "berm" and thus the origin of the name. The outer fresh moraine of the younger set splays into six smaller moraines to the west, and several moraines lie upslope from this until the throat between the lower and upper basins is reached. At the constriction lobed morainal debris appears to have flowed into place rather than have been shoved by ice. Down valley from the fresh sets of moraines a dark braided outwash area is slowly engulfing Berm Lake, itself dammed by ancient moraine sporting turfy alpine vegetation on its leeward slopes. It is considerably higher, wider, and more gently sloped than the moraines up valley and an age of either Early Neoglacial (2500 to 3000 years) or Late Post-glacial of the last Pleistocene ice advance (ca 8000 to 10,000 years) appears to be likely though considerable work would be required to prove or disprove this. Between Berm Lake and the fresh turn of the century moraines an older 18th century moraine may have once existed because lateral morainal loops trend into the above noted

outwash area. They are of darker appearance than the fresh berm-like moraines up valley.

Recent fluctuations of the Berm Glacier are haphazard. Table II indicates a sudden one year advance between 1947 and 1948 and then retreat back to the older position until about 1970, followed again by a renewed advance. Basal slippage on its bedrock sole in its confined upper basin may account for the erratic behaviour. Machine set-up photogrammetric observations may alter this prognosis but certainly the hand method of measurement does indicate some unusual changes relative to the size of the glacier. The complex array of moraines located down valley are perhaps indicative of what has been recorded by photographs over the last 30 years. The 1964 air photo coverage shows this basin completely engulfed in snow and the glacier snout cannot be found with any precision to justify even some crude measurements.

HAVOC GLACIER

In 1893 Stanley Smith discovered this glacier to have completely engulfed Wave Creek valley to a depth of at least 60 m. The creek passed under rather than over or around the ice. The observation also agrees with the climatic analysis of the tree specimen taken from Moraine "A" of the Wave Glacier. Wave Creek thus transects or separates the climax terminal moraine and colossal lateral moraines of this great glacier which currently exhibits a maelstrom of crevasses. The terminal moraines abut into a talus and rock slide slope on the opposite valley wall, creating confusion as to what is the 18th or 19th century morainal crest and what is protalus ridges — some of the former are now used for the latter. While walking over this bouldery area of 2.5 kms extent we fully expect to see a lake enclosed within the rocky basin on the opposite side of Wave Creek as shown on the topographic maps. It was not there and the area in question was found to be only a sandy fan, shown on all years of aerial photography. The surrounding area was of rugged rock exposure, flanked peripherally by 100 m high lateral moraines that are indicative of great recession in a very short time span between 1925 to 1951 (Table II). Since the latter date the glacier has been advancing quite steadily, courtesy of a rather high and expansive Plateau Icefield source area.

The unusual quirk of the Havoc ice tongue is that it did not dam up Wave Creek during its turn of the century climax advance. However the 18th century or an earlier climax appears to have done this because aerial photos show some upstream terraces cut by ravines and abutting the Havoc morainal system.

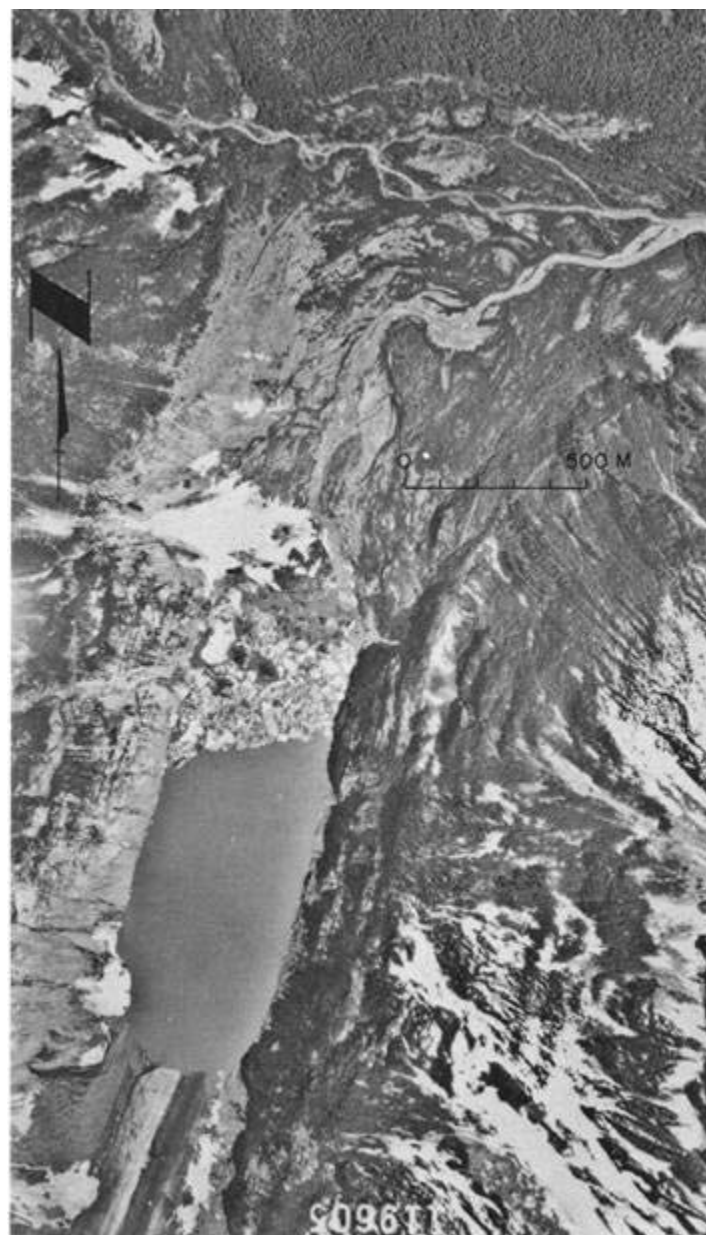
CLENDENNING GLACIER AND LAKE SYSTEMS

The Clendenning Glacier is reminiscent of a scaled down Aletsch Gletcher system of the European Alps. Its slight sinuous alignment rises on a low even gradient into two circular bowl areas some 10 kms from its present snout. Two major tributaries located half-way upstream enter the main trunk glacier from opposing side valleys. To the east an advancing Military Glacier tumbles in a sudden 800 m drop, to connect to the main ice stream in a superimposed position. The topographic map is completely in error on this score, showing the two disconnected. Up valley the lateral moraines are bilobed, the 18th century considerably higher on the slope than the 19th to 20th century climax. However down valley on this side of the glacier the lateral moraine shows only a faint bilobed crest at the same elevation of well over 100 m above

Submerged ice terminus of Clendenning Glacier in lake. Boulders in foreground are on glacier ice as well. Rock face on east side of lake is useful indicator of ice margins on 3 August 1979. Karl Ricker



Aerial view of Clendenning Lake, Glacier, and morainal area by Pacific Survey Corp on 6 July 1979. By permission of Weldwood of Canada Ltd



Two spillways (OF) of the Wave Glacier ice marginal pond enter the Lower Racoon Lake plunge basin. The lake level is marked by colouration changes on boulders in background and "cut" on heather (arrow). Outwash (sand) marks shallow part of now drained lake basin. Karl Ricker



Morainal sequence.

A (18th century ice advance) with lichen encrusted boulders and 5 to 10 m high fir trees, and B - E of the 19th and 20th advance and recessional phases. Wave Glacier at re-entrant to Racoon Pass; the main glacier was in the valley to the right. Note vertical joint pattern. Karl Ricker



Multiple morainal sequence (B, C, D, E) and evidence of drained ice marginal lake (sand and overflow spillway = OF) at Wave Glacier re-entrant to Racoon Pass.

Note vertical joints (J) of the Clendenning Pluton and down valley lateral moraines (lm) of the once much elongated Wave Glacier. When ice plugged re-entrant, ponded meltwater spilled to the right into Lower Racoon Lake. Karl Ricker

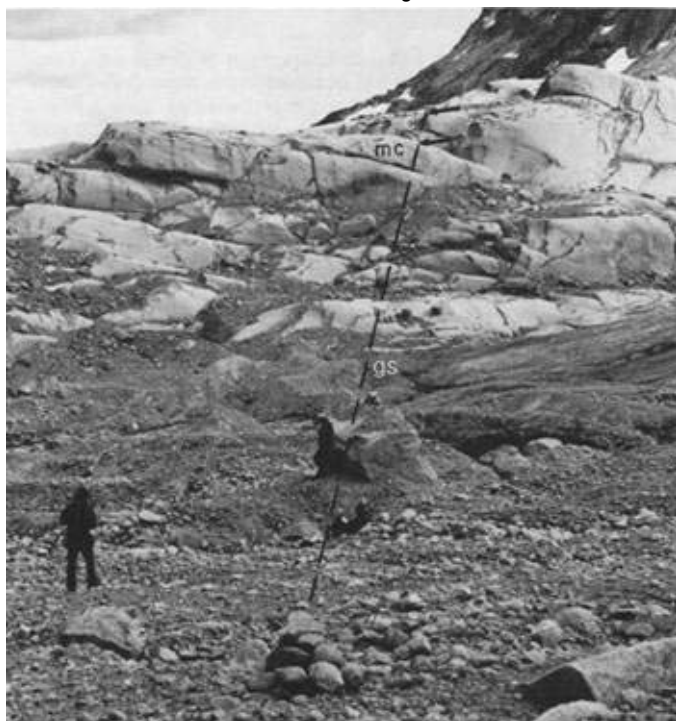


Berm Glacier historical morainal sequence.

The multi lobed 19th and 20th century sequence (19) lies to the right, the 18th century (?) sequence (18) is poorly developed and engulfed altogether by outwash entering Berm Lake (BL), which in turn is dammed by an older end moraine (em) that may have been developed more than 2000 years ago. Morainal debris lying between 'em' and Belinda Lake (Be) is of probable latest Pleistocene age (Sumas Stade?). Karl Ricker



Survey cairns (c), including message cairn (mc) placed on true bearing 130° across snout of Wave Glacier on 1 August 1979. Karl Ricker

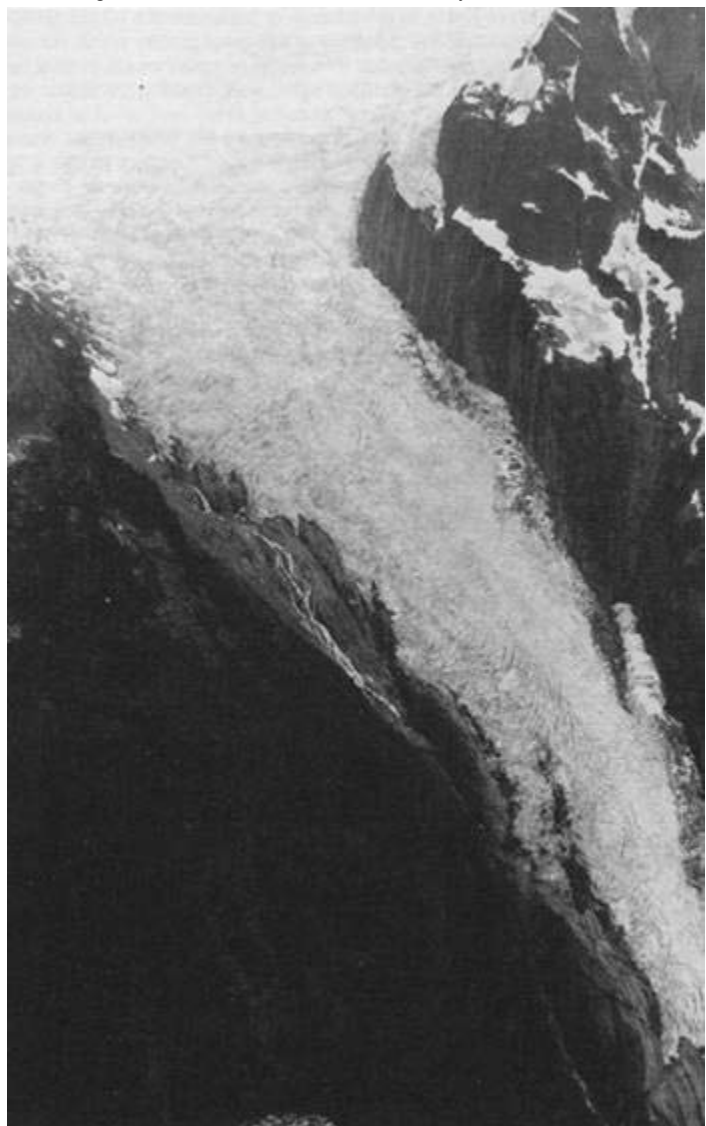


Clendenning Glacier outwash and moraines

From near outlet of lake looking across valley towards Havoc Glacier (H) and trimline of 18th century advance of Clendenning Glacier onto opposite valley wall (arrow). Note house size boulder on Moraine "C". Karl Ricker



Advancing Terrific Glacier from Breaker Mtn. July 1979. Karl Ricker



the present ice surface. The outer crest sports the rare occurrence of five needle pines of 30 cm trunk diameter. On the opposite or west side, Rund Glacier still connects (despite topo map to the contrary) with the mainstream in an inset position though it is thin and with patches of exposed underlying bedrock. Its ice advance has yet to arrive downslope though it can be expected within the next few years. The only other major source of ice connection left to Clendenning Glacier is the curiously shaped cirque in feeder known as Schluselloch Glacier, ie a keyhole supplier of ice!

Clendenning's fascination centres around the lake at its snout. The detail map shows the historic recession of ice leading up to its development as we know it today — a sea of dirty icebergs between near vertical walls of granitic rock. Beginning with the 18th century climax position it is evident that the glacier completely blocked the main valley riding up onto the lower slopes of Mt Elaho to the north and coalescing with the Havoc Glacier to the west (see detail sketch). It is likely that the ice retreated in the 18th century to the present position of Clendenning Lake to oscillate and built a broad terminal moraine which is denoted "F". Debris sweeping downslope from the west also added to the pile before the glacier advanced out of the basin to extend again across the valley in the 1890's as reported by Smith. Apparently the ice just made it to the north edge of the valley floor to Moraine "B" easily recognized by large boulders on aerial photos. In the 1920's the glacier began its pulsating retreat to the newly exposed ground moraine at "F" where it oscillated at three positions between 1947 and 1951.

The outer, a minor superimposed transverse end lobe on "F" marks the approximate 1947 ice position indicating no lake at all in the basin except for a tiny ice marginal moat to the north. Table I indicates that 10 years passed before any seedling alders germinated, on the newly exposed and lowly elevated ground (less than 1000 m asl). Table II shows that at the ice snout a marginal lake of only 58 m width had developed by 1951 through glacier retreat. Once the ice had thinned in the area however the lake grew at rapid rates thereafter. In fact the 1964 aerial photos show the lake almost 50% covered by glacial icebergs suggesting a rather rapid breakup in 1963 and 1964. By 1977 however the lake has been temporarily restrained from elongation, forward motion equalling the yearly breakout of ice which is accomplished in part by emergence due to buoyant forces acting on totally submerged ice. While the differences in ice position between 1979 and 1977 are only marginal we observed much iceberg breakouts during our post-photo coverage visit and a system of circular crevasses on the true left side suggests that the lake will be extended another 85 m within a short span of time.

Clendenning Lake as it now stands is slowly growing. Ice margin landslide debris on the ice has retarded melt and the advances of the Military and soon expected Rund Glacier will also assist in retarding ice loss. The lake is by far the largest contributor of flow to the Clendenning system and will moderate the discharge of water into the system. It is an ideal area to study the evolution or colonization of life in a new body of water, being less than 40 years old. In our surveys of the lake we have found that the 1970 topographic map is in error. Dirty icebergs have been taken for shoreline debris and the north edge and outlet of the lake is shown 175 m too far south. There are two kinds of bergs in the lake. Dirty glacier bergs measure 55 to 60 m in diameter while snow slabs

developed from avalanche cover entering lake may be up to double this size though thinner.

LANDSLIDE AND TALUS

Smaller talus cones developed at the outlet of couloirs in the vertical joints of the Clendenning Pluton are conspicuous and typical of both Racoon and Clendenning Creeks. Much larger forms at three areas are worthy of special note (see regional map). In Clendenning Creek valley opposite the mouth of the Boardman Glacier an ancient but post glacial landslide of coarse angular rock filled the valley. Eventually the creek cut through the blockade to re-establish grade. Then in the 18th century Boardman Glacier descended to the valley floor bifurcating into two lobes as it sprawled in climax position across the landslide debris left on the south side of the creek.

Continuing up valley the same Curious phenomena of glacier overriding coarse talus and landslide debris has occurred in the Wave Creek basin opposite Havoc Glacier. However here the process has gone further. Some of the debris zone itself has slumped (ice melt out beneath?) and continual talus activity is establishing some elegant protalus flatirons land forms in at least two areas.

In the vertical walled Racoon Creek basin the processes have reached their zenith. Procyon Lake owes its existence to landslide debris dams. An older post-glacial phase of landsliding off Swede Saw Mtn filled the valley floor as did several other smaller slides located down valley. Water backed up by the debris dam eventually breached the debris leaving a gigantic cut escarpment at the outlet end of the lake and lesser scarped embankments on fan shaped slide zones down valley. Fresh rockslide off Swede Saw Mtn occurred just prior to the 1947 photography (due to 1946 earthquake?) and has overtopped the older debris zones on both ends of Procyon Lake. The mountain's loosely jointed appearance suggests that this will be a recurring phenomena.

ELAHO PASS

Lying between the ACC and BCMC camp areas between the Elaho and Toba River systems the very large Elaho Glacier bends at this point before dwindling downslope to the east. In 1951 a large triangular-shaped lake filled the pass, being dammed against the ice but draining to the northwest in Toba River. The lake measured 400 by 290 m but by 1940 had drained leaving only three small potholes of 60 to 70 m in diameter. Thus we have a modern day exhibit of what took place at Racoon Pass on a smaller scale at the turn of the century.

CONCLUSIONS AND ACKNOWLEDGEMENT

The foregoing preliminary observations have only whetted our appetites for the work to be done with the geomorphic and glacier features that lie on the moist side of the Coast Mtns. Clearly at least two weeks of dedicated wood sampling are needed to date the various morainal features on the glaciers examined to date. The help of Dr Ken Hunt, especially in having our key wood specimen analyzed at Forintech Laboratories, Vancouver, has been a big help in unravelling the glacial chronology established in this review. Weldwood of Canada is to be thanked for letting us use their roads, during intense fire season, to approach the camp area and I appreciate their willingness to release key 1979 aerial photography and their contract photogrammetrist (IRP) for the necessary up-

to-date background data for this work. Such cooperation will help the Alpine Club of Canada fulfill one of its constitutional stated goals — to study the glaciers of Canada. Sometimes mountaineers forget that the club has this long-term scientific commitment, and some group sacrifices as well as personal expenses are required to meet this objective.

Karl E Ricker

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The Draining of an Ice Dammed Lake

In the course of field work in July 1979 the authors were fortunate enough to witness the rare event of the draining of an ice dammed lake. Hazard Lake is located in the St Elias Mtns in the valley of the Hazard Glacier below Mt Wood and is dammed by the Steele Glacier. Its history has been described by SG Collins and Gary C Clarke (1978). The lake formed when Hazard Creek was dammed by the surge of the Steele Glacier in 1966 and remained full until 1975. Since then it has apparently drained annually by means of a sub-glacial tunnel which allows its contents to escape under the glacier. This year drainage commenced on 9 July, at which date the first photograph was taken. Initial drainage of the lake level was slow; a few centimetres per hour but increased exponentially over the next two days. By the evening of 10 July the lake level was draining at 10 to 15 m per hour, with drainage being completed in the early hours of 11 July. The second photograph* was taken on the evening of the 11th. Discharge in Steele Creek at the snout of the Steele Glacier must be radically increased by this event, outflow from the lake surpassing 450 cubic meters per second at its peak.

Gerald AN Groves and David Liverman

Special thanks to Dr RW May, Dr GC Clarke, The Boreal Institute, and AINA.

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Donjek Glacier Surge

Kluane has glaciers in all stages of advance and retreat. In 1965/66 the Steele Glacier "surged" then settled down once more to its normal rate of advance. Today we have another "surge" occurring at the Donjek. It seems to be a less significant advance than that of the Steele although its effect, as seen in the accompanying photos, is still quite spectacular.

Landing at the Donjek a little over a year since my first visit I was astounded by the 30 m high wall of ice only a stone's throw from my perch. In March 78 I had walked a 200 to 300 m wide gravel bar. Now there was nothing but the river between me and the glacier. Although it has only advanced about 100 m the Donjek Glacier could dam the river passing by its front with as small a leap as 30 m. During summer and high water such a feat is unlikely but by early spring "Lake Donjek" could be in the offing. The new lake may be only 20 m deep and one or two kilometers long but I look forward to seeing the spectacular falls. The new spillway will be on the rock bluff upon which I was standing. Cutting through the bluff it forms a shallow channel which suddenly drops 20 m into a narrow canyon. The lake itself will only be a temporary feature that will last for perhaps one or two years. Then "Lake Donjek" will find itself a channel under the ice dam and drain. But in its draining Lake Donjek will be as spectacular as the ice dam created by its glacier. The escaping water will create a rapidly enlarging tunnel through the ice. During the first hour of its end the lake may only drop a few centimetres. But as it nears the empty mark it may be dropping at 20 m an hour.

WJ Schick, Kluane National Park

Excerpted from Kluane, August 1979.

Mt Moloch and Downie Lake: Biophysical and Historical Research

Mt Moloch and Downie Lake lie in the northern Selkirk Mtns some 30 miles north-east of Revelstoke, BC. From the 10,150 ft summit of Moloch one looks west to the headwaters of Downie Creek which flows north to join the Columbia River. To the east is Moloch Creek, a tributary of Tangier Creek which flows south to meet the Illecillewaet River at Albert Canyon. Glaciers clothe the sides of this mountain, named after the Phoenician God Moloch to whom human sacrifices were offered. Fortunately it has not yet claimed any lives but the combination of steep, loose rock, unreliable weather and access problems has long presented a formidable challenge to climbers.

North-west of the peak lies upper Downie Lake. Hidden in a glacially scoured amphitheatre at 6500 ft, this almost circular lake half a mile across rivals Lake Louise in colour. On its southern edge is a limestone karst area with caves and underground streams that carry water 200 ft down to lower Downie Lake, a smaller and shallower lake from which a stream passes through caves and over spectacular waterfalls on its way to join Downie Creek.

Around the lakes are open forests and meadows, the haunts of ground squirrels, picas and mountain goats. In the lower valleys of Downie and Moloch Creeks are virgin stands of forest frequented from time to time by caribou and grizzly bears. The mountains are flanked with scree slopes and moraines — eagles and hawks gliding above.

HISTORY

The Mt Moloch area has been neglected by man due to its rugged, inaccessible terrain, the long, harsh winters, and the lack of major mineral discoveries. The Indians apparently made little use of the area and the early white explorers like Thompson and

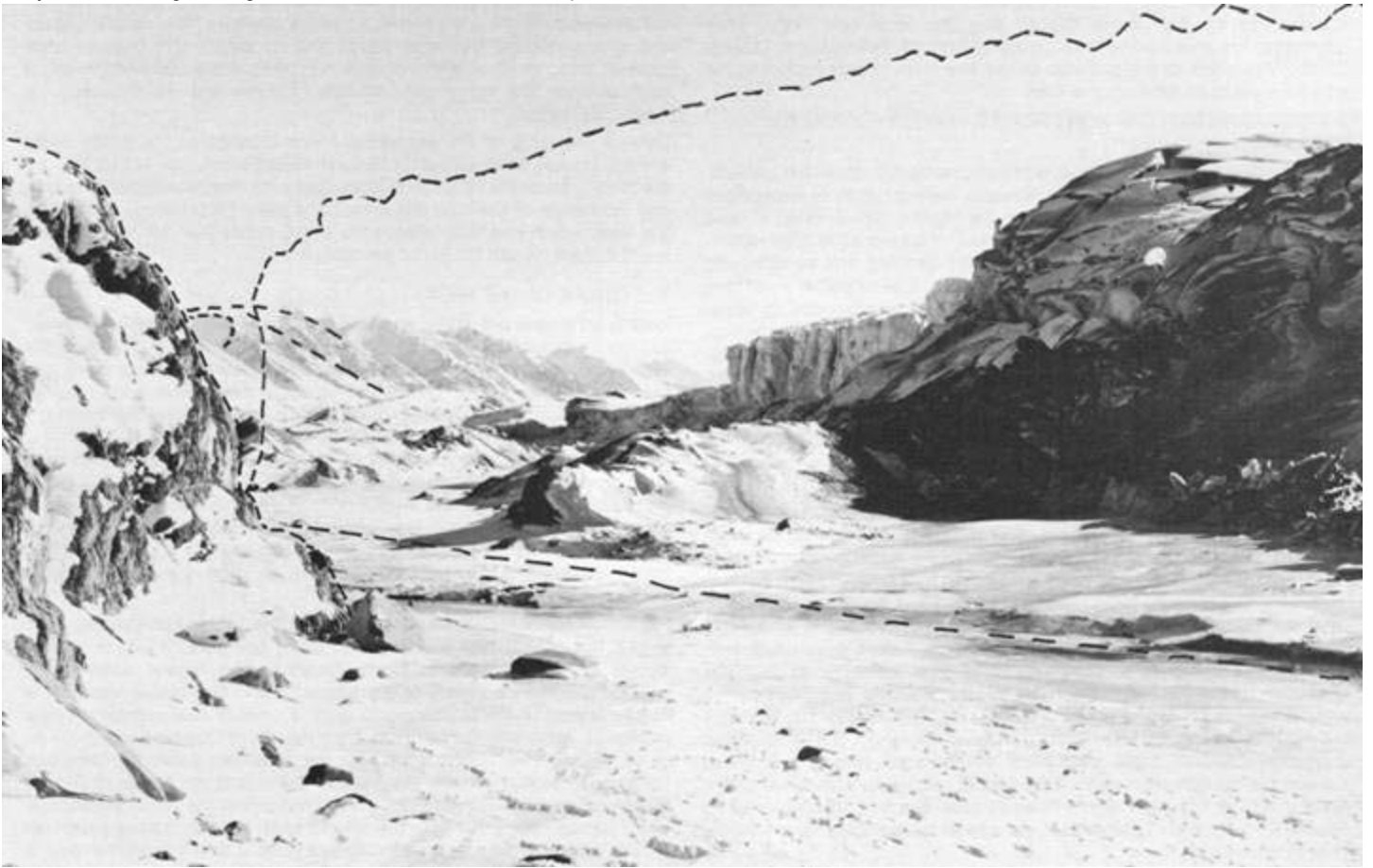
Hazard Lake as seen on 9 July 1979, shortly after drainage had started. Gerald Groves



Hazard Lake empty on 11 July 1979. Hazard Creek seen coursing through the lake bottom. Gerald Groves



Donjek Glacier Surge - the glacier on 15 March 1978 with 1979 position indicated. W J Schick



The glacier on 10 July 1979. W J Schick



Henry, as well as the fur traders, chose to follow the Columbia River and more accessible passes. During the gold rush to the northern Selkirks in the 1860's some prospectors may have penetrated the area.

The first documented visit was in 1865 when the railway surveyor, Walter Moberly, looking for potential routes through the mountains, explored the lower reach of Tangier Creek, then known as the north branch of the Illecillewaet. The opening of the CPR via Rogers Pass, 20 years later greatly improved access to the Selkirks and resulted in a community being established at Albert Canyon. From here prospectors explored the Tangier valley and in the 1890's built a wagon road to the Waverly mineral claims near Tangier Pass. The surveyor AO Wheeler used this when mapping the area in 1901, as did surveyor PA Carson who having worked there in 1906 and 1907 described the road as "fearfully and wonderfully made."^{1,2,3}

In 1911 the British climber Howard Palmer found the road was "overgrown with ferns, alders and cow parsnip, but an easy footpath remained in the middle".⁴ He passed old cabins at Fang and Farm Creeks and observed that "the largest was quite pretentious with shakes for a roof and the word 'Hotel' in rustic lettering over the door". He suggested that this place, known locally as 'The Farms', was where Moberly had turned back in 1865. Two miles north-west of Tangier Pass he came to the Waverly mine, consisting of "two substantial buildings and a complicated system of trails that zigzagged back and forth between the two shafts at different levels". Palmer identified the ore as "a rich galena, but apparently no work had been done since 1898". His party then climbed Mt Sorcerer to the east, first climbed by Heinrich Peterson in 1904. Turning west they made the first ascent of Mt Holway from which Palmer saw to the south a "forbidding, snowless horn" which he named "Mt Moloch".

Beginning in 1912 there was much rivalry to make the first ascent of Moloch, all parties approaching from Tangier and Moloch Creeks. In 1912 Professor Sissons and one companion made the first attempt.⁵ The same year PAW Wallace and two companions tried to reach the peak by the south arête.⁶ Sissons returned with Professor Holway and Swiss Guides Ernest and Edouard Feuz in 1913 but weather prevented them from climbing.⁷ Sissons combined with Wallace in 1915 and attacking from the north side reached the top of and named Mt Baal but got no further.⁸ Almost simultaneously JWA Hickson with guides Ernest and Ed Feuz reached the eastern shoulder of Moloch but turned back due to lack of time.⁹ A debate raged on which approach route afforded the best chance of reaching the summit.¹⁰ The matter was settled in 1918 when Hickson and the Feuzs set off by moonlight on 10 August, climbed the south arête and reached the summit by 1.10 pm.¹¹ After this interest in climbing in the area waned, only the need to establish further survey stations provoking activity. Thus in 1929 a Dominion Survey party climbed a number of peaks in the area, including Mt Graham, Mt Anstey, Holway South Station and Moloch West Station.¹²

Bill Putnam, long involved in explorations of the Selkirks, visited this area with a party in 1956. They approached from the west via Carnes Creek, Bridgland Pass and the Dismal Glacier,

and having climbed Fang Rock exited via Tangier Creek.¹³ The only previously documented penetration of the area from the west was by Dr CH Shaw who in 1909 "went up Carnes Creek, and found at its head a great névé from which glaciers drained into Downie Creek, Carnes Creek, and the Illecillewaet. For several days he explored around this névé and finally decided to try to cross it and to go down into the north fork of the Illecillewaet."¹⁴ Putnam and party returned in 1959, crossing from Carnes Creek to lower Downie Lake. From here they made second and third ascents of Mt Baal, an ascent of Mt Sissons north of Downie Lake, but gave up an attempt on Moloch from the Baal col. They left the area via Tangier Pass, Sorcerer and Downie Creeks.¹⁵

In 1961 a Geological Survey party made the second ascent of Mt Moloch, approaching via the Dismal Glacier and the south-east ridge. They returned to the area next year by traversing from Mt Revelstoke to Downie Creek.¹⁶ Accounts of the activities of the few more recent parties in the area have yet to be located or written.

THE CANADIAN EXPLORATION GROUP'S 1979 EXPEDITION TO MT MOLOCH

The Canadian Exploration Group, a private, non-profit, scientific exploration group, based in Peterborough, Ontario, having run three expeditions to the Mt Sir Sandford area and one to the Monashees, decided to send the 1979 expedition to the Mt Moloch area.¹⁷ It appeared to offer opportunities for basic inventory research and for climbing and backpacking challenges. Expedition aims were to conduct a biophysical inventory, making planning recommendations for the area encompassing upper Downie Valley, Downie Lake and Moloch Creek, photograph the glaciers, teach outdoor skills, and climb Mt Moloch and adjacent peaks. The expedition assembled in Revelstoke on 7 August 1979 and consisted of 17 men and women. The main party were trucked 6 1/2 miles up the Tangier logging road, from which point they hiked along the old, overgrown road, past The Farms to Moloch Creek. This was reached by the second night, a relatively easy wading of Tangier Creek immediately above its confluence with Moloch Creek being made in the late afternoon. Two further days were spent hiking up Moloch Creek (despite the lack of a trail easy travel by Selkirks' standards), over the north side of Moloch Pass, and around the south side of Downie Lake to the outlet of lower Downie Lake. Here a base camp had been established by a smaller party, flown in from Tangier Creek by helicopter with some 3000 lbs of supplies a few days previously. Expedition members agreed with Bill Putnam, who wrote "this is one of the most attractive camp sites I have ever used; with adequate but open, widely scattered trees, clear water, no bugs, some heather and beautiful alpine flowers of every shape and colour."¹⁸ It proved to be a perfect location for conducting our studies and for once the weather co-operated. On 29 August, after 2 1/2 weeks of enjoyable and productive exploration the main party left the area, returning to Albert Canyon via the approach route. Four people remained, dismantled camp, manicured the site, and with the equipment flew out by helicopter to Revelstoke where, on 1 September, the group reassembled for a banquet prior to dispersing.

RESEARCH

Using existing information obtained from air photographs the study area was divided into ecological units and an attempt made

to random sample as many of these as possible. The rugged terrain made travel to all parts of the study area impossible so research was focused on the woods and meadows around the lakes, the upper reach of Moloch Creek valley, and that part of Downie valley west of base camp. The biophysical variety of these units reflects altitude and weather factors, vegetation ranging from mature hemlock stands in the valleys to glacier lilies in the meadows and lichens on the peaks. Over 100 floral species were identified and a herbarium collection sent to the Provincial Museum, Victoria. Trapping enabled us to secure a number of small mammal skins which were sent to the Royal Ontario Museum. Two mountain goats in the meadows above Downie Lake were observed and photographed for a week, their behaviour, food preferences and reaction to humans being noted.

The limestone karst and hydrological features of Downie Lake proved especially interesting. Several small caves, up to 50 ft, were discovered, explored and photographed. One that proved inaccessible carried water from the upper lake to the lower lake. The succession of shorelines around the upper lake suggests that at times this outlet is sealed, probably by ice, thus causing the lake to rise. Stream flow and water temperature data were collected for several days at numerous points, spring water averaging 3°C and Downie Lake surface water 9°C.

The glaciers in the area are generally small remnants flanking the peaks, only the Dismal Glacier at the head of Downie valley and that descending into Moloch Creek having true valley forms. The latter is very dirty and quite steep at the snout perhaps suggesting that it has advanced recently as having some others in this range.¹⁹ This remains to be verified using old maps and air photos.

Meteorological observations of temperature, humidity, precipitation and wind were made twice daily at base camp. The maximum temperature recorded was 19°C and the minimum -1 °C. It was generally sunny, calm and dry. There was one thunderstorm at camp, some precipitation on 12 out of 19 days, but no snow. The data reveal considerable variation between the weather here and that at Revelstoke and Rogers Pass. A more comprehensive scientific report, including all previous information on the area that we have been able to locate, will be available in 1980.

CLIMBING IN THE AREA

The first climbing objective of the expedition was of course Mt Moloch. The leader of the expedition Dave Goodrich along with Bruce McLean and Jim Martin made four attempts on the mountain but had to settle for an ascent of Mt Baal. All attempts were focused on the unclimbed north-west side that is approached by the glacier on the north side. While Baal col was reached the ridge above, as earlier climbers have noted, is steep and rotten, offering few belay points and no satisfactory bivouac spot. Lack of time, weather and the rock conditions forced abandonment of each attempt. This virgin route remains for those who like long slogs up steep slag heaps! Various members of the expedition made ascents of the lower peaks around Downie Lake including Moloch West Station, the author making the third(?) ascent of Mt Sissons, solo. Given the inaccessibility of the area and the nature of the rock this is mainly a place for persons climbing for the view, which invariably repays the effort, rather than for the technical interest, the thrill and the joy of the climb itself.

THE FUTURE OF THE AREA

Visiting an area is one thing, studying it another, and making recommendations for its future a still more difficult task. It is especially difficult in this area given a continuing dearth of information and the lack of plans and management policies for the adjacent areas of the Selkirks and Columbia valley. We recommend, therefore, above all else that the northern Selkirks be studied, planned and managed in a comprehensive fashion. This requires improved understanding of the resource, the collaboration of such agencies as the BC Parks Branch, the BC Forest Service, BC Hydro, and Parks Canada, and the involvement of the public at all stages of the planning process. In particular such agencies should take advantage of the expertise and information that can be provided by the few climbers, hikers, prospectors and hunters who have penetrated the more remote wilderness areas.

Expedition members generally agreed that the Mt Moloch-Downie Lake area is one of very high scenic quality easily comparable with renowned beauty spots elsewhere in North America. The appeal results from specific scenes, the variety of environments and the relative absence of human impact on the landscape. Specific scenes of note include the view of Downie valley and Carnes Peak from the rim of Downie Lake, the view of Mt Moloch and Downie Lake from the meadows above the lake, and the view of Moloch Creek, the Tangier valley and the peaks of Glacier National Park from Moloch Pass. The views from all the peaks are impressive, Hickson noting that from the summit of Mt Moloch "I have never had a more extensive and, so far as vastness goes, a finer panoramic view in the Rockies or Selkirks."²⁰ Micro environments and specific features are also of interest including the huge virgin forests in upper Downie valley, possibly the habitat of caribou, the caves and karst area of Downie Lake, the goats and eagles, the waterfalls, the alpine

Moloch from meadows north of Downie Lake. John Marsh



meadows and the glacier in Moloch valley. It is the combination of these features in an unspoiled state and generally unspoiled scenery viewed from this area that makes it impressive. Its appeal is heightened by the sense of isolation, the challenging approach, and the knowledge that few have gone before. We recommend therefore, that the ecological and recreational values of this wilderness area be protected through legislation, planning and management. We support initial proposals for a park or wilderness area in the upper Downie region but suggest that more attention be given to its boundaries and that the carrying capacity of the area be carefully evaluated.²¹ As elsewhere in the Selkirks protection may be needed soon. Possible future threats to the area include logging in Downie valley; road improvement, logging and mining in Tangier valley; mining above Downie Lake and excessive recreational use. The greatest immediate threat is posed by logging in Downie valley which if extended south will spoil the view and threaten the ecological and recreational value of the impressive, mature virgin forest stands now found in the upper reaches. Road improvement in Tangier valley and logging and mining there would have a major impact not only on the valley and Mt Moloch area but also on all the areas adjoining the valley, including Glacier National Park. It is the inevitability of activities in one area having impacts on other areas that forces us to emphasize the need to view the northern Selkirk Mtns as an ecological and recreational system that needs to be thoroughly studied and comprehensively planned, in the near future.

Further information on the activities of the Canadian Exploration Group and conservation issues in the Selkirks and Columbia valley can be obtained by writing to the author, at Box 1635, Peterborough, Ontario, K9J 7S4.

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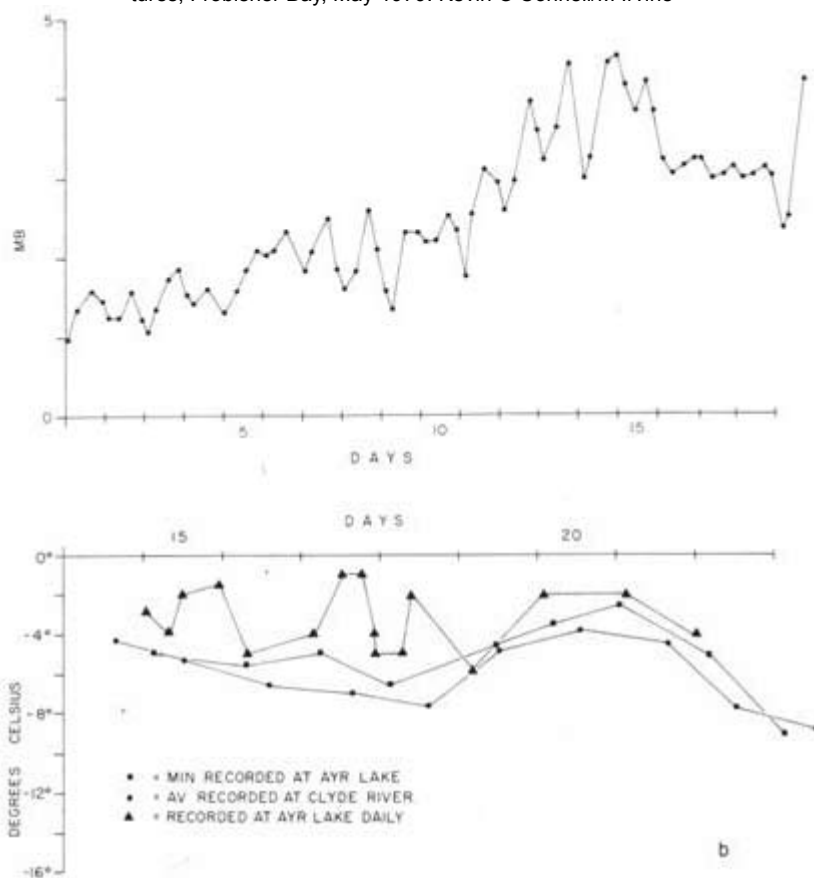
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Eastern Arctic Weather Notes

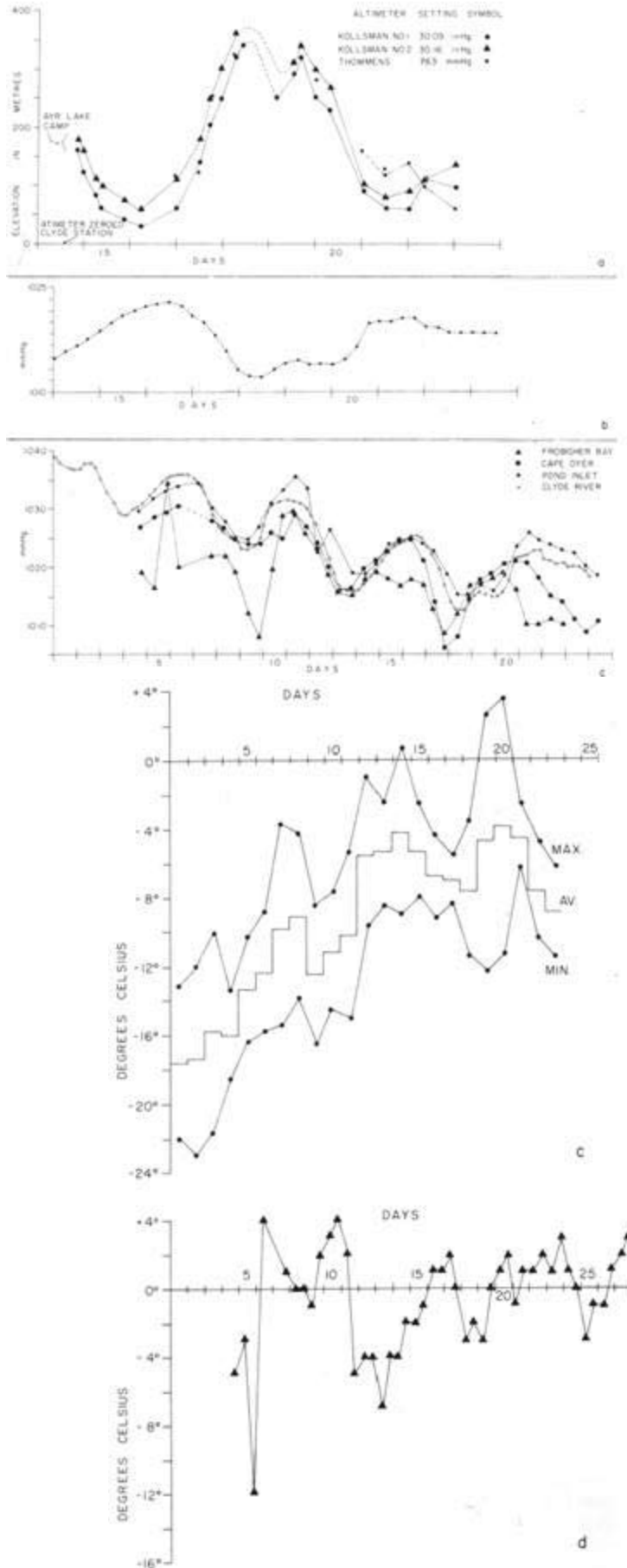
The accompanying pressure and temperature graphs, based on information gathered during May 1979, may serve as a guide to climatic conditions on Baffin Island. This data may compare with that reported during the 1977 Stewart Valley expedition (CAJ 1978). Detailed data from weather stations mentioned was made available through the Ministry of Transport at Dorval, Quebec, and Clyde River, NWT. Other data relating to the Ayr Lake region near Clyde River was collected by myself, using simple thermometers and aircraft type altimeters (Kollsman) on loan from Aviation Electric Ltd of St Laurent, Quebec. Of some interest will be the atmospheric pressure fluctuations which have a very pronounced effect upon altimeter readings. Finally it should also be mentioned

Eastern Arctic Weather Notes

a-vapour pressure, Clyde River, May 1979, b-temperature, Ayr Lake, May 1979; c-average temperature, Clyde River, May 1979; d-surface temperatures, Frobisher Bay, May 1979. Kevin O'Connell/M Irvine



a-base camp altimeter readings, 14-23 May 1979, Ayr Lake; b-sea level pressure, Clyde River, May 1979 (detail for comparison with Ayr Lake base camp altimeter readings); c-sea level pressures, Clyde River and other arctic locations, May 1979. Kevin O'Connell/M Irvine



that the weather at Ayr Lake during a good part of May was exceptionally clear in contrast to that of Stewart valley during May/June 1977.

Kevin O'Connell

A New Sighting of *M solifugus* (Ice Worms), Lowell Glacier, Yukon

Darkly pigmented worms inhabiting permanent ice and snow of the glaciers of the Pacific coast of North America were first reported by Wright (1887) from the Muir Glacier and by Russell (1893) on the Malaspina Glacier. A mountaineering party crossing the Malaspina in 1900 first collected specimens that were described by Emery (1900) who named them *Melanenchytraeus solifugus*. A second mountaineering party also crossing the Malaspina sent specimens to Moore (1899) who gave the name *Mesenchytraeus solifugus*, the present name. Other early explorers noted ice worms on La Perouse, Grand Pacific and Seward Glaciers as well as on Mt Rainier. All specimens examined to date have been *M solifugus* (Goodman, 1971), an enchytraeid oligochaete that is an annelid related to the common earthworm.

After 1917 there is no new literature on *M solifugus* except for occasional mention in review articles. Tynen (1970) in a report on the geographical distribution, collected reports from people who frequent glacial areas to supplement the sparse literature on ice worms. The present known distribution of ice worms is restricted to a coastal belt extending from the Bagley Icefield in Alaska down the British Columbia Coast Mtns to Mt Rainier and the glaciers of Mt Olympus. The extreme northern and southern limits are not known. There are no confirmed reports of ice worms in the glaciers of the Canadian Rockies, Selkirs or Cariboos nor from the environs of Mt McKinley.

The geographical distribution of ice worms with their limited migration ability and need for permanent snow will be reflected in the extent of the Cordilleran ice sheet. At maximum extent this ice sheet covered an area from the Continental divide (crest of the Rockies) to the coast and south to the vicinity of Mts Rainier and Olympus. The northern limit to the geographical distribution is probably as much a function of the winter temperature and the presence of free water in the snow and ice as it is to the limit of the Cordilleran ice sheet. Tynen (1970) enumerates the glaciers on which ice worms have been reported to date.¹

Despite being aware of the existence of ice worms I had never observed them. In 1977 while on a glaciological reconnaissance of the Lowell glacier, St Elias Range, Dr GK Clarke, Sam Collins and myself observed birds obviously feeding on something in the snow. Closer inspection revealed numerous black one to two centimetre long worms on the snow surface. This was in mid-July, about 3 to 4 pm at ca 1375 m (4500 ft). Photographs taken at the time show generally clear sunny skies. Later in the evening they disappeared into the snow pack and were not seen on subsequent days as we proceeded down glacier. This appears to be the first recorded sighting of ice worms on the Lowell glacier.

Few attempts have been made to study the ecology of ice worms. Goodman (1971) provides an extensive morphological

description as well as details of the behavior of worms that occur on the Casement Glacier, Alaska. Apparently the worms feed on pollen grains and red algae (*Chlamydomonas nivalis*). During the winter and on cold clear summer nights with freezing temperatures, the worms descend into the snowpack where the temperature will be above 0°C. Probably due to the absorption of shortwave radiation and subsequent overheating, glacier worms are generally not active on the surface during daylight hours (Goodman 1971).

The Mt Rainier subspecies is the only well documented case (Welch 1916) of ice worms being on the snow surface during the day, although Odell (1949) reported ice worms on the surface of the Seward Glacier during the day in bright sunshine. The present observations on the Lowell Glacier were made during sunny daylight hours which suggests that if this behaviour is confirmed there may be several subspecies of ice worm that can exist on the snow surface during bright sunny weather.

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FOOTNOTE

1 According to Karl Ricker the 1973 ACC Ape Lake Camp saw innumerable ice worms on all glaciers about the lake.

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Coast Mountains

The Lions in Winter: A Reprise

As Robin Barley pointed out (CAJ 1977:61) the Lions can provide a good deal of entertainment in a decent winter. As he also pointed out (Cecil Pub, wee hours, 1978), the north face would not be so much an ice climb as a rock climb, "horribly snowed up, and awful". That sounded enticing. Kevin and I bivied on the snow shelf a third of the way up the face, seven hard hours from the car. The next morning, in mist and sifting snow, we set off up and right. Kevin took the traverse into the central snowpatch, a desperately thin pitch of snow on slabby ribs, I plodded up the snowpatch and across a rib at its right side. Kevin set off directly up the wall above but was forced back down. He then tried the shallow gully to the right, below the black wall which I remember as the crux in the summer, again without success. Finally he found a way around the rib at the righthand extreme of the face and got a belay on a couple of frozen cedars. I scraped and scrambled up the corners above (perfect hands but poor cramponning!), stood in a couple slings, and eventually bridged and underclung to a flake and jammed ice-axe shaft belay. Kevin bridged on up, stood in a sling himself, and eventually disappeared up the snow slope above. A bit of easy ground led to the west corner of the summit "plateau" but as it was now nearly dark we passed by and buggered off down as fast as we could. Then again as Howie put it (slide show, even wee-er hours, 1979) "is there any one of us that Kevin hasn't dragged up something horrible?".

D Serl

First winter ascent, north face of the West Lion, 21 to 22 January 1979, Kevin McLane and Don Serl.

Squamish Report 1979

Activity once again showed a marked increase this year,

with three general trends being evident. These were the heavy development of the Little Smoke Bluffs, a marked upturn in wall ascents (especially free), and the free climbing (generally at an extreme standard) of a number of previously aided routes. The local waterfalls were also climbable for the first time in a decade as a result of a January cold span. Shannon Falls became an 'instant classic' and had several dozen ascents. Shorter more extreme falls also received attention.

Two new routes were established on the walls, namely Zorro's Last Ride (V 5.9 A4, P Beckham and D Lane), which lies between Up From the Skies and the Black Dyke, and Freeway (V 5.11 A2, R Rohn and T Gibson), a predominantly free route to the left of Cannabis Wall reported elsewhere in this Journal. The former follows a zigzag line, crossing the great roof about 100 ft left of the Dyke and eventually connecting with ledge systems leading into the Flats on the Grand Wall. Several pitches involve hard nailing. An attempted second ascent came to grief two pitches from the top when a bolt inexplicably broke after a difficult section, precipitating a 70 ft fall. Two Toronto pairs (G Manson and T Gibson, G Cameron and D Lister) made one day ascents of Humpty Dumpty; the former pair also managed a single day blitz of the Black Dyke. After preliminary exploratory attempts by P Beckham and others, the Grand Wall was free climbed (with variations) to the Dance Platform, except for a 40 ft bolt ladder above the Sword, by P Croft and R Suddaby. The lower bolt ladder was avoided by climbing Mercy Me then traversing across to the base of the Split Pillar. Beckham also made the first solo ascent of Uncle Ben's while P Kubik and L Soet managed a nearly clean ascent of University Wall.

At Murrin Park P Croft completed two outstanding ascents: Excitable Boy (5.12) on the cliff to the east of Browning Lake, and a free ascent of Granddaddy Overhang (5.11) on Nightmare Rock.



The former involves a steep, thin crack, the latter an outrageous undercling. Croft went on to repeat Sentry Box (5.12) after B Price had bagged its second ascent. On the Papoose, A Duet for Two Hands (5.11, R Atkinson and Croft) was established and involves difficult face and crack climbing; this was the last significant remaining line on the crag. Previously unrecorded were free ascents of Pinup and Hairpin (both 5.10) in the last few summers by D Serl, J Wittmayer and others.

The neglected Bullethead area received a burst of attention last year. J Buszowski made a free ascent of Bullethead Central (5.10), soon followed by the freeing of Bullethead East (5.10c, J Campbell, Croft and A Tate). The big ascent was Rainy Day Woman (5.11, Atkinson, Croft and T Knight) which offers three pitches of varied crack climbing, two of them graded 5.11. Just to its right Croft and G Foweraker put up the Black Book (5.11), a 100 ft crack/groove. Remaining unreported from 1978 was A Cream of White Mice (5.10a, Croft and Knight), a pleasant three pitch climb on the Bullethead's extreme right to which others also contributed.

Croft continued his onslaught on the Malemute, eliminating the final point of aid from Berrycup (5.11) and freeing the Id dihedral, renaming it the Wizard of Id (5.11, both with Knight). In that cliff's shattered central section J Howe excavated and climbed Chasing Rainbows (5.10d), part of the same intrusion as the Black Dyke, which involved some intriguing edging. B Price and G Zaccor, part of an American raiding party, freed Chicken Cacciatore, renaming it Penguins in Bondage (5.11), a grotesque chimney problem. At the crag's other end Overly Hanging Out was largely freed (5.10c, AO) by the Torontonians.

On the Apron, Happy Trails (5.11) an overhung undercling was freed by Buszowski, Croft and Knight in a rainstorm. Croft and Knight also removed the last few aid points from Unfinished Symphony (5.11) late in the fall, making it one of the longer and more continuous free routes around. Squamish Buttress, the area's first serious rock climb, was freed by B McNeil and party at a moderate 5.10 standard.

Solo ascents became a hopefully passing fad this year. J Stoddard soloed Snake and Sparrow on the Apron, while similar ascents of Penny Lane, Jabberwocky (qv), Neat and Cool (qv), and Split Beaver in the Little Smoke Bluffs were also recorded by various individuals. The plum was G Cameron's solo first free ascent of Pipeline (5.10d) on the Squaw, the crux of which was an exposed, overhung 'awful width'.

In all some 40 new routes were established this year in the Little Smoke Bluffs, many of them of a difficulty belying their shortness (typically 50 ft). The main protagonists were Atkinson, Buszowski, Croft, Campbell and Howe, although virtually every active climber contributed at least one route. Adequate chronicling of these developments is outside the scope of an article such as this, hence only a few representative routes are herein recorded. These include Werewolves of London (5.11, Croft), Crime of the Century (5.11, Croft), Easy Does It (5.10c, FFA, Croft), Gopher Baroque (5.10c, S Tooley), Neat and Cool (5.10a, Beckham and Lane), The Zip (5.9, W Robinson) and Hot Cherry Bendover (5.11, Price). These routes typically involve thin crack and/or face climbing; most routes in the Bluffs are similar in type and quality

but more moderate in difficulty, a desirable trend.

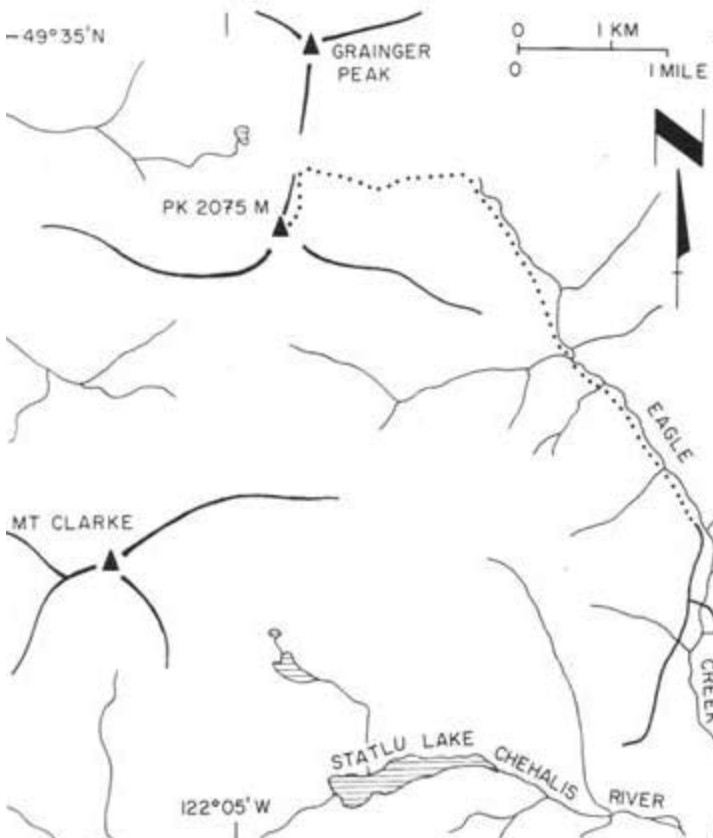
During 1980 a number of the longer climbs seem likely to be attempted free. Tantalus Wall seems the most likely victim in this respect, although large sections of other major routes could likely be freed (ie University Wall). Ample room exists in the Smoke Bluffs for further development before this becomes degenerative while the Bulletheads and the Chief's northern sections should attract the attentions of those interested in longer, more serious climbs.

Anders Ourom

Peak 2075 m, Eagle Creek Area

I'd been eyeing the peak shown on 92 G/9 as lying between Mt Clarke and Grainger Peak. It had three summits marked at 2075 m. I knew it hadn't been climbed so decided to try it. On 20 April 1978 I drove to a point 1 km north of the Mystery Creek turnoff on the east side of Eagle Creek. The road was blocked by a slide. I slept there and was moving by 0500 hrs next morning. I followed the road north, crossed Eagle Creek and continued up the west side road to its end in a recent clearing at 580 m. Neil Grainger and friends from Chilliwack had brushed and flagged a good trail along the west side of the creek as far as the major western tributary entering at 701 m. I followed this and then relied on flagging I'd put in on a couple of previous trips to continue up the west side. Starting at the tributary I used Sherpa snowshoes for quick travel over the deep snow. I reached the beautiful basin (1100 m) to the east of Grainger by 1000 hrs and headed west directly up snow slopes amidst the continual rumble of small avalanches from all parts of the basin. From the saddle (1800 m) between my objective and Grainger, up the north slopes of my peak to an icefield which

Peak 2075 m, Eagle Creek Area. Doug Kasian/M Irvine



lies mostly on the east side of the summit. Inspection soon showed that the two southerly contours of 2075 m were not the high points. It was in fact the most northerly — an interesting objective. The west side a drop of 400 m to the headwaters of a tributary of Winslow Creek, the south side technical rock (one pitch). I opted for the east side — technical rock cut by a steep snow gully. I ascended the gully on reasonable snow, at a 55 to 60 degree slope, 100 m vertical. No rock for a cairn (only snow) so am certain that my summit register was swept down later in the season. Descended the summit tower in my own footsteps. It was about 1430 hrs — time really flies when you are having fun. By now quite sunburnt I fairly flew down to the basin at 1100 m and Sherpa'd my way back down the valley. It had been sunny and fairly clear on the summit but as I reached my car at 1900 hrs it began to pour.

A satisfying day — a total of 32 kms on foot, with 1730 m of vertical ascent. Incidentally Neil Grainger and friends are probably too modest to mention their second ascent of Grainger, done in the spring of 1978 by way of a long, steep snow gully on the south face. They worked hard for it and beat the rest of us to the top.

Doug Kasian

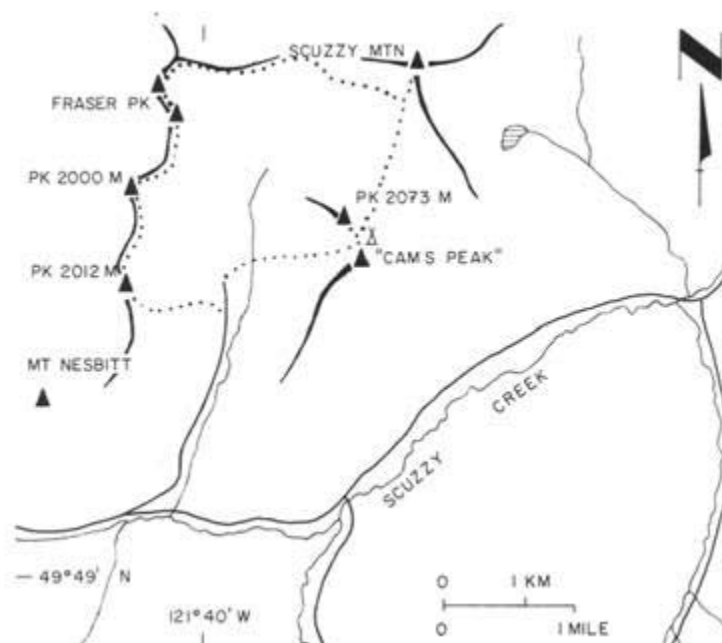
New Ascents, Scuzzy Creek Area

I first visited this area on 5 November 1976. With no time to climb I did a recce drive of all the roads and was impressed by the good access. The promised return visit occurred 22 January 1977 when Paul Berntsen, Cam Dolman and I climbed a few pitches of excellent granitic rock. The valleys abound in large slabby faces of very good rock. Next morning, Paul's feet hurting from some recent Garibaldi climbing, Cam and I plowed through deep powder to Peak 2000 m. It was a fine clear day — a lot of nice peaks visible. We built a cairn and left a register. The only peak climbed this trip. I would like to unofficially name it "Cam's Peak" after Cam Dolman, and outdoor's enthusiast to the end, who died in Mexico the following year.

I returned alone on 14 October 1977, intending to climb the peaks surrounding the south flowing tributary of Scuzzy Creek which drains the Scuzzy-Fraser-Nesbitt basin. An excellent road climbs along the west side of the tributary to 1220 m. Every time I have wanted to drive it has been cross-ditched at 975 m. This time was no exception. I parked at about 1200 hrs and walked north to road end, where timber thins out quite a bit. I crossed the creek and scrambled east up the gully separating "Cam's Peak" from its higher northern neighbour, Peak 2073 m. After a second ascent of "Cam's Peak" at 1830 hrs and the first ascent of Peak 2073 at 1912 hrs the night was spent at 1935 m in the saddle between the peaks. I started early next morning, traversing around the east side of Peak 2073 m to the saddle joining it to Scuzzy. Scuzzy (2217 m) was ascended by its south slopes on pleasant and gentle slabs. At 1100 hrs I found a big old survey cairn on the top. I left a mention and descended the southwestern slopes, becoming very frustrated in the scrubby brush. Descent is easier on the west side.

At noon I started up the east ridge of Fraser Peak. This is a highly scenic area with fine long views in all directions. The rock was everywhere excellent. This east ridge was blocky granitic rock and offered bits of class 5 bouldering amidst nice open scrambling.

New ascents, Scuzzy Creek area. Doug Kasian/M Irvine



I reached the north summit of Fraser (2103 m) at about 1330 hrs, built a cairn and traversed a pleasant horseshoe-shaped summit ridge to gain the south summit (2103 m) at 1430 hrs. The descent of the south ridge was very brushy.

At about 1530 hrs I arrived at the summit of Peak 2000 m (1.1 km southwest of Fraser's south summit). Another cairn and continued southerly traversing brought me to the top of Peak 2012 m. By now it had clouded over and the ceiling was dropping quickly. I finished my final cairn and summit register for the day then descended down the south-east then east slopes of this last peak to regain the road at 1100 m by about 1700 hrs, the car by 1730 hrs.

This is a fine area which will see plenty of future climbing activity because of the fine open alpine country and good rock faces. Access is excellent. I highly recommend it.

Doug Kasian

Peak 2000m ("Cam's Peak"). 1st ascent, NTD. Doug Kasian and Cam Dolman. 30 January 1977.

Peak 2073 m. 1st ascent, NTD. Doug Kasian. 14 October 1977.

Scuzzy Mtn, 2217 m. Not a first ascent; NTD. Doug Kasian. 15 October 1977.

Fraser Peak, 2103 m. Probable first ascents of both north and south summits; low class 5 on east ridge. Doug Kasian. 15 October 1977.

Peak 1981 m. 1st ascent, NTD. Doug Kasian. 15 October 1977.

Peak 2012 m. 1st ascent, NTD. Doug Kasian. 15 October 1977.

A Climb in the Anderson River Peaks

Deep in the maze of logging roads near Spuzzum is Steinbok Peak. On it lies a buttress, a fin dividing the east and north faces. In one magnificent sweep it curves from bottom to top, easy angled at



first and culminating in the vertical.

The hike to the base takes an hour and is easiest staying high. Just before traversing out right on the slabs there is a grassy ledge, kept green by water trickling from a snow patch under the east face. The water forms a pool on the ledge and then overflows and runs down the slabs filling many crevices before disappearing into the talus. It is an idyllic spot to fill water bottles and sort gear.

Up and right across the slabs the climb starts with a bush pull up over a steep wall and a short weedy grovel to a belay below a slab. By keeping the bush groove on the left the route goes on the slabs. After four more pitches a good ledge is reached near the crest and at the base of a steep slab split by many face cracks. Surprisingly this slab is 2½ pitches. The climbing is superb; nailing with face climbing between cracks. Then some flakes go up on the left side of the roofs. A crucial pitch traverses right over the top of the roofs, around the crest onto the steep north face, and joins a face crack which shoots up for 100 m.

At this point John and I were looking for a bivy so instead of going up the crack (obviously more straightforward) we opted for a messier corner system aiming for an illusory ledge on the very crest. Needless to say it was disappointing, hardly big enough to stand on, no way to sit down. We passed the night in improvised hammocks of slings, cagoules, and butt bags. The night was warm, still, and perfectly clear. I eyed the horizon anticipating dawn when all of a sudden the moon popped up from behind Gemse Peak.

In the morning I tensioned right to the face crack. After a couple of pitches in the crack step left and ascend a short corner to a belay on a multi-cracked slab near the crest. The view now from high on the wall is faintly reminiscent of being on Half Dome.

Continuing up from this belay the climbing starts free on the very crest. Up a flake and then more nailing over a small rotten roof to arrive at the best ledge on the route. It is perched on the headwall of the north face, long and wide enough to stretch out for awhile — the place to be. John and I only stayed for lunch as we were short of water and in a hurry to get off. Another face crack splitting the wall above the ledge gives some fun nailing. Then a tension right and free up a dihedral and under a roof. A sensational lay-away over the roof and up the dihedral beyond and, voila, the summit terraces. The summit was reached barefoot amongst moss and heather and at last we had a view to the west — familiar peaks from a new angle.

Scott Flavelle

1st ascent, YDS grade (V + 5.9 A3), 19 pitches, 700 m, 17 to 19 July 1979. J Howe and S Flavelle. Pin list; 5 KB, 5 Bugaboos, 3 short LA, 6 long LA, 5-1/2, 4-5/8, 4-3/4", 4-1", 3-1/4", 2-1/2", 1-2", Hexs #5-#8, Stoppers #2-#8.

Stein Mtn and Vicinity

On 19 October 1977 Steve Bell arrived at my house in Mission, BC, from a summer of climbing in Alaska. He seemed eager to do a bit of local stuff so the next day we drove to Lytton, crossed the Fraser on the ferry and camped on the north side of the Stein River bridge. He was not impressed by our early rising and, grumbling, we set off in the dark. We gained the foot of the very long prominent ridge which extends from Stein Mtn southeast down towards Lytton and started up. I had tried this approach earlier but previous climbing partners were too smart to persist in +40°C weather. Steve and I had cool, overcast conditions. We needed them on that endless ridge — 1700 m vertical to more open terrain near treeline. The wind was very strong and after 3 kms we camped in a sheltered spot at 2225 m. It snowed lightly overnight. Next morning we set out at the outrageous time of 0800 hrs (Steve insisted!). The ridge continues towards Stein Mtn and is easy travelling. We left the ridge at 2380 m, dropping into the basin due south of Stein to avoid the highly broken mess the ridge was becoming.

The south slope of Stein Mtn is just a scramble. In high winds and blowing snow it took longer than necessary. The summit is double, that on the north-east being higher. It offered a bit of lofty, icy class 3 to 4 climbing, at last succumbing to our efforts at 1300 hrs. No cairn on either summit so we built one and left a register on the higher peak at about 2775 m. Through ragged clouds we glimpsed bits of country far below. The relief above the Fraser River here is an impressive 2630 m. Stein Mtn is no doubt climbed once in a long while by a prospector and we're sure our feet weren't the first on its summit.

We descended the south-west ridge and traversed over to Stein's neighbour. This peak, at 2652 m, was ascended by its east ridge, an easy scramble among drifted snow and tumbled blocks. We built a cairn and left a register recording what we believe to be a first ascent at about 1430 hrs.

Steve agreed that one more peak would make a good day so we headed south-west and climbed Peak 2682 m by its east ridge. This was also an easy scramble. A cairn and register were placed at about 1530 hrs. The ridge over to Peak 2713 m to the north-west looked long and tiring. So we did our second complete traverse of Peak 2652 m, this time from west to east, and descended to our gear in the basin south of Stein. There is water here but nowhere else on our trip did we find any. In fact lack of water was a major problem on these ridges — we just couldn't carry enough! We always seemed thirsty. The ridge leading up from the Stein River is as dry as the Sahara — pack all the water you can carry! We returned to our tent in the hollow, spent a cold and blustery night and left early next morning, out of water, low on food, in 10 to 20 cms of fresh snow. Down that long, dry ridge to the Stein River then home.

In retrospect the outing was a good one. A total of 40 kms and 3600 m vertical was completed, with some nice high country traversed. Open, lofty ridges, offering fairly easy travelling. Very little water except in basins lower down on the south side of the range. The basins on the north side of the Stein-Siwhe divide are heavily glaciated and water abounds. Map sheets 92 I/5E and 92 I/5W are very disappointing, showing nothing of these glaciers. This is a complaint I have of so many of our 1:50,000 topo maps in south-western BC — they omit so many glaciers, icefields, and permanent snowfields. What we need is a climber in charge of the mapping branch in Ottawa.

There are several lofty peaks waiting for first ascents in the Stein-Siwhe group — we did but two of them. An interesting exercise would be Stein done as a day climb — either up the ridge we used or directly up the east flanks from the west side road along the Fraser. The latter route is shorter but the rock fairly poor, especially in the very gritty gullies. A day climb of 2600 m up and then down again would be a strenuous but possible introduction to this scenic area if one used a headlight and picked a long summer day for the ascent.

Doug Kasian

Peak 2652 m. 1st ascent, NTD. Doug Kasian, Steve Bell. 22 October 1977.

Peak 2682 m. 1st ascent, NTD. Doug Kasian, Steve Bell. 22 October 1977.

Mt Joffre: North-East Face

From the end of the logging road on Cerise Creek we chose a route on this face and while cramponing up the glacier decided it looked very feasible. It lay on a huge ramp or rib between the impressive vertical buttress on the right and a dangerous couloir on the left. The route began almost inside the couloir and climbed a left facing corner/chimney. The second pitch is the crux, a wide crack on a steep wall (visible from below). After four more pitches a snow patch was reached and the three mixed pitches up a gully to the summit ridge. We bivouacked near the summit after leaving the car 11 hours earlier. The next day we descended steep snow slopes and icefalls down the same face but farther north.

Scott Flavelle

1st ascent, 28 July 1979. NCCS III F8. Just nuts. Dave Lane and Scott Flavelle.

McGillivray Pass ACC Ski Camp, 17 to 24 February 1979

This was a first time for an ACC Ski Camp in this area of the Coast Mtns but it is not likely to be the last due to the luxurious cabin and the powder snow which almost invariably dominates the McGillivray scene. The cabin is at the top of the pass at 6100 ft and has a gas cookstove, gas and wood heating, electric light and wall-to-wall carpet in the living room. Even the outhouse has electric light, although no heat. Our total number was 13, just right for the cabin.

As with all other areas in the West, the avalanche hazard this

McGillivray ACC Ski Camp: view towards Telephone Ridge. Doug Herchmer



Andre and John skiing powder. Doug Herchmer



Powder Tracks. Doug Herchmer



Trail from the cabin to Telephone Ridge. Doug Herchmer



year was severe and snowfall was a lot less than normal. We were to be helicoptered in on Saturday but had to wait a day because of a severe snowstorm. When we arrived at the pass patches of blue sky were beginning to appear and for the next four days it was mostly sunny with temperatures between -10°C and -15°C. Because of the avalanche hazard we took stringent precautions. The camp manager organized a practice in the use of Pieps and we dug snow pits to check conditions. As the snow was bad we decided to avoid all steep slopes and follow well protected up routes. All parties carried probes and shovels. Later that day we took a short trip to Telegraph Ridge, noted signs of instability but had an excellent powder run back to the cabin. The ridge is so named because a telegraph line was relocated on it after the original line in the pass was taken out too many times by avalanches.

During the next four days we climbed to high ridges on both sides of the pass. We climbed McGillivray (8600 ft) and on Thursday six of us climbed Whitecap Mtn (ca 9700 ft). Because of avalanche hazards the route we chose was a longer variation of the usual route, entailing about a 1000 ft climb to the ridge then a descent of about 2000 ft to reach the foot of the mountain. Our total height to climb was about 7500 ft! The trip took nearly 141/2 hours. We started at 6 am and had nearly two hours of skiing in the dark including the 1000 ft descent back to the cabin. That was the night of our turkey dinner and towards the end the thought of Joan's cooking may have been the only thing that kept some of us going. We found some good powder but higher on the mountain there was crust on the depth hoar base. We left our skis and climbed on foot for the top 2000 ft.

Friday was our last day and it was cloudy with light snow so we stayed near the cabin and prepared for our trip out. Murray and Doug put in a good down trail for two miles so that we could start our ski out early. We left on Saturday at about 5 am with 16 miles to go and a train to catch at 4 pm. Conditions proved to be quite good except for some heavy snow and breakable crust near the bottom — we caught the train with hours to spare.

N Purssell

Elaho and Clendenning Ranges ACC Vancouver Section Camp, 28 July to 6 August 1979

This camp had its beginnings during the winter months when Bill Tupper, Howie Rode, Fips Broda and Jack Bussell started talking about the Clendenning Creek area. Other Club members became interested and planning started. There was very little information. The GSC did not publish 1:50,000 maps of the area until 1976. Early travellers may have gone through in the 1890's, when Stanley Smith journeyed from Squamish to Chilko Lake looking for two men lost the previous year (CAJ 1940:159-68). It is hard to trace routes of early explorers who traversed vast areas of unmapped terrain but re-reading the 1940 article with the benefit of hindsight suggests similarities between the country described and that at the head of Clendenning Creek.

Little if any activity occurred in the upper Clendenning until the 1970's. During the 1950's BC Hydro was considering the Elaho as a possible area for hydro power generation but it is

doubtful that their survey parties penetrated to the headwaters of the Clendenning. BC Forest Service eventually put a stop to development due to the heavy forestation. John Clarke did some of the early climbing in 1972 (CAJ 1973: 59-62) and again in 1976. No other explorers were known. As BCMC were planning a camp in the Manatee Group at the headwaters of Toba River just to the east, Elaho and Clendenning seemed appropriate for our camp.

A reconnaissance flight in the spring led to great excitement because reported glacial coverage was greater than that shown on the recent maps. Comparison with year old air photos showed the changes to be very significant and led to a second flight during the course of which it was discovered that the initial flight had gone up the wrong valley.

This was a do-it-yourself camp with the Section providing only a cooking tarp for wet weather, shovels for the biffies, helicopter transport, and an emergency radio-telephone (on which we got no reception!). This approach has been consistently successful in providing a low budget, enjoyable camp for a wide range of participants.

A hot day in July found the 29 participants and some spare drivers heading up the dusty logging roads in the Squamish watershed. The fire hazard was extreme but Weldwood was most co-operative and opened their gate to let us use their roads. We were stopped by logging debris about eight miles before the road end and had to take the helicopter from there.

The helicopter arrived too late and with insufficient fuel to fly all into camp before nightfall. Eleven camped by the cars and the remainder set up camp in a pocket meadow, hoping that all their gear would eventually arrive. Next morning a few stayed in camp to finish setting up while the rest headed out for the first climbs. The helicopter did not return for the people on the logging road till afternoon.

Our group was diverse with broad ranges of age, ability, and desire. Trips ranged from meadow walking to marathons taking 15 hours and covering five peaks. Such diversity, combined with changeable weather, which while seldom bad was not often encouraging, made trip planning a spur of the moment affair. All trips signed out but not enough were written up at day's end for the log to be really complete. During the first few days there was a tendency to form large groups heading to single objectives but as people became acquainted smaller groups headed out, scattering to different points.

Towards the end of camp, on 2 August, a group of five packed down to Clendenning Lake and set up a climbing camp. They were later joined by three others. See Clendenning Lake and Glacier Sortie for an account of their climbs.

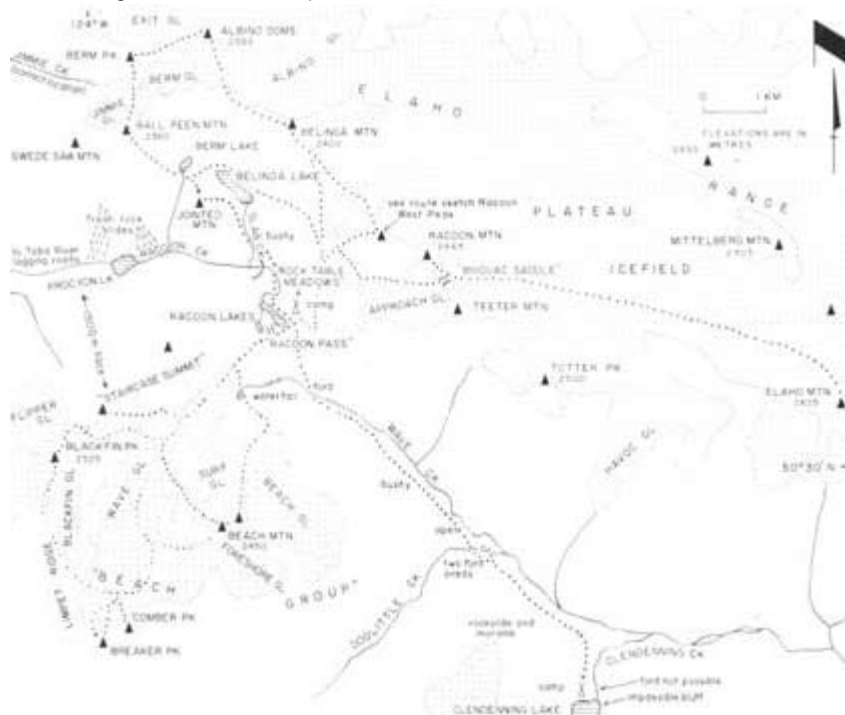
There was no direct climbing from camp but access was easy. One favoured route was across the valley moraines to the foot of Wave Glacier then up it to the western peaks. The other route went up a steep gully leading to the open ridge and eastern peaks. An access route pioneered by Peter Durnford should be mentioned — bushwhacking north along the valley floor to slabs beside a creek then up these to Belinda Lake.



Racoon West Peak, south-west face, 300 m. Ed Zenger



Elaho Range and "Beach Group". Karl Ricker/M Irvine



Rock Table meadows, Racoon Lakes, and Wave Glacier. Karl Ricker



Beach Peak was an early and popular objective, providing widely separated routes of varying challenge. Perhaps its biggest attraction was a small beach at the summit where lunch could be enjoyed in the sunshine.

A recce was made by Howie Rode and Ken Martin of Racoon Creek valley to the north-west, looking for an exit to the logging roads visible five miles away in the Toba valley but 600 ft cliffs blocked the route. During the attempt Ken, visiting from Scotland, expressed his amazement at being probably the first person to set foot in the area. Perhaps we should all realise more often that we are exploring.

When organizing the camp we had planned to meet BCMC on top of Elaho Mtn. Our party did not go on the agreed day and thus missed them. A climb finally went to Elaho, with a planned bivy at the top of the ridge made miserable for some by an evening rain shower. The next day was good for crossing the glacier to the north-north-west ridge of Elaho and then to the summit. A quick return was made over the rapidly softening glacier snow and everyone was back in camp by early afternoon.

Finally the day came to depart. The previous night we finalized the names we proposed for all the mountains climbed. In the morning people were wandering off, taking a last look at Racoon Lakes, remembering to take pictures of the bathing pools, when suddenly the helicopter appeared around a corner. Packs and bodies were stuffed in, slings dropped for later trips, then up and away. Final clean-up continued between flights; collecting cans to be flown out for disposal, scattering camp fire ashes, and generally trying to return our meadow to its unspoiled state. At the road groups waited for their equipment and, as each car was ready, headed back to civilization through holiday traffic jams, struggling to adjust after the rugged grandeur of the Clendenning Ranges.

Many people are responsible for a successful camp such as this. Special thanks go to Fips Broda, leader, and to Howie Rode and Jack Bussell who ably assisted him.

G Barford

FIRST ASCENTS

Ball Peen Mtn 7737 ft P Durnford, K Martin, N Lambert, via south-east slope, NTD, 30 July. Also on 30 and 31 July and 1 August.

Belinda Mtn 7865 ft P Durnford, K Martin, J Lixvar, from south slope, NTD, 29 July. Also on 31 July.

Berm Peak 7800 ft P Durnford, K Martin, N Lambert, on traverse from Ball Peen Mtn to Albino Dome, 30 July.

"Jubalay Mtn" 7700ft B Allen, D Feuchuk, from Belinda Mtn, 31 July.

Jointed Mtn 6162 ft G Barford, J Lixvar, via easy slopes from Belinda Lake, 30 July. Also on 5 August.

"Staircase Summit" 7519 ft G Barford, N Lambert, traverse over north and south ridges, NTD, 29 July. Also on 1 August.

Teeter Mtn 8000 ft J Bussell, P Bussell, J Kay, I Kay, via north-west ridge, NTD, 30 July.

Windigen Mtn 7990 ft E Zenger, R Sauser, via east face and ridge, grade 5.5, 5 August.

OTHER ASCENTS

Albino Dome 7860 ft Same party as on Berm Peak above, 2nd ascent, 30 July. Beach Mtn 8040 ft Large party, 2nd ascent, new route via north ridge, 30 July. Also on 1 August. G Barford, K Martin, P Durnford, new route via Surf Glacier icefall, 4 August. Blackfin Peak 8284 ft 2nd ascent via north ridge from Wave Glacier, rope required, 29 July. Also on 30 July and 1 August. P Durnford, J Lixvar, new route via Limpid Ridge, 2 August. Mt Boardman 8695 ft Large party, 2nd ascent, new route via Assault Glacier, 5 August. Breaker Peak 7500 ft Large party, 2nd ascent, via easy north-west slopes, 30 July. Also on 1 and 2 August. E Zenger, R Sauser, new route via north-east arête, 3 leads, grade 5.6, 30 July. Comber Peak 2nd ascent, 2 August.

Corporal Mtn 8195 ft K Ricker, K Balik, 2nd ascent, new route via north ridge, 3 August. E Zenger, R Sauser, 3rd ascent, new route via west ridge, 3 August. Sergeant Peak 8395ft K Balik, K Ricker, 2nd ascent from Corporal, 3 August. Elaho Mtn 9260 ft Large party, 4th ascent, via north-north-west ridge with bivouac at Bivouac Saddle, 4 August.

Racoon Mtn 8097 ft B Parke, K Hunt, 2nd ascent, via south-west slopes, NTD, 31 July. Large party, new route via north-west ridge and minor peak, 1 August. E Zenger, R Sauser, K Balik, R Babicki, new route on south-west face, west peak, grade 5.7, 3 hours, 1 August (see accompanying sketch).

Totter Peak 8200 ft H Rode, J Bussell, J Davies, 2nd ascent via north slopes, 4 August.

OF INTEREST

Mittelberg Mtn 8878 ft J Clarke, 1st ascent. Unclimbed by either ACC or BCMC.

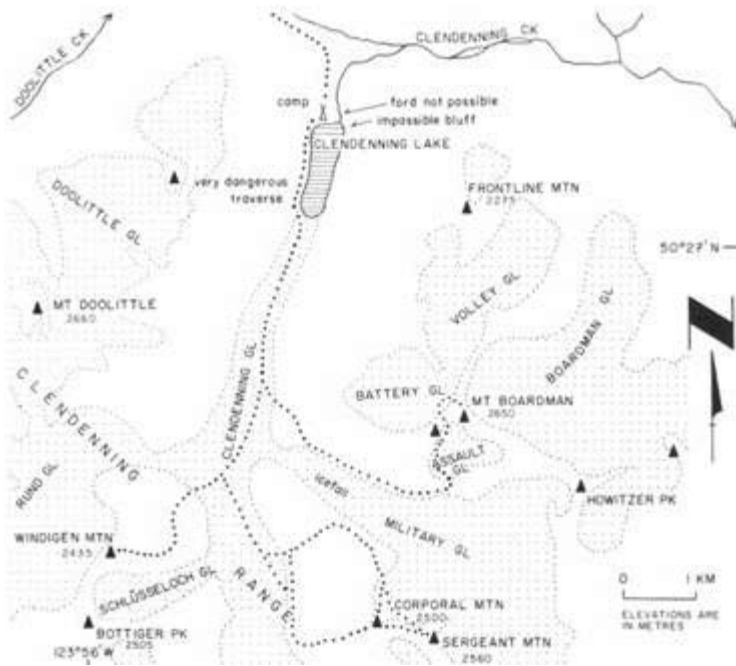
Swede Saw Mtn 7550 ft Attempt via east ridge cancelled due to unanticipated approach problems.

Clendenning Lake. Dangerous traverse along steep moraine hung west lake shore. One hour going out in am, half to three quarter hour returning in pm. With further melting of ice cased moraine at south end of the lake route may become impassable.

Racoon Creek valley. Descent impossible without long rappels at 200 m high vertical headwall located just west of pass.

Clendenning Lake and Glacier Sortie

The splinter group(s) from the Vancouver Section Camp left the base camp on 2 August. Descending the morainal rubble, Wave Creek was forded in short order at the only braided channel reach just downstream of a large waterfall issuing from the precipice guarding Wave Glacier. Instructions were to flag the route in case everyone was forced to retreat to a lower elevation in the event of heavy weather, which was done haphazardly in brilliant sunshine as far as the outer limits of the valley moraine. The going was bushier for another kilometer where Beach Glacier had once terminated in the valley. Beyond lay an open mature forest with heather underfoot. The ford of Doolittle Creek appeared too soon, requiring a safety rope in this year of unusually high runoff. Another kilometer of soft carpet greeted our band of five and then the scenery changed to a desperately rugged rock slide about 2 kms broad. At the toe lay dense alder and a rambunctious Wave Creek. Havoc Glacier on the opposite valley wall left desolate, rugged moraines and a mud flat which shows as a lake on the recent topo map. By mid afternoon we finally emerged unscathed on the mighty lateral moraines of a once larger Clendenning Glacier. One rock block was easily the



Clendenning Lake and Glacier with view of Windigen Berg



Ross Ridge and Corporal Mtn from true right moraines of Military Glacier.
Karl Ricker



size of a two storey house. At iceberg strewn Clendenning Lake camp was set up before the mighty glacier, flowing like a divided highway between walls of steep granitic rock.

Only the west side of the lake could be traversed, the east being blocked by an unfordable outlet river and vertical walls rising above the lake. The journey was dangerous, morainal debris hanging loosely over rock slabs and stagnating ice. At the far end of the lake, reached in about one hour, the glacier ice flowed smoothly into the lake. The large medial moraine that showed so well from camp proved to be only a broad strip of debris without vertical relief. This we followed to a point upstream of the Military Glacier tributary. Ross Ridge was the only logical objective. Karl and Karel chose the meadows and boulders to reach a snow crested north ridge. Ed and Ruedi shouted that it looked too easy and headed up glacier to the west ridge. Nearing lunch time the former holed up in a bouldery cave to wait out a rain squall while the others continued on exposed higher class climbing. The north ridgers punched up easy snow to reach a rather flat summit of Corporal Mtn (8195 ft) on the north end of Ross Ridge at 1330 hrs. Meanwhile Ed and Ruedi had negotiated at least 200 m of class 4 basal slabs then entered low class 5 bush rock with a dirty crack in a mid section of four leads on nice class 5 rock. After a quick greeting Karl and Karel descended the east ridge to have a go at the next highest along Ross Ridge — Sergeant Mtn (8395 ft). Steep westerly snow slopes with 'schrunds were the only defences and the mountain was topped at 1500 hrs with again no sign of a cairn. Ed and Ruedi gave them a shout to acknowledge the ascent. The double baggers had to run at full tilt to catch them at Clendenning Lake, aided by a nice snow traverse below Corporal to avoid its re-ascent. We had a fleeting glimpse of the maze of crevasses in Military Glacier and realized that the true right side of the moraine was the only way to reach the Mt Boardman group. At camp we found three immigrants wanting a taste of our nomadic ways.

The following day was for rest — the only clear day as luck would have it. The highlight of the day was when some leviathan bergs appeared, surrounded by new ice generated by the night's freeze. During the day the gang studied routes. Ed focussed in only one direction — the face of Windigen Mtn with its double set of snow patches. The question was how many would join him for the attempt?

Only Ed and Ruedi set out for the prize the next day. The remainder opted for the Mt Boardman group. Both peaks required the excruciating traverse along the lake. By 0700 hrs the parties had split on the glacier. The Boardman crew picked out a delicately steep lateral moraine to exit from the Clendenning Glacier which headed onto the true right lateral of Military Glacier. This led easily up onto the névé and our first good look at Howitzer Peak. It appeared to be an interesting day. After Boardman we could traverse easterly to give this fine looking chunk of rock a go as well. The plan was to reach the col between the west and main peaks of Boardman, climbing the latter via a grade 4 to 5 west ridge. The final approach was in increasing cloud and Karel elected to end run through the col to climb the snow slopes on the north ridge (John Clarke's route) in order to salvage something of the day. The final rock was only a grade 2 to 3 scramble to a pinnacle and the start of a snow storm. That finished the day after an enjoyable six hour uphill grind. Retreat was in full blizzard that finally turned to rain

on the moraines of the Military Glacier. We peered anxiously over to Windigen Mtn. After several scans with the binocs they were finally spotted moving smartly on the slabs.

It is hard to imagine that such places exist only 150 to 200 kms from Vancouver. We must come back again to the splendour of the Clendenning Range. Our foray only tickled its toes. The anticlimax came a day later, with an exasperating all day wait for a helicopter that constantly flew over our heads despite our desperate signals for mercy. The pilot knew as well that we were sitting at a good thing and he wanted us to soak up our money's worth.

K Ricker

Windigen Mtn: East Face & East Ridge

Windigen Mtn (7790 ft) is probably the most difficult mountain to climb from Clendenning Glacier. Ruedi and I climbed a route through slabs (class 4) directly above the glacier and then over the east ridge. We had two false starts before finding a route. A conspicuous snow fan and gully on the righthand side of the face leading up to some waterfalls is the key for reaching the slabs, which we crossed, rising at an approx 20 degree angle, till we reached a small icefield. Here we had to put on crampons to walk up and over to the east ridge.

This next part of the route between two icefields is the most difficult, requiring two short and one long lead of 5.5 climbing. We kept to the right of the ridge — up some chimneys and one long open book. The rest of the climb to the peak is mostly scrambling over really good, solid granite. A few class 5 pitches in between and one more snowfield had to be climbed.

As soon as we reached the top fog and clouds moved in and it started to snow, so we decided to climb and rappel down the same route as fast as possible and before the slabs could ice up. The little cairns which we built on the way up were very helpful. The rock is very rough and it wasn't too slippery but rappelling with a soaked rope wasn't too pleasant. Karl waited faithfully for us on Clendenning Glacier and we were glad to hear his group made it up Mt Boardman.

Ed Zenger

Camp to base of mountain 2½ hrs, base to peak 4 hrs, peak to base 3 hrs, base to camp 2 hrs. Total 11 1/2 hrs.

Vancouver Island Section Activity

Since our last report (1977) there has been a big increase in rock climbing at Flemming Beach, Mt MacDonald, and Mt Wells. Attracting more climbers from the Victoria area, mostly outside our membership, the friable rock continues to suffer at the hammers of a few high impact climbers and even the firm rock of Flemming is showing the strain of entertaining dozens of people on a sunny weekend. Within the Section, partly spurred by spring mountaineering courses, the fine rock of Squamish Chief has become more attractive in spite of the travel logistics — even for people new to rock climbing. There is simply nothing like it on the Island. A rock climbing guide to the Island was considered but after intense research in local pubs it was agreed that the combination of access into private landholdings and fragile routes would

continue to be better approached through in-person introduction by informed locals. Meanwhile small fragments of Squamish rock are often smuggled back to Victoria whereupon the uninitiated can smear a toe of their EBs in anticipation of their first visit to mainland granite.

There were reconnaissances of rock climbing potential in the sub-alpine MacKenzie and Maitland Ranges, led by Gary Kirkham and Rick Eppler. A presumed first ascent was made of “Bonanza Peak” on the north-east coast of Vancouver Island (see report this volume). Family trips were made to Mt Tuam and the Forbidden Plateau region. The largely sub-alpine character of the Island, particularly in eastern Strathcona Park, has a lot of potential for introducing children to the values and pleasures of mountain country and at the same time offering parents many practical and scenic objectives that are relatively close to trailheads.

Jim Weston and Mike Sampson

“Bonanza Peak”

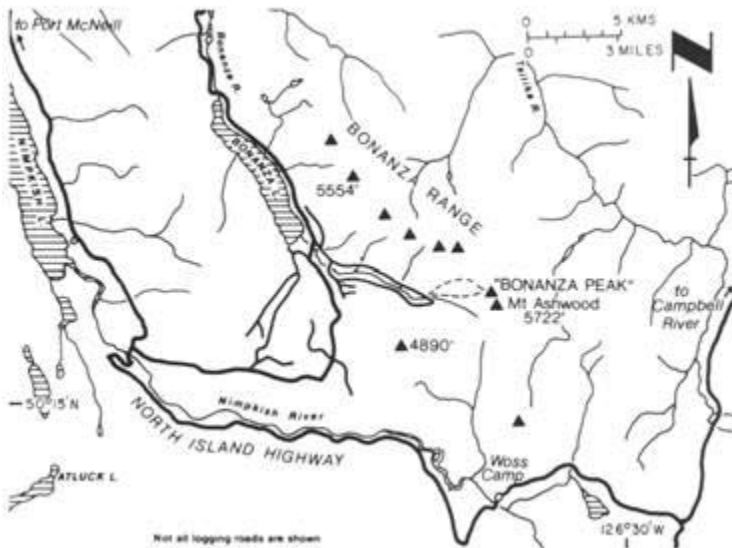
A presumed first ascent of the higher, north peak of Mt Ashwood, northern Vancouver Island.

In 1976 when we climbed the south peak of Mt Ashwood (1744 m), with the name and survey point on it, we only realized on reaching that summit that the north peak is actually higher. A careful counting of the map contour lines (sheet 92 L/7) confirmed this and now, nearly three years later, the north peak has graciously accepted our advances.

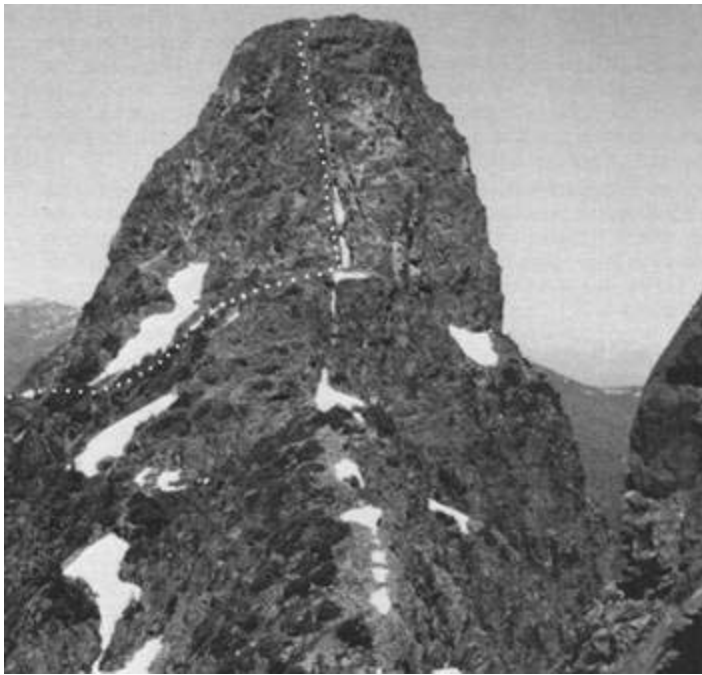
We drove up the new North Island Highway in pouring rain on the Friday evening of 16 June 1979, and camped by Bonanza Lake at a Crown Zellerbach camp site. Saturday dawned moist and misty and we were in no hurry to get going. After some to-ing and fro-ing along logging roads, looking for the best approach to our mist shrouded mountain, we parked the Land Rover on a spur from CZ's main road south and took to the bush about three miles west of our summit. The lower open slopes, pleasant open forest with no bushwhacking, led beautifully and smoothly up a ridge to timberline, and about 2 pm we reached a snowy dome and had a brief glimpse of our summit through a hole in the mist. On along a snowy ridge with some down and up again and at 6 pm we were at the base of the final rock peak, in bright sunshine. Here Syd sat on a rock and worked out a much better way back to the car than the way we had come while the rest of us reconnoitred the rock ledges leading toward the summit. We rejoined Syd at 6.45 pm and followed the route he suggested, down to the Bonanza River and then along a bench beside it, in spruce and hemlock forest where the going was good, as he expected. We reached the Land Rover at 9.15 pm and were soon back in camp.

Next morning was clear and fine and we were away at 6.30 am, going up the north side of Bonanza Creek to about 692750 on the UTM grid of our map, and from there turning up to the col between our peak and one north of it. With some minor variations up the route we came down the day before, we reached the bottom of the final rock tower and roped there about 12.30. Climbing was easy but exposed at first as we traversed ledges around the west face of our peak to gain the south ridge, up which we proceeded without difficulty, reaching the summit at 2.10 pm. It is a large detached

"Bonanza Peak", Mt Ashwood (North). Jim Weston



"Bonanza Peak", Mt Ashwood (North): "Bonanza Peak: from Ashwood. John Gibson



block which looks as if it might roll down toward Johnstone Strait one of these days. We built a cairn and left a record in it. After basking in the sun up there for an hour or so, we descended by the same route, getting back to the Land Rover at 7.15 pm.

This summit, at 706756 on the UTM grid, is I think the only one above 5800 ft (1768 m) in the Bonanza Range, so it seems odd that the surveyors ignored it, placing the name Mt Ashwood on its lesser sister half a mile to the south. To give it its due, our peak should perhaps be named "Bonanza Peak".

John Gibson

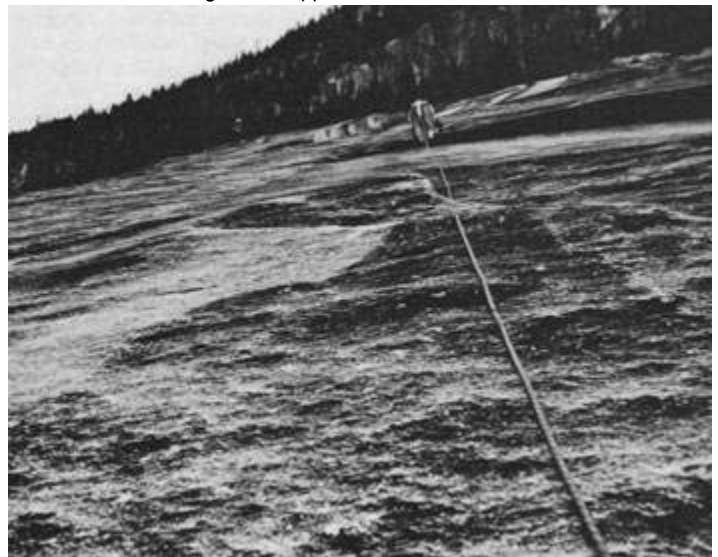
Participants: Rick Eppler, John Gibson, Ben Peterson, Syd Watts.

Mirror Slabs

Looking for new rock has its rewards. Mirror Slab in an obscure valley up EC's coast is one of them. It's fair sized, 2000 ft high by about two miles wide, good angle with a bulge at mid height, and generally quite blank. When Tim and I went to climb it we didn't know what to think — standing in the valley bottom the slabs seemed smooth and steep. We didn't want to place bolt anchors — they would just get old and die; we didn't have time anyway. At our camp by the wild creek complete with underwater caves and granite patios we got hyper for a trail to the slab's base before dark to see exactly what the climbing would be like. Unreal, the primal forest filtered in evening light; strange birds sang as the creek's murmur became silent and we made our way upwards over boulders and moss gardens. Emerging at the base everything's great. We look around and choose a route on the right side which goes up to a corner then to a ledge and that's it — can't see no more because of the bulge. It's starting to get dark. The sun is only playing on the mountain tops to the south-east. Time to go back to camp.

Next day it's white light, white heat going up to the slabs. Tim's waiting there ready to go. The weather's overcast; clouds drift silently across the slab's face. Four leads take us to the ledge, then straight up, hoping for belay spots. Tim finds a flake, I find a crack, and it's onto the bulge. We have to keep pulling belays to extend

Mirror Slabs: heading for the upper corner. R Norduik



the pitch so we can reach the next belay. Beyond the bulge we see to the top and choose to head towards another corner. Everything goes great, the sun even peeks out producing instant heat. The last two leads get done without belays and don't slip techniques. It's the top. We scramble for descent, rappelling, trees, down climbing, sliding. Back at the base we collect our belongings and disappear back to camp.

R Norduik

Mt Waddington Access

In July 1979 I made my fourth trip into this spectacular region of BC. As usual there were other parties coming and going or just left.

I spoke with one party about how they got there and they seemed to have a few problems. I also saw signs of passage of those before us. How does one get to this area? Well it is no longer much of a problem.

FLOAT PLANE

It is as well not to cut back too much on the monetary outlay as it can add several days to your trip. Choose a company that will do the job including an air drop.

Campbell River to Tellot Lake (toe of Tellot Glacier). Island Air on Vancouver Island have done numerous trips into this area and are very experienced. They will also do an air drop at the foot of the Bravo icefall with no problems. The disadvantage is the weather. Clouds tend to back up against the hills and can delay departure for several days. About \$400 per trip, four or five per plane load.

Middle Lake (south of Tatla Lake which is 216 kms west of Williams Lake in the interior). Dean River Air Services also drop off at Tellot Lake. This company based out of Nimpo Lake has flown into this lake and has done air drops many times. Advantage is the weather is better on the east side of the mountains. Disadvantage the long drive from Vancouver. Four or five per plane load.

HELICOPTER

Expensive but it does eliminate the need to walk in as your drop off is your base camp.

Helicopter from Williams Lake. A party of three or four may go for this one. Okanagan Helicopters will take you. Flying time is one hour both ways, so for one trip in and one out it's four hours at about \$400 to \$450/ hour. But its fast.

Helicopter from Middle Lake. White Saddle Helicopters based out of Tatla Lake are regulars. Disadvantages are a long drive from Vancouver and as far as I know only a two seater and pilot helicopter. Advantages are low cost, short flying time and familiar pilot.

Helicopter from Pemberton. Pemberton Helicopters may be able to fly direct in about 1 to 1 1/2 hours. They are hoping to obtain a larger aircraft. Cost about \$400 to \$450 per hour with three or four people.

With all the float planes it is easiest and fastest to fly to Tellot Lake, walk over Nabob Pass and down to the Tiedemann for access to the Bravo Icefield. If you are going to the hut then access up the Tellot Glacier is better.

Traffic between the hut and foot of the Bravo is via a snow slope and glacier — see photo. I noticed this year that the environment is taking some punishment from the relatively heavy use. As this area grows in popularity it is subject to damage. Please stay on the route shown on the photo as this will reduce the impact on the area. The flora extremely delicate and should be treated as such.

Egress, if using a float plane, is a little tricky. All routes converge on Nabob Pass then up over the shoulder of Jeffrey (see photo) then down to above Ghost Lake. A great deal of sweat and toil can be eliminated if you stay high dropping gradually until past the

Mt Waddington Access

1-use this hourglass slope; 2-bear right at top of snow patch beneath rocks; 3-Plummer Hut; 4-Tellot Lake. Route up to hut very easy. Brent Ash



Mt Waddington Access

1-Rainy Knob; 2-normal base camp air drop; 3-Jefferey; 4-Ghost Lake (behind). Route drops behind shoulder into a valley up the other side. Bear left to overlooking Ghost Lake then head for west end. Brent Ash



west end of the lake then drop down to the meadow and approach from the west going east. Normal pick up is at the west end of the lake. Allow several days extra food as bad weather may delay your pick up, especially from Campbell River. Take lots of insect repellent. Ghost Lake has very hungry flying friends.

Roger Griffiths

Mt Waddington: North-East Spur

Annette Richards and Stuart Ross, a pair of itinerant New Zealanders, made a very adventurous trip through the Waddington Range, opening a new route on Waddington to boot. They walked in from Twist Lake via Twist (Granite) Creek, Bifrost Pass, and Pocket valley to the Scimitar Glacier, which they ascended to the Waddington-Combatant col. This took nine days, from 7 September 1979 onwards. After climbing Combatant, which probably had as many ascents (three) this summer as in total previously, they made the first ascent of the ice spur which rises out of the east end of the col (fourteen 120 ft leads) onto the glacial shelf below the summit tower of Waddington. They successfully crossed the ledges below the Tooth, attaining the Notch, but were forced back from below the chimneys by heavy icing and the late hour. They quitted the peak and crossed to the shoulder of the North-West Peak, where they bivouaced. The following morning they climbed the North-West Peak and then dropped down the Angel Glacier, finally down climbing and rappelling the north-west shoulder directly into the west end of the col in order to avoid passing beneath the ice cliffs which threaten the Firey route. To complete their traverse they descended to the Tiedemann Glacier via the true left arm of the upper icefall, popped up to the Plummer Hut at Claw Peak, and finally continued down the Tiedemann, crossed Nabob Pass, and walked out to Twist Lake via Moseley Creek (five days from the hut) with two fellows they had met at the hut. Low creek levels (late season in a dry summer) undoubtedly eased this leg of their journey. They reached Twist Lake on the 28th, after a pretty remarkable trip.

D Serl

Mt Tiedemann and other Peaks above the Radiant Glacier

On past trips to the Waddington Range we discussed and rejected numerous ideas for approach routes to the peaks of the upper Radiant Glacier. These peaks are seldom climbed or even attempted and several attractive routes remain unclimbed. The approaches to the Radiant from the Tellot Glacier, as well as the upper section of the Radiant, entail substantial travel difficulties.

Our approach problems were completely solved by the helicopter of the White Saddle Air Service. On 16 July 1979 we landed on the Radiant at 7100 ft. In a day and a half we waded up the knee deep fresh snow of the severely broken upper section of the Radiant to a high camp at 10,000 ft.

We had hoped to climb the east ridge of Mt Tiedemann as well as Mt Asperity. However we were unable to reach the Asperity-Tiedemann col. To reach this col from the Radiant one must circumvent an imposing glacial ice cliff, done by Joan Firey and Piro Kramar in 1974 on their ascent of Asperity. They encountered

a small amount of ice climbing and some tunneling behind séracs. This year the only feasible route around the ice cliff appeared to be at least several hundred feet of 60 to 70 degree water ice on the north-east face of Tiedemann. No one in our party was prepared to climb this.

Turning our attention to easier objectives, we climbed Mt Damocles and the north ridge of Mt Tiedemann, encountering only minor difficulties in crossing the bergschrund below Damocles and with the snow covered rock in the col between the peaks. As the route to the Asperity-Serra V col also seemed beyond our abilities, we descended to our landing site. From this camp we climbed Chaos, Centaur, and Unicorn Peaks. These peaks had not been climbed since the first ascents of Culbert and Woodsworth in 1964. A first ascent was made on the peak between Centaur and Unicorn for which we propose the name "Satyr". Our route was the south ridge *and was class 3 except for one class 5 pitch*.

David Knudson

Participants: Joe Firey, Hansueli Hosli, David Knudson, Michael Martin, Peter Renz, Frank de Saussure.

Mt Waddington Expedition 1979

On 1 August I received an invitation to join an expedition to Mt Waddington. The three of us visited Paul Starr who graciously offered to show us his slides of Waddington. Don Serl offered much helpful advice, having just come out of the Waddington area the week before. On the 10th in beautiful sunny weather we drove to Bluff Lake.

We woke up bright and early Saturday morning. Pilot Mike King flew in around 9 am and lifted off with Brian to pick a suitable landing site. We had planned to set up base camp at the bottom of Rainy Knob but big crevasses indicated that the best spot would be at the top. An hour later Mike returned for Robert and me.

We landed, the helicopter flew away and we were alone — separated from the nearest farm by a four day hike. The scenery was unbelievably beautiful — very rugged and ominous. Rumbles could be heard from the surrounding mountains every now and then as avalanches came crashing down. We cached some food and gas, taking enough with us for four days, then started up the Bravo Glacier shortly after noon.

At the beginning the route finding was easy because tracks were still visible from a party which must have gone in a few weeks earlier. The snow was mushy causing us to sink in about eight inches with each step. After about two hours we came to a huge crevasse. To the north of the crevasse was a huge rumbling icefall, next to this a rock ridge. We left our packs at the bottom and went for a recce. As we were climbing we heard a great thundering sound and looking up saw a ten ton boulder crashing down the chute we had crossed minutes earlier. Feeling a bit unnerved we continued to the top of the rock ridge.

From the top of the ridge there appeared to be an easy route to the bottom of the headwall but it looked extremely exposed and rock and snow avalanches were constant so we decided to wait for sundown. We rappelled off the rock ridge to our packs, had

The north-east face of Mt Tiedemann from Mt Termination. David Knudson



The upper Radiant Glacier. The peaks (left to right) are Serra II, III, IV, and V, Asperity, Tiedemann. David Knudson



supper and then at 8 pm, started out across the chute. At the top of the icefall a sérac toppled over, just missed Brian and crashed down the path just taken. We dug a tent platform and settled in for our first night on the mountain — gorgeous with starry skies and distant silhouetted mountains.

We broke camp early and were ready to leave at 6 am. The route contained an obstacle we'd not noticed — a small crevasse just beyond our camp site. It took an hour to rappel in and climb out the other side. We then ascended the ridge — quite treacherous with steep avalanching snow slopes on either side. Above the headwall we dropped off the snow capping the ridge onto a rock band. Progress was slow from this point as we began doing stationary belays. In retrospect the route directly up the centre of the headwall is probably the best at this time of year. It is not nearly as steep as it appears from below and danger from avalanches is low as long as the route taken is directly up the centre. All the avalanches we saw came from two sides which have a lot of snow on them.

It was an easy walk to Bravo Col and on to our camp at 10,400 ft. Combatant, Tiedemann, and the Serra peaks were breathtaking. The main peak of Waddington stood in mighty solitude. We went to sleep early in preparation for the long day ahead.

At first light we left camp with day packs on our third day of good weather. It was an easy walk to the base of the Tooth with only a few minor crevasses en route. Getting onto the rock involved climbing over a 15 ft bergschrund and then up a short snow slope. We took the standard route, traversing diagonally on a ramp going along the base of the Tooth to a notch between it and the main summit. Then a narrow rock ridge was crossed going to the chimney which led to the peak. Up to this point the climbing was all class 4. We climbed up the chimney past three chock-stones. The third of these had been fixed by pins which we took advantage of, using aid. The rock was very dry and there was no falling ice as reported by earlier groups. In a few spots there were formations of hanging icicles which looked like brilliant chandeliers. The Tooth was spectacular from the Waddington side, very narrow in shape. As we climbed, Bravo Peak and the Tiedemann Glacier appeared smaller and smaller below us. At the end of the chimney we traversed to the right into a gully signifying the final summit approach. At 5 pm we were on top!

We took the traditional summit photographs and then hastily started down. We were already late especially since our camp was below the 12,000 ft level, where most groups camp. When we reached the notch we descended down a gully leading directly to the glacier. It took eight rappels to reach the bottom by 9 pm, some not full length as we were being careful not to get the rope caught. At least two other parties before us left long pieces of 11 mm rope in the chimney. There was also lots of fixed protection and rappel slings on the route.

Brian went back up the first ice section and snowfield to get the ice axes we had left there. By the time he got back it was 9.30 and already dark. We made our way down with only slight difficulty until we reached a crevasse which seemed to go from one side of the ridge to the other. We decided to wait a couple of hours until the moon came out so that we could see better. It was a cold two hours with camp just below us. Once we could see again it only

took 15 minutes to reach camp. We crawled into the sack, boiled some hot tea, and passed out at 2:15 am, 22 hours after leaving camp!

We slept late, folded up camp, then made the long trek back down to Bravo Col. After such a strenuous walk we felt it was necessary to establish another camp.

After setting up camp we headed for Bravo Peak. This involved crossing one crevasse and climbing an icy slope without the crampons left in camp. We did however have an ice screw and the rope for protection. After half an hour we reached the summit with a marvelous view of the Waddington-Combatant col. When we left camp the sun was shining but in the time we climbed, it clouded over and actually started raining.

We got up early on Wednesday in preparation for our descent of the headwall. An avalanche had come off Spearmann Peak and completely obliterated the tracks we had made on the way up. We rappelled down the headwall in three rappels on rock and snow. On the last rappel we left two ice screws but also found one. We descended by the route the party of four had left. As expected it proved to be a better route since they had put more consideration into making it. We did one rappel over an ice wall we had climbed on the way up, using a bollard for an anchor. We arrived at Rainy Knob around noon.

On Thursday we went over to the Plummer Hut. It took a long time to find a route onto the Tiedemann from Rainy Knob. First we tried to descend from the south side but ended up on top of some granite bluffs. We climbed back to the top of Rainy Knob and attempted a descent via the north side. This proved successful as there were snowfields most of the way down. There were a lot of crevasses to cross on the edge of the Tiedemann but once these were negotiated the glacier was relatively unbroken. It took about 30 minutes to make the crossing and then another three hours of climbing on a mixture of rock and snow to reach the hut. It was a welcome sight over the final knoll in the ridge. When we arrived it was cloudy but just around supper an inversion occurred and Claw Peak and the hut appeared amid blue skies above a sea of clouds.

On Friday we climbed Claw Peak in overcast weather. This required five pitches of mid class 5 on nice solid rock. It started snowing as we approached the summit and once on top the air was so charged with electricity that the moss on the rocks was crackling and our hair stood on end. We down climbed the first pitch and then rappelled down over an overhang on the north-west side. When we tried to retrieve the ropes they got jammed. Since we were still in possession of both ends Robert volunteered to prusik up the ropes and untangle them. When he returned we managed to pull the rope down but one end got hung up on some rocks half way up. I climbed up to retrieve it and after another half hour finally recovered both ropes. We were back at the hut in the afternoon. We packed our things and headed back for Rainy Knob where we had arranged to be picked up by Mike and at 10 am on Saturday morning we heard the faint hum of helicopter engines. In another hour and a half we were all back at Tatla Lake sipping coffee and eating Mrs King's home baked cookies.

The Waddington area is very beautiful and rugged but the success

Brian, Bill, and Robert (left to right) with the Tiedemann Glacier in the background. Bill Maurer



The north-west peak from the summit of Waddington. Brian Vezina



Robert on the ridge with Tiedemann below. Brian Vezina



of any expedition into the area is always highly dependent on the weather, with storms of a week or more in length not uncommon. Different times of the year afford different advantages. In June and July the Bravo is easier to pass but the summit tower is usually covered in a layer of ice from which pieces are constantly breaking off. In August and September the Bravo is wide open and difficult to cross but the summit tower is dry and more enjoyable to climb.

Bill Maurer

Expedition members: Robert Gordon, Bill Maurer, and Brian Vezina.

Recent Nomenclature Changes by the Canadian Permanent Committee of Geographic Names: Coast Mtns 1979

Climbers are fortunate that BC has Don Pearson (Surveys and Mapping Branch, Ministry of the Environment, Victoria) as its representative on the CPCGN. Place names are a provincial responsibility; it is Pearson who decides what names will be officially accepted. Ratification by Ottawa is a mere formality.

A summary of how names proposed by climbers are processed may be of use to Journal readers. Each name is checked for duplication using the Gazetteer of BC and Supplements (copies available in many libraries). The name does not have to be unique in the province but it should not be duplicated in the range or general area. Pearson is much more flexible here than some of his forerunners but submitting an overused name such as "Bear Creek" will not win any sympathy. The locations of the features are checked to be sure that they are not already named. If all is well and the name is not obscene, inappropriate, or for a living person or a deceased person with no connection with the area, and if the origin of the name is clearly given, the name is generally processed for adoption.

There are problems, most having to do with poorly prepared submissions. Unlike many government offices, Pearson's is understaffed; proposals requiring extensive staff research commonly go to the bottom of the pile. Names should be shown on the largest scale map available (1:50,000 for much of the province). Summits of peaks should be marked. Mark creeks with a pen, particularly in the headwaters where many creeks splay out. Outline the boundaries of glaciers and mountain ranges. In a covering letter state why the name was chosen and give alternate names if you feel your first choice may be unacceptable.

Glaciers offer special problems because their rate of change is commonly very rapid. Although glacier names are approved in Victoria, the boundaries of the glaciers (snowfield, icecaps, etc) are delineated by glaciologists in Ottawa. Approval of the name is one thing, approval of the feature is another (how many climbers know how to tell an icefield from a glacier from a névé?).

Experience suggests several features of Pearson's philosophy of nomenclature. Features named for living persons are almost never accepted. Names of deceased persons may be accepted if they have some connection with the area and if some biographical

information and names and addresses of next of kin are given (this applies particularly to people who have died in the last few years). English generic terms are preferred in BC ("Rund Glacier" is preferable to "Rund Gletcher"). Pearson feels (correctly) that making any ascent of a peak does not confer the right to name it. Proposals such as the following (paraphrased from one on file in Victoria) go nowhere: "Dear Sirs: This is to inform you that the peak about 10 miles north-west of _____ is known as Mt _____. I climbed this peak last August and named it for my wife.

Yours sincerely, _____"

Glenn Woodworth

LILLOOET RANGES: STEIN BASIN

The Stein River basin was touched upon in CAJ 1979. However the main part of the basin was purposely avoided, pending the publication of Exploring the Stein River Valley (see review this volume). The book's well-prepared maps covering this large basin show the new nomenclature adopted for the vast relatively untouched wilderness.

LILLOOET RANGES: JOFFRE GROUP

A number of loose ends and rejected names were noted in CAJ 1979. After an intervening year of negotiation by Alpine Crafts Ltd, the local Indian Band, and the help of a few Pemberton historians, the outstanding issues have all been cleared. For better or for worse, the following are official and will not be changed under any circumstances: "Rex's Pillar" (Culbert 1979) is SLALOK MTN; "Capricorn Mtn" is MT HOWARD after the late and enthusiastic alpinist John Howard who opened up the area with his partner Roger Griffiths; "Mt Gorman" is TSZIL MTN and its glacier on the north-east side is TSZIL GLACIER feeding TSZIL CREEK (the usual camp area). Amen.

LILLOOET RANGES: CAYOOSH RANGE AND PLACE GLACIER GROUP

Rejected MT GARDINER of CAJ 1979 has now been reconsidered and is finally approved thanks to some spadework by Mrs Roayne at Pemberton.

PACIFIC RANGES: TENQUILLE LAKE AREA

FOSSIL PASS between Coppermound Mtn and Seven O'clock Mtn (CAJ 1979).

PACIFIC RANGES: NORTH CREEK AREA (CAJ 1977 and 1979).

ASH PASS (not shown on map in CAJ 1978:84) lies between the headwaters of Pebble Creek (now BOULDER CREEK) and McParlson Creek.

PACIFIC RANGES: GARIBALDI PARK. SNOWCAP LAKE AREA

GREYMANTLE MTN lies almost 2 kms north-west of Greenmantle Mtn and ROLLER COASTER RIDGE is the east ridge of Mt Pitt extending all the way to Tuwasus Pass. From this pass, SOUTH TUWASUS CREEK feeds Tuwasus Creek and the main creek extends westerly around Mt Pitt to RAIN DOOR PASS, lying on the north-west flanks of the mountains, NORTH TUWASUS CREEK meets the main creek at a triple junction with South Tuwasus

Elsewhere in Garibaldi Park the names in CAJ 1917 and in D Munday's 1922 Guidebook are in the process of being accepted with some minor revisions due to the problems created by glacier retreat since his time and by the 1928 Garibaldi Park map with its host of politically inspired names.

PACIFIC RANGES: RALEIGH-GILBERT AREA

The map in Geological Survey of Canada Bulletin 295 shows snow and ice features more accurately than map 92K/16 as well as many more peak and glacier names all official but not likely to appear on topo maps for quite some time.

PACIFIC RANGES: CHEHALIS LAKE AREA

All names in The Chehalls Range: A Climbing History (this volume) are official except for Mts "Ratney", "Bardean", and "Trio Peak".

PACIFIC RANGES: ELAHO AND CLENDENNING RANGES (NTS 92J)

The names appearing on the maps (this volume) are official unless in quotation marks.

St Elias Mountains and the Yukon

Mary Whitley, editorial assistant

Kluane Report 1979

There were 18 expeditions of 89 men and women in the 1979 season on climbing or ski expeditions into the Icefield Ranges of Kluane National Park.

Lloyd Freese, Park Warden, Kluane National Park

Ted Billings, Jon Rosen, Mike O'Connor, Jim Thompson and John Kleinwachter skied in from Kluane Lake and attempted the east ridge of Mt Logan but were unsuccessful, John Skirving, Cy Perkins, Jim Price, Stu Ferguson, and Jim Witte were successful on their attempt on the south-west buttress of Mt St Elias.

Alex Urfer, Steve Roedde, Les Sturgen, Mary Stafford, and Pam Simper had a small trip up the Kaskawulsh Glacier.

Mike Bourns, Daryl Wylie, Keith Webb, and Terry Gamble spent a few pleasant days in the Mt Kennedy area.

Barry Hagen, David Wood, Paul Parker, and Frank Daenzer attempted a south west ridge on King Peak but were unsuccessful; then moved over and attempted the King Trench route on Logan but were unsuccessful.

Martyn Williams, Richard Burton, Chris Harris, and Mike Skreiner were successful on their King Trench route climb of Logan.

Jock Glidden, Frank Sarnquist, Steve Ericson, and Alan Bergland were successful on their Catenary Ridge climb of Logan.

John Lauchlin, Jim Elzinga, Allen Burgess, and Raymond Jotterand again attempted the south west buttress of Logan and were successful. A first ascent.

Bob Saunders, Mel Mines, Errol Smith, and Steve Smith did a ski tour in from Kluane Lake, climbed Mt Logan via the King Trench route and then skied out.

Mike Strong, Brian McLean, Kelly Kissock, and Doug Dalquist were successful on the east ridge of Logan.

Fred Becky, Richard Nolting, Craig Tillery and John Rupley attempted a south-east ridge on Mt Vancouver but were unsuccessful. They then moved down to Mt Foresta; results are unknown. Richard Fiechtner, Herbert Feichtner, Wolfgang Feichtner, and Bernhard Feichtner were successful on their climb of the east ridge of Logan.

Bruce Hickock, Monty Alford, William Wilson, Davida Wilson, Shawn Beck, Eve Anderson, Andrews Black, David Bunch, Jerry Cor, James Davis, James Eason, and John Murphy virtually skied across the St Elias Mtns from the ocean to Kluane Lake.

Hugh Ewing, Deborah Ewing, and Thomas Lenchek had a successful trip with a few peaks along the south arm of the Kaskawulsh.

David Hughes, Robert Kandiko, Jim Allan, Paul Starr, Tim Ryan, Douglas Herchmer, and Ross Nichol were successful in their climb of the Catenary Ridge of Mt Logan.

Shigemitsu Murai, Kouich Ezaki, Takashi Kuranishi and Harutoshi Toyota were unsuccessful on the east ridge of Logan.

Roger Griffiths, Rob McLaren, Brent Ash, Allen Richardson, Brian White and Dave Timewell were successful on their climb of the south east ridge of Vancouver but were a walk away from the summit. A first ascent.

Michael Down, Reid Carter, Paul Kindree, John Howe, and John Wittmayer were successful on the north west ("Amenity") ridge of Logan. A first ascent.

Mt Vancouver: First Ascent of South-East (Clone) Ridge

An account of the first ascent of the south-east ridge by faculty and students of Capilano College, North Vancouver.

North to the Yukon, north we go again.' 1978 weather had stopped four of us in our attempt on this ridge dead in our tracks. That same summer thoughts kept churning; should we forget it or give it another go. The latter won out and by early fall planning had started and in late May 1979 north we did go.

Our party numbered six, with more time, equipment and food than before. In Haines Junction we stop in to see Lloyd Freese, the ranger. His steely eyed look reminds us of Clint Eastwood. After "Clint" Freese has checked all our goodies we head for the airfield sure we will fly straight away. On the seventh day we can.

Base camp is set up at 2000 m and the following morning two of us reconnoitre the route but bog down in soft snow. Clouds were infrequent, the days hot, the snow mushy. So we climb from 9 pm to 6 or 7 am and make good progress up the easy knife-edge part of the ridge to 300 m. Two of us stay here to forge the route ahead while the others return for more supplies. Clouds build up and that evening work is called early due to high winds and blowing snow. The following day is quite clear so another carry from relay cache, an ascent up a steep ice slope and we establish camp 1 at 3100 m. Before us lies the thin line of the headwall of the cirque where our base camp is. It looks easy and we anticipate no problems. After 80 m of the 450 m ridge we wallow in bottomless depth hoar and the top 40 cms of the snow slides constantly. We retreat for tea. That evening at -12°C it sets up and we push another 60 m until cornices and breaking nerves force retreat for more tea and courage. This baby is not going to be easy.

For five more nights we stay in the same camp, two storm bound and three slowly pushing the route and fixing it. At last, after another cornice falls away beneath us and more depth hoar slides off, we fix it all except the last few metres.

Wait, wait, wait; momentum grinds to a halt and spirits drop. For group morale there must always be something to do, loads must be hauled or the route forged ahead. Finally after six days we surmount the headwall. The final 100 m is led with packs on and is desperate. So desperate that camp 2 is made just past the end of the ridge.

We sleep until mid-afternoon then start up the next steep 750 m. Our problems are not yet over as a light winter snow pack makes crevasse crossing a slow process. The route winds around small icefalls and séracs and up a long, long 40 to 45 degree slope. Eight hours of gruelling work put us at camp 3 at 3750 m. A dramatic

sunrise clears storm clouds to the east. Peaks beyond peaks with clouds drifting aimlessly amongst them and the Hubbard Glacier below,

Coffee, breakfast, and sleeping pills end our day at 8 am. We wake just in time for afternoon tea at 5 pm. Bodies are still aching and sore from days of hard work. Firmer snow helps us get back into a more pleasant schedule of sleeping at night and climbing during the day.

Evening and four of us without packs check out the route. Climbing to 4050 m we see our route to the saddle below the summit of Good Neighbour Peak. It looks good with few problems. Supper and sleep in high spirits but then next morning Mother Nature sends in the clouds, winds and snow. Three days of tea, food, sleep, tea, tea, sleep, tea, food.

Time is running out. Those hard won steps are gone—rats. A small patch of blue—wind dying? Go for it! Up a steep slope, the long mind-numbing traverse of 3 kms of knee deep snow. An endless day to camp 4 at 4200 m.

Building storm clouds and winds greet our summit push. Brent and I start out and gain the ridge. Winds are now 70 kph and gusting to 80 plus, the temperature has dropped to -15°C without the wind chill. Slowly we gain altitude. The windward side drops off steeply; the lee side drops away vertically a 1000 m or so. Winds force us to our knees and our faces grow numb. At 4500 m we stop. It is 200 m or so to the summit but clouds build even thicker. Discussion, torn between different desires. Cold creeps in, we return. Camp 4 is fairly battered with tents straining and snow burying all.

It's back across the 3 kms of unstable snow. Slabs are forming, a lower line maybe. Thud—Brian is carried 6 m in a 40 cm slab, the rope saving him. Battered and bruised we make our way to camp 2 above the dreaded corniced ridge. Old Sol has been unkind and most of the fixed line anchors have melted out, the path slid away.

Days later it seems we collapse into camp 1, pass out until the sun comes round again. Down the final ridge to base camp. It's great! Lots of room in the tents, endless cookies, coffee, clean clothes and candy. Now all that is required is the weather to clear up so the chopper can fly us back to Haines Junction and Mother's Cozy Corner Cafe. We just have to wait. . . and wait. . . and wait.

Roger Griffiths

Participants: Roger Griffiths, leader, Brian White, Rob McLaren, Brent Ash, Dave Timewell, Al Richardson.

TECHNICAL NOTES

On this expedition, we endeavoured to use as many Canadian made products as possible and they all worked. This greatly pleased us, showing that Canadian manufacturers and producers can hold their own.

Footwear Half of us wore Galibier double boots, the other three regular climbing boots with Neoprene inner socks and Neoprene overboots by Fitzwright of Surrey. The overboot was very warm

Route goes back 3 kms along ridge. Camp 1 is behind ridge. Summit in clouds. Roger Griffiths



Route comes up from other side. 1-headwall, 2-camp 4 and high point beyond, 3-Mt Good Neighbour, 4-Mt Vancouver. Roger Griffiths



On summit attempt. Roger Griffiths



but was abraded in spots. There is definitely room for a properly designed overboot. Some of us also had felt insoles and good old wool socks and these were fine.

Underwear Odlo polypropylene was our choice and not once were we sorry. It was very warm and did not snag or pull at the seams. If wet from sweat, it dried fast. At times we climbed with only the top and bottom on.

Leg protection Goretex bib wind pants by Far West, Vernon gave us lots of protection, the bib especially keeping the small of the back warm.

Body protection Our wind jackets varied. I had a totally waterproof one by Super Sport, BC that was very durable although it did tend to ice up as any will at sub-zero temperatures. Brian had a Goretex one by Taiga, Vancouver and it presented no problems.

Polarguard jackets We had the Whistler made by Equinox, Vancouver and I have never been so warm. The insulation and ease of wearing was second to none.

Pile clothing Pile Patagonia suits under the above jackets kept us toasty even in the coldest conditions. No moisture is absorbed so the insulation value remains the same. These and the Equinox jackets were some of our best items.

Sleeping bags The Robson, also by Equinox, had three layers of polarguard on top and two under and was the warmest and most comfortable bag I have used.

Food Most of our main meals were dried rather than freeze dried, greatly helping our digestive systems. We had no major problems with eating at all. For treats we took Coffee Crisps, Kit-Kats and Smarties, all in great demand.

Stoves MSR. Very few problems but they had to be cleaned a couple of times.

Fixed Line 5/8" polypropylene. This ended up being a little heavy and 1/2" would have been better. Dead men and dead boys were used to secure it but there were times when 24" or 30" snow stakes would have been better.

Trans St Elias 1979

To travel on skis is usually a pleasure but when that travel includes the crossing of a mountain range like the St Elias it becomes an adventure and when it is done in the company of delightful companions the journey reaches the sublime. So it was summer 1979 when eleven of us were landed at the foot of Alaska's Malaspina Glacier. The expedition had been organized by Mountain Travel of California. Bruce Hickock of Alaska and myself, a Yukoner, had been given the responsibility of co-leading this unique traverse.

We began the 240 km crossing on the shore of berg filled Malaspina Lake on 25 June. Our party had been ferried across Yakutat Bay in a float-wheel equipped Cessna 180 piloted by a charming lady of Gulf Air. What wasn't so charming was the weather. As we relayed supplies, skis and 11 sleds across 8 kms of moraine debris, it rained. We received 50 hours of continuous rain and heard later that in one 36 hour period Yakutat had recorded 22 cms. If this was a test of the mettle of the party they came through with flying colours. On the fourth day the elements relented and we had four continuous days of perfectly clear weather. The spectacular profile of Mt St Elias, which looks so symmetrical from the east, and the august beauty of Mt Augusta (couldn't resist that) became a backdrop to every photo.

We were dry again and the good weather came when we had to devote all our attention to the forging of a route up the Seward where it is sandwiched between the Samovar and Hitchcock Hills. A gallant try by Bruce to force a direct passage had been thwarted by an incredible jumble of séracs. The alternative was 'up and over'. That's how it was that we were close to the 1500 m level, just breaking camp, when we received our first check flight (out of Yakutat). What we didn't expect was a second breakfast in the form of a ten kilo package of pre-cooked Dungeness crab. The force of impact as it hit the snow served to break the succulent morsels into handy, ready-to-eat, pieces.

The climb over the western ramparts of the Hitchcock Hills gave everyone an opportunity to taste a spot of mountaineering on what was essentially a cross country ski trip. From camp on Pinnacle Glacier the way was clear to Pt Glorious where we picked up the air drop of food. We had no sooner left Pt Glorious when the weather began to deteriorate and for the balance of the journey we experienced every kind of weather. When visibility became minimal we proceeded with extreme caution, compass in hand. Only one day that gave an excuse to rest and as the snowstorm deposited a light mantle of white we had an opportunity to socialize. When the clouds cleared the vistas were so extraordinary, so grand in form and dimension, that the eye roved, restlessly, from one massif to another. Ahead the full profile of Mt Vancouver, on our right flank the buttresses of Mts Owen and Cook, across the wide expanse of the Seward Mt Logan, behind the sharp ridges of Mt Augusta. These peaks, viewed from such a sea of ice and in such a perspective, imposed feelings of humility, bewilderment, unreality and gratitude all at the same time.

At the Seward-Hubbard divide we made camp by the cache established a few weeks earlier using Alkan Air's ski-wheeled Helio Courier out of Kluane. The terrain lent itself admirably to our cross country skis and while the generally warm weather gave snow conditions that were never ideal they were not really bad. One day all will remember. We were on the upper Hubbard. A combination of a slightly colder temperature and increased altitude gave us the ideal surface. We skied in sheer ecstasy for the first time, oblivious of packs and the small sleds that had become an extension of ourselves.

The ascent to the Hubbard-Kaskawulsh divide culminated in a col between two nunataks and as we reached the crest the marker of our third cache appeared just below us. But it was not so much the cache that warmed the soul as the view of the mountains that flank the Kaskawulsh Glacier and its tributaries. We could see into the Yukon. It was such a glorious day that we took time out to climb the nunataks and take pictures of distant peaks.

The following day was quite the opposite. We could see about two rope lengths and were forced to cross the divide plateau guided solely by compass. On two occasions we had to reconnoitre the route ahead and camp was pitched at the end of the day at an estimated location. The morning offered only slight relief. Bruce and I wanded a trail for a few miles but had no sooner done so when the clouds lifted. After lunch all enjoyed an effortless descent of the Central Arm as far as the firn line which was much too high for our liking (2000 m). In light drizzle, skis lashed to packs or sleds, our path became tortuous as we avoided melt-water streams

and crevasses. Our sleds took a terrible beating on the rough ice. A rather miserable camp just below the junction of the South Arm and a more pleasant tent site on the shore of an ice filled lake brought us within a day's march of Kluane Lake. How fitting to end our journey as we had begun, by the frigid waters of a glacial lake.

On 15 July the hike along the east bank of Slims River exposed us to an environment that we had forgotten existed. The smell of pines, the sight of flowers and the crunch of sand underfoot were foreign to our senses. The crossing of Vulcan Creek and, a mile or two later, the sound of vehicles on the Alaska Highway told us that the journey was over. Technically, geographically, physically and spiritually, it had been a grand experience but what had made it so memorable was the unflagging good humoured spirit of the party. I shall always harbour the most pleasant memories of Trans-St Elias '79.

Monty Alford

Participants: Monty Alford and Bruce Hickock, leaders, Eve Anderson, Shawn Beck, David Bunch, Jim Davis, Jim Eason, John Murphy, Davida Wilson, Sabine Wilson, Slate Wilson.

1979 BCMC Mt Logan Catenary Ridge Expedition

A typical start to an untypical expedition into the St Elias Mtns; beautiful weather at Kluane Lake, terrible weather around Mt Logan for the next four days, numerous soccer games/skinned knees on the gravel airstrip, frying hamburgers on a snowshovel, drinking beer and eating popcorn on Kluane beach. Listening to the idle chatter from the 'Animals' next door while unpacking food, sorting gear, weighing bags and tuning into infrequent weather reports — finally six of us flew into the base of the mountain on the north-east side. The seventh, Roscoe, had to wait an extra five days before the weather (and the 'Animals') allowed him to rejoin our team! Base camp was set up near the bottom of Catenary Spur (2340 m), an unclimbed ice and rock ridge leading to Catenary Peak (4050 m) which we would have to climb over on our way to the main massif of Mt Logan. Initially weather was quite good and spirits remained high as we shovelled and climbed our way up the first 450 m of the corniced ridge to an obvious break in the slope where we chopped out camp 1 at just over 2700 m. Several fine pitches of ice climbing above led to a long gradual snow ridge where we could just begin to see the main difficulties ahead — a series of sharp rock towers and gendarmes blocking the ridge at about 3200 m. Having spent five days pushing the route only 720 m, used up most of our fixed rope and hardware and with the main difficulties ahead, we reluctantly abandoned this spur and concentrated our efforts on another route to the east. Base and camp 1 were disbanded and advance base located about 2 kms from the main icefall between MacArthur and Dak Peak. The weather was very unsettled, numerous storms, high winds and avalanche danger making progress slow and uncomfortable. A new camp 1 was finally established on a flat but crevassed section in the icefall at about 3000 m. The ridge above was gained at MacArthur Col and loads ferried up and over Dak Peak (3450 m) to camp 2 at 3300 m. Route finding along this ridge proved tricky at times due to frequent whiteouts and numerous slots, only thinly covered. Camp 3, located below Catenary Peak at 3990 m, gave a good

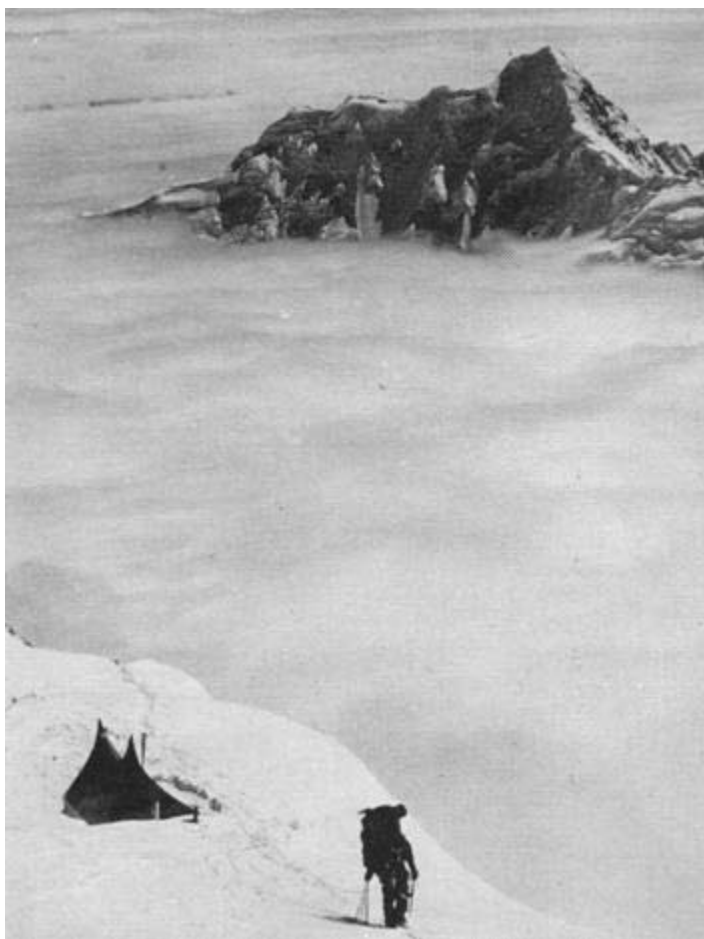
Trans St Elias 1979: descending the central arm of the Kaskawulsh. Monty Alford



1979 BCMC Mt Logan Catenary Ridge Expedition base camp with Catenary Spur and Mt Logan in background. Douq Herchmer



Above camp 1 on 'Dak' ridge with Hubsaw Peak in rear. Doug Herchmer



view of portions of the 'boardwalk' between Catenary Peak and Mt Logan. This 3 km corniced ice ridge proved to be the most difficult route finding section of the entire climb. Luckily we were able to safely traverse much of it on the leeward side but were constantly threatened by overhanging ice and snow from the cornices above. Camp 4 was established at about the mid-point of this corniced ridge on a relatively flat and widened section of ice and snow aptly named the 'Platform' (3600 m). The next part along the 'boardwalk' involved some steep and exposed ice climbing for the lead team fixing line. Load carrying for the 'porters' was also tricky across these sections and we had one accident — a climber fell in a crevasse and was cut on the head by his ice axe. Gradually we pushed this route past the end of the 'boardwalk', up through a short steep icefall and onto a sloping section where camp 5 was located at 3900 m on the Logan massif. Progress improved dramatically as both the weather and spirits picked up. Camp 6 was soon established at 4500 m, camp 7 at 4900 m quickly thereafter as momentum built. The summit plateau was clearly visible off to the northwest, the north and north-west peaks of Logan standing prominently against the blue sky. An intermediate camp was located at approximately 5100 m just below the actual plateau between the east and west summits. Our final camp (8) was established beneath a towering ice block at 5250 m on the main plateau 800 m below the west summit.

With deteriorating weather, our food supply sinking very low and some altitude sickness, all seven claimed the main summit on 24 June after 31 days on the mountain. A severe wind and snow storm forced us to spend another week encamped before being in a position to fly out of the airstrip in the 'Trench'. We spent four days of that week at the AINA High Altitude Physiology camp at 5280 m on the summit plateau. By this time we had exhausted our food supply and were living off handouts and Canadian Army rations. Finally the storm abated permitting us to drag the remains of our gear (no food) down the normal King Trench route in a momentous 21 hour struggle through thigh deep snowdrifts to more Army rations at a food cache in the 'Trench'. Some of us managed to fly out that day. The remaining five had to wait another two days before returning to civilization and all that food we had dreamed about earlier while waiting out the storm at the HAPES camp.

Doug Herchmer

Mt Logan Catenary Ridge, 21 May to 4 July 1979. Participants: Jim Allan, Doug Herchmer, Dave Hughes, Bob Kandiko, Ross Nichol, Tim Ryan, Paul Starr.

The expedition acknowledges with thanks the financial support provided by BCMC.

Austrian Mt Logan East Ridge Expedition 1979

After a seemingly endless journey by Greyhound bus from New York we reached Whitehorse on 1 July. On 4 July, after a visit to the very friendly administrators of Kluane Park, we left Kluane Lake for our base camp on the east side of Logan. Andy Williams expertly put his ski plane down 10 kms away from the east ridge.

By 7 July we had pitched base camp on the south side of the foot

of the east ridge. When the weather cleared on 9 July we packed our equipment and supplies for 15 days on the mountain. We reached the crest of the ridge by climbing a 400 m snowfield with an inclination of 45 to 55 degrees. Following the ridge we came to the only rocky portion of the ascent. We made good progress and reached a level step at about 3350 m and pitched camp 1. The next day a snowstorm made any activity outside the tent impossible.

We set out 11 July at about 0800 hrs. The previous day we had had a heavy snowfall and trail breaking was extremely exhausting. When we reached the knife-edge on the east ridge the weather again turned bad. We had to move with care because of the huge cornices. That evening we reached a spot at 4100 m just below the rugged steep snowy slopes of Logan Dome where we set up camp 2.

After an icy night we climbed Logan Dome on 12 July. That day the weather was wonderful and we were enthusiastic about the mountainous world. At 4500 m we had to climb a vertical ice step of extreme difficulty. We sometimes sank hip deep into the bottomless powdery snow. One of us always seemed to be falling into hidden crevasses. It was very exhausting and nerve-wracking to get out. Nevertheless we reached the highest point of Logan Dome that day and pitched camp 3.

For the following two days we had such a raging snow storm that it was impossible to leave the tents. On 15 July at about 0900 hrs the weather turned beautiful again and we decided to try the final assault. We still had 1000 vertical metres of climbing ahead of us across unbroken snowy slopes. In the knee deep powdery snow we made only slow progress and the weather turned bad again. Through thick fog and storm we inched our way to the east peak. By 2100 hrs all four of us had reached the peak. We were very happy to climb the peak in spite of the bad conditions. Very soon we began to descend, reached camp 3 at 0130 hrs, slept till 0900 hrs, then descended to 3350 m. We had beautiful weather and could see as far as the Pacific.

On 17 July we reached base camp at 2200 m in very bad conditions with imminent danger from avalanches. The next day we made it to the landing point for the aircraft but it was only on 23 July that the conditions were favourable for flying. To make the wait seem shorter Wolfgang and I climbed the third peak in the Logan-Vancouver ridge as seen from the "Water Pass".

We certainly enjoyed the wonderful mountains and the huge icefields of the St Elias Mtns. We were most impressed with the untouched wilderness. We are very happy that this part of Canada has been made into a National Park, in order to protect it in its natural state for future generations. We will return.

Richard Feichtner as translated by Berndt Schmidt

Participants: the Feichtner brothers, Richard (leader), Herbert, Wolfgang, and Bernhard. Subsequently the expedition visited the Rockies and climbed Mt Robson. For us the climb of the Emperor Ridge served mainly to search for our brother Hans, lost on a solo attempt. We searched in vain.

1979 Tahoma St Elias Expedition

The route chosen by the expedition was the south-west buttress. From our research we thought that, if successful, we would have completed a first ascent of this route. Upon our arrival at Kluane Lake we learned that a Japanese party was successful on that route during the summer of 1978. We found fixed line and other evidence of their climb on upper portions of the mountain.

We were flown in from Kluane Lake 15 June, landing on the north side of the mountain at 6500 ft on the Columbus Glacier. Our route to the southwest buttress was up an unnamed glacier located below the western end of Mt St Elias' main east to west ridge. This glacier was first explored in 1913 by a US Boundary Survey party. They had attempted to climb the mountain via the south-west buttress but were turned back at about 16,000 ft by bad weather. The glacier rises quite rapidly and terminates at 13,500 ft, providing access to a small shoulder on the south side of the mountain at the base of the south-west buttress. Reaching this shoulder was no easy task. The glacier was badly broken up due in part to two serious earthquakes that occurred during the winter of 1978/79.

We placed five camps during our ascent of the glacier. Camp 1 at 6500 ft on the Columbus Glacier at the landing site, camp 2 at 7500 ft at the base of the glacier, camp 3 at ca 10,000 ft and camp 4 at 12,500 ft, both in the centre of the glacier, and camp 5 at 13,500 ft on a small shoulder on the south side of the mountain. At camp 5 bad weather struck and pinned us in our tents for six days with winds estimated at 70 mph.

The summit climb from camp 5 was made by four of us, a throat infection confining the fifth member to camp. The climb of the south-west buttress itself was slow due to the time involved in putting fixed line over most of the route to be used on our descent. We anticipated a difficult buttress descent because of its steepness, its 3000 ft vertical rise to the top of the ridge, the 2½ mile 1500 vertical feet of climbing along the ridge and up the summit cone, unstable weather and our own exhaustion after reaching the summit.

As it turned out our summit climb included one bivouac on the buttress, one at the top of the ridge at 16,500 ft plus 24 hours in a snow cave at 16,500 ft waiting for a break in a sudden storm during our descent. The four of us reached the summit at 8.15 am on 5 July.

John Skirving

Participants: John Skirving, Cy Perkins, Stewart Ferguson, Jim Price (did not make summit), and Jim Witte.

Mt Logan via King Trench

On Sunday 20 May 1979 a party of four were flown into King Trench from Kluane Lake. We reached the summit of Mt Logan on 9 June on our second attempt. Richard, Mike and I also climbed Prospector Peak on 2 June. We arrived back at King Trench on 12 June and flew out to Kluane on 14 June.

Martyn Williams

View towards Gulf of Alaska from 13,000 ft on St Elias. John Skirving



Hauling gear up 60 ft ice cliff and 10,000 ft. John Skirving



Participants: Martyn Williams, Chris Harris, Richard Burton, Mike Skreiner.

Corrigenda: Mt Hoge, Donjek Range and Unnamed, Si Elias Range

In the 1979 issue of the CAJ (79:19-21), there appeared an account of climbs in the vicinity of Mt Hoge by a group of Czech climbers. May I suggest that the peak referred to as Hoge, but spelt Hodge (proofreading error), and shown in the photo as Hoge, is in fact a peak lying some three miles north-west of Hoge. The two peaks are somewhat similar and are part of the same massif. I know it is often difficult to determine exactly where one might be standing in a region that is unfamiliar. I mention it only for the benefit of those to follow and in the interests of accuracy.

The other item, mentioned for the same reasons, is the reference to a peak on the west side of the Donjek River which the Czechs say had an elevation of 3420 m. The only peak I know of in that region is closer to 3050m.

Monty Alford

Keele Peak

In the 1979 Journal (CAJ 79:82) it is stated that "the higher east summit [of Keele Peak] is, apparently, still unclimbed". In 1977 an Edinburgh University expedition, doing research on lichenometry, reached the east summit on 25 July, after two unsuccessful attempts.

The first attempt was from the south-west on predominantly snow and ice, ending in a snow storm at about 500 vertical feet below the west summit. The second attempt was via a south-east rock ridge but failed due to injury and inclement weather. The third attempt followed up a rock band and snow and ice gully slightly east of the south face to our previous high point on the ridge. From here we followed the ridge to the summit via rock with some snow and ice. We descended via the west ridge, thus completing a traverse of the mountain. We considered the route to be Alpine IV, but that judgment was based on our experience with Scottish grading.

About three quarters of the way up the south-east ridge we encountered remnants of slings used for abseiling which we assumed were from a French party we had heard were visiting a year earlier. We did not think that we had a new route, let alone a first ascent. We were under the impression that Monty Alford had made the first ascent from the northwest some years earlier.

Murray Smith

Participants: David Brown, David Hodgson, Chris Huntley, Murray Smith.

FOOTNOTE

1 George Denton and Monty Alford climbed the west peak only on 2 July 1968, but are not sure if this was a first ascent.

Recent Nomenclature Changes by the Canadian Permanent Committee of Geographic Names: Yukon 1979

From results of submissions to date for the Yukon it has become apparent that Yukoners do not appreciate names coined by outsiders for their geographic features. Almost all alien suggestions were rejected unless a local name. All names suggested for the Monolith Mtn area of the Tombstones were dismissed outright, despite pleas by the late Neal Carter to accept at least those of outstanding mountaineering significance. This is disheartening and points to the futility of unofficial Yukon names on Journal maps. In future, to ease the embarrassment and confusion it would be simpler (and face saving) for all concerned to refer to numbered or lettered points on maps submitted. Pre-publication of a list or map of suggested new names guarantees only that they will be rejected when submitted for official recognition. Yukon reps to the CPCGN have also objected strenuously, despite protests by our alpine name advisor, Dr G Woodsworth, to any scientific names, be they Latin generic names of biotic organisms or names of specific scientific curiosities such as "Slate Mtn" or "Hydraulic Hill". Furthermore they will not accept names of deceased outside dignitaries or other people who have made outstanding contributions to the scientific field. Therefore we suggest you save your "Einstein Ridge" for another part of the country, even if his theory of relativity had some sudden application to your Yukon mission at the time.

Karl Ricker

OGILVIE MTNS

The physiography of this region has been revised since the classic works of Bostock of the Geological Survey of Canada (GSC Memoir 247) and names on GSC Map 1254A are now official, with the addition of TAIGA VALLEY between OGILVIE MTNS and TAIGA RANGES to the north. Thus many atlases and topo sheets are in error. The initial 120 kms of the Dempster Highway passes through the Ogilvies (as redefined) then enters an expanded portion of Taiga Valley at Chapman Lake about a surrounding BLACKSTONE PLATEAU sub unit to the south before entering the TAIGA RANGES near km 135, formerly known as "Central" or "Northern" Ogilvies. These approvals apply mainly to those peaks of the Ogilvie Mtns that lie within a few days' hike of the Dempster Highway. Obviously it is the start of a long siege of geographic naming because surrounding map areas show a hiatus of mountain names, despite the existence of some local ones coined by mining exploration companies and big game outfitters. The following names are found on GSC maps Open File 478 and Map 1248A, the latter approved several years ago, the former only adopted in the last year despite the 12 year existence of the map. Names on either are not likely to appear on topo maps for some years as these areas have recently been published in 1:50,000 format, before official adoption or revisions of names. We will use NTS designation for location of the following (the referred GSC maps above cover two or more such map areas). NTS 116 B/1 SNOWY RANGE lies to north of Lee Creek and an extension of STEWART PLATEAU has been added to the south of the creek to as far as Tintina valley; O'BRIEN RANGE to east of O'Brien Creek (now renamed to BREWERY CREEK).

NTS 116 B/2 SIGNAL HILL (1250 m) on south-east end of

NORTH KLONDIKE RANGE (see next map area for limits of range).

NTS 116 B/7 E 1/2. DIPSLOPE MTN (1791 m), MT MacLENNAN (1400 m) - not "Contact Mtn", MT McIntyre (1960 m) - not "Wonkle Mtn", YOKE MTN (2240 m), HORN MTN (2160 m), MT FRANK RAE - not "Ray" (2360 m), MONOLITH MTN (2165 m), TOMBSTONE PASS and DIVIDE LAKE, PRUNE MTN (2260 m), NORTH KLONDIKE RANGE (south of Little Twelve Mile River and Wolf Ck), TOMBSTONE RANGE (to north of aforementioned creeks), CLOUDY RANGE (see below). NTS 116 B/7 W'2. On GSC 1248A only. CHERT MTN (5678 ft), MT BRENNER (ca 6800 ft), TOMBSTONE and NORTH KLONDIKE RANGES as above, and CLOUDY RANGE as below. NTS 116 B/8 O'BRIEN RANGE (east of Brewery Creek), ANTIMONY MTN (now returned to a specific peak of 2121 m — see Snowy Range), LOGGER MTN (1870 m), MT WALKER (1970 m), MT FRENCH (2000 m), MT LABBE - not "Labby" (1838 m), MT CHISHOLM (1875 m), MT ROBERT SERVICE (1800 m), SNOWY RANGE (not the once expanded Antimony Mtn between North Klondike and Brewery Creek to as far as ROBERT SERVICE CREEK), FOLD MTN (1974 m), ROCK CANDY MTN (2030 m), MT BIG ALEX - not "Alex McDonald", MT CAIRNES (1710 m). NTS 116 B/9 CLOUDY RANGE (topo maps have overblown this and it is redefined to be only the main ridge lying north of the North Klondike and Tombstone Rivers but lying to the south of the main valleys of the Blackstone River system), NORTH FORK MTN (1860 m), WHITECROWN MTN (2000 m), MT BOYLE - not "Mt Andersson", MT ADNEY - not "Mt Taber", MT ROBERT HENDERSON (CAJ 1978; 2140 m), MT CHESTER HENDERSON (recent addition, ca 6300 ft, 2 1/2 kms west-southwest of grandad RH), GOLDENSIDES MTN (1870 m), BLACKCAP MTN (1860 m), TRAPPER MTN (2010 m), ANGELCOMB MTN (1860 m), BLACKSTONE RANGE (not "Cloudy Range" in Blackstone system — it is the rejected "Rangifer Range", located west of highway but east of main Blackstone River and north of Cloudy Range as redefined).

116B/10 E 1/2. WATERFALL MTN (1870 m), BLACKSTONE MTN (2010 m), MT AUSTON (1980 m), not in NTS 116A as shown on GSC Map 1283A), SEELA RANGE and BLACKSTONE RANGE to the west and east of the main (or west) Blackstone River respectively (not Cloudy Range as previously noted), PATROL RANGE (to north of EAST SEELA CREEK and Seela Pass). 116B/15 E'2. PATROL RANGE as far as Kit Lake and KIT RANGE to north of lake. 116B/16 RENDELL RIDGE — not "Erratic Ridge", PUDDINGSTONE HILLS (to south of Lomond Lake), MT VINE - not "Pilot Pk" (1730 m), McFARLAND RANGE - not "Nehru Range" (to north of Lomond Lake), TAIGA RANGE - not "Central Ogilvie Ranges", MT CHAPMAN - not "Chapman Hills" (4730 ft) and INFANT PK (4900 ft), MT MARTIN (4700 ft) and MT ABRAHAM (5500 ft) in the Taiga Ranges. VISTA RIDGE (1230 m) - not "Panorama Ridge".

All other peak and glacier names in Open File 478 are rejected though some alternate names are currently being considered. "Agglomerate" and "Prospector" Ranges have also been discarded and any names appearing in other theses as listed in CAJ 1978 are still unofficial unless they fall within the realms of the above. All names by McKeith (CAJ 1974) and his forerunner Malcolm

Slessor (Climber Rambler Jan 1973) for the Monolith Mtn area of the Tombstone Range (NTS 116B/7 & 8) are flatly rejected. Yukoners do not appreciate the hints of outsider mountaineers at all!

Interior Ranges

Kamloops Report

The Kamloops Climbing Club which has been the catalyst for most of the climbing in this area has been reconstituted as the Kamloops Mountaineering Club and now exacts a small membership fee and has an elected executive. A good proportion of its members are also members of the ACC and the facilities of the latter have been utilized more in 1979 than in previous years.

The first foray was to the Wheeler Hut at the end of January when nine bodies had some excellent skiing in the Asulkan and Balu Pass areas. Many minor ski excursions were also made closer to home before the end of the winter. We had a contingent of four at the Assiniboine and Kokanee ACC camps. Rock climbing got underway at the end of March at some previously undocumented rocks near Logan Lake. Early in April a party of eight reverted to skis and with the Elizabeth Parker Hut as headquarters made day tours to the adjacent lakes and passes. Leavenworth has become a bit of a tradition at Easter so a party of six had some good climbing in fine weather and managed to survive the rigours of social life at the rocks. Winter hangs on a long time in the Blue River area, so five ardent down hillers spent a weekend late in April at the Nelson Cabin and had some great ski runs down Mt Cook. Mt Columbia was the next objective on the Victoria Day weekend but the party was turned back a short distance from the summit by an uncooperative blizzard. Other summer climbs were Mt Rogers and Sifton (eight people), Mt Slesse south-east of Chilliwack (nine) and a trio successfully did the north-west arête of Sir Donald. Two small parties overnighted at the Sapphire Col Hut. One almost had to share it with a tame billy goat and regular patrons will be pleased to know that Rupert the Pack Rat successfully raised a family under the hut this year. A party of five made it to the Glacier Circle Hut from Rogers Pass and had a few days climbing in that area. The Fairy Meadow Hut was visited in early October and Mt Sentinel was climbed by the six participants. So by November it was back to skiing out of the Wheeler Hut. Twelve people with their oldest skis had a rock dodging contest. There was also rock climbing going on locally most weeks during the summer and Ian Mackenzie and Amand Groner claim the first ascent on the north-east face of Dunn Peak, 40 miles north-east of Kamloops. Local climbers were also active in Nepal, Norway and the Austrian Alps.

How our freedoms are being eroded! If you teach climbing, keep out of the National Parks. I've ended my climbing courses at Cariboo College for the last eight years with an ice session on the snout of the Illecillewaet Glacier. This year I was threatened with criminal proceedings. My crime!? I do not hold a Canadian Professional Guide's license. So our happy annual safaris to the Wheeler Hut are finite.

Hugh Neave

First Ascent, Pyramid Peak, Premier Range

On 17 July 1979 we climbed the south ridge of Pyramid Peak (ca 3080 m) tying on the ridge south-west of Mt Sir John

Thompson (formerly Mt David Thompson). The ascent was via the Crescent-Pyramid col from a base camp located on the glacier between Little Matterhorn and Pyramid (map reference 83 D/12, Azure River).

The ascent took approximately four hours, although additional time was first spent on the more attractive east ridge before abandoning that attempt due to deep soft snow. The south ridge was largely without snow and the route generally 4th class, perhaps with one or two borderline 5th class moves, only some pitches being belayed. To make the climb interesting we traversed left onto the west face, encountering there few technical challenges. Although there were muddy slopes and loose rock about, it was about as hazardous a climb as Eastpost or Crescent in the Bugaboos and not at all as foreboding as earlier published reports seemed to indicate. The summit was snow covered but under some large sheltering rocks near the precipitous east edge we placed a summit register, containing also four 1979 pennies. A few days later, unknown to us and while we were elsewhere in the Range, a party led by Sepp Renner climbed the east ridge and confirmed our ascent.

While in the Premiers our party made ten ascents, including the second ascents of Crescent and Mt Louis St-Laurent, and of MacKenzie King, Sir John Thompson (new route), Laurier, Little Matterhorn, and Peaks 1 and 2. During our 11 day stay we had blue skies but warm temperatures and soft snow, making travelling arduous—unlike the cold, snowy and cloudy weather so often encountered here in summer. We were fortunate in securing many fine photographs throughout this part of the range as well as of some new route possibilities. A major report is in preparation for the 1981 CAJ relating our full experiences there.

Richard G Estock

Participants: Vaclav E Benes, Richard E Bevier, Richard Q Estock, Rudi Kranabitter.

I have been advised by Mr DF Pearson, British Columbia Representative to the Canadian Permanent Committee on Geographic Names, that "Pyramid Peak" is an unofficial designation for this feature, owing in part to an existing Pyramid Mtn (1094 m) at the confluence of the Clearwater and Murtle Rivers in nearby Wells Gray Provincial Park (map reference 92 P/NE, Canim Lake).

Mt Austerity North Ridge

On 30 July 1979 Julius Bede and I completed the north (east) ridge of Mt Austerity. We would like to name it the "Nester Route" for Ed Nester who died attempting it in 1978 after previous attempts in 1968 and 1972. The route combines ice, snow and rock on an elegant line.

From the amphitheatre formed by the north (east) and north (west) arms of the north ridge we climbed to the north-east arm via a 40 to 55 degree ice gully. On the ridge the first step was turned on the right. Above the snow arête easy to moderate class 5 rock led to the steep second step. This was also turned on the right via one tricky move (A1) and a small down climb which gave access to a

chimney system which led back left to the ridge crest. Easy class 5, 4 and 3 leads to the cairn (junction with east face route, 1967). Moderate class 5 to the summit. Descent was via the standard (west ridge) route.

Robert B Hall

NCCS III-IV 5.7.A1.

Everett Mountaineering Camp

Incredible scenery filled with jagged granite peaks, long ice faces connecting the summit ridges and whipped-cream glaciers below. A more than cozy cabin nestled in the pines alongside the massive Granite Glacier. Alpine meadows scattered over the higher slopes displaying brilliant reds and yellows. Fifteen people open to experiencing and sharing each new adventure. Two weeks of flawless weather. Sound like an idyllic combination? Those who attended the Everett Summer Mountaineering Camp would have to agree. Fairy Meadow in the Adamant Range in the Northern Selkirks has all these features and more!

Nineteen peaks were ascended during our stay. Notable routes were Quadrant west face (III, 5.7), Pioneer north-east face in 21/2 hours, and Adamant north ridge in 12 hours (IV, 5.7). Sticklereceived probably its 5th ascent by Dave, Bill, Benny, and Steve before they climbed Pioneer's north-west face. This new route on Pioneer involved 700 ft of 45 degree ice leading to the notch between the two main summits (21/2 hours on route). Three climbers repeated the traverse of Adamant by ascending the complete north-east arête leading to the east summit and descending via the Turret Glacier (18 hours round trip). This is probably the second traverse by this route. Bob and Fred climbed the north-west ridge on Spire Peak, a possible new route (II, 5.7). Glen and Dave did an outstanding route on Gibraltar north-east buttress. The route moved from the north-east corner around to the south-east corner with seven full leads (5.9). The ice couloir leading up to the notch between the Blackfriers from the Austerity Glacier was climbed in four hours by Bob and Dave.

After two weeks of tranquility and each others' good company we agreed that the Adamants had fulfilled our wildest expectations. Every feature was better than reported, even the mosquitoes were tolerable. Hopefully future visitors will take care not to ruin this scenic area so other travelers may have an experience equal to ours.

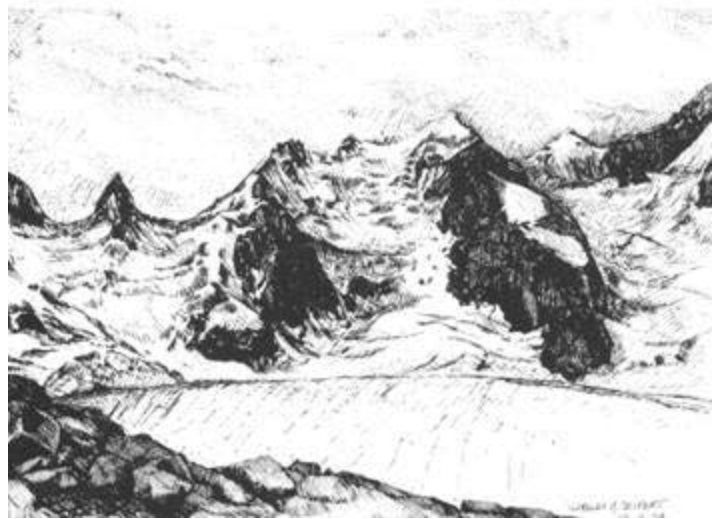
Bob Kandiko

Participants: Bob Kandiko, leader, Dave and Kay Jaecks, Don Fager, Glen Frese, Maurice Wilkinson, Mike Hill, Bill Gray, Bill Kuhn, Tamara McCollom, Fred and Sue Rose, Steve Cunningham, Benny Curtis, Lorelei Seifert.

Consternation Chute

First ascent north-west ice couloir Blackfriers Peak 1 August 1979

The view from Austerity Mtn did not inspire confidence. For more than a week Bob had been talking up the 1500 ft Blackfriers north-west ice couloir, "a great route with continuous ice and no



Consternation Chute: Dave Jaecks roughing it at bivy with ice couloir up Blackfriar in background. Bob Kandiko



rock bands or avalanches!” Two weeks of flawless weather had definitely brought the ice into good condition but now lowering grey clouds pushed by a cold, brisk wind carried a threat of storm. Besides, the grey ice of the couloir looked steep as hell. The cozy Fairy Meadow cabin was far more attractive than a cold bivouac on the Austerity Glacier. “Are you still keen to do the route,” Bob asked. “Well yeah, but isn’t that a lenticular cloud east of Sir Sanford?” Our hesitant discussions were ultimately resolved by diminished winds, clearing skies, and a slight surge in testosterone levels. We descended the soft snow slopes north of Ironman and found an ideal bivy ledge at the base of its west ridge. A hot brew, warm evening sun, a vista of mountains and valleys, and an inspiring view of Blackfriars made the bivouac alone worth the trip.

The cold, grey dawn punctuated by brief squalls of grainy snow revived some talk about the comforts of the hut but the weather improved as we crossed the Austerity Glacier and the climb was on. Bob crossed the ‘schrund over a small avalanche cone and kicked up the 40 degree snow apron placing an occasional protecting screw in the underlying ice. In the gully proper the angle steepened to 50 degrees and the ice was generally hard although flakey in part. A constant deluge of ice chips poured down the narrow chute and made following a sometimes painful task. After 500 vertical feet we switched and I led out over ice that varied from hard black to crusty hollow with flakey surface ice. The chute narrowed and steepened to a 60 degree bulge of delightfully solid ice above which we switched leads. The shower of ice pieces resumed along with a near miss rock fall and a small ice avalanche off Big Blackfriar Peak. No place to hide here! Bob set up another belay about 30 m below the top and we climbed over the withered cornice without difficulty using a series of convenient horizontal ice strata as ledges.

Mutual congratulations were quickly followed by a welcome brew of tea and a much needed sandwich. Towering cumulus clouds darkened the sky to the south and west as we scrambled unroped to the summit, pausing only long enough to snap a spectacular photo or two before heading for less lightening prone surroundings. We descended Silvertip Glacier to what we thought was Azimuth Notch, but wasn’t. Two 50 m rappels, one down a dead vertical face complete with lightening, thunder, rain and a stuck rope delivered to us the Adamant Glacier. We waded (literally) across, slogged up to Thor Pass and trudged over the Gothics Glacier through familiar Friendship Col and down to Fairy Meadow where the warm welcome from our friends eased the fatigue of the day.

Bob Kandiko

Time: ice chute, 1500 vertical, 4 1/2 hrs; col to summit and return 1 hr; descent to Fairy Meadow, 7 hrs. 26 ice screws placed in running belays. Dave Jaecks and Bob Kandiko.

Fairy Meadow ACC Ski Camp, 31 March to 6 April 1979

There was some uncertainty about the trip but a couple of last minute recruits tipped the balance. The 13 participants easily picked each other out from the truck stop regulars at the meeting

place in Golden. From Golden we drove up an amazingly good logging road on the west side of the Columbia River until the road was blocked by avalanche debris. The chopper deposited a CMH group from Fairy Meadow and picked us up. For all of us, except Helena the cook, Fairy Meadow was a novel experience.

No one seemed to notice that the next day was April 1st—we were too new to each other to risk practical jokes. We ascended, in separate parties, Pioneer and Sentinel Peaks from Friendship Col. On the return trip we were friends enough to be freely trading insults.

Next day the weather was warm; Lotar and Dave stripped to the waist to ski excellent powder on Granite Glacier. The next several days weather was poor and most skiing was done near the hut in the steep and deep powder in the trees. The more ambitious skied up Enterprise and Dameon.

What made the trip worthwhile was the camaraderie—20 to 25 years separated the youngest from the oldest participant. And of course there was Helena’s superb cooking. The only regret is that we never did get up Sir William.

Keith Webb

Fairy Meadow ACC Calgary Section Camp, 14 to 22 July 1979

For 32 members of the Calgary Section that dream of good weather came spectacularly true in July. Day after day of cloudless, sunny weather provided a week of continuous peak bagging. The only possible complaint was it was so warm that groups had to leave camp by 3 am in order to escape the heat and to seek better snow conditions and the mosquitoes thrived.

At the beginning of the week 24 climbers were flown into the Fairy Meadow Hut and eight to the Great Cairn Hut. The eight traversed over to Fairy Meadow mid-week, having climbed Sir Sandford on Sunday 15 July. Eight of the main Fairy Meadow group made the trip in the opposite direction to climb Sir Sandford the following Saturday.

MT ADAMANT

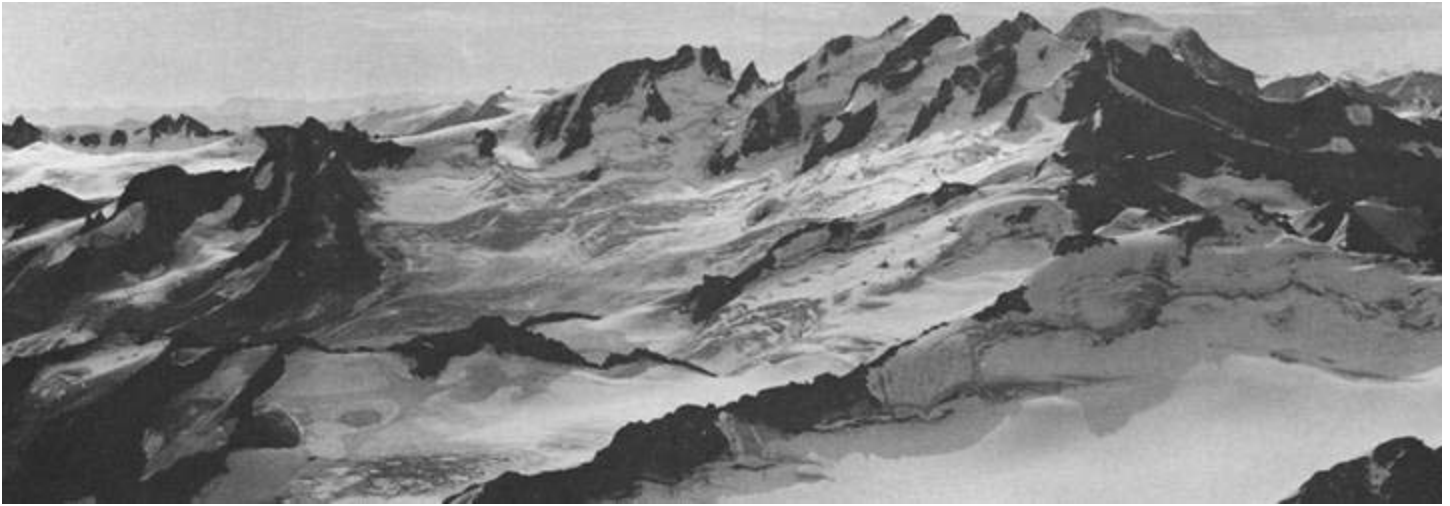
Although most parties made early starts across the crevasse ridden Granite Glacier snow conditions were well on their way to mush by early morning. The route to the Adamant/Ironman col involved following a rather erratic path through the crevasses, some of which were absolutely monstrous. Once the sun had risen above the peaks the glacier became a huge solar furnace—the shadow of Mt Adamant provided welcome relief from the heat. While avalanche debris had fallen across the route taken by the climbers early in the week, the Mt Adamant side provided more stable snow conditions. From this point it was up and over a relatively easy bergschrund and then a traverse across a steepish face covered with rotten snow and ice to reach the rock. After the initial rock and a short but steep snow gully there remained only one rock pitch before the summit.

MT AUSTERITY

Early starts were made in the hope of better snow conditions,



The Adamant Range from north-north-west taken while flying with Bill Smyth of Banff. Glen Boles



The Adamant Range from the south take while flying with Bill Smyth of Banff. Glen Boles



Camp on the Gothics Glacier. Glen Boles



The slopes leading to "The Hourglass" on Mt Sir Sandford. Glen Boles



On the way to Azimuth notch looking back at M Sir Sandford. Glen Boles



Mt. Sir Sandford and the Great Cairn Hut. Glen Boles



The summit ridge of Mt Sir Sandford. Glen Boles



dawn just breaking as most parties roped up at the toe of the glacier. The route, involving the negotiation of the crevasses mentioned on the Adamant climb, led towards the Ironman/Unicorn col and thence left up the rocks leading to the base of Ironman. From the base of Ironman the options are climb it or by-pass it. The climbing looks steep, snowy and icy so following the advice of the guide books and journals we decided to by-pass the mountain around its east face above the bergschrund of the Granite Glacier. Thence the route goes up the snow slope on Austerity side of Ironman to the col. The balance of the ascent is easy belayed climbing on large snow covered granite blocks and 90 minutes after leaving the col the diminutive summit is reached. Descent was made by going over Ironman rather than around and involved two easy rappels from well defined stations.

SIR SANDFORD

The initial group that climbed Sir Sandford early in the week consisted of eight people and judging by the amount of food the Boles crew had brought in they also came for an eight day rest. Unexpectedly the weather was perfect and everyone had to climb. The peak was reached on the second day of our stay at the Cairn Hut. The group did two routes on Sir Sandford. The larger party of six climbed the normal route up the northwest ridge and through the hourglass while a rope of two did the Chouinard-Thompkins route, several hundred feet to the left of the normal route. The two routes stay together until the Ravelin col where they separate. Much later they rejoin. The righthand hourglass, the normal route, is the easiest. The lefthand hourglass has an immense 'schrund running across the bottom. To get around this 'schrund meant moving left almost underneath the enormous ice cliff. The crux comes at the top—the exit. Ice screws are very useful at this point. Descent is by the righthand hourglass and is quite easy except for the hourglass itself which requires belaying. There are slings in place for rappels if desired.

On the traverse across to Fairy Meadow a camp was made on the Gothic Glacier next to Pioneer which was climbed the next morning. The East Peak of the Gothics was also climbed and is a short but spectacular ascent; very exciting where you step off the ice onto 5th class rock. The snow sloughs off beneath your feet and goes down into an enormous 'schrund. Nuts were found to work well in place of pitons on this climb and all the rappel anchors were in place for the descent.

THE GOTHICS

Once above Friendship col there are any number of easily accessible peaks. Sentinel, Pioneer, and Wotan were all climbed by various members of the camp. Like the route to Adamant, the glacier became an oven after 11 am. Surprisingly there were still a few ski tracks visible on the snow slopes from the spring ski camps.

Sentinel was also attempted via the north ridge. The guide book describes it as "continuously difficult and exposed. The rock is solid and the route lies along the ridge with two sharp notches which must be passed by rappels and traverses onto the east face." With this in mind four climbers left the hut to climb Sentinel via the north ridge. The first notch, about one third of the way along the ridge, is easily gained by climbing the large boulder laden north end which is guaranteed to stretch the leg muscles. This first

notch presents a major obstacle since it is about 150 ft deep. We rappelled to the base of the notch and then moved out onto the east face across a mixture of rock and avalanche snow. The second notch was not as deep. However there was a large gendarme in its centre and in spite of the route description we rappelled and traversed across the west face. There is then a third notch to negotiate and as progress had been slow and the day was getting late we decided to do a few quick rappels down the east face to the Shoestring Glacier and then head back to the hut. About two thirds of the way down we decided to bivouac on a good ledge. The next morning saw three easy rappels down to the glacier. Two recommendations come out of this climb: take some basic bivy gear even on a nice day because nice days can turn into cold nights and, routes described as "continuously difficult" should be attempted only by strong parties who are confident that they can climb quickly and efficiently together.

Compiled by Bev Bendell

From the various contributions published in the September 1979 Chinook by Ken Hewitt, Jay Straith, Jim Jones, Linder Armitage and Merv Davies.

The camp was organized by Jay Straith of the Calgary Section and the total cost per person was \$160 and included a cook, Bev Bendall.

The History and an Attempted Ascent of Mt Moloch, British Columbia

Mt Moloch is a commanding 10,150 ft peak in the Selkirk Mtns, north-east of Revelstoke by some 30 miles. It is one of the highest peaks in the area and from its summit one surveys the Downie valley to the west, Moloch Creek to the north and Tangier valley to the east. It was not climbed until 1918 as it was difficult to reach, is characterised by rotten rock, and its ascent is time consuming even if good weather prevails. Accordingly it has only been climbed a few times since. It was the subject of attention of the Canadian Exploration Group's research expedition to the Downie Lake area in the summer of 1979. This article summarizes the history of climbing on Mt Moloch and reports on an attempted ascent in August 1979.

EARLY CLIMBING ATTEMPTS

While surveyors such as Carson and Wheeler penetrated the Tangier valley before 1910 and the British climber Howard Palmer ascended nearby Mt Sorcerer in 1911, it was not until the following year that the first attempt to climb Moloch was made. There is some confusion in reports regarding early visits to the mountain but it appears that in July 1912 CB Sissons joined surveyor MP Bridgland on a trip into Tangier valley. Later in the summer Sissons returned to the valley accompanied by Harold Bennett and PAW Wallace. They ascended the Waverly Mine wagon road noting that it "is still practicable for man and beast. That is, provided the man is prepared to wrestle with tangled and frequently soaking brush and bracken, and the beast is calm in the face of uncertain bridges and resourceful in circumnavigating windfalls". Turning west up Moloch Creek they travelled two miles with the horses before a gorge forced them to continue on foot. In appraising Mt

Moloch Sissons noted that the “south face is altogether too steep for convenient use and is probably quite out of the question” but that “it may be possible to ascend it from the north”. The party seems to have tackled the more accessible east ridge, it being reported that “at 1.30 we found ourselves at something under 9,000 feet”. The account then discussed the glaciers on the mountain leaving us to presume that no further progress was made towards the summit. Another article by PAW Wallace, entitled “Up the Waverly Road”, printed in *Rod and Gun in Canada*, March 1913 may clarify the exploits of this party but to date we have been unable to locate a copy of this rare issue.

In July 1913 Sissons returned to climb Mt Moloch with Professor Holway and Swiss guides Ernest and Edouard Feuz. Clouds and rain prevented them for over a week from even reconnoitring the peak and forced them to leave.

In August 1915 Sissons again visited the area, this time with Harold Bennett and Paul Wallace of the 1912 party. Describing the trip, Wallace likened Mt Moloch to the Wetterhorn and a debate ensued on how soon it would be before a scenic railway reached the spot. “The pessimist said fifty years; but the others, more sanguine, placed it at five hundred.” The party bivouacked near a strange conical peak overlooking the head of Moloch valley which they named the Fool’s Cap. They then proceeded towards Downie Lake for an ascent on the mountain from the west. The west ridge descends steeply to a col between Moloch and a flanking peak named by this party Mt Baal. Given the steep face of the col the party elected to climb Baal first. This they did via a difficult ‘schrund and a steep snow slope. Having with difficulty descended and crossed the col they were confronted with the steep and rotten west ridge of Moloch. They concluded ascent by this route “may be possible, but it is not mountaineering”. Returning via Mt Baal to Moloch Valley, Sissons and Bennett went on to climb the somewhat higher peak of Mt Sorcerer. August 1915 saw an almost simultaneous attempt on Mt Moloch by a party led by JWA Hickson. Accompanied by Ernest and Edouard Feuz, a packer named Peterson, and two horses, Hickson left Albert Canyon for Mt Moloch on the 18th. They followed the old waggon road “through lines of magnificent cedars and hemlock” stopping at a place called The Farm “in the interests of a thirty-year old horse which appeared unlikely to make the remainder of the trip if we didn’t”. At the head of Moloch valley they camped and during breakfast on the morning of 20 August noticed the Sissons party climbing towards Mt Baal. The next day the Hickson party ascended the east ridge which was described as steep and ledgeless with few decent hand holds and much rotten rock. Reaching a lower summit at 12.30 they found that the main peak, some 100 to 150 ft higher was still about “a quarter of a mile away” along a narrow, rotten and exposed ridge. Surmising that it would take three hours to make the traverse and back Hickson, who also admitted to being very tired, decided that they would go down. Making the last part of the descent by lantern the party regained camp by 9 pm where they met the Sissons party and discussed their two unsuccessful attempts. There was considerable disagreement as to which would be the best approach to the summit.

THE FIRST ASCENT

Hickson returned to the area with the Feuz’s in August 1918. Again horses were used and the frustrations of bushwhacking

were compounded by problems with river crossings, snowslides, mosquitoes and sand flies. After some prospecting the group decided to look at the Sissons route up the west side. Hickson described 5 August as a day “on which it is a joy to be merely passively alive, and to feel that one is in complete harmony with Nature by being just a bit of it”. The group was far from passive. They travelled over the ice to the foot of Mt Baal but the guides decided the route was “probably impossible” and accordingly the party returned to camp. Unfortunately “the moistening capacity of the Selkirks” delayed their attempt for a few days. At 3 am on the 10th they were away again, this time up the south ridge. Despite difficulties of smooth, slippery, rotten rock and poor belay points the summit ridge was reached by 10.30 am. This time Hickson estimated the ridge to be half a mile long and unlike the previous time the sharpest parts were now snow covered and corniced. Hickson observed that the guides “were very unfavorably impressed by the possibilities”. Nevertheless after some refreshment they all proceeded. As envisaged the traverse proved difficult but Hickson reports thankfully that he “was spared the indignity of having to crawl”. Finally at 1.10 pm the summit, a remarkable upright block of red granite, was reached. The view appears to have repaid the effort for Hickson later wrote “I have never had a more extensive and, so far as vastness goes, a finer panoramic view in the Rockies or Selkirks.” After half an hour the party retreated along the ridge, down to the southern col and, after some “disagreeable work” were on the lower snowfield by 7 pm. Failing light, rain and alders prevented them from reaching camp that night and they were forced to endure a miserable night in the open. Hickson felt shaky and unwell but survived and two days later the group was back at Albert Canyon. His experience led Hickson to conclude his article on the first ascent of Mt Moloch with a plea for more shelters in the mountains!

MORE ATTEMPTS ON MOLOCH

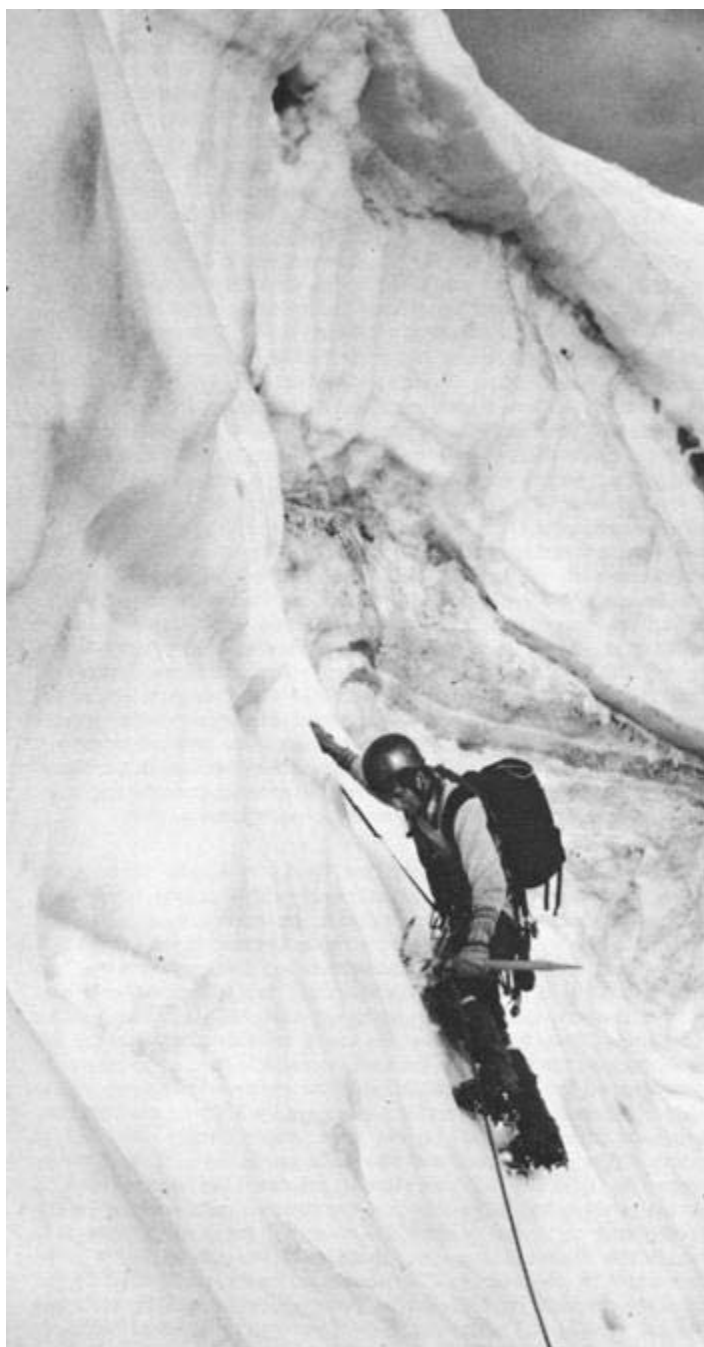
Following this first ascent in 1918 interest in climbing in this area waned, the incentive apparently gone. The next recorded ascent did not come until 1961 when a Geological Survey party reached the summit by way of the Dismal Glacier and the south ridge. Two years previous to this a party led by Bill Putnam had made second and third ascents of Mt Baal but had given up an attempt by way of the Baal col. No further documentation of other attempts on the mountain, if indeed there have been any, has come to the attention of the authors. The summer of 1979 however, saw a research expedition of the Canadian Exploration Group in this area and an ascent of Mt Moloch was an obvious objective. The climbing party consisted of Dave Goodrich (leader), Jim Martin, and Bruce McLean, the following account being contributed by Dave Goodrich.

On 26 August the weather cleared. The time had come for a last serious attempt to climb Mt Moloch by the north-west ridge and Baal Col. We left base camp on lower Downie Lake and headed up to upper Downie Lake. From there we gained the north glacier of Moloch via a large brown rock spur running north-south into the main ice mass. By 4 pm the once brilliant day was deteriorating into partial cloud. Each of us silently recalled the thunderstorms that thwarted our previous attempt. We hoped to bivouac in the cathedral-like bowl formed by Mt Baal to the south-east and a minor peak-ridge system that wrapped around us to the north-west. All was going well until a myriad of crevasses were encountered.

The last, was bridged by an insecure looking arch of snow five feet wide. Calling for an ice belay I gingerly but swiftly crossed. With all of us safely on the other side we proceeded to a bivouac site. Dinner was accompanied by a sunset to rival all others we had seen. Innumerable peaks pierced the red hued sky. The icefall leading to Mt Baal looked awesome with three crevasse systems, requiring technical work, being exposed to sun softened falling snow and ice. "No way" I thought and considered an alternative route up the back side of the bowl.

The morning was clear but by the end of breakfast the weather had socked in. Our spirits dropped but with some openings in the sky we were off. The wall of ice took three hours. I started off, hands soon numb, but sweating as I hung on to the 150 ft wall of near vertical ice. After placing the second ice screw a white ball came rumbling down the mountain, smack onto Bruce's right arm.

Dave Goodrich on the ice wall on Mt Moloch. Jim Martin



He rose slowly and proclaimed good health. On we went every swing of the axe sending ice chips flying in my face. I set up a belay just below the rock and urged Jim to come up.

Going up towards the rock sent a small amount of corn snow on its way. I knew Bruce was in the vicinity of this miniature avalanche. Jim continued to belay Bruce who soon emerged carrying a good bit of the snow that had covered him. Now we were on the rock but it was rotten like all the rest in the area. This was a major factor in our decision to turn back. It wasn't that climbing up was so bad for we could have unroped and scrambled up; it was getting down that presented major difficulties. A decent rappel point was nearly impossible to find. After climbing up several hundred feet, then down again the point was driven home. It was decided to climb a minor peak on the end of the ridge, eat a long lunch and head back. Enjoying the scenery and munching our lunch, we turned to a more important point. What were we going to tell everyone in camp when we returned? Bruce suggested that we play up the bit about his arm and put it in a sling to make it look good. Since the weather was good and few, if any, earthquakes, avalanches and other such disasters had taken place, it seemed like our best alternative. For no one would believe the rock was bad. We, being climbing types, are supposed to be able to deal with such things. Such discussion provided a few laughs and eased the disappointment of turning back.

The defeat on Moloch was offset by many fine scrambles up the lower peaks around Downie Lake. John Marsh made the third recorded ascent of the peak north of Downie Lake. The canister here revealed previous climbs by Bill Putnam's party in 1960 and Dick Culbert and Hamish Mutch in 1963. Other peaks bore cairns but no records. Many don't even have names and all members of the expedition had a heyday thinking of names, suitable to climbers if not to the Geographic Names Board.

CONCLUSION

Such mountains as these will likely appeal to persons from the north of England who like climbing slag heaps. However the view is better. As at the turn of the century the best access route is via Tangier and Moloch Creeks. The old waggon road is still discernible, creek crossings are still a problem, and mosquitoes may plague you. However two hard days will get you from the hot springs at Albert Canyon to the cold springs at Downie Lake. Although most of the major peaks have been climbed at least once, one may still experience what Hickson described as "the thrill which comes over one from the thought of treading and grasping rocks which no human feet or hands had touched before". There are new routes to be tried, winter ascents to be made, and new places in the valleys to be explored. Even the Tangier valley is still as Sissons described it, "a neglected valley" and the country beyond a wilderness paradise. The rock may not be great but as we and previous climbers found out, it is challenging.

John Marsh and Dave Goodrich

Battle Brook to the Battle Range

The Battle Range in the southern Selkirks is comprised of a number of sharp granitic peaks. The most popular access is by helicopter, though a number of overland approaches have been made. During late August 1979 we made a somewhat unique



traverse from Rogers Pass to the Battle Range and then out via Ferguson Creek. Our route initially followed the classic Purity Range approach, traversing Asulkan, Donkin and Purity Passes (H Palmer and AO Wheeler originally crossed these passes in the early 1900's). From Purity Pass we contoured the east slopes of Battle Brook to a col overlooking Butters Lake. An ascent of the well-crevassed glacier at the head of Butters Creek brought us to a high col between Mts Pequod and Forecastle in the Melville Group. Descending to the Houston Glacier we then contoured the west slopes of Mt Billy Budd, crossed Scylla Glacier, and dropped into the Westfall valley (this river system marks the division between the Badshot and Battle Ranges). After another long session of contouring steep slopes in the Badshots we crossed a small glacier at the head of the Ferguson valley. The old, abandoned mining town of Ferguson was reached after a good bush thrash in Ferguson Creek.

Though not really a peak bagging trip, we did manage to scramble up a few, namely Mts Donkin and Vestal (Purity area), and Forecastle, Pequod and Moby Dick (Melville Group). Of the 14 days that we planned to spend on the route, only 11 were used (Scott worked out the problem of extra food though). As a piece of advice to parties visiting this and other areas in the Selkirs, we found crampons most useful in contouring steep, grassy slopes above timberline — especially after a rainfall.

It seems to be the general opinion of local mountaineers that the Battle Range is the most inaccessible and remote area in the Selkirk Range. To our great disappointment we found otherwise. Due to the discovery of molybdenum the Battle and Badshot Ranges were a beehive of activity during the summer of 79. Helicopters were used by claim stakers to beetle around the mountains and were also being used to supply a drilling operation. We stumbled into one particular camp of drillers doing their thing in, of all places, a moraine outwash directly beneath the summit of Moby Dick. As well CMH has now built a climbing hut directly across the valley (Butters Creek). It seems unavoidable that the area will receive more use in the near future — hopefully it will not be developed to any great extent.

Phil Smith

Participants: Scott Duncan, Phil Smith, Steve Smith.

Blockhead Mtn variation, 10,050 ft

In July 1979 Bruce Fairley and I climbed what is probably a variation in the westerly approach to Blockhead. Approaching from Glacier Creek we climbed the first headwall encountered, which gave fast access to the summit slopes. Due to poor rock quality this route is only suited to early season ascents or to years of heavy snowfall.

Hamish Mutch

Cauldron Mtn, 10,550 ft, new route south-east ridge

Following an ascent of Blockhead, Bruce Fairley and I traversed southwest toward Peak 9698 ft. We bivouacked on a small rock ledge just below the summit. The following day we climbed Cauldron by the southeast ridge, a long and pleasant route on excellent rock. Approx 15 pitches, class four to five, of which the first is fortunately the most difficult.

On reaching the summit we were unable to locate a summit record which I had left there the previous summer. This fact, linked with a marked absence of summit records on neighbouring peaks suggests that perhaps the present concern over clean climbing is being extended to "clean summits". Summit records are part of the North American climbing tradition and they're fun to read. If you don't believe in them, don't sign them — but don't steal them either, you * * * *!

Hamish Mutch

Bard Peak, 8000 ft

Located 1 mile northeast of Plaid Lake near the head of Crawford Creek. Michael Reams and I made the first ascent of this attractive peak in June 1979. Our route followed the north-east ridge, starting from the col between Bard Peak and Prosaic Peak. Class 4 to 5 on steep and solid quartzite. Descent via easy south slopes.

Hamish Mutch

Kokanee ACC Ski Camp, 3 to 17 March 1979

WEEK ONE

From Kokanee Provincial Park the helicopter flew north up Kokanee Creek valley. As it slipped over the ridge north-east of Kokanee Pass, the Slocan Chief Cabin came into view, nestled in a little nook among the "Kokanee Totems", the gnarled, burnt trees which give the area part of its distinctive character.

After four trips the helicopter quickly disappeared, leaving the seven camp participants in a new world. It was time for us to make our acquaintance with Dave Smith, Helen Bulling, and John Carter. For the first time the Club's Kokanee ski weeks were being organized by John, who runs Arnica Adventure in Nelson, BC. John stayed with the group for the first two days to see that everything was off to a good start, in particular the wood supply. His efforts in cutting and hauling tree trunks from afar were much

appreciated.

On the first day Dave set the initial tone of caution by digging snow pits and staging a Pieps practice. Even Kokanee had seen an unusual winter season and there was some concern about the snow conditions. No one knew what to expect. The group didn't venture very far afield during the first two days. Dave wanted to get a feel for the conditions and besides, the weather was socked in.

On Monday the group skied westwards across Kaslo Lake and up Griffin Creek to Lemon Pass hoping to go up Outlook Mtn but before we could start along the ridge the weather forced us back to the cabin. Next day the clouds were down, there was a little snow and a wind coming over the ridge but there was a strange warmth in the air. Where was the famous Kokanee powder? Skiers ventured short distances south of the cabin but not much further. Much of the day was spent sawing, chopping and stacking the new supply of dry firewood.

By Wednesday the two Californians decided to ski out; conditions were not what they had expected and they were not prepared to put up with it for the remainder of the week. The rest of the group had planned to ski up to the glacier but snow flurries caused us to put that trip off until the next day. Instead we went west again, this time up Commission Creek. We managed to find some powder for one or two runs on Mt Giegerich.

Thursday and Friday were the highlight of the camp. Wednesday's snow flurries provided us with approximately eight cms of powder! We made good use of it by skiing up Kokanee Glacier. One day we skied to the southern edge of the glacier and had some great views from Kokanee, Cond and Esmeralda Peaks. The runs back down to the cabin tempted us to more and the next day we went up to The Pyramids and The Battleship. This time we skied down to the west of The Battleship and were all grins at the bottom! Back up for more! A great way to end the week. Well — not quite the end. Two keen skiers ventured out on the last evening for a delightful moonlight ski to Helen's lake.

It was with great reluctance that we bade farewell to Helen on Saturday. She had certainly lived up to her reputation for her

delicious meals and excellent company. The other key person had been guide Dave Smith whose quiet competence had welded the group together. Quite an accomplishment, considering that the group spanned half a century in age and consisted of people with a great variety of backgrounds and expectations.

While two people flew out, six set off to ski out down Kokanee Creek valley. Everyone met up at John Carter's place, and at John's recommendation we all went for supper at The Jam Factory in Nelson. Much to her surprise, the waitress was requested to soak the labels off all our beer bottles. She complied and everyone went home with a beer label portraying The Battleship and Kokanee Glacier — a little reminder that one day we would return to sample some "real" Kokanee powder.

Kitty Jones

WEEK TWO

Saturday 10 March saw us all converging on the Peebles Motor Inn in Nelson. The coffee shop was a hive of activity as Neil Colgan introduced everybody and gave instructions as to where we could find the helicopter. It landed us a few metres from the cabin whereupon we grabbed our gear and moved in for a week of fine skiing.

A few of us quickly dumped our gear and climbed up onto the Kokanee Glacier. We turned and were off enjoying mogul free skiing, the spectacular scenery and the freedom of ski mountaineering. As the year had been one of special notoriety in respect to avalanche victims we were ever conscious of the possibility.

The evenings were passed with quiet conversation, a gala jug of wine, a few grand slams, and some excellent cooking by Helen Butling. After some quick talking and technical preparations (3 drinks of gala wine) and a full moon (2 1/2 headlights) a tradition of skiing, in the dark, down Smugglers Ridge was established.

Climbs were made during the week of Esmeralda, Mt Cond, Giants Kneecap, Kokanee Peak, The Battleship, Outlook, and Giegerich. Skiing was enjoyed by all, good times were had, saying good-bye was hard but we'll look forward to the next time. We'll miss him.

Howard Campbell

Rocky Mountains

Mt Shatch

In anticipation of seeing some new country, Bill Berry and I drove 45 miles of logging roads from the southern end of Columbia Lake up the Kootenay River, then up the Palliser River to within three miles of Loki Creek. Here we left the car and ascended an unnamed stream bed southward on what may have been a trail many years ago. Four miles of brush and stream crossings brought us to a small meadow in which we located our camp. The next morning we climbed east on the right side of an open area. Although it was scarred by winter avalanches and waterfalls to the summit ridge, the major obstacles were steep wet grass, blow downs and loose rock. Once on the main ridge crest we found the rope necessary for 200 ft of steep narrow ridge. We continued south with no difficulty to the summit and built a cairn. No evidence of

a prior climb was found. The peak is listed as Mt Shatch (9400) in the Climber's Guide. From the meadow camp it was seven hours up and five hours down.

Kent Heathershaw

NCCSII-F3

Moonlight Falls

On 4 February 1979 Phillip Oltmann and I made what we believe to be the first climb of Moonlight Falls, a 300 ft waterfall on the south-west side of Evans-Thomas Creek in the Kananaskis (map 82J14, grid reference 331365). The first pitch of steep ice led to a small ice cave, above which was a short vertical section followed by a flat belay spot. Above the belay we climbed a gully to the

right, avoiding the vertical section above the belay as darkness had descended while Phill led the second pitch. Descent was made by abseiling from trees in a waterfall gully a quarter mile down river. We rated the climb as a grade IV, steep with only a small amount of rotten ice.

Alan Dunham

Kid Goat Crag Update

Since the initial write-up of Kid Goat routes (CAJ 1976; Greg Spohr's Selected Climbs in the Canmore Area) the crag has become quite popular and number of established routes nearly tripled. Easy, 20 minute access, generally sound rock, and interesting climbing are the main attractions. Although there is some fixed

Kid Goat Crag Update

1-Ripoff, 5.7; 2-Slipkid, 5.8; 3-Breezy, 5.6; 4-Tip-off, 5.6; 5-Leftover Grooves, 5.7; 6-Cheap Thrills, 5.8; 7-Slingsby's Overhangs Direct, 5.6; 8-Slingsby's Overhangs Indirect, 5.5; 9-Edge of Night, 5.7; 10-Blue Bubble Connection, 5.7; 11-Twilight Zone, 5.6; 12-Daylight Sailing, 5.6; 13-Keelhaul Wall, 5.6; 14-Hazy Daze, 5.8; 15-Skylight, 5.6; 16-Highlight, 5.8; 17-Twilight, 5.6; 17a-Goodnight variation, 5.6; 18-Drifter, 5.8; 19-Sticky Fingers, 5.7; 20-Slow Hand, 5.8. Chris Perry



protection the routes still require a small rack of chocks and pitons. Recommended: 6 or 7 pitons to 3/4" (with an emphasis on blades), plus chocks to about 1" (including small wired stoppers). Protection is often difficult to arrange and while there are no bad belays there are some fairly long run-outs. The rock is usually sound on the open slabs and faces but loose blocks remain at some of the overhangs on routes which have not yet been completely cleaned. The easy terrain near the top of the crag is often quite loose.

Of the routes listed below, numbers 1 to 4 can be climbed in one pitch by traversing left to rappel from trees, and numbers 19 and 20 have rappel trees on route after one pitch. Asterisk indicates revised grade. 1 - Ripoff, 5.7, chocks to 1 1/2". 2 - Slipkid, 5.8. 3 - Breezy, 5.6. 4 - Tip-off, 5.6, watch for loose rock at the overhang. 5 - Leftover Grooves, 5.7. 6 - Cheap Thrills, 5.8 belay to the left for second pitch (dubious blocks). 7 - Slingsby's Overhangs Direct, 5.6. 8 - Slingsby's Overhangs Indirect, 5.5*. 9 - Edge of Night, 5.7. 10 - Blue Bubble Connection, 5.7. 11 - Twilight Zone, 5.6*. 12 - Daylight Sailing, 5.6. 13 - Keelhaul Wall, 5.6s. 14 - Hazy Daze, 5.8, #1 Friend used on first ascent. 15 - Skylight, 5.6. 16 - Highlight,

5.8. 17 - Twilight, 5.6, watch for loose rock at overhangs. 17a - Goodnight variation, 5.6, chocks to 2 1/2". 18 - Drifter, 5.8, start below a pale gray lichen patch about 20 m above the ground and immediately right of the base of a rounded buttress. 19 - Sticky Fingers, 5.7, start by climbing a fir tree which almost touches the rock at the left end of a small scree ledge; poor protection; watch for and avoid a large dubious block. 20 - Slow Hand, 5.8, an inverted, right leaning corner about 8 to 10 m right of the same tree.

John Martin

New route participants were Calgary climbers Ben Gadd, Lynda Howard, Bruce Keller, John Martin, Chris Perry, Chris Shank, Greg Spohr, Dave Strand, Murray Toft, and Martyn White.

Rock Climbing in the Heart Creek Valley

Heart Creek has been a popular hiking area for many years but apparently only recently has serious attention been paid to its rock climbing possibilities. The creek crosses Highway 1 a few hundred yards east of the Lac des Arcs turnoff (10 miles from Canmore) and drains the north side of Mt McGillivray through a pleasant winding gorge. The cliffs at the sides of the gorge are mainly small and uninviting but a short distance below the waterfall those on the west side reach about 300 ft in height and offer several interesting lines. This area is generally referred to as Lower Heart Crag and the three routes done to date are marked on the accompanying photograph. Undoubtedly the best is "Overly Hung", first climbed by Mark Whalen, which is steep and sustained on generally good rock. Further up the valley at the waterfall the slabs of Upper Heart Crag can be seen on the hillside to the east. The climbing here is mainly easy (5.3 to 5.6) but the central portion is unusually smooth and gives several short routes reminiscent of those on Yosemite's Glacier Point Apron. Probably the best is "Rough Mix" which features a smooth 150 ft slab (the first protection being at 75 ft)

followed by an interesting pitch over the 6 ft overlap above. Although short, the route is one of the most enjoyable in the Calgary area and the granite-like smoothness of the first pitch has inspired visits to some of the more obscure crags with hopes of an encore. The accompanying photographs show all the routes climbed to date and illustrate the character of the climbing.

C Perry

Rock Climbing in the Heart Creek valley: Lower Heart Crag, 1-Styx, 5.8; 2-Grovel, 5.7; 3-Overly Hung, 5.10a. C Perry



Rock Climbing in the Heart Creek valley. Upper Heart Crag. 1-unnamed, 5.9; 2-Rough Mix, 5.9; 3-Soft Touch, 5.8; 4-Plimsoll Line, 5.5; 5-Red Slab, 5.8; 6-The Scoop, 5.7; 7-Route One, 5.5; 8-Route Two, 5.5. C Perry



ACC Leadership Training Week, 14 to 21 July 1979

On the morning of 14 July, 17 individuals met to begin Leadership Training Week. Seven days and a few thousand feet later a group of good friends said their goodbyes, all of them wiser in a variety of ways. Credit for this transition, both in know how and group closeness, goes to our instructors and good buddies Don Vockereth and Mike Sawyer.

The 14th commenced with knots, rope handling and basic climbing reviews at Wasootch Slabs, followed on the 15th by ascents of Kings Chimney and Grillmair routes on Yamnuska. A pre-dawn start on the 16th saw snow and ice techniques and crevasse rescue part way up the Athabasca Glacier, followed by snow cave digging below the east ridge. The next morning the groups divided, one ascending the snow slopes skirting Silverhorn, the other tackling the north face directly.

The 18th was really a rest day with piton and nut placements being well covered, but the pace picked up again the next day with three groups climbing. One small group sweated their way up Redshirt on Yamnuska, a second group climbed the north-west ridge of Nestor, while a third tackled Aberdeen via the North Glacier. The remainder of the week was devoted to route finding and rescue techniques on rock.

The number of ascents may have been less than previous years but this could be attributed to the energy-sapping 90° F temperatures all week and the fact that some group members required considerably more instruction than others. The post-climb and post-instruction sessions were of value to all participants as were the pre-climb planning sessions and while it is near impossible for all group members to be "leaders", these qualities did emerge in one or two minor emergencies as well as day-to-day decisions. There were times when the instructors were compelled to take over the leadership role more than they should have had to, however by

the end of the week this trend was largely reversed.

Enough cannot be said of the patience of Don and Mike — although Don was seen to look heavenwards on occasion, and even Mike made a big speech at the finish! And last but not least there was the food. Like the proverbial army that marches on its stomach, so did we — thank you Sheila.

Joe Turnham

Mt Storm, North Ridge

Several days after Christmas 1977 Guff Dawes, Bob Brock, Mark Nissen and I climbed the north ridge of Mt Storm. The airy ridge leading up from the 8200 ft col was safe from objective hazards and gave spectacular views east past Storm's huge face overlooking the Bow valley. We encountered two delicate pitches of frosted rock near the top. A recommended winter climb, with good snowshoe or ski access from Vermilion Pass.

David K Coombs

East Face of Mt Babel

On 9 August 1979 George Kinnear and I did a new route on the east face of Mt Babel. Originally intending to do the Greenwood-Grillmair route we spotted an inviting looking quartzite buttress immediately north of Greenwood's line. The one we chose starts at the top of a short talus slope and is identified in the lower section by a deeply cut chimney containing a huge chockstone of 200 ft. The edge of this buttress was climbed in two pitches on excellent quartz to easier angled ground above. Moving together over this broken section for 500 ft brought us to a second steep quartz band — the crux of the climb. To the right of a steep, foul looking gully-chimney it offered two pitches of steep, beautiful climbing to 5.6. Above this we were again able to travel together and traversed up right for 500 ft toward a break in the steep upper limestone headwall. A loose rib for 50 ft led to a right leaning ramp, the key to attaining easier ground above. Once over this steep section we moved rapidly up gullies and ribs, belaying on the occasional steeper pitches. Six hours after leaving the top of the talus we emerged on the summit ridge, 300 ft north of the summit, very surprised at our rate of ascent. We had thought the climb would have taken longer, our success at route finding making us very content with our efforts. We were able to descend next to the snout of the Fay Glacier which spills over a cliff immediately under the west face of Babel. Three short rappels from ice bollards and one from a piton allowed us to gain easy ledges leading to the big boulder field down to Moraine Lake. The climb is graded III 5.6.

Murray Toft

Mt Lefroy North-East Face

For years the huge north-east face of Mt Lefroy has intrigued me. Over 3500 ft from the lower glacier to the summit, one of the last big unclimbed faces in the area. In September 1978 Cliff White and I attempted a line that started from the top of the large scree cone, bearing left up a buttress to a ledge which runs across the face. After traversing left 1 3/4 rope lengths we started straight up the very steep face but retreated when the rope was cut by falling rock. From 31 July to 1 August 1979 Cliff, Gerry Israelson and I climbed the face by a route that runs directly down from the

right edge of the upper glacier. From the top of the scree cone the obvious buttress is nice F4 to 5 climbing up to the ledge. After traversing left 1 3/4 rope lengths the route goes straight up to the upper glacier. I led the first pitch up to a small cove, anchored and slept as Cliff cleaned and Gerry jumared. Cliff led the next pitch, a crack leading right until it becomes overhanging followed by a pendulum left to a large ledge. Gerry took the third lead, a beautiful clean corner ending in 20 ft of aid (6 knifeblades required). Above here the climbing becomes easier. Five leads of F5 to 6 on variable rock brought us to the upper glacier where we bivouacked. The next morning we traversed left on the ice then climbed 45 degree snow and ice, exiting beside the huge ice mushroom on the summit ridge. By early afternoon we were enjoying cold beer at the Chateau. A party of two could probably climb the route in one day. The first three pitches above the ledge are the crux of the climb.

Clair Israelson

Mt Lefroy North-East Face. F7 A1.

Kootenay National Park

“PIONEER ROUTE”, THE GREAT ROCKWALL

The final rope length took us to the top of the rockwall, extending ca 5 kms from Limestone Peak to Mt Drysdale. The sheer rockwall is below us and the gentle sloping Washmawapta Glacier on the backside shows our descent route to the Helmet Falls and out to Marble Canyon via Helmet Creek. A long way around the wall; it would be shorter to rappel but we took the first choice. The great rockwall, which we assumed was climbed for the first time, was not as hard as estimated. We chose a line directly above Rockwall Pass to the left of Limestone Peak. Two main water cracks follow the direct line of the face and we followed closely the one to the right. Alternate pitches of grade 3 and 4 followed the rib beside the crack. At the upper section of the face we traversed to the left for two rope lengths, crossed both water cracks, then climbed to the top on solid rock.

PARTY: B Brown and H Fuhrer, 20 August 1979.

APPROACH: 1 - trail Paint Pots, Ochre and Helmet Creek to Helmet Falls and Rockwall Pass, 18 kms, 7 hrs. 2 - trail Paint Pots via Ochre and Tumbling Creek to Wolverine and Rockwall Pass, 19 kms, 8 hrs.

EQUIPMENT: rock climbing, camping or bivouacking.

TIME: 5 hours for the wall, 2 to 3 days for entire trip.

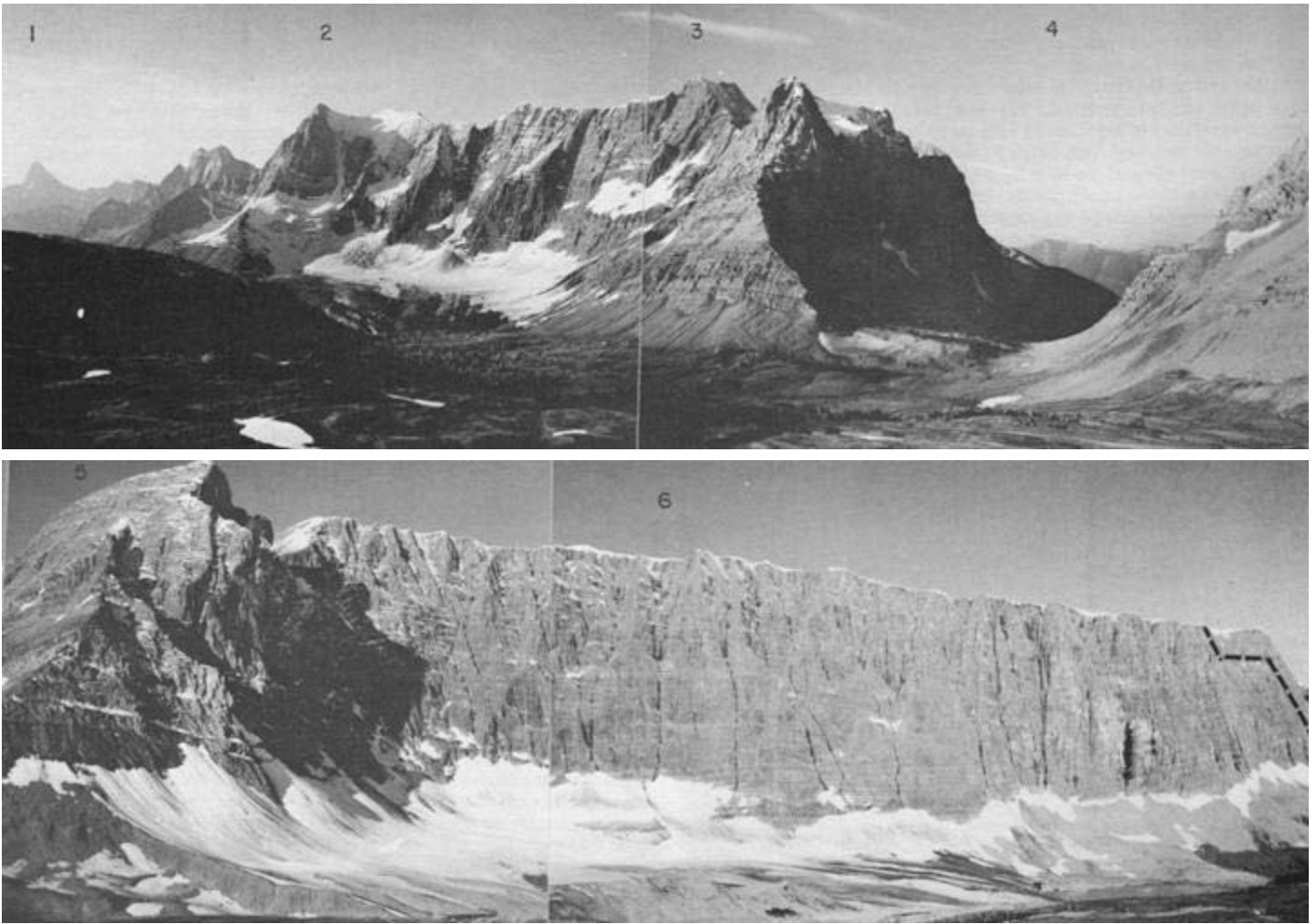
ROCK: Bottom section of the wall composed of quartzite and limestone, upper section limestone. Good and solid rock on most steep pitches. Average vertical of the Rockwall, 670 m (2200 ft).

ROUTES: The entire wall offers a great variety of routes still to explore yet. The months of August, September and the beginning of October are the best to climb the wall as by this time the large snow cornices have melted off.

FUTURE: A fixed rappel descent route could be established through the face. This would avoid a long descent route via Helmet Falls or Mt Drysdale.

Kootenay National Park:

1-Foster Peak, 2-Tumbling Peak, 3-Mt Uray, 4-Wolverine Pass, 5-Mt Drysdale, 6-The Rockwall and Pioneer Route, 7-Rockwall Pass and Limestone Peak. Hans Fuhrer



Kootenay National Park: view from Mt Oke over entire length of Prospectors Ridge towards Marble Canyon. Hans Fuhrer



PROSPECTOR'S RIDGE

Eight summit 16 km traverse from Mt Oke via Prospector's Peak to Marble Canyon. On 8 August 1979 we set up our first camp on Prospector's Ridge south of Mt Oke. The next day we traversed over smaller peaks and deep saddles, average elevation between 8000 and 9000 ft. A second camp was necessary before the last peak. The final exposed ridge section we detoured via the large west basin then climbed the west face over a steep rib where we used the rope for the first time. From the last peak we descended the long avalanche slope to the Ochre Helmet Creek Trail. This high level ridge traverse was a most rewarding and scenic climbing experience of an easy mountaineering level (grade 2 and 3). The entire ridge offers great views of two fine mountain ranges, to the north-east the Tokumm Peaks (10 peaks) and to the south-west the Goodsir and the Kootenay Rockwall area.

PARTY: C Bjorgan, B Irons, H Fuhrer

APPROACH: Via Tokumm Creek to Misko Pass. The ridge can be reached via the north-east slope and rock ledges to the south of Mt Oke. Alternate approach via Ottertail Pass and south-west slopes to the ridge.

TIME: Approach 1 day, ridge traverse 2 days.

Hans Fuhrer

Mt Bosworth North Face

From the Banff-Jasper Highway one gets a brief glimpse of the Bosworth north face. It looked like fun, so on 4 July 1979 Gerry Israelson and I hiked up Bath Creek and discovered a clean rib running directly to the summit. Twelve leads of F5 climbing brought us to the summit where we were greeted by a fierce thunderstorm. The descent to the highway was straightforward. We believe ours to be the first ascent of this face. F5.

Clair Israelson

The North "Thing" of Mt Aires

On 13 and 14 September 1979 James Blench and I climbed a route on Mt Aires, which is just south of Howse Peak on the Banff/Jasper Highway. The climb involves about 300 m of rock climbing (two pitches F8) which because of hauling problems must be done with packs on. We bivied at the top of the rock just below the 3-pitch high sérac, which we climbed straight up the middle of the next morning. Above the sérac we encountered 650 m of 55 to 65 degree ice, cut by crevasses which had vertical lips of up to 10 m which had to be climbed over. The ice climbing on the sérac was sustained the whole way and I even managed to get in a short section of about 120 degrees. The climb is safe, semi-remote and a real blast from bottom to top, and even down the back.

John Lauchlan

High Route Frustrations

Out of three attempts in the last three years to ski parts of the Great Divide High Route during the Christmas-New Year's period, only one has been successful. In 1976/77 Rob Amann, Mike Bourns, Drew McGibben and Daryl Wylie skied in from Saskatchewan River Crossing to the Freshfields. They never made

it: four sets of Silvretta loop cables broke, one bear plate broke, one set of hinge bushings wore through, one complete binding pulled out and an MSR stove packed it in. The party limped back to the highway from just above Forbes Brook, breaking about 10 more 4 mm rope cable substitutes.

Next year, armed with different bindings and lots of spare cables, Mike Bourns, Jason Edworthy, Keith Webb and Daryl Wylie had another go. The party skied up to Freshfield camp in two days. Even at -40°C there was open water in parts of the Howse River to cross. Freshfield Glacier was crossed between Gilgit Mtn and Mt Helmer and the fourth camp was above the icefall on the Mummery Glacier. The party skied up the Blaeberry River to Wildcat Creek, which was followed to the Trapper-Peyto col on Peyto Glacier. The highway was reached from Peyto Glacier on the ninth day. Six silvretta cables broke on this trip which was considered satisfactory performance. All other equipment worked well but all down gear and the McKinley tent became progressively heavier and wetter due to condensation. The party sustained at least 30 frost related injuries.

During the same period of 1978/79 the leg of the trip between Field and the previous year's exit, Peyto Glacier, was attempted. The party included Daryl Wylie, Mike Bourns, Pat Comer, Chris Sivers and Jason Edworthy. Severe avalanche conditions and moderate freezing injuries (at least -50°C) forced the party back after two days.

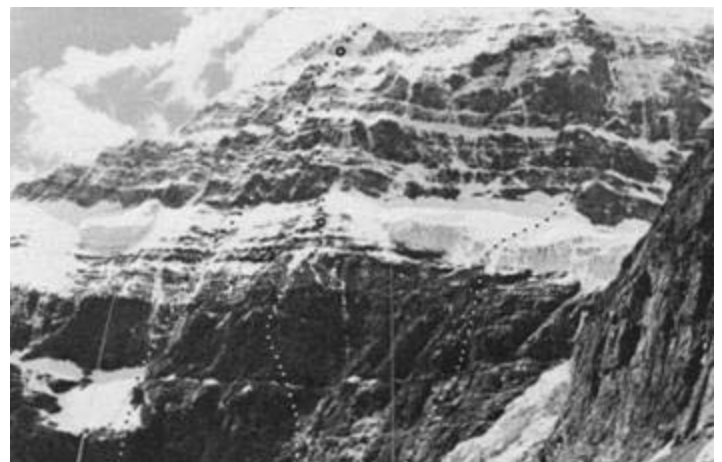
This period seems to be characterized by blue skie(r)s, severe cold, short days and broken cables. This made the successful trip very desperate but rewarding (hah!).

Jason Edworthy and Mike Bourns

Iwahibari Alpine Club Canadian Rockies Expedition 1978

Three members of the Iwahibari Alpine Club which has most of its members in Tokyo climbed in the Rockies during June to August 1978. Our route on the north face of Mt Edith Cavell was between the direct route of Beckey, Doody, and Chouinard (1961) and that of Chouinard, Jones, and Faint (1967). We succeeded in a new route at 2.15 pm on 27 July after two bivouacs, being

New route on north face of Mt Edith Cavell. Left, 1967 route, right, 1961 route. Shintaro Kamimura



troubled with a member injured by a falling rock, bad weather, and shortage of food. We descended the east ridge in bad weather as if white milk. We climbed the south face of Yamnuska on 21 July by following the Grillmair Chimney route. The ascent was pleasant and easy for us. We attempted the north face of Mt Robson and the northeast ridge of Mt Alberta but these attempts ended in failure.

Shintaro Kamimura

Participants: Shintaro Kamimura (leader), Seishi Oda, Shigeki Sato.

Columbia Icefield Expedition, 12 to 14 July: Mt Edith Cavell attempt, 18 July; Yamnuska, 21 July; Tunnel Mtn Gonda Traverse, 23 July; Mt Edith Cavell, new route north face, 25 to 27 July; Mt

First Ascent in the General Direction of Wherever
Jotterand finding the starting pitch too steep for comfort - why did we get out of our sleeping bags? J Jones



Robson, north face attempt, 4 to 8 August; Mt Alberta, north-east attempt, 11 to 17 August.

We thank all persons of the Park Wardens' office as well as the Banff office of the ACC for the kind help during our stay.

Une Randonnée aux Rocheuses

L'année 1979 fut une année importante pour le Club de montagne de l'Université de Montréal. En effet c'est en 1979, grâce à l'initiative de quelques membres du club, que celui-ci entreprit de se rendre en haute montagne.

Fort de l'appui du Service des sports, une imposante organisation fut mise sur pied. Outre la formation de plusieurs comités, on nomma des responsables qui se chargèrent de l'organisation du transport, de l'élaboration des menus ainsi que de l'achat et la préparation de la nourriture, d'inventorier les besoins en équipement, technique et de camping, de l'auto financement et de la coordination. Au total, il y a eu un an de préparatifs pour vingt et un jours en montagne. Le budget du projet a totalisé \$15,000. Finalement trente personnes se lancèrent à l'assaut de quelques sommets des Rocheuses.

Le voyage débuta par une mise en train de quelques jours à Yamnuska, Sentinel Pass et montagne de Castle. Par la suite on se rendit au Columbia Icefields (glacier Athabasca) pour pratiquer quelques manœuvres techniques. Là le groupe se divisa en deux. Une équipe s'est dirigée vers le Bow Glacier pour y gravir des sommets comme St Nicholas, Rhondda et Gordon. L'autre partie du groupe s'attaquera une approche d'Athabasca Silverhorn, et Edith Cavell.

Après une journée de repos toute l'équipe s'est dirigée vers les Bugaboos. Là, plusieurs petits groupes gravirent entre autres: Bugaboo Spire, Crescent, et se rendirent à East Post et Pigeon. Pour terminer le voyage, on se divisa pour aller à Abbot's Pass et faire Lefroy, monter au Peyto Glacier et faire une randonnée sur le sentier de Ottertail River jusqu'au lac O'Hara.

Après ces vingt-et-un jours en montagne, tous se sont enrichis de merveilleuses expériences, nouvelles, pour la plupart d'entre nous. Tous ces paysages inoubliables et ces émotions stimulantes n'ont pu qu'aviver le goût de chacun de nous pour la vie en montagne. Pour plusieurs, c'est avec la ferme intention d'y revenir qu'on a dit au revoir à cette magnifique contrée.

Jean Michel Levesque

First Ascent in the General Direction of Wherever

On 17 and 18 February 1979 Trevor Jones, Greg Spohr, and Raymond Jotterand joined forces (and crampons Trev!) for a third and final attack on the Upper Weeping Wall just off the Banff/Jasper Highway. While the lower tier of the wall is a "sheet" of weeping ice, the upper tier proved to be a real tear drop — six pitches of continuously vertical and near vertical ice and slush — culminating in an incredible last pitch where one belays from a hole in the icicle with water gushing out and must step out from the hole onto the icicle, with 750 ft of nothingness below. Greg felt that the climb should be called "In the General Direction of Up", Trevor thought of "The Tear Drop", and we finally gave up and settled

down on the "Upper Weeping Wall" to avoid confusion. When the two tiers are climbed together the Weeping Wall is unquestionably one of the most difficult and impressive grade 6 ice climbs in the Rockies — a certain rival to Polar Circus.

Raymond Jotterand

Glacier Lake ACC General Mountaineering Camp, 28 July to 11 August 1979

Saturday's sunshine was a welcome contrast to Friday's wetness. And Saturday's blue skies proved to be a harbinger of conditions to come. In fact during week two the only items hanging in the drying tents were articles left behind by the more weight conscious of the week oners. Week two was of a smaller size than week one. Almost all could be squeezed around one dining tent table. The group included one professional guide, Peter Schlunegger, and four designated 'amateur guides'. In addition the group included some engineering types who were responsible for refurbishing the fresh water pool, and that respected mountaineer Mrs Munday who brought order to afternoon tea. Despite the smaller numbers Saturday night decision making was no less traumatic. This initial sign-up would determine what and with whom the rest of the week would be spent. As could be expected the limited size of Forbes camp precipitated a high number of signees.

Not reserved for week one alone were the pleasures of pioneering new routes to high camp. Admittedly the trail to Lyells high camp became so well-trodden and well-flagged that for the week two attendee the bush battering trips of the week previous were incomprehensible. But two new routes to Forbes high camp were forged. One followed the top of the moraine and sheep trails on Division's slopes and was more generally well received than the other which explored the upper reaches of the true right bank of the Mons Glacier Creek.

With respect to the more glamorous accomplishments of the week, the standards were repeated, new speed records set, and a couple of previously unrecorded routes completed. One group, displaying a fetish for face routes, ascended the faces of Lyell 3, Forbes and Mons. In more typical ACC fashion my side of the valley was launching mass assaults of the ridges: 16 on a traverse of Mons, 14 on Forbes west ridge, six on a traverse of the Lyells, and five on Peter's sightseeing circular tour — Lyell's camp to Division west Peak to Mons Glacier to base camp (for supper) to Lyell's camp. Not to be outdone by the younger generation a group of experienced mountaineers after much preparation climbed 'Lyell 6'. But the climb which I felt was the prize of the week, the traverse of F3, was captured by the presidential party.

No one climbed Lyells 4 or 5, or returned to Cambrai, Messines or St Julien. An oft repeated phrase among Friday night's cocoa drinkers was "one more day". Saturday the graces smiled; it rained. A very enjoyable week — great weather, an interesting area, good people.

Judy Gifford

ACC Cross Country Skiing Leadership Training Week, 24 February to 3 March 1979

The first day was spent at a symposium in Banff and the remainder of the week at Mosquito Creek Hostel with Bernie Schiesser as our leader and instructor. Camp manager Gary Bruns got us settled into as orderly a routine as could be expected with a bunch like us.

The purpose of the course was to improve on trip planning, route finding, safe travel, and leadership qualities in general. We covered all aspects of the problems that one would encounter on an alpine cross country trip. One overnight was spent on the Saskatchewan Glacier, where the "academics" and the "practical ones" competed in building an igloo in the shortest time. End result was that the "practical ones" went to bed an hour or two ahead of the "academics" but the igloo produced by the latter was a real masterpiece!

Bernie refreshed us on knots and belay systems in the hostel shelter where we hung upside down for half a day. Route selection was a daily item combined with planning and safety. Bernie relegated most of the decision making to the group and the free wheeling discussions and analyses which followed were very helpful.

The weather was cold and clear most of the time and we all had a very good week of skiing and comradeship, combined with a good introduction to what you are faced with if you want to take on the thankless task of leading a bunch of highly independent and stubborn cross country skiers. Thank you Bernie, for putting up with us so well.

Bjorn Norheim

Andromeda North-west Face Direct

On 14 August 1979 Mike Hill and I set out a 6 am to climb Andromeda by either the Sky Ladder or the north-west bowl. When we turned the corner onto the glacier we were discouraged to see parties on both routes. The north face was covered with snow leaving us the option of following the others and being barraged by ice or trying something new. Straight ahead at the head of the cirque there seemed to be a plausible route through the ice séracs lining the summit rim; at least I thought so. Mike just grunted and led over the debris covered 'schrund. Seven screws and seven leadouts on the 40 degree apron brought us to the ice blocks guarding the rim. The glacier buses loaded with tourists seemed like toys as I led up the 75 degree ice, wishing I had a third hammer to hang on. After one scary lead we hollered to the north-west bowl climbers to throw us down a rope if we had not appeared when they summited and with that reassurance I crawled out of our belay to search out that plausible line. Traversing left then right on a bulge and more ascending ramps, all above 60 degrees, brought me to a 20 ft vertical section between ominous overhangs that led to the sunshine on the top. Mike came up, grabbed both axes, shoved the shafts into the soft snow and scrambled up and over. It seemed like forever but only six hours had elapsed. A late lunch before the trudge down the icefields and a dreamed of ride up to

the parking lot on one of those toy buses.

Bob Kandiko

Maligne Lake ACC Camp, 11 to 25 August 1979

The camp was located on the peninsula adjacent to the mouth of Coronet Creek. In first day excitement the bus left Jasper overlooking a minor detail — the food! Cargo and people were ferried to the camp site and most tents were pitched before the showers arrived. Except for a few more showers the weather held splendidly until the eve before departure. Bob Jordan set up the radio equipment but despite valiant attempts communication was poor. Supplies were plentiful though some high camp equipment was not received till the second week. Meals were a gastronomical delight! Jerry Geisler, the already busy and dedicated cook, was kept even busier the second week when an overshipment of food arrived and needed to be prepared to keep from spoiling.

Charlton-Unwin was a popular excursion. Three groups of about 10 each went with the help of a commissioned boat, landing them at the mouth of the stream from the Charlton Glacier. The routes followed were basically those described in the guide except for variations in approaches to the west side of the glacier where the “bare ice” turns to “crevassed snow”. Climbers did either one or both peaks. From the summits they had a magnificent view of Maligne Lake. The numerous tiny tourist boats seen on the lake fortunately seldom went as far in as to be seen from base camp though they did pass the landings used for Mts Charlton-Unwin and Maligne.

Henry MacLeod was another popular summit. High camps were established at the head of Coronet Creek. The route followed the Coronet Glacier to the snow couloir, this year rolling scree. Two groups with prospects on Mt Brazeau via a traverse from MacLeod abandoned the attempt after reaching Mt Valad due to poor weather.

Mt Coronet was denounced early due to the large amount of scree on its west side. The first day of climbing a group of ten set off for Coronet, crossed the col north of Coronet between its hanging glacier and unnamed 9150 to reach the western slopes. 14 hours later five had made it up and back. The rest took one look at the steep scree slope and decided to traverse across the west side of unnamed 9150 and up its north ridge to the summit.

Unnamed 9150, via the waterfall route, gained reputation as a nice day hike and conditioner with a decent view. Another group had prospects for Coronet by its east hanging glacier. Leader Jim Moore fell ill during the night so the party, disappointed but a little relieved, did MacLeod instead. Feeling better by mid morning Jim did some exploring and found that his specialty, a chimney leading onto the glacier from the 9150/Coronet col moraine, would have indeed been feasible. This climb remains a must for the next time.

Another tour was to Maligne Mtn. The party hitch-hiked a ranger boat which took them to Samson Narrows Bay. From here they ascended Sandpiper Creek to the north-western outrunners of the glacier system surrounding the Maligne group. High camp

under a rainfly was established at timberline. Scouting revealed that the routes described in the guide were of little avail because of poor snow conditions and withdrawn glacier tongues. The group decided to attempt the southernmost of the outrunners with its snow face in the central depression of the falling glacier section. They skirted the hanging séracs and followed the left shore of the snow face close to the ice. The weather had been warm all night and when the Maligne plateau was reached the rising sun made conditions more uncertain. Maligne's main peak (Peak Five) was in cloud. The group ascended Maligne One and quickly withdrew.

A nice rock tour was that of peak 52°35' 25" N, 117°28' 42" W, about a kilometre north north-west of Llysfran on the periphery of the Ultramaligne Lake cirque. The party followed the left bank of the Mary Vaux Glacier basin up to the north-western enclave at the foot of the glacier. After some route finding they turned north, ascending some scree and rock and finally exiting through a gully on the saddle between the basin and Ultramaligne cirque. The rock was rough and unstable but pleasurable; the group wound itself up along the crest over and around gendarmes to the peak where a small cairn was erected.

The climactic climb of the camp was that of the loftiest peak, Mt Brazeau. Oddly both ascents were made, not by the easy but tedious scree on the south face (normal route) but rather by the impressive snow and ice clad north face. During week 1 Peter Roxburgh and Bill Hurst bushwhacked up Warren Creek to place a high camp just below a glacier tongue leading to the Brazeau-Warren col. After reaching the col they followed the general line of the north-west ridge, passing rock towers on the steep and icy north slopes which required considerable use of modern ice climbing techniques — frontpointing, etc. A week later Peter Vermeulen with Harriet and Bob Kruszyna bivouacked near the earlier party's camp site. From near the Brazeau-Warren col they worked diagonally east out onto the north face proper. After working through a zone of séracs and ‘schrunds, the party climbed up the face to pass the final bergschrund near its north-east end and then continued directly up to the top. Their technique was a strange, perhaps amusing mixture of classic step cutting and contemporary clawing and frontpointing, as the varying consistency of the ice/snow dictated. Both parties descended the south face and circled east and south over glaciers to regain their starting point.

The camp site was left cleaner than found. Vestiges of previous camp(s), which had had to pack up in a rainstorm, were returned to natural condition. Even the freshly axed woodchips were removed.

Francoise Soges

We are grateful for the volunteered time, effort, and leadership of camp managers Walter Robinson (week one) and Bob Kruszyna (week two), for guide Hans Schwarz, and of course for the ACC, in making this camp possible.

Mt Brussels North Face

Mt Brussels attracted us with its reputation as one of the toughest summits in the Rockies. The guidebook listed only two routes, We hoped to add a third.

Coronet Creek peninsula and campsite. Francoise Soges



Sandpiper Creek and south-west outrunner of Maligne Mtn. Francoise Soges



The laborious approach up 3000 ft of brush, scree and cliff bands from our camp on Fryatt Creek took us four hours and gave a fine alpine start at 10 am. We began on the left side of the face directly beneath a large roof 200 ft off the ground. I led the poorly protected first pitch which zigzagged for 170 ft up F8 rock, eventually climbing a shallow, left facing dihedral. Dane's pitch, F9 and loose, skirted the large roof on the right. Two moderate pitches took us back left then straight up to a large ledge just below the steep upper half of the wall. We had hoped to free climb the dihedrals above but they proved to be nearly crackless and probably only climbable for us with aid. We scrambled left to the last dihedral system before the junction of the north and north-east faces. These dihedrals looked no less steep but at least the cracks that split them offered protection. I led off and soon reached a smooth bulge with a crack too wide to aid. For 15 minutes I fiddled with exotic bridging moves before committing myself to the inevitable, overhanging layback. "That might even be 5.10!" I yelled down to Dane after panting over the crux. I led the next pitch as well after Dane retreated saying, "I'd really like to try it but it would take me forever." Route finding and the tedious necessity of testing every hold, every anchor had gobbled the day. Already the sun hung low over Fryatt. I found the next pitch nearly as hard as the last and sustained for its full 150 ft. Thirty feet above my belay the angle at last began to ease. We ran out of daylight 200 ft higher and bivouacked a scant 100 ft below the summit. "I suspect I'm going to freeze my ass off tonight," Dane said as a chill breeze began blowing off the Hooker Icefield to the west. We shivered till dawn in wind pants and sweaters then scrambled to the summit. Once out of the wind on the descent down the east ridge, the standard route, we napped at every rappel point and christened the route Hypoglycemic Blues in honour of our aching empty stomachs.

Glenn Randall

Mt Brussels, 10,370 ft. First ascent north face, IV F10. 16 to 17 August 1979. Glenn Randall and Dane Waterman.

Eremite-Tonquin ACC Ski Camp, 27 December 1978 to 2 January 1979

As has been the custom in the past the trip was made in two stages, with an overnight stop at the Edith Cavell Youth Hostel. A tentative plan to ferry in a large stock of wine by toboggan was foiled by the Alberta Liquor Board who did not open their Jasper store on 27 December. Probably fortunate in view of what lay ahead.

The road up to the Hostel was only thinly covered with snow and this had been ravaged by the assaults of numerous snowmobiles over Christmas. Accompanied by rapidly falling temperatures but no mechanical monsters the pack train set off for the Hostel, bedecked by loaves of bread and bags of food which Sue Davidson seemed to think might be important.

Early the following morning, with a temperature of -30°C, the group set off for the Wates-Gibson Hut. First arrivals attempted to light fires with little success, the small amount of wood that had been stored being virtually incombustible. Darkness prevented an immediate sortie to solve the wood problem and a somewhat

cool night was spent by all, outside temperatures being -35°C and inside not much higher. Ignoring advice to the contrary we had carried in some white gas which allowed us to cook a meal and have some light. We also discovered that a martin had destroyed some of the hut food supplies that were counted on to supply the camp. Hurried adjustments to the menus by Doug and Sue and we did not suffer too much on this score.

Dry wood was quickly located next morning and the hut climate became more bearable. Those who had sustained mild levels of frostbite spent some time patching their wounds. The rest moved out and explored the lower reaches of the Fraser Glacier, enjoying some good powder skiing.

On Saturday five skied up to the Amethyst Lake area and climbed Clitheroe while others explored closer to the hut. Sunday, while others explored the Eremite Creek area, seven stalwarts attempted McDonnell. The cold plus increasing wind on the Fraser Glacier caused two to retreat. At the col below McDonnell the wind became even more fierce and three more retreated, leaving two to attempt the final ridge. We battled upward to a knife-edged ridge some 200 ft below the summit. The combination of exposure, and lack of time and experience decided us to turn back to the more friendly environment of the hut where a New Year's Eve meal was in preparation. A batch of mulled wine welcomed in the New Year.

The following day brought moderating temperatures, cloud, and poor visibility. The majority opted for a trip up Eremite Creek to investigate Angle Glacier and vicinity, with an early return to prepare for our departure.

We left by flashlight early on 2 January in two groups, one headed over Maccarib Pass, the other following the original route in. The Maccarib Pass group reached the highway (34 kms) at 2.30 pm. The others were slower, stopping for a brew-up at the Hostel, hitting the highway at about 4.30. A reunion at the Athabasca Tavern, followed by a meal at the Lobstick (there is a story behind the name) wound up camp events in a satisfactory manner.

The camp was a learning experience for all, particularly in respect to survival at low temperatures. The difficulties inherent in managing a large group in a remote area under these conditions became painfully obvious. Many were not sufficiently prepared for cold weather and did not appreciate the risks incurred by skiing alone under such conditions. On two occasions search parties were being organized as the "missing" turned up. Some were not fit enough to handle the conditions which in turn increased the hazard for the remainder who had to compensate for them. We also learnt that wine tended to freeze at -30°C. All in all an instructive and enjoyable ski camp.

Mike Bamford

Wates-Gibson ACC "Indian Summer" Camp, 8 to 15 September 1979

Twenty of us met on Saturday morning in front of the Astoria Hotel in a melancholy drizzle. Chairman George Stefanik led the car caravan to the lot at the trail head and we set out in the rain.

The possibility of five hours of tramping in the rain extended its depressing influence but before we had covered half the distance the rain abated and sunny intervals accompanied us for the remainder of the hike.

Mixed weather on Sunday and Monday restrained our ventures but we managed to hike up to the bergschrund below Angle Peak and to the Fraser Glacier. The succeeding days were warm and sunny and ascents were accomplished on every day, five peaks in all. Thursday was perhaps the most memorable. A party of six returned from McDonnell Peak with broad beaming smiles outshone only by the dazzling snows and resplendent glaciers they had trodden that glorious autumn day. Another party of six returned from Maccarib with time left over to cavort in the Clitheroe meadows and rejoice in divine ablutions in that unnamed tarn beneath "Ada Boulevard", merrily shattering the pool's radiant reflection of the Ramparts. The other peaks ascended during the week were Thunderbolt and both peaks of Outpost.

Under the capable management of Chairman George schedules were set up for chores — dishes and table, wood cutting, water detail, cleanup, etc. Some members exceeded their duties. The stove in the dining-living area of the hut was relocated for more efficiency. Biffy capacity was increased, a second hole being fashioned in the nearest John to provide for convivial acquaintanceships for future generations. However the camp lapsed into dereliction on one occasion. During happy hour the cook, wearing a menacing scowl, appeared with the devastating news that unless a cord of kindling suddenly appeared there would be no supper. Every able bodied person sprang to the rescue with the knowledge that a moment lost might bring starvation to all. Axes, saws, chisels, hammers — anything that could reduce the forest's deadfall to fit the kitchen's all consuming stove — were brought into instant requisition. The momentous effort of this frantic detail of humanity demonstrated their tribute to the culinary talents of Gillian, the cook. For her suppers were laden with hams, pork chops, steaks and mushrooms, chickens and even prime ribs, including all of the trimmings and heaped with potatoes and fresh vegetables. The concluding supper on Friday evening was a most sumptuous affair, a kind of international potpourri served buffet style with several species of wine.

Regretfully but inexorably Saturday arrived and it was time to leave. Chairman George arranged for disbanding and cleanup. An advanced party departed right after breakfast while some of us remained for a final sweep up. About an hour later we left by way of the "Ada Boulevard" and over to the highline trail above Amethyst Lakes and below the Clitheroe meadows, affording a final grand panoramic view of the Ramparts and the Eremite Valley.

While passing a clump of brush on the edge of the meadows we darkened to a very distinct GROOOOF, WOOOF. Horrible thoughts raced through our minds as we froze in our tracks. Perhaps Chairman George might step forward and present his credentials to this beast to identify us as ACC bona fide users of the trail. More efficaciously, Val could relate to the bear his favourite joke about the nuns, the Orangeman and Queen Isabella's peepot. That would be sufficient to propel the fiercest of grizzlies over the ridge and into the next valley. Personally, the writer had already reached into his pocket to fetch out his aerosol whistle and vial of skunk

juice. Then muffled giffles and chuckles emanated from the brush. A bear indeed! It was the advance party trying to freak us out.

Eventually we assembled at the car lot at Edith Cavell uttering fond farewells and expressing resolutions to meet again at next year's "Indian Summer" camp.

C Davis

Grande Cache Ice Climbs

The Smokey River valley between the town of Grande Cache and the coal mine has several interesting waterfall ice climbs. The parking lot of gun club firing range, just south of the railroad bridge, provides a central location for starting both climbs described here.

KNUCKLE GNASHER Grade 3, 800 ft

Directly across the river from the gun club range is an obvious shallow valley. After crossing the river via the RR bridge walk upstream along an old road to where the creek from the climb crosses the road. An easy walk up the frozen creek bed ends at a vertical wall of ice, set in the back of an overhanging amphitheatre. This vertical section is the crux of the climb, about 45 ft high. Undulating ice continues above the crux to moderately steep ice, 60 to 70 degrees at maximum. Two to three pitches belayed on trees and shrubs brought us to the top. A couple of short rappels using trees and some down climbing returned us to the vertical section. This was avoided by traversing south of the gully and descending through the woods to the old road. Three hours round trip.

Greg Grant and Greg Horne, 25 April 1979.

EVERGREEN GULLY Grade 4, 1500 ft

On the opposite side of the valley from Knuckle Gnasher is another fine ice climb, a deep set gully lined with spruce and pine. From the paved road walk up the frozen stream bed. This drainage path is followed through the entire climb. At first the climbing is solo, over minor vertical steps and undulating cascades. By the time the first roped pitch is reached one is at the bottom of an ever deepening gorge with vertical and overhanging walls. Large blocks of rock on top of the ice indicate dangerous conditions exist at times. The first roped pitch is 70 degrees and 30 ft high. More walking and climbing together brings one to the second major pitch. The vertical ice can be avoided by using ice covered ledges just to the left. The third pitch again has two options, allowing one to climb the easier 50 ft high pitch of 60 to 90 degree ice, thin in places. Again easy soloing led us to the final difficult section of our climb, a free standing column of ice five feet in diameter and 20 ft high, with running water on the surface. Above this, after more soloing, we reached the end of our climb. All that remained was an unclimbed attached column of ice, 90 degrees and 75 + ft high. Lack of time and intestinal fortitude directed us to traverse off to the right here, along ledges to aspen forest covering the slopes outside the gully. Five hours up and 1 1/2 down.

Greg Horne and Dave Bedry, 7 April 1979

Greg Horne

Manitoba, Ontario and The Maritimes

Manitoba/Ontario Report

Rock climbing possibilities close to Winnipeg continue to increase as new cliffs are located and investigated. During the last two summer seasons a second granite cliff has been developed near to Redditt and now has a number of worthwhile routes. Other cliffs have been investigated in far western Ontario at Tegga Lake (a restricted access area) and at Hillock Lake. An experienced New Zealander, Peter Gough, joined with regular climbers Peter Aitchison, Bob France and Richard Tilley in pioneering new routes on these cliffs. On the main climbing area at Gooseneck Rocks a number of hard routes have had aid moves eliminated, including, Frog-in-the Crack (by Geoff Murray, Trevor Down and Ian Clarke). An excellent new slab route, Great Slab, to the right of Great Corner, has been climbed, overcoming a considerable overhang and very steep rock (Peter Gough and Peter Aitchison). Another new route has been climbed on the rarely visited South Cliff at Gooseneck where access is only easy by canoe.

PW Aitchison

New Brunswick Report

Secured to a waterfall turned ice wall, one's thoughts can give new meaning to the adage, "solvency is entirely a matter of temperament". The icy stillness of the New Brunswick winter morning is broken by the echo of a train whistle in the valley below. A side glance catches the morning train winding through the slumbering village of Welsford. It has left behind it the woodlots and pastures of the lower Nerepis River, unfolding into the wide frozen Grand Bay. Through a notch at the far reaches of the Bay can be seen the city of Saint John, blanketed by a morning ice fog, the Bay of Fundy stretching across the horizon on either side.

This has become a familiar scene for the members of the New Brunswick Rock and Ice Climbing Club since its conception three years ago. Access to the crags at Cochrane Lane, the province's major climbing venue, is exceedingly easier than when the first climbers bushwhacked through the thick spruce forest to scramble across the boulder field to the base of these 200 ft cliffs. The trail is cleared and well used and the club hut now accommodates regular visitors.

Sparked by the enthusiasm of the first cragsmen mentioned in two previous CAJ articles, the sport of climbing both rock and ice has been introduced to 30 to 40 new members each year. Our locale is off the beaten track of eastern climbing circles, so an equipment pool has been created and maintained by the club through the assistance of the University of New Brunswick Department of Physical Education.

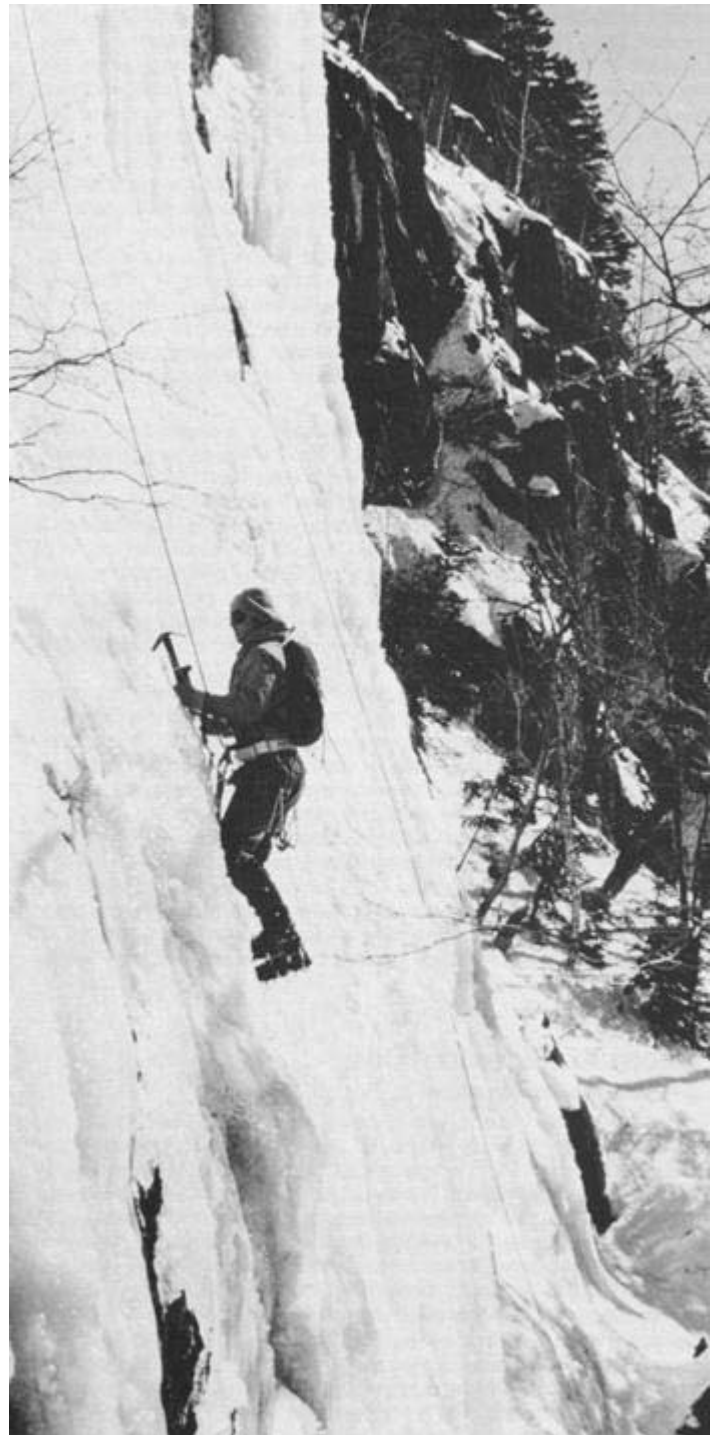
Consolidation of old routes and bouldering have been in the mainstream over the past year. Many of the high grade rock and ice routes have not received any visitors for over a year now, notably, Sinus (5.8, Bell and Lacroix, 1978), and Cave Fever (ice grade IV +, Bell and Lacroix, 1977). A rockcraft workshop held September 1979 for the inception of new members has spawned renewed interest and many are preparing for a winter season of good ice.

New Brunswick ice often falls prey to an extended January

thaw. In 1979 the warm and drizzly weather lasted for almost three weeks, successive freezing and thawing building up a brittle, layered condition. The ice climbing season however, generally extends from late December to mid-March, with late season snowfalls offsetting the unpredictable mid-winter weather.

The winter trails are well packed, often with a heavy crust from the Maritime winter, so walking is facilitated to the base of the climbs where crampons can be fastened and tools sorted out.

Further information concerning New Brunswick climbing
Dave Gluns on the Waterfall, Cochrane Lane Crags. Craig Leslie





possibilities can be obtained c/o UNB Dept of Physical Education, Fredericton, NB, where a Guide to New Brunswick Rock and Ice, by Colin Bell (including maps, illustrations and photographs) is available.

Craig Leslie

Quebec

Climbing Report

The winter of 1978/9 was a weird one. Lots of snow at the beginning before the cold set in. Then after Christmas two mild spells and very little snow. The result was that dreams of new ice routes did not become reality. However the ever popular Chutes Montmorency near Quebec City were in good shape and received several ascents.

Despite the mild spells a new multi-day cross country ski trail became very popular. La traversee de Charlevoix is a six day trip which takes the skier through the spectacular mountains of the St Urbain and la Malbaie regions. Five log cabins were built along this route thanks to the initiative of La Federation Quebecoise de la Montagne (FQM) and with the help of government funds.

Two solos and a second ascent were the highlights of the rock climbing season. Jacques Lamontagne soloed les Grands-Galets on Cap Trinité in about 31/2 days. His auto-belay system was successfully tested in a 40 ft fall. Gaétan Martineau made a solo ascent of the Mt du Gros Bras at St Urbain. Claude Berube and Louis Babin made the second ascent of La Tache Blanche on the Dome at St Urbain. However they did not repeat the original route (done in 1975) in its entirety as they reached the white spot itself from the right side instead of from directly beneath and they continued on straight up from this point instead of traversing slightly left. They thus avoided the two 20 ft cliff hanger pitches and their variations made the route all free with a 5.9 + grading compared to the original 5.8, AI. This route remains one of the most beautiful and demanding free climbs in the province. It involves very delicate moves with long run outs and little or no protection. However the run out above the white spot is now safer as an expansion bolt was placed by the Berube-Babin team. In the Bale Eternite area, almost if not all of the climbing has been limited to Cap Trinité with its 300 m multi-day artificial routes. But to the Club de Montagne du Saguenay (CMS) this region has

much greater potential as evidenced by the impressive rock walls on the five mountains adjacent to the Cap. On an outing of the (CMS) to this area, François Garneau and Régis Richard put up a new (the first?) route on a mountain close to the parking lot. The route required a fair amount of gardening in the lower sections and was baptized "La Poire" (500ft, 5.5).

A new hut was built in the region of la Mauricie. It is situated at Grands-Piles and is very close to several ski trails and ice falls for winter activities and in the summer several crags are within easy reach, a few of which are unclimbed. A new guide book of climbs in the Eastern Townships was written by Bertrand Cote (see Reviews this volume). This year also had a sad note with the death of Jean-Pierre Cadot in the Huascarán region of Peru. He was a very popular and competent Quebec climber who took up residence in Alberta a few years ago and became a professional guide. His love for the mountains was unsurpassed and to his many companions he leaves behind many fond memories of unforgettable climbing experiences.

Besides organizing and supervising the tremendous achievement of La Traverse de Charlevoix, the FQM held many climbing schools including formation de cadres, recycling (to up-date certified teachers) and mountain rescue. A very popular formula for climbing initiations was the stages de découverte which involved a preparatory evening followed by two week ends of instruction. The Jamboree this year was held in the still to be created park of Val-David/Val-Morin. Much good climbing was had by all in this the birthplace of climbing in the province. The FQM's conference was held in the enchanting Forêt Montmorency of the Parc des Laurentides and the various work shops turned out an impressive number of propositions as a guide to the FQM's future orientations. If just half of these propositions are realized, we can look forward to a very fruitful 1980.

François Garneau

Eastern Arctic Mountains

Case of the Missing Mountain

Torngat Mtn scenery has a way of being elusive. It is hard to put into perspective, tricky to bring into scale, prone to misidentification. Some localities such as "The Torngak's Lair" are famous for resisting all attempts to photograph them. But on page 17 of CAJ 79 one of the peaks of the Torngats outdid all previous feats of landscape magic—it disappeared altogether! Like the Cheshire cat, it left only a smile behind and at last even that was gone. When John Andrachuk made the first ascent of Starshape in 1978 he could hardly have imagined his accomplishment would be preserved from mortal emulation in this way.

Starshape may or may not still be there. Members of the 1979 Torngat Mountain Expedition saw what they thought was Starshape, brightly shining behind Ivitak Cove in its accustomed place. But was it real? Moira tries again. But she is dealing with a phenomenon as hard to photograph as rainbows or the northern lights and whether or not the mountain reveals itself in this new printing we shall have to wait to see.

R Chipeniuk

Auyuittuq Report

Climbing, cross country skiing and glacier skiing parties



increased in 1979 for Auyuittuq National Park and environs of Cumberland Peninsula, Baffin Island

Excellent early spring weather coupled with good ice until mid June provided for good access to the main climbing and ski areas of the Park. After an early ice break-up in July the weather turned quite bad, with much rain, wind and low cloud, not excellent climbing weather by any means for July and August. The weather did not hamper the exploits of many groups who found that the higher elevations have much better weather than the lower valleys. Combined glacier ski travel and climbing was enjoyed by many groups with some staying as much as 50 days in the isolated Penny Ice Cap area of Auyuittuq.

The most significant climbing activity in the Park involved two attempts to climb the west face of Mt Thor. Both attempts failed. An American group of three spent 31 days on the face of Thor to reach 2/3 of the way up before turning back. A well equipped, experienced Japanese party of seven, attempted a technical ascent of the face of Thor but turned back half way up the face after the tragic fatal fall of one of the party members. Mt Thor still remains one of the world's largest faces not yet climbed. The Japanese party hope to return next year and complete the first ascent of the west face of Mt Thor.

The many peaks, and glaciers of Auyuittuq National Park and the Eastern Arctic mountains still remain one of the unspoiled climbing and wilderness adventures, for those who come properly prepared for all eventualities of this isolated region.

RE Redhead, Auyuittuq National Park

Shizuoka Mt Thor West Face Expedition, 23 May to 15 July. Isao Yagi and six others. To climb the west face "Yamazaki" buttress. On 8 June one member of the party fell to his death off Mt Thor. Ken Nichols and one other, 6 July to 6 August.

Expedition Beige Baffin 79, 12 in number, 4 July to 3 August. Mt Killabuk: face est (voie Scott), ED- V+, tempête a al sortie; JC Sonnenwyl, P Morand, E Blanc, B Legros, 10 July. Mt Asgard, Sommet Nord: mauvaise neige, tempête a 100 m du sommet, retraite; L Ancion, A Grignard, M Bodard, 10 July. Mt Thor: tentative sur un pilier, tempête a 100 m du sommet, IV +, -V; A Legros, M Vivier, J Schroeder, 10 July. Mt Odin: tentative ouverture de l'arête sud-est, 500 m escalade fibre V, abandon sur mauvais temps; A Grignard, J Schroeder, M Bodart, 16 July. Mt Breidablik; voie Lee-Koch, ED

-VI, 2/3 de la voie granit, bivouac sur hamac, tempête; L Ancion, M Bodart, M Vivier, 22 July. Unnamed Peak (in front of Mt Thor): probablement nouvelle variation voie Américains, 35 longueurs, V, très mauvais rocher sur 25 longueurs; A Grignard, B Legros, J Schroeder, 24 July. Armadillo Climbing Club, 6 July to 3 August. Overlord Peak: up rock on cirque north of summit then up north ridge (rock and snow); D Perkins, K Scott, 8 July. Tête des Cirques (East Summit): up Turnweather Glacier, across moraine, up snow and rock; D Perkins, K Scott, A Russell, R Russell, L Peters, 27 July. See report this volume.

Shawangunk Alpine Group Expedition, 15 June to 5 August. Mt Thor "Endurance Route". Up to second prominent ledge ("Zag Ledge") 2/3 up face. Involved continuously hard aid climbing on problematical quality rock. 25 pitches, grade IV, 5.10 A4 + . S Amter, R Sacks, M Sawicky. Abbotsford Expedition, Mt Tyr East Peak, 28 July to 14 August. Followed left gully up from Summit Lake to south-east buttress, grade III to IV. A Devlin, M Devlin, M Little, J Shapiro, 12 August. See report this volume.

1979 Baffin Island Expedition, 5 to 17 August. Gauntlet Peak, East Ridge: climbed hanging glacier in Turnweather/Gauntlet cirque to east ridge; B. Nelson, K Hunter, L Lempert, 11 August. Trinity Dome, West Ridge: B Nelson, K Hunter, S Grossman, T Donnelly, L Lempert, 11 August. See report this volume. Luc Rivest and five others, 3 to 25 August.

Baffin Island

Someone once said something to the effect that the only worthwhile expedition was one which was financed on a shoestring and the details figured out on the back of an envelope. Our expedition certainly filled the first requirement although our planning had started while snowbound in a tent on the Columbia Icefields in August 1978. Alan mentioned Greenland as a possibility for 1979. I replied that anywhere was fine. Christmas vacation gave us two days to continue planning. Alan, who had done all the preliminary research, had changed his mind. Greenland was too far away and too hard to reach. He had "discovered" a place which was relatively unexplored, easy to get to, and offered some of the best climbing in the world: Baffin Island. Throughout the spring we continued our planning, prospective team members were written. The trip began to take shape.

The final plan had evolved during the spring. Our group would fly to Baffin in two parties. Ken and I would fly up in early July, the others in mid-July. Ken and I would have more time for climbing and could do some investigative hiking before the others came up.

After two days in Pangnirtung we and others chartered a freight canoe to take us up Pangnirtung Fiord to the Auyuittuq Park boundary. The further up the fiord we went the higher and more majestic the mountains became. The arctic sunrise welcomed us to the park and highlighted the peaks.

We arrived at 6 am and, having been up for 24 hours, pulled out our sleeping bags and jumped in. Sleeping through the morning we got up around 2 pm for breakfast. After talking to the park wardens and surveying the slopes of Overlord Peak (4895 ft) we decided to try it. Ken had had very little rock experience; I thought Overlord would be a good place to start him out. We packed up and left at

4.10 pm. The arctic twilight gave us enough light all night long.

We only had two problems on the climb. About half-way up a rock slid over the rope. As I started leading the next pitch Ken called out for me to stop — the rope had been cut. We finished the job the rock had started shortening our 120 ft rope to about 90 ft. Another problem was wet rock. Our late afternoon start coincided with maximum snow melt. At one point we literally crossed under a small waterfall. Seven hours after leaving camp we reached the summit, greeted by an almost full moon. We could see all the way down the fiord to Pangnirtung. Even though the sun had gone below the horizon we had enough light to take pictures.

The next 12 days were spent hiking up the Weasel valley. Although all our planning had been based on climbing I felt so small and insecure and unprepared when confronted with the awesome faces and towers on Baffin that we mutually agreed to spend some time just hiking. We went up the Turner Glacier and got a good view of Mts Asgard and Loki. Then we retraced our tracks back to Overlord for a rendezvous with the others of our group.

A radio call to park headquarters in Pangnirtung confirmed that the second group had not picked up our food box left at park headquarters. We decided that one of us would go out in the next available canoe, get our food box, stop at the Hudson Bay store and buy some additional food and then return to Overlord as soon as possible. With the larger appetite, Ken went.

The trip was unnecessary though because the others met him when he returned, their altered flight schedules having put them a day behind. On 20 July the four returned to Overlord. The extra food from the Bay store was a welcome change from our freeze dried food. The only time we used our medical kit however, was the following day when I developed cramps and diarrhoea from the candy!

Over “breakfast” that afternoon we decided to hike only a mile or two up the valley to be in good position for going up the Turnweather Glacier the following day. A storm and poor visibility kept us in our tents for the next two days. On the morning of 24 July the sun reappeared, we moved up to the Turnweather Glacier, and established a base camp. The following day we attempted Tête des Cirques (6060 ft) but were turned back by rain. The next day it snowed.

The morning of 27 July was clear but high winds still kept us in camp. We listened to and watched avalanches come off Turnweather Peak. As the day progressed the wind died down. Alan, tired of being tentbound, got the rest of us moving and we left camp at 4 pm.

Alan led across the Turnweather Glacier then gave the lead to me. Within five minutes the problems of route finding through the morainal debris changed my attitude from “Can I go back” to “Gee, this is fun!” After taking a short rest break Ken led the rest of the way to the summit. The clouds, which had partially obscured the summit rocks, drifted away.

The views in all directions were dramatic. Pictures were

snapped, the last of the snacks eaten, clouds started to move back in, and down we went. We got back to camp at 1.45 am — almost 10 hours for the round trip.

After another day of rain Ken and I hiked back to the Overlord camp on 29 July. Our food was running out and we had to get back to a cache at Overlord. The others remained. The Overlord camp was overrunning with people. A big cabin cruiser boat took 24 of us out late that night.

Donald R Perkins

Participants: Donald Perkins, Lynne Peters, Alan Russell, Raymond Russell, Ken Scott.

1979 Baffin Island Expedition

On 4 August a five man expedition departed Washington, DC, for the region east of the Pangnirtung Pass on Baffin Island’s Cumberland Peninsula. Our primary objective was to explore the peaks at the head of the Turnweather Glacier and the peaks south of the Gauntlet Peak-Mt Turnweather wall.

Our journey northward from Montreal was marked by continuous rain showers and the usual flight delays at Frobisher Bay. At Frobisher we got our first inkling of how the climbing season was shaping up. The number of backpackers seiging Auyuittuq Park was on the rise and had severely strained the local resources. Weather-wise since before the ice pack break up in early summer the season had been marred by continuous fits of rain with only the occasional clear day thrown in. After what was supposedly one of the shorter flight delays out of Frobisher, only 12 hours, we landed in Pangnirtung. Snow was falling above 3500 ft and rain soon followed at sea level. To our dismay we discovered that we had arrived during some sort of holiday and the Hudson’s Bay Store and everything else was closed up tight.

Ken and I had been on Baffin in 1977 and thought we had a pretty fair idea how to handle the local transportation arrangements. But we were totally unprepared for the new twists the local Inuits had concocted. In 1977 a boat to the head of the fiord had cost \$40 but it was now \$100 and worse yet, they now took unsuspecting types up fiord during low tide. This may not sound like such a big deal until one remembers that when the tide goes out on Baffin, the water line at the fiord head moves over a mile and a half! The really appalling part of the deal was that if you did not take the boat when the native wanted to take you, you simply did not get a boat at all. It was not the last problem we were to have with transportation.

After our abominable and unplanned trudge across the tundra below Overlord camp (we normally tried to avoid walking on tundra both to minimize our impact and ease load carrying) the weather amazingly cleared. The next seven days were the usual mish mash of different camps, moving up and down mountains and hideous moraines, picture taking and occasionally chatting with passing hikers who were stunned at the appalling loads and hardware we carried. One amazed hiker met total defeat when his 130 lb body could not pick up my 120 lb pack. At the time we were storing all the hardware in it but he thought it was a normal load. We never disabused him of his mistake.

We successfully climbed Trinity Dome (ca 5300 ft) via its west ridge. From its rounded summit we had a fantastic view of the peaks hidden behind the Gauntlet/Turnweather wall. Unfortunately the approach to those peaks looks like many miles of tundra slogging. Ken, Larry and I also climbed Gauntlet Peak via its east ridge (ca 5700 ft).

We hiked out a day early to Overlord to ensure that we could radio back to Pangnirtung for a boat on the correct day. This precaution didn't help at all as the boat was still a day and a long half late. Upon our return to Pangnirtung at 2 am the rain returned and made our beach bivouac totally miserable. The next morning we sought out the Park superintendent and made a few appropriate comments that amazingly, we tempered with some courtesy. We found him to be very receptive and at somewhat of a loss as to how to control the problem as transportation to the park is, rightfully, a private business. The park is attempting to solve the transportation problem and our team has prepared a study to assist the park in arriving at a solution that will insure that climbers' desires are looked after.

Barry Allen Nelson

Participants: Barry Nelson (leader), Tim Donnelly, Ken Hunter, Stan Grossman, Larry Lempert.

East Peak of Mt Tyr

It had been nine days since we left the nearly tropical mid-summer weather of Montreal for the 6 to 8°C cool, windy and rainy west coast of the Cumberland Peninsula. Our fifth camp site was located on the Caribou Glacier moraine by idyllic Summit Lake. We had reached our base camp after slogging the 32 kms from Overlord with 25 kg packs for the ladies and 35 kg for the gents. We all felt really good to take two rest and recuperation days.

One of the more pleasant aspects of our trip was that we had dried all our food in a food dryer, hoping to avoid the high costs of freeze-dried food and eating preservatives. While the meats, fruits and vegetables would lose up to 95% of their water content, they retained their vitamin content and when reconstituted, came very close to resembling a home cooked meal. Each person carried 9 kg of food and we took turns lightening our packs at dinnertime.

The weather so far was pretty predictable: rain, wind and more rain. It had rained five days of our first nine. We had been having the type of days reminiscent of the month of November in the St Lawrence lowlands before the winter snows blanket the countryside. In the early morning it would be fairly clear but by midday clouds would roll down the Weasel River valley and bring the probability of rain up to 80%.

While the main route for our peregrinations was confined primarily to the valley floor and a few glaciers, we did seek out one high place. On 5 August 1979 we climbed the East Peak of Mt Tyr, 1310 m, scrambling up the side of a snow gully that eventually led us on to a buttress and the snow capped summit. On that day, when we started out we estimated that the climb would be of a two to three hour duration with sunny weather for good pictures.

Instead, the round trip ended up taking nine hours and became a good lesson in judging distances above the treeline. On the summit we marvelled at the breath-taking panorama; Mt Breidablick with its avalanching slopes, Summit Lake and Mt Battle, and finally, the dual 'smoke stacks' of Mt Asgard peeking around the shoulder of Freya Peak. We began to contemplate descent as dark clouds began to roll in from the surrounding ice cap. All of a sudden our sunny day for pictures turned into a snow storm and we hastily retraced our route to the valley floor.

Arnold Devlin

Participants: John Shapiro, Mary Little, Arnold Devlin, and Mona Devlin.

Orizaba — First Ascent of Central North-West Amphitheatre

Eye glued to the monocular eyepiece I watched the first glimmer of sunshine strike the uppermost rocks of the face. “That’s it, we’ve got to be out of there by eleven before the rock fall starts”. The headwall appeared to be about 2000 ft high and consisted of two bands of cliffs separated by a huge left trending ramp. We had no desire to venture up the rotting volcanic rock and therefore the ramp offered the best route.

The thought of climbing in Mexico had long fascinated me with its promise of sunny weather as an alternative to the cold Canadian winter. Now we stood in the dusty town square of Hidalgo — the last village before Citlaltepētē. With an altitude of 18,851 ft, Citlaltepētē (or Orizaba) ranks as the third highest peak in North America.

The volcanoes of Mexico are known for their technically easy routes — long snow slogs up uniform slopes with the primary difficulty being altitude. This general characteristic applies to the now standard north glacier route of Citlaltepētē. However on the north-west side of the peak the symmetrical volcanic topography is broken by a steep cirque. With only a single route up its west margin, it was our intention to climb a new, more central line, up this amphitheatre.

A local family had allowed us to spend the previous night in their home and had supplied us with a burro and mule to transport our gear to the proposed camp site at the base of the cirque. We set off towards the south-east, winding through sparsely treed areas broken by fields of tall grass.

It was cold, maybe -15°C outside, as we huddled in the cramped confines of the tent. The wind tore at the flimsy nylon barrier, threatening to dislodge the poorly pitched A frame and send it flying across the cirque. In order to give us more time to acclimatize it had been decided that Ken and I should establish a high camp at about 14,500 ft, level with the base of the ramp.

Orizaba: on the road above Hidalgo. The north-west side of Orizaba in the background. Jared Israels

Winston had not been feeling well and opted to remain behind at our first camp. With only 4000 ft separating us from the summit I was confident that we could complete the climb in one day. Now however at 4 am Ken told me that he was suffering from altitude sickness. Even if he could climb, he did not feel that he would be able to move fast enough to avoid the afternoon bombardment. I didn’t want to descend — to drag myself back up the endless talus slope on the following day. The only alternative was to go on alone. The more I thought about it, the more attractive the idea of a solo ascent became. I knew that I could handle any technical difficulties — the route didn’t look hard. And climbing alone I could move faster. I had made up my mind and yet I still wrestled with a bad case of the “what ifs?”.

Orizaba. north-west amphitheatre of Pico d’Orizaba. Original Mexican route (1962) on right, new line on left. Ascent was from high camp level with first cliffs (in shadow). The upper face and summit cone are greatly foreshortened. Jared Israels



At 6.30 the first rays of the sun began to filter through the tent as the wind finally abated. It was cold and clear; conditions would be good. I hurriedly pulled on my boots, ate a cold breakfast of sardines and stuffed a few last minute items into my pack. Ken stood on the slope above the tent looking towards the hidden summit of the Star Mtn. I could see his disappointment — to have travelled so far only for the summit to elude him. I moved quickly across the scree filled basin to the first snow slopes and the base of the ramp. At first climbing was easy; up a gentle snow-ice couloir broken by the occasional band of shattered rock. As I worked higher the face steepened slightly and ice curtains engulfed the cliffs to either side. My earlier fears began to disappear. Soon I was totally involved in the ascent, negotiating the occasional tricky move and pausing to enjoy the spectacular view to the east. I felt exhilarated — there is a sense of freedom, a particular excitement that can only be experienced when climbing alone.

The couloir necked down and an ice plastered rock step proved interesting but was surmounted without major difficulty. Above the step the face turned to low angle black ice, broken by outcropping of rotten rock. This portion of the ramp lay directly in the line of fire from disintegrating cliffs above — the scars from rock fall were everywhere. Needless to say, I did not hang around for any length of time. I carefully moved up the slope, points barely penetrating into the hard surface.

The climbing shortly returned to snow-ice, as the angle of the narrowing ramp steepened towards the exit couloirs. Finding a convenient rock, I rested briefly, tightening my crampons, studying the two gullies, and munching on a few Salvavidas (Life Savers). The right hand couloir appeared straightforward. Reluctantly, I left my comfortable resting place and moved up the slope. A low 'whirr' — I ducked instinctively as the grapefruit-sized chunks of ice buried themselves in the snow about me. It was 10.30; the barrage had started.

Hastily I made for the relative safety of the couloir which, unlike the ramp, was not shadowed by the rotten cliffs. The climbing wasn't difficult and I soon emerged into a steep bowl to the right of a glacier tongue. The rock fall danger lay behind me and I breathed a sigh of relief but above the wall steepened to 60 degrees. I chopped a step and rested briefly, examining the ice above. The slope was covered with surface hoar!

The razor sharp crystals cut at my gloved hands as I cautiously climbed upwards. Each step demanded the utmost care, kicking the rotten surface away to gain purchase on the blue ice beneath. Progress was slow and with no belay I was reluctant to bend over to chop a step for fear of breaking my points from the fragile surface. I was tiring rapidly. The altitude, my poor level of acclimatization and the unobstructed view of the scree slopes 2000 ft below began to take effect. DAMN — my right foot had sheared through the ice as I moved to place my axe. A flash of fear. Too much exposure — TOO MUCH HORROR FROST — one mistake and. . . Don't think about it; get your ass out of here! I was climbing faster now, my strength quickly disappearing, trying to make the end of the face before I would bag-out and peel. Finally I pulled over the top, elated, exhausted. I glanced down the face to the end of the exit couloir — a mere 100 ft and an eternity below. Before me the summit cone of Orizaba shone a brilliant white in the noon sun. To

the west, the snow capped peaks of Popocatepetl and Ixtaccihuatl shimmered on the horizon. Two hours of easy snow and I would be on top.

Jared Israels

Participants: Winston Crausaz, Jared Israels, Ken Vrinten.

SUMMARY

First ascent of the central north-west amphitheatre of Orizaba, Mexico by Jared Israels, 29 December 1978. Predominantly on snow-ice up to 60 degrees (last pitch) but generally less steep. 7 hours to summit from camp at 14,500 ft. Descent via North Glacier.

Some Notes on the Disappearance of JP Cadot and Bill Porritt, Alpamayo Area, Cordillera Blanca, May 1979

On 19 May 1979 my brother Brad and I returned from a seven day acclimatization hike in the Cordillera Blanca to the Hotel Barcelona in Huaraz. Upon arriving we were given a note left by JP Cadot saying, "Gone to Alpamayo base camp with two weeks food via Hacienda Colcas. Care to join us?" They had left on 17 May so we figured we could catch up to them to make a strong four man party. A summary of the next few days' events follows.

May 21 to 25. Pack up gear, rent burros and hike into Alpamayo base camp. Arrive at noon, 25 May. There are two camps at the base area — JP's and BP's and the camp of an Austrian party. No one around so we spent the afternoon exploring the valley. The Austrians return that evening and tell us that JP and BP left the afternoon before (24 May) with three days food and bivy gear to climb Kitaraju and Alpamayo. The Austrians saw JP and BP at 2 pm that afternoon (25 May) ascending (ca 200 m) below the summit of Kitaraju on the north face.

May 24. Sunny. Brad and I carry four days food and climbing gear over the 5000 m col which provides access to the Alpamayo-Kitaraju Glacier and down to a camp on the glacier. No sign of JP or BP on Kitaraju. The Austrians ascend to the camp with us. They stay and we go back to base.

May 27. Sunny morning, clouds in afternoon. We carry remainder of gear to the glacier camp. The Austrians work a route through the icefall and camp 2 kms away from us, above the icefall. We camp near the glacier. Still no sign of JP or BP but we do not worry because it's possible that they have descended the west glacier of Kitaraju to base camp or are climbing one of the back ridges on Alpamayo.

May 28. Sunny, hot. Using the Austrian route we quickly cross the icefall carrying all our gear and by noon have set up camp at ca 5500 m near the col between Alpamayo and Kitaraju. We pass the Austrians en route. One of their foursome has symptoms of bad altitude sickness so they are preparing to descend. We spend the afternoon looking at routes. The north face of Kitaraju does not look good — abundant avalanches coming off due to the warming weather.

We also see what are probably JP's and BP's tracks running along the glacial plateau at the base of Kitaraju and ascending to the base of the south-west face of Alpamayo. The tracks are drifted over but it looks like they came back down the same way. Probably they climbed up the steep west side of the icefall (high danger of ice avalanche) to reach the plateau instead of the longer but safer route we had used. I was still not worried about them because I was sure they had descended the west side of Kitaraju. Also this camp was the highest we had made and we were having altitude problems.

May 29. Sunny, hot. Brad and I climb to within 200 m of the summit of Alpamayo on the south-west face before deciding that we are not interested in a bivouac and that it is not so smart for a two man party to be on such a steep face for their first time at altitude. We descend and by late afternoon are back at base. No JP and BP. The implications are obvious.

May 30. Snow in afternoon. After an early morning discussion with the Austrian party we decide to re-ascend to our last camp then climb the north face route to look for tracks on the summit of Kitaraju, the party to consist of the two strongest Austrian climbers and my brother and me. Just as we are about to leave another Austrian party shows up in base camp and say they will probably climb the route during their stay. Thus we decide not to go for the following reasons. 1 None of us are very healthy. I have been coughing so bad at night that have only had a few hours sleep in the last three days. The Austrian fellow is very sick and his friends want to stay with him. 2 Following their tracks will be difficult as they are already drifted over in places. What if it snows again? 3 Over the three previous days there has been a camp at the base of the north face of Kitaraju and we have all done a lot of looking, seeing nothing but avalanches. 4 We are not sure they are on Kitaraju. They could be on Alpamayo or trying Loyaquirki, an easily accessible peak to the west. 5 They are at least three days overdue and at that elevation, with no food or water and only bivouac gear they are probably already beyond help, even if only injured by whatever happened to them. 6 The other Austrian party is ascending to the glacier camp and if anything turns up they will probably see it. Thus we take a badly needed rest day. A storm blows in that afternoon which confirms our decision.

May 31. Cloudy, cool, some snow. Snowed down to 4200 m overnight. Brad and I rise shortly after dawn, climb to below the west face of Kitaraju and spend the morning looking. We see nothing and this convinces me how dangerous it might be poking about in the avalanche cones around the rest of the mountain with the rock, ice, and snow that is falling down regularly. We return to camp that afternoon. The burro driver arrives to pick up JP and BP. We are low on food and have a lot of gear to pack out so we leave, as do the first Austrian party. The weather remains poor for the next few days.

Upon returning to Huaraz we inform the authorities and the Canadian Embassy, Lima. I continually veto all suggestions for a foot search because I am convinced that JP and BP are already dead and that the risks are too high to justify looking for bodies. The area involved is too large, the elevation too high, the time expired too long.

The Peruvians promise a helicopter but after two weeks it never materializes, even when a lady member of the second Austrian party develops pulmonary oedema and slowly dies in the Alpamayo base camp area. Rudi Thuni, CMH Banff, also spends a lot of time talking to the authorities and the Canadian ambassador but has no better luck.

In summary it seems most possible that JP and BP climbed to the Kitaraju glacier plateau on the morning of 25 May. They first walked across to the south-west face of Alpamayo but turned back and then tried Kitaraju, reaching their last seen point at 2 pm. Somewhere near here they got into trouble, probably due to a combination of the following factors: 1 Poor acclimatization. JP and BP were acclimatized to spend nights at 4000 m. Within 24 hours of leaving this elevation they found themselves in a bivouac situation at over 6000 m. 2 Exhaustion. JP and BP climbed an incredible amount of terrain within 24 hours. At those elevations they must have been physically demolished. 3 Objective hazard. The avalanche and icefall danger on the north face of Kitaraju was severe. A route finding mistake or slowness in crossing an avalanche slope would be fatal. 4 Small size of party did not allow for altitude sickness or any of the other problems that just about one person in every group encounters during their first climb at high elevations.

I did not know Bill Porritt but have made several climbs over the years with JP. I do not believe that JP made all those errors. He was an excellent climber with good judgment. Thus the actual circumstances of their fate are probably somewhat different than

The north face of Kitareju on 28 May. Note avalanche scars across the face. Cliff White



the evidence indicates.

The remainder of Brad's and my trip was more enjoyable. In June we participated in the mass Canadian climb of Artesonraju. Eight reached the summit via three routes — all within two hours of each other! Later in the month we climbed Nevado Huandoy via the 1974 ice couloir/east face route.

We will remember the Cordillera Blanca as one of the most spectacular groups of mountains in the world. The resting place of JP Cadot and Bill Porritt is by far more beautiful than the one most of us will find.

Cliff White

Taulliraju Yahoo

One would think that memories of a first Peruvian expedition would be of blue skies, snow and ice climbing, bivouacs, friendships and so on. The memories that came back to me instead, one evening last year, were dancing to "Stayin' Alive", Peruvian salsa, and star gazing in Huaraz with three lovely Peruvian girls. I had to dig very deeply to conjure up thoughts of the blue skies, the climbing and the bivouacs. Towards the end of April 1979 the Bee Gees, the salsa, the stars, and a photo of Taulliraju all came together again one night. I wanted to go back to Peru and, among other things, do a first ascent of the north face of Taulliraju (5830 m) in the Cordillera Blanca. I needed a partner and a brief note to Peter Busch to advise him that he was coming along, with no ifs, ands or buts was enough.

We arrived in Lima on 6 July 1979, tired from the overnight flight and one last wild night at home with very little sleep. We were staying at the Hotel Continental in Lima and after stowing our gear in our room I called the three Peruvian girls and we made arrangements to paint the town for the next couple of nights before leaving for Huaraz and the mountains and the climbing and the bivouacs.

We rode from Lima to Huaraz in a collective, arriving on 10 July, tired and ready for the first good sleep in five days. The next couple of nights we toured the flesh-pits of Huaraz and when we ran out of places we created our own. It was during one of those nights that the phrase "Gringo Alpinista look" was conceived. The criteria for the "Gringo Alpinista look" are; to be a gringo (foreigner) but not necessarily a climber, to have white raccoon eyes with a sunburned face and, to sport a scraggly, half-grown beard, with matted, wind-blown hair. We looked forward to becoming part of this elite group, soon.

By 12 July we had finished our shopping and left for Pomabamba. We travelled north from Huaraz through an arid landscape dotted with the snow capped mountains of the Cordillera Blanca full of past and future adventures. The estimated one day journey to Pomabamba stretched into three as we had to wait two days for a ride at the Mina Pasachanca, a large molybdenum mine near the small village of Pasachanca. For some reason we expected Pomabamba to be about six mud shacks and a General Store. Instead, on the evening of the third day, the lights of a small city spread before us as we drove into the outskirts. All of the amenities, including paved streets complete with potholes, hotels, a bank, a hospital

Taulliraju Yahoo: large overhang on descent. Joe Bajan



Taulliraju Yahoo: first ascent. Joe Bajan



and stores, shattered our image of a rustic Peruvian village. The hotel room we checked into reminded me of a scene out of a Clint Eastwood western movie with three foot thick mud walls, creaking floor boards, and a sagging bed which was a foot too short. It took us all of the next day to arrange for the burros to take us up the Jankapampa valley to our base camp.

July 16th found us at base camp after a one day journey from Pomabamba. The lonely Andean valley we had expected was populated with farms all the way. The natives even went past our base camp to cut ice at the foot of the icefall, the base of the Puckihircas, which they later sold in Pomabamba. Fortunately this base camp was virtually wind free as we were flanked on three sides by 600 m high bluffs, and an icefall, which rose a further 600 m.

The endless blue skies one expects in the Cordillera Blanca had clouded over during the walk in. The next morning we crawled out of our wet sleeping bags, the price paid for a poorly pitched tent fly. After re-pitching the fly, Peter set off to find a way through the bluffs to the south. I stayed to guard the camp from the ice cutters. Peter came back a few hours later with very little good news. My turn to play scout came that afternoon but about 20 minutes out of camp my first "Turista" attack came on suddenly. The dropping of my drawers just coincided with the end of the five second warning one gets. With this part of the battle well out of control I felt fine, until I started vomiting while still squatting. I returned to camp and left my reconnaissance for another day.

The following afternoon I found a way through the bluffs but

the route was too difficult to pack large loads up. We would have to fix the lower 150 m. This reconnaissance took me up to 5100 m on the far east ridge of Taulliraju. It looked as if the route would go so I returned to base. For the next six days we ferried loads from our base camp up to camp 2 at 4700 m along the route that would eventually see us placed at 5100 m in camp 3. Camp 2 was located beside the icefall, below the far east ridge of Taulliraju.

On 25 July we set off on another reconnaissance to scout out our route. We sat for four hours about 2 kms from the face staring at a total whiteout. We couldn't even see the mountain let alone pick out a route that would go. Our four hour vigil proved virtually fruitless. We threatened, swore, pleaded, screamed and even asked Taulliraju to show itself. Finally as we packed up to leave we mumbled "Alright Taulliraju, you can show your face now, we're leaving." A few minutes later, as we were about to descend back into the icefall, Taulliraju's half misted north face appeared long enough for us to snap a hurried photo. The north face, with its mixture of granite and flutal ice ridges darting in and out of the mist, made us feel like we were dreaming.

July 26th was a day of rest, contemplation and writing. It was also the tenth straight day of rain, sleet, hail and/or snow. The weather was starting to depress us and we were having doubts about even seeing the mountain, never mind setting foot on it. The only good thing about the bad weather was that it was forcing us to acclimatize. We planned to start up the north wall the following day if the storm lifted and establish a bivy camp (at 5100 m) with enough food for five days. Then we would sit there until the weather permitted us to race for the summit.

The next day, for some unexplainable reason, there wasn't a cloud anywhere. It was the kind of day one dreams about (when not dreaming of the Bee Gees and salsa). We couldn't find any more excuses for staying back so we had no choice but to head off with a good "alpine start" at 9 am. As we climbed above the icefall Taulliraju came into full view in all its glory. What a wall and what a mountain! The Pukahiras were almost unreal, especially after just seeing nothing but clouds for the past ten days. We trekked onwards with our necks craned upwards analysing our route.

We arrived at camp 3 (5100 m) without much further ado except for one very steep ice pitch of about 20 m which I mistakenly led without gloves. Afterward I sat for awhile while my cold bloody hands screamed obscenities at me. I promised them I wouldn't do that again, unnecessarily. But secretly I was smiling — it was nice to be back in action. Later, sitting in camp watching the sunset, we were inspired and had a feeling of impending success. I could see the spot from where Lionel Terray took his famous photo of Taulliraju. I recalled reading his book *Conquistadores of the Useless* and now I was really here. I could almost see Terray trekking across the glacier below on the way to do the first ascent of Taulliraju via the north-east ridge. In his book Terray said of the mountain that, "Never perhaps, in the whole history of mountaineering, had the ascent of a peak been such sheer hard work." But climbing techniques have changed a lot in the past 22 years, I thought to myself, "Taulliraju, you just better not be a push-over, you better be as worthy as you look." I was to eat those words — later.

July 28th we arose at 4.30 am to peer out into a pea soup fog,

unable to see more than three metres. We went back to sleep. With another good alpine start at 9 am we set out, still in pea soup but able to see about 50 m. We reasoned that "as we know where the mountain is, we roughly know where the route is." We were tired of sitting around so we decided to go for it.

The beginning of our climb up the wall was straightforward ice climbing of about 55 to 60 degrees. Nothing really special or exciting involved but there were interesting moments. I was doing all of the leading while Peter was seconding me and jumaring when necessary. Everything was going smoothly except that we were still in fog. About noon we got into some mixed climbing. Up to this point, for some reason, we were climbing without helmets. Shortly before lunch we put on our helmets, which was fortunate for me because during our lunch stop a rock the size of a grapefruit landed squarely on my head. That could have been the end of my Peruvian climbing and possibly my head as well. I was out cold for a couple of minutes, (actually two seconds) and came to trying to focus on Peter's worried face, silhouetted above me.

We climbed the next two leads without belaying ourselves which helped as we were now running out of time. But Taulliraju was not going to give in easily. The next three leads proved to be the crux of the climb. I was on rock, on crampons, trying to lead a 5.9 jam crack that I'd normally be wearing my EB's on. I noticed a lot of rope drag and pulled up enough slack to get over. I told Peter to get his camera out because this bit would be good for a hero shot. I grunted, groaned, panted, and with sparks flying from my crampons, scrambled the overhang and found myself directly below another. "Ahhh, did you um, ahhh, pant, pant, pant, get some ah shots?" "Ya!" panted Peter, "great ones, good stuff up there eh?"

Peter jumared up, we exchanged a few words, and I set off again. Strange climbing this, right hand and crampon on rock, left hand and crampon on ice. I get both my ice hammer and axe out. Bloody nuisance. I put these away again. I repeat this procedure several times until finally the rope jams. "What the hell", I think. "Slack." I am moving out on the main overhang, the crux of the pitch. I jam one arm into a crack, the other hold a small finger jam. Crampons grope for traction. Finally the left one finds a flake large enough for one of the points. I am shaking, "Christ, I am going to fall if I don't get some bloody protection in." The last runner is five metres below. I've got to get a pin in quickly. I'm hanging on my left arm as I fumble for a pin. The only one I can find is a wide angle and it drives in five centimetres. Tie off quickly, clip in. My left hand is almost useless, my right fingers are numb. "Tension!" To the right and up in one quick move and I can rest.

A few minutes later and I'm on the last pitch. The rope goes tight while I still need another two metres. I undo the belay after hammering a pin above me and tying in with a long runner. I move up to a stance that would have kept Spiderman feeling right at home, get almost nice and secure and bring Peter up. His head appears and I mumble, "Good pitch eh! I just about peeled off back there." Peter grins and replies, "Ya, I believe it." We smile and congratulate ourselves and decide to bivouac where we are as it's getting dark. We stomp around on our little ledge for 12 hours and munch a bit of cheese. It's all we have. Fortunately the weather is good but we don't sleep.

We move off shortly after dawn onto a steep ice pitch that turns to hard névé above. Just this one pitch to the base of the summit mushroom. But it took over an hour to lead.

Much later and very exhausted I drive in a snow picket, tie in and rest. We're close now. A few more feet and the base of the summit mushroom which overhangs on all sides comes into view. Peter comes up and I tell him that I am so tired I don't think I can do the last bit. He says, "Ah give it a shot, if you can disco all night you can climb this mushroom. What are you, a jam tart?" So after a little engineering work and some heavy duty panting and a three metre walk to the summit we stand on top of Taulliraju and stare off to Huascaran and the rest of the Cordillera Blanca spread out before us and stretching into the distance. I strip to my T-shirt which says, Taulliraju Yahoo. We take a few hero shots, a few panoramas, and then start down. Nine 50 m rappels later we arrive back at our tent, 30 hours after leaving.

We lie exhausted and dehydrated in the tent and again Lionel Terray's words drift slowly into my mind, "Never perhaps, in the whole history of mountaineering, had the ascent of a peak been such sheer hard work." I had to agree.

Joe Bajan

ACC Nepal Trek 1979

For the first five days the trek was eastward, across the hills and river valleys of east/central Nepal. A portion of the Rolwaling Himal was visible on the third day and on the fifth day a glimpse of the mountains of the Everest region whetted appetites for what would be coming later. Starting from Jiri the route crossed a 9000 ft pass and dropped 4000 ft to the subtropical valley of the Likhu Khola river. The 12,100 ft Lamjura pass was then crossed, followed by a descent via the sherpa village of Junbesi to the Ringmo Khola. The 10,125 ft Takshindu pass was next, dropping off on the eastern side to the Dudh Kosi river at 4900 ft. Here the trek turned northward and continued along the Dudh Kosi valley into the heart of the high mountains of the Khumbu region.

Although there were few large villages along the route, the area is populous, with subsistence farms and terraced fields reaching up the hillsides. The countryside appeared rich, especially along the lower slopes of the valleys where rice and other grains, bananas, apples and such, were ripening in the lush, post monsoon season. Weathered prayer walls and stupas were indicators of the long settled nature of the region while the beautiful monastery of Takshindu suggested that the religious traditions continue to be nourished and stimulated.

The Dudh Kosi River cuts a deep valley through the hill ranges which lie to the south of the main mountain systems. The trail is thus forced high above the river and over a series of ridges. Once past these ridges the trail dips down below the airfield at Lukla and reaches the village of Musheye. Musheye was the home village of the trek sirdar who, together with his family, provided trek participants with a delightful evening of Sherpa hospitality.

Northwards from Musheye we rejoined the Dudh Kosi and followed the river to the entrance to Mt Sagarmatha (Everest)

National Park where an entrance fee of about \$6 per trekker was collected. Once into the Park the trail soon begins to climb up from the river and its beautifully forested banks towards the village of Namche Bazaar. As we climbed big mountains began to appear until they seemed to be popping up in all directions. The afternoon was spent visiting Namche Bazaar which is both the administrative capital and prime tourist town of the Kumbu region. New government buildings and hotels have recently opened with others under construction. It was a lively place with a large number of shops.

The next destination was the village of Thami at 12,500 ft, a half day walk up the side valley of the Bhote Kosi river. This is high country, in large part treeless and rather arid. Firewood is carried up from the valleys below. Trek members spent three nights at Thami, resting and enjoying several local excursions. An interesting visit was made to the monastery perched on a hillside above the village. Several trekkers climbed the hill behind the monastery for the view northwards to the peaks along the Tibetan frontier and southwards down the valley towards the mountains behind Namche Bazaar. Another excursion was made up the Thami Khola valley to the high yak pastures at the entrance to the 19,100 ft Tesi Lapcha pass leading west to the Rolwaling valley.

From Thami the trek returned towards Namche Bazaar for a visit to the prosperous twin villages of Khumjung and Kunde and then moved on to higher elevations, following the upper Dudh Kosi to its headwaters near a small settlement on the edge of the 15,700 ft Gokyo Lake. From the 18,000 ft mountain behind Gokyo Lake we had the most spectacular view of the entire trek. To the north lay Cho Oyo and the unnamed mountains of Tibet, to the east Everest, Nuptse and Lhotse and the great pyramid of Makalu. Smaller yet visually spectacular peaks rose to the south and west. Below lay the Ngozumpa Glacier — the largest in Nepal. The frigid, beautiful sunset on Everest was followed by a rapid descent to camp in the waning light of the alpenglow.

The return route lay back down the east side of the upper Dudh Kosi valley to the village of Portse and then on to the village of Pangboche at the foot of Ama Dablam. The monastery of Tengboche, located at 12,700 ft across the Imja Khola river on a subsidiary ridge of Kangtega, offered the next camp site. During our visit Everest was shrouded in cloud although the sun shone on Tengboche and the other peaks of the region were clear.

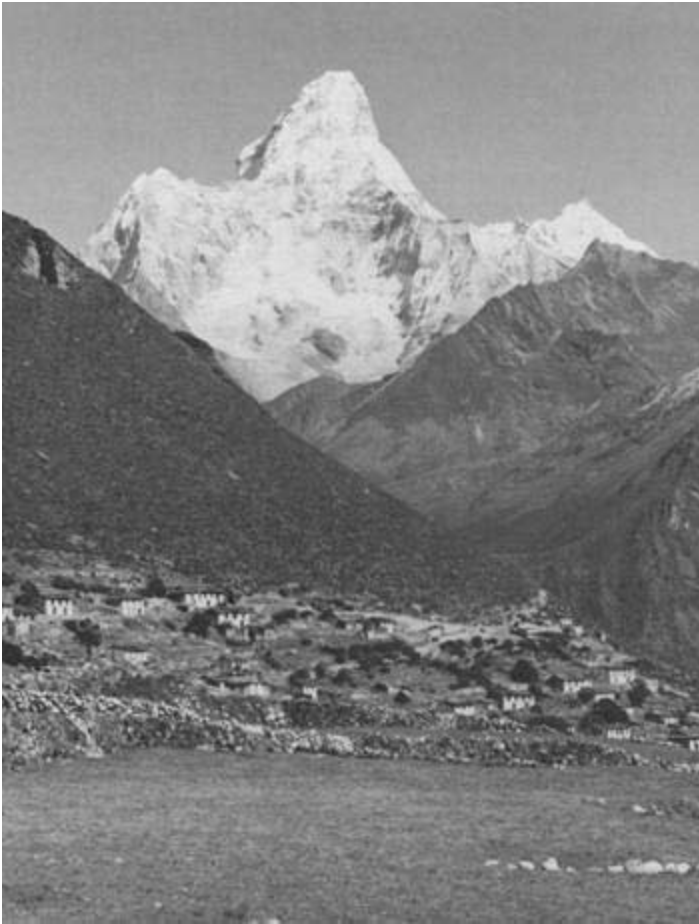
From Tengboche the Imja Khola was crossed once more and brief return visits were paid to Khumjung and Namche Bazaar. The now familiar trail along the Dudh Kosi was rejoined for a day until the side trail to Lukla was reached. A short climb followed which led to the village of Lukla and its airstrip. Our porters and sherpas soon departed for home villages as we settled into a Lukla hotel to await return flights to Kathmandu.

Nepal tends to come at one at a number of different levels and in a variety of ways. The memories of experiences gained, whatever their particular blend, are likely to remain vivid for each participant for a long time to come.

John Brady



The sherpa village of Khumjung. Ama Dablam in background. M Rojik.



1978 Colorado Himalayan Expedition to Manaslu

In the fall of 1975 I was still groping, struggling to come to grips with my thoughts and emotions after our failure on the south face of Makalu the year before. Questions and doubts coursed through my mind, half of me thinking I had done my best, the other half suggesting that perhaps if only I had tried just a little harder. I will never know so, doubt lingers on. I had trouble deciding on the role of large international expeditions in my climbing career. In the spring of 1975 four of us had done an enjoyable alpine climb in Alaska; low key on a shoestring budget with fun and climbing the primary objective. In contrast the commitment, financial requirements and strained personal relations I had experienced on Makalu was a major concern. I vacillated back and forth in mental gymnastics attempting to arrange my climbing priorities. But the process was mainly academic as I had no reason to expect another opportunity to climb an 8000 m peak.

How quickly ideas and emotions change when faced with the improbable. In late 1975 I received a letter. A group from Colorado had a permit for Manaslu in central Nepal for spring 1978. Was I interested? A quick phone call for details and 20 seconds deliberation committed me to a two and a half year wait and a four month expedition.

The next two years flashed by. Enumerable lists, frequent trips to Boulder for climbing and planning. In between agonizing periods raising funds when the life of the expedition hung on a tenuous thread. Most of the time I felt as though I was living a hazy dream, performing some ritual. Only when I arrived in Kathmandu did I begin to believe it was reality.

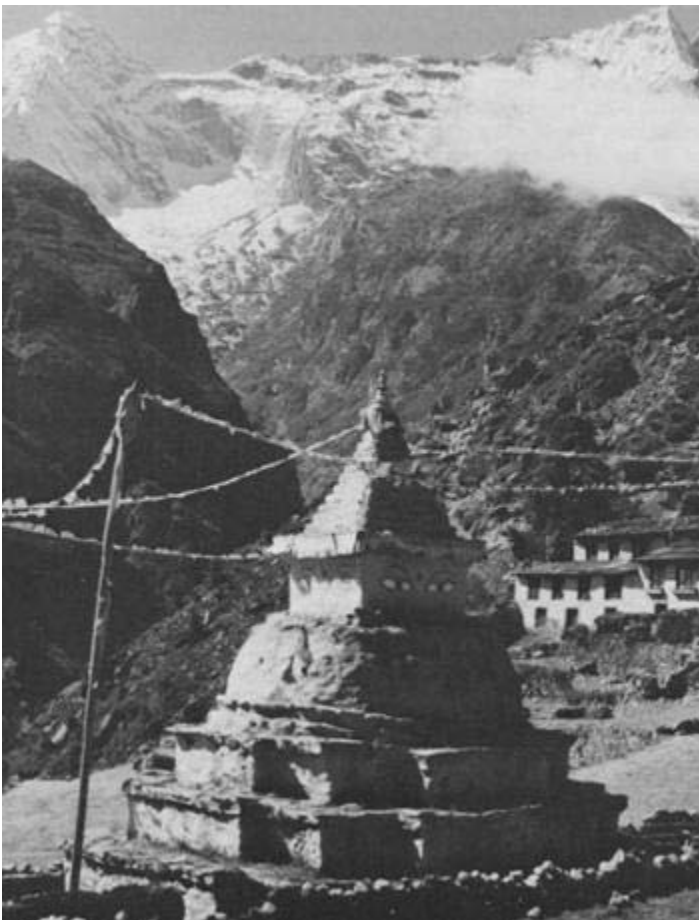
Individual and team philosophies agreed reasonably well with my own. Team members felt strongly that it was possible to enjoy a major trip, provide everyone who so desired an opportunity to attempt the summit and, most importantly, to return home safely still good friends.

Cities rarely excite me but arrival in Kathmandu in February was like a breath of fresh air. Memories flooded back and the assault on the senses began; that exhilarating blend of sights, sounds and smells possible only in a few places of the world. For me Kathmandu is a romantic city, the beginning of another adventure.

The week after our arrival in Nepal was packed with a hundred and one chores, errands, parties and exploration of Kathmandu. After a few days of hotel living to recover from jet lag we were ensconced in the backyard of Mountain Travel, repacking boxes and outfitting our sherpas. Our liaison officer was Captain Ale while Gyalgen Sherpa was our sirdar. We had four high altitude sherpas, Dorje, Nuwu, Pasang and Ang Rita. Ang Tsering, a veteran with over 20 major expeditions to his credit since 1953 was our expedition cook.

On the afternoon of 22 February three trucks laden with 250 porter loads, 100 porters and our sherpas departed from the Mountain Travel courtyard bound for Trisuli and the beginning of the trail to the Manaslu base camp. Rather than leave for

Namche Bazaar with Kwangde Peak. M Rojik



Trisuli immediately, team members chose to attend a party at the US Embassy, planning to catch our sherpas and equipment the following day en route to the mountain.

On the mountainous, winding road between Kathmandu and the small town of Trisuli events went awry. One of our trucks missed a curve and careened off a steep embankment into a paddy field below. The truck turned over at least once, flinging its contents in all directions. Four porters were killed outright, 35 were injured, our equipment and supplies scattered. Upon notification at the US Embassy of the accident, Dee Crouch, an emergency physician, and five expedition members left Kathmandu immediately. About 1 am we arrived at the accident site. Our sherpas, having moved the injured to a nearby hospital were keeping watch. They had done an incredible job of making some order of the chaos. The small hospital in Trisuli was a horrifying scene, maimed and bleeding men lying two or three to a bed while others huddled in blood caked clothes and blankets on the concrete floor. Dee worked through the night, deadening pain and making assessments of which men should be moved as soon as possible to Kathmandu. Expedition members were shocked and numbed by the experience, wondering how we could justify flying half-way round the world to climb and so endanger other men's lives. There were no easy answers. The end result was a stronger bond between members and sherpas.

As soon as possible the accident victims were transported back to Kathmandu and we began to reassemble ourselves. Captain Ale sorted through the myriad details required to satisfy the local authorities. Once all reports were properly filed we were given permission to proceed and on 25 February finally departed Trisuli.

The trail from Trisuli along the Buri Gandaki River to Manaslu is like a stone age highway. In places it perches precariously on small ledges while in other locations it is hewn from the vertical canyon walls that confine the raging river.

Countless men and beasts have filed along this highway maintaining trade between Tibet and Nepal. Once past Trisuli the traveller must rely solely on his feet and a sturdy back. Day to day business is conducted along the thoroughfare, punctuated by hamlets and villages. Every square inch of tillable land is formed into terraces that cling precariously to the steep hill slopes, seemingly maintained more by imagination than physical constraints. Westerners seldom visit the further reaches of the Buri so the local population flocks to observe this unusual event.

Our route took us from Trisuli across the terraced foothills to Arughat Bazaar, thence along the Buri Gandaki through the villages of Jagat, Lho and Sama. As we approached Sama, houses changed from elaborate wooden structures to cold and massive stone walled ones, each with prayer flags fluttering in the wind. Along the way the quality of the river crossings deteriorated from substantial steel cable suspension bridges to lone logs and airy cantilevered structures, often spanning 50 m or more. The latter swayed and groaned, threatening to pitch the unwary into the tumbling waters below.

The eighth day the mail runner arrived. Although he brought welcome mail from home, he also carried devastating news. The

Nepalese government assessed the expedition \$31,000 for the deaths of six porters. We would also incur additional debts for funeral expenses, medical bills, disability payments and partial wages for porters recovering from injuries sustained in the accident. The government requested immediate payment or the climbing permit would be rescinded. A mixture of anger, panic and frustration gripped the expedition but after an evening of floundering, panic turned to resolve and determination. We had come too far, with too much commitment of time, energy and money to give up so easily. A carefully worded letter was dispatched to Kathmandu, stating that we would abide by the regulations and decisions of the Nepalese government but that it would take time to raise the required money.

After the truck accident we were very concerned. Bridges, in particular, were inspected with care and climbing ropes pressed into service to serve as handlines while team members monitored the movement of our 266 porters, one at a time, across the more delicate looking structures.

Along our route camp sites ranged from flat and roomy to small, woodsy and impractical. Marijuana camp was named for the luxurious stand of the weed that literally engulfed our tents. But we cut it back with flailing ice axes. This camp was also noted for the proximity to Tato Pani or hot spring where expedition members washed clothes and soaked themselves, much to the astonishment and amusement of our porters. The nadir was Bamboo camp, a narrow oblong semi-flat spot on a steep hillslope covered with bamboo. An optimist might describe the site as adequate for a party of six. We were 266. Much of the bamboo had been cut and lay, slippery underfoot, while the sharpened stalks waited to impale the unfortunate victim.

From just below the village of Lho on 10 March we were able to see Manaslu for the first time. The shining ice clad slopes, topped by the unclimbed east summit pinnacle, soared into the sky, three miles above our heads. The long summit plumes and wispy looking slopes showed that the upper mountain was still being ravished by ferocious winds. It was still much too early to be climbing at high altitudes.

Beyond Lho we were dismayed to find snow lying on the ground. One reason for selecting Manaslu had been the comparatively low base camp at 3840 m that is normally snow free and an ideal location for rest and relaxation. The local inhabitants informed us that this winter had been the worst in perhaps 30 years. Although the Tibetan people of Sama are Buddhist and do not kill animals for meat, this year they had an abundance of meat, since many yaks had accidents while grazing on the mountain slopes in the paths of thundering avalanches.

We rested for a day in Sama, an hour's walk below base camp. The previous day, a normal three to four hour walk had turned into a marathon as we slogged through knee deep snow. In the afternoon the lamas of the Sama monastery blessed the climbers and sherpas in a fine and moving ceremony. Chanting, beating of deep voiced drums and the raucous blare of long Tibetan horns gave us a grand finale to our trek through time. The following day we would erect a microcosm of our own time, perched on the side of the mountain.

The final leg of our journey to base camp was short. Even with several feet of snow on the ground it was a relief to arrive. Shovels were manned to clear tent sites. The expectation was that a few sunny days and most of the snow would melt. We were so busy that we hardly noticed the failing weather. By 2 pm snow had started to fall and it was time to stop shovelling old snow and get some shelter erected. A mad scramble ensued to locate personal gear and flop into a tent out of the growing storm. In 24 hours we had about 80 cms of snow and more on the way. The previous day we had done little organization. Food boxes were difficult to locate and markings even more difficult to discern. The night's dinner was probably buried under boxes of food required a month from now. While some members tried to locate essential food and equipment, others passed the day writing postcards to our many sponsors. The storm continued for two and a half days, more than doubling our original amount of snow. Frequent excursions were required during the nights to dig out tents before they collapsed.

March 13th dawned glorious, warm and clear, the mountains draped in a thick blanket of fresh snow. High above us the winds had already begun to work, whipping the snow into long trailing summit plumes. The day was spent attempting to form some semblance of order from the previous chaos. The beehive of activity soon resulted in new lists, piles of food and equipment and plans for a trip to locate camp 1 the next day.

On the second day of good weather, six members left for the site of camp 1, 1200 m above base. The trail breaking was very difficult, the snow often up to the knees even with snowshoes. By late afternoon they had located an apparently safe camp site. The days following loads were quickly relayed to camp 1.

On the evening of 16 March we celebrated the birthdays of our two youngest team members. Paul was 25, Sandy 23. To share our happiness with the sherpas, we ate together sherpa style with our hands. Rice, dahl and ham followed by two cakes cooked by Ang Tsering, rakshi and tea. To cap the evening Dee set off fire crackers and rockets, much to the delight of the sherpas. This was what I had been looking forward to, that rare mixture of climbing, adventure and good times.

By the afternoon of 17 March snow had begun to fall. Several were up all night shovelling out tents and trying to keep ahead of snow falling at the rate of 4 cms an hour. By morning we had a new accumulation of over 50 cms and increasing. By late evening of the next day the storm had begun to abate but we were now faced with the arduous task of breaking a new trail to camp 1 the following day. When we finally arrived at our dump we found supplies buried under more than a metre of avalanche debris. Even though this had been the site of all previous camps we looked around for a location that appeared safer and finally chose a nearby knoll. Camp 1 was occupied on 20 March. Radio contact on the first day of spring reported 15 to 20 cms of new snow and still storming so progress from neither base nor 1 was possible.

The latest storm was relatively short lived and the following spell of good weather was used to forge a trail, wanded with bamboo two metres long. Camp 2 was to be located in the Naiké col at 5600 m. We made the most of the good weather, moving over

70 loads to camp 1 and so were well established to begin work. At the Naiké col the roar of the wind high on the mountain was loud and it was still bitterly cold. This suggested that we were still early and so plans called for consolidation at camp 2 and observation of the 1000 m icefall barring our route to camp 3.

Our forward momentum was again checked by another storm that left behind a further 60 cms of snow. A trail was renewed to camp 2 and the next stage began in earnest. The scene from camp 2 was incredibly beautiful. Looking directly through the col into Tibet one faced an indescribable 6000 m unnamed peak with enormous granite faces. South the Buri Gandaki wound into the distance far below. Above towered the fluted face of the north peak and the icefall guarding the upper slopes of Manaslu.

March 29th heralded another day of storm, increasing in intensity during the day and accompanied by driving winds during the evening. The night at camp 1 was hellish with two avalanches running close enough to camp to cause severe wind blast, breaking tent poles and destroying our kitchen. The storm continued all the next day with one avalanche sufficiently close to create darkness with suffocating snow filled air. We lay in our tents with shovels and electronic transceivers beside us. The emotional strain was intense but retreat to base was cut off by two metres of new snow.

South face of Makalu from base camp at 5000 m. David P Jones



All we could do was sit tight.

After three days the storm cleared so we could watch avalanches rumbling down. First priority was to dig ourselves out and dry equipment. Of the two metre wands marking the route to camp 2 only a few protruded a couple of centimetres.

The next five days were blessed with good weather and camp 2 was consolidated. Lest we get too confident we faced another storm on 6 April and the day was spent resting in camp 1. The next day several of us moved up to occupy camp 2 and begin work in the icefall. Good weather allowed continued upward movement so that by 14 April camp 3 at 6500 m was established and occupied. On the 15th the route was pushed out to the site of camp 4 at 7300 m. At this point the constant wind and cold high on the face began to take its toll. An intestinal problem and a general flu-like sickness afflicted several members and sherpas.

Once again the weather showed signs of deterioration and a storm struck on the night of 17 April, continuing unabated throughout the 18th. At camp 3 high winds snapped tent poles like toothpicks while other camps only experienced a snowfall. The next day there was only the incessant wind and broken clouds so a carry was made to camp 4. This was a secure camp site from which to tackle the 500 m headwall providing access to the summit plateau. We became optimistic that a few days would see us on the summit, little knowing that we had reached our highest point. On the return to camp 3 the weather closed in again and it began to snow with a vengeance.

After two days of intense storm we had another metre of snow to wade through. At camp 3 the situation was critical, with dwindling food supplies, only one working stove and four sick people. Dee made the medical decision to evacuate one of the sherpas who might be critically ill, even though the avalanche hazard was extreme. In camp 2 the sherpas were watched descending the fixed ropes, setting off avalanches and sloughs in front of them. It was an unspeakable relief to see all arrive safely at camp 2. The storm returned with renewed fury. In camp 2 we could barely keep up with the shovelling, receiving another metre of snow. Radio contact with camp 3 reported that the site was a disaster, necessitating evacuation of the camp at the earliest possible time, irrespective of the local avalanche hazards. Most of the team left directly for base, leaving only a skeleton crew to occupy camp 2. Any hopes we had of renewing the climb were soon dashed. Another intense storm moved in trapping those of us at the Naikhe col. At times the snow was falling at over 6 cms an hour. After three more days we submitted to the inevitable. Those of us at camp 2 were emotionally and physically devastated having experienced almost nine days of continuous storm with only minor breaks. In the last week we had accumulated almost three metres of new snow. Reluctantly we withdrew to base camp, packing and dragging immense loads so that we would not have to repeat the climb to camp 1 to clean up. Supplies at camps 2, 3 and 4 are buried under masses of snow. Base was different world — no snow, blooming flowers and spring leaves.

The next two days the mountain teased us with beautiful clear sunny weather while we reluctantly packed. All around avalanches rumble down the mountain slopes as if to underline the fact that we

could have been snuffed out at any time. We took our leave after 51 days on the mountain of which only 18 were good climbing days. Estimates vary depending on the location of measurement, but a conservative figure is that we received over 10 m of snow during our attempt.

The return trip to Kathmandu was quite pleasant although the frequent rains hinted at more snow storms on the mountain we had left behind. The possibility of a large debt still hung over the group but we all felt that we had made an honorable effort. We may not have made the summit but we all returned safely with friendships forged stronger through our experiences.

In the end perhaps Sir Francis Younghusband has said it as well as it can be said:

“To those who have struggled with them, the mountains reveal beauties they will not disclose to those who make no effort. And it is because they have so much to give and give it so lavishly to those who will wrestle with them that men love the mountains and go back to them again and again. . . .”

It was an incredible experience and this time there is no doubt. I will be returning to continue my struggle with an 8000 m peak.

David P Jones

Participants: Glenn Porzak (leader), Charlie Clarke (deputy leader), Dee Crouch, Gerry Roach, Paul Parker, Bruce Gordon, Sandy Read, John Gordon, and base camp manager Verne and Marion Read.

Expedition News

DHAULAGIRI I

A Calgary based team of climbers has received permission from His Majesty's Government of Nepal to attempt Dhaulagiri I (26,795 ft) during the pre-monsoon season of 1981. Dhaulagiri I, the world's sixth highest mountain, was the last but one 8000 m peak to be climbed and was dubbed by the Swiss The Mountain of Storms. The Calgary team will be led by Jon Jones. The expedition will be sponsored by the Canadian Himalayan Foundation (a registered charitable organization) and donations to it will be tax deductible. Team members expect to meet half the cost of the expedition by personal contributions. For further information please write to: Canadian Dhaulagiri I Expedition, Box G 802, Calgary, Alberta T3A 2G6.

NANGA PARBAT

A small Anglo-Canadian team has obtained permission from the government of Pakistan to climb Nanga Parbat (8125 m), Kashmir, during the summer of 1980. The team, made up of Adrian Burgess, Alan Burgess, Jon Jones, Chic Scott, and Paul Moores, will attempt the peak from the Rupal valley by the south-west (Kinshoffer) spur. For further information please contact: 1980 Nanga Parbat Expedition, 215-10A Street NW, Calgary, Alberta T2N 1W7.

Jon Jones

Dhaulagiri I taken from Dhaulagiri IV. Ian Rowe

