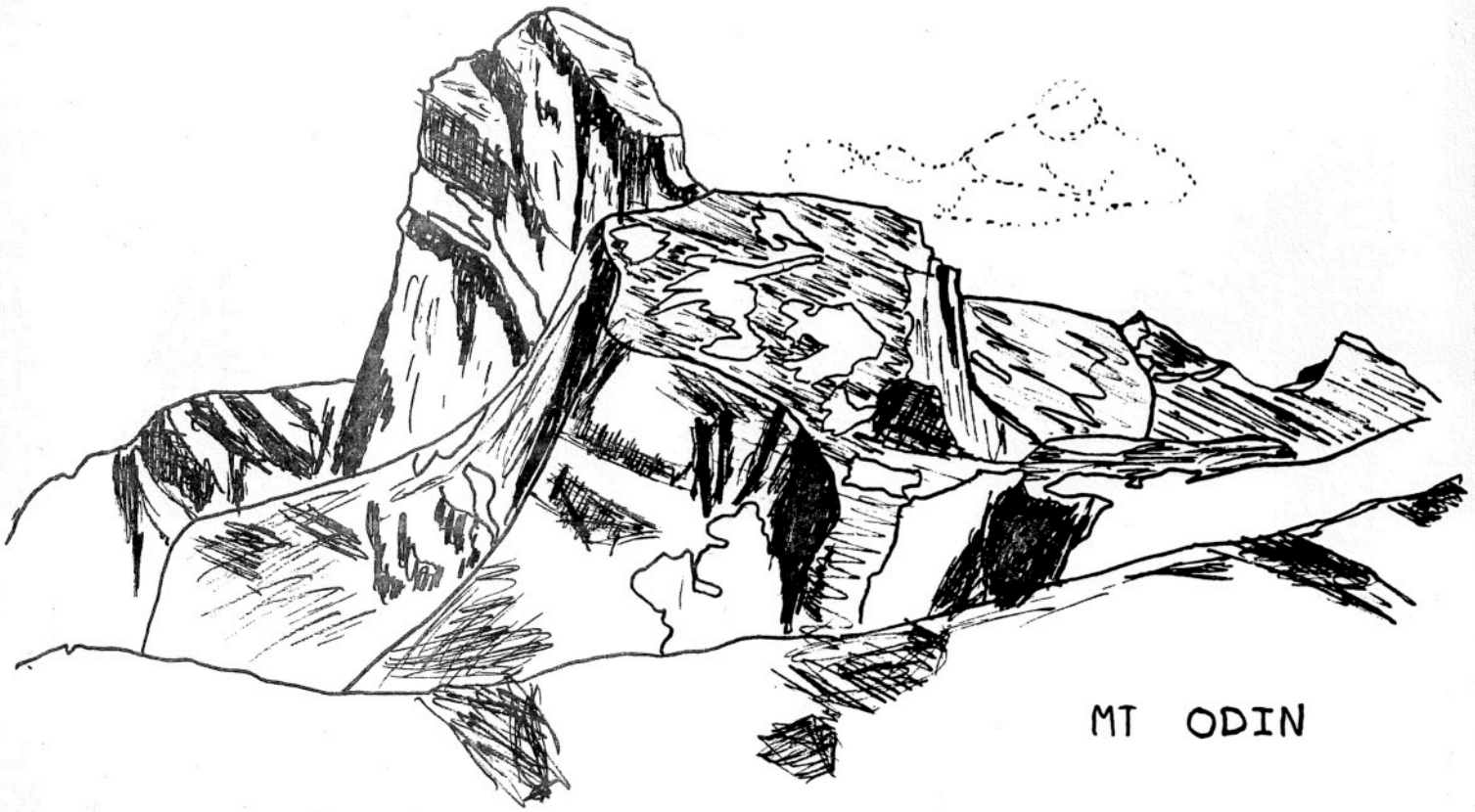
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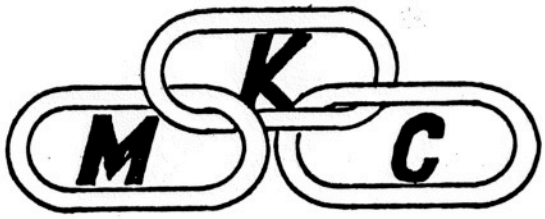
KOOTENAY MOUNTAINEERING CLUB JOURNAL

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VOLUME 16 FALL 1973

EDITED BY BERT PORT



KOOTENAY MOUNTAINEERING CLUB

OFFICERS AND EXECUTIVE 1972-73

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*	Secretary	Tom Charlton
	Treasurer	Ann Wood
	K.K. Editor	Bert Port
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*	Summer Camp	John Carter
	Social	Anilees Anderson
*	Mountain Rescue & Rock School	John Carter Iain Martin
*	Cabins	Howie Ridge
	Conservation	Gordon Stein
*	Publicity	Susan Port

* According to the Constitution, elections for these positions take place in November 1973 at the Annual General Meeting.

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CHAIRMAN'S REPORT

With the passing of yet another active year for the K.M.C., we must take a moment to reflect on the activities of the past year.

Membership continues to increase with perhaps a slight improvement in member participation on Club trips. An effort should be made next year to involve more club members in outings. Although we increased the registration fee for Rock School and had pre-registration, we still found it necessary to turn interested beginners away. A question that many of the executive ask is "are the Rock School participants taking part in Club activicites?"

Our Summer Climbing Camp to the Gold Range was a success in all respects. Many summits were ascended, flowers identified, animals stalked and stories told. A special thanks goes to our cook, Ann Wood. The Hiking Camp had to be postponed due to the forest closure, but several members went elsewhere and enjoyed the fine weather. We will be ready again next year!

During the past year, both the Conservation and Parks Advisory Committee have been busy writing letters and preparing briefs. An excellent brief on Fry Creek and the Purcells was prepared by Gordon Stein and Helen Butling. We certainly hope that some part of the Purcells is set aside as Park area. K.M.C. is continuing to press for re-classification of Kokanee Glacier Park from "B" to "A" and of establishment of green strips down all major creeks draining the Park. The Parks Advisory Committee is at the moment examining reports and briefs prepared by other organizations on the suitability of cabins and trails in Parks.

I suppose that each Club Chairman has favorite projects that he or she would like seen completed and mine is the establishment of a Valhalla Wilderness Park. We have been working on this project for a number of years now and with the added use of Kokanee Glacier Park, we must continue to press the Parks Branch in Victoria.

Our finances continue to prosper and perhaps in the future we can sponsor a Club expedition. As we have not constructed any shelters lately, we still have a healthy fund and any suggestions for our surplus are welcomed.

Our K.M.C. Mountain Rescue Group has been active in practicing throughout the year and will be getting involved in Avalanche Training this Fall and Winter.

During the past year some Club members have embarked on new careers, new life styles, and new families, and we extend our congratulations and good luck to them all.

In summarizing, I would like to thank all the executive members for their time and help, for the board is only as strong as the nails that hold it. A special thanks should be extended our Secretary, Sam Charlton, who is retiring from active Club service because of ill health.

JOHN CARTER

HEATHER LAKE & BOOMERANG MTN.

by KIM KRATKY

Although the scheduled trip to Heather Lake and Boomerang Mountain for July 29th was cancelled, Bob Dean, Janice Isaac, and I decided to make the journey anyway. We met at Bob's house about 7:00 AM and followed the highway north to the Enterprise Creek road. About eight miles up the logging road, we parked the little Volkwagen near a washed-out bridge over the creek and unloaded our gear. At 8:45, we slung our rucksacks onto our backs, crossed Enterprise Creek on some convenient logs, and started walking up the road. Shortly thereafter, we heard the roar of a motor and were amazed to see a Land Rover motoring determinedly up the track on which we were walking. When he pulled even with us, the driver stopped to ask the way to Tanal Lake and seemed somewhat surprised when told he couldn't drive there. Maybe he could have. Slightly nonplussed, we continued afoot along the trail to a point near Boot Lake from which we ascended a bushy hillside that we hoped led to Boomerang Mountain. After several hours of thrashing, we found ourselves in a fine little meadow situated a bit above Heather Lake and just below the northern ridge of Boomerang; a perfect spot for sandwiches, fruit, and cold drinks.

After our repast, we started our final ascent via a snow gully to the west of the mountain, a convenient route on such a hot day. Upon reaching the notch at the top of the gully, we continued to the summit by a fairly easy rock scramble. Unfortunately, our time on top was limited to about thirty seconds as thunder boomed menacingly and ominous black clouds filled the sky as we finished our climb. We made a prudent, rapid descent via the northern ridge of the peak and found it to be an easy way--by far the best course up or down. Upon arrival at Heather Lake, as it hadn't yet begun to rain, two members of

the party succumbed to the temptations of a warm day and went for a rather brief swim.

The remainder of our descent consisted of following the Heather Lake creek through bush and a brief rain shower until we chanced upon the Heather Lake Trail. A glance at the map shows that this trail doesn't go all the way to Heather Lake, but from where we began it did lead us nicely back to the Enterprise Creek Trail and to Bob's trusty VW. We returned to the car shortly after 5:00 PM, having seen no further sign of our Rover friend, yet satisfied with our day's accomplishment.

THE HAYSTACK

by SUE PORT

My weekend off (from children) and no Club trip! A call to Helen Butling and a trip to the Haystack and Kokanee Peak was organized for June 16. A surprisingly efficient grapevine resulted in eight more KMC'ers hearing about the outing.

We hiked from Molly Gibson Lake to the end of the road and then on the old trail a short distance until we reached the first large clearing (old avalanche path). A short upwards bushwack and we reached open slabs and eventually the Molly Gibson Mine. From the mine we traversed rock and snow, gaining little elevation, to cross the south spur of Kokanee Peak. This put us in the broad gully below the Kokanee Haystack col which was reached on hard snow three hours after leaving the cars.

The day had begun beguilingly sunny but by the time we reached the mine we were into snow flurries and bitter wind. The peaks were in cloud as we left the col, but they soon obligingly cleared. The seven who went to the Haystack enjoyed the last steep pitch to the summit on firm crisp snow. The ascent from the col took only forty-five minutes, Helen, who had never been up Kokanee Peak, left us at the Col. Unforturnately, she did not reach her goal this time.

As we reassembled at the col, the unanimous vote was to go straight down the broad gully - Molly Gibson Lake being directly below us. Although there was much falling through thin patches of snow as we descended, this route was very fast and direct and would be ideal earlier in the year with more snow (but full of slide alder etc., in the summer.)

We all felt quite pleased with our efforts, until Leo told us about his uncle, John Gansner, who in 1912 took the boat from Nelson to the landing at the end of the Molly Gibson Road, walked up the road, climbed the Haystack, walked back down and caught the night boat to Nelson.

To the Haystack: Leo Gansner, Knut Langballe, Dave Adams, Sue Port, Herb Sokoloski, Darwin Thompson and Mike Dolan.

Towards Kokanee: Helen Butling, Kim Chute and Jan Kubik.

KOKANEE AT EASTER

by STAN BAKER

We had aranged to meet our trip leader, John Carter, at the foot of Kokanee road on Good Friday morning at 9:00 o'clock. The day dawned clear and beautiful with just a patch or two of white cloud and the temperature low enough to promise a good trip into the cabin. John Carter, Peter and Ann McIver, Howie Ridge, Pat Gibson, Gordon Stein, Bill Michaux with Brian and Denise, Jim Moore and myself made up the party. John and Ann returned to Nelson to fly in with our grub and some heavy gear for the Parks Branch. The rest of us set out about 9:30 in two Beetles and a Chevy van. The road had been ploughed as far as Gibson Lake and there was a bit of snow on it as we proceeded up to the slide area. We had to park the vehicles where a larger slide had come down about two miles below Gibson Lake. The Langballe van was already there as Knute and Mike Dolan had taken off earlier and were ahead of us somewhere on the trail. So, after much jockeying we finally got all the vehicles turned and headed in the right direction and the "Porky-Proofing" began.

By 10:30 we were all on skiis or snow shoes and headed up the road in cool crisp air and bright sunshine. Howie and Gordon were on snow shoes as their plans were to camp on the glacier via the Keyhole and join us at the cabin the following day. Another young couple were ahead of us on the trail and their plans were to camp out somewhere around Kokanee Lake.

The road to Gibson Lake was covered in good time as it was in good winter condition with a few inches of snow on a hard base. We had a rest stop there and an application of glacier cream, as the sun was beginning to show its power, then on with the packs again and up the road to Gibson mine. The snow was beginning to soften, which made the going a little tougher, the hills a little steeper, and the skiis a little heavier, so

you begin wondering what you have in your pack that you don't need and make a few mental notes for next time.

Lunch time found us scattered along the trail between Gibson mine and Kokanee Lake. I took my break at a particularly beautiful spot past the mine where the view was terrific and it made the stopping worthwile. Time to take a picture or two then on again. Up the trail-sure getting warmer-snow stickier, pack heavier (I wonder what sensible people are doing this afternoon - drinking a cool beer? relaxing in a lawn chair?) Pause and look around, take a swig from the water bottle. Beautiful mountains, snow, green of the trees,-all in the most living color, and silence. No roaring, whining, banging of civilized sounds, just the whisper of the breeze and the peeping call of the little black capped junkos. Maybe we are the sensible ones?

And so down across the Lake and over the pass, exchange a word or two with the snow-campers looking for a spot to settle in. Time is getting on and our leader expected us soon after lunch, but then we did have that extra two miles tacked on by the slide. Kicking steps along the steep side of Smugglers ridge and will soon be to the top above the cabin. Looks like somebody took a dandy spill, slid right to the bottom and had to kick steps all the way back up. Better kick each step a little harder and save that extra climb. Top of the ridge at last and off skins for the run down. But the quick change in temperature from the bottom to the top of the ridge had frozen the soft snow to the ski bottoms like concrete. After much scraping, got most of the snow off, but the skiis would not run, so it was a downhill walk to the cabin.

Nice to see the old cabin again. Take off pack and skiis and indulge in a mug of hot tea that Ann had prepared and just relax in the warm sun for a while. Ann and John had a good flight in and had all the supplies in the cabin, water hole and conveniences dug out and had been very busy. Soon there were more arrivals and all were present and accounted for with two extras who had arrived on foot rather ill equipped. One of them stayed overnight then departed. The other was still there when we left.

The rest of the day was spent on the woodpile, or jawing and sipping tea until Ann and Pat announced "supper is served" and a goodly meal it was complete with candlelight and wine. After a leisurely repast and each taking a turn at the dishpan, we had a pleasant evening discussing this and that until it was time to roll out the foamies on the sleeping deck and sack out.

Saturday morning I peeped out the window to see a clear blue sky and a rosy glow on the peaks. My watch said five-thirty, so I wriggled out for a morning stroll. As I returned to the cabin, I could hear the thump-thump of the axe, and knew that the day was under way. Breakfast and lunch making was soon accomplished thanks to Ann and Pat and the dishes cleared away. Pat volunteered to watch the Easter ham and keep the cook stove stoked, while the remainder of us put on our climbing skins and followed on up the trail which John and Jim were fast making up to the glacier. Up through the timber past the Pyrammids, past the Battleship and up over the ridge and across a large expanse of powder-literally acres of powder. The sun was quite warm and most of us had some burn. The trail led on up to the ridge between the Kneecap and the highest pyrammid and along this ridge, to where our leader sat chewing his sandwich and viewing two small figures on snow shoes capering about on the glacier below. None other than Howie and Gordon enjoying the fresh air and sunshine after their little camping session on Esmeralda pass. Lunch ended quickly as a cool breeze was coming up so off skins for the run down.

Certainly a much different feeling than the packed slopes that I have been used to, which probably explains a lot of those queer marks that marred the snow fields. I didn't really get a fair batting average on my turns until I was down somewhere below the Battleship. The others being much better had decided to take the route down between the Battleship and the Pyrammids and were relaxing, enjoying hot tea when I finally arrived.

Jim Moore decided he would like to have another run and headed up once more to the ridge above the cabin where he made a most beautiful run. John and Peter soon decided that they too would make this run, and were soon on the top of the ridge where John made a most spectacular run and Peter made an excellent run although not down the same route that John took.

A while later over the hill popped the smiling young face of Felix Belczk, followed by his two little sisters and their Mother and Father, Renata and Felix Sr.,, who had come to join us and spend a day or two skiing on the glacier. Soon the two snow shoeing mountain campers hove into view, and joined the party.

The rest of the day was put in on the wood pile, which always disappears at an alarming rate, but with all hands and the help of a chain saw, the wood problem was solved and so to our Easter dinner. Another candlelight and wine repast, till Felix Sr., fixed the gas lamp. The clouds started rolling in during the evening and soon the wind sprang up and icy pellets were bouncing of the shake roof. It makes for a cozy feeling in snug if somewhat crowded cabin. The evening wore on with many tales of mountains climbed while one by one we wearily sought our sacks and relaxed to the sound of the rising wind.

Sunday dawned clear but grey. Breakfast and lunch making were leisurely, as most of us would be going out and those that were staying ware waiting to see if the little windows of blue sky really held any promise.

Our particular group set out around 10:00 o'clock or so and used skins to the top of the ridge. The snow was crusty there, just barely breakable for some of us. The lighter ones fared better. There is nothing like skiing breakable crust with a pack on. As we progressed toward the lake the going became better. The ridge at the east end of the Lake was a side stepping session, but after that we were away with the snow becoming heavier and sticker. Lots of spills now and getting back up is rather tiring. We had lunch at the mine site and were down to the vehicles by 2:00 p.m. having to hike the last bit as the road above the slide was quite bare.

And so home for a hot bath and a cool beer with a few reflections on ski-touring in general. In retrospect, -Wonderful and a special thanks to Ann and Pat for their culinary efforts.

SAPPHIRE LAKES

by KEN RICHARDSON

On 16 August, in perfect hiking weather, Sue Port headed a group of twelve on the Lemon Creek route to the Sapphire Lakes. The party included Bob Dean, Kim Kratky, Janice Isaac, Libby Martin , Annalies Anderson, Ken Richardson, Morag Booth (a recent arrival from Scotland) and the four McKays - Norm, Martha, Brian and Maureen. Dave Adams and family were also along for part of the trip but succumbed to child-weariness.

From the end of the logging road (which was in good condition) the hike to the lakes took 3 1/2 hours at a relaxed pace. The trail, excellent on the whole, especially through the large portion of forested area on this route, was in need of more traffic to keep the brush back in some spots and to make the route more obvious in the upper portion of the Lemon Creek basin, where it was missed completely for the last half mile on the way up. The gully crossing, where the hillside is eroding, presented some difficulty to those who prefer snow for steep downhill skiing, but footsteps were carved out with the aid of a mattock conveniently left beside the trail.

After lunch by the lakes with a party from Nelson, led by Helen Butling, the more energetic souls climed Mount Giegerich while four of the group (who shall remain anonymous) relaxed near the lakes. From the top of the mountain Bob, Kim and Janice took a "short-cut" to join the trail further down in the basin - and were last seen shouting and waving from a high bluff. For the rest, the return journey was about 2 3/4 hours. Sue, Morag, and Ken emerged from the jungle as walking wounded - having stepped into a wasp ambush. Otherwise a good day!

SIWASH MTN.

by HOWIE RIDGE

Although the weather had been extremely unsettled for the previous several days, on October 14, 1973, a Sunday, Eileen McKerral, Gordon Stein, and Andy "Stein" piled into my VW "Thor" and we drove to the Nelson City Power Dam on the Kootenay River. Here a mining access road leads seven miles up Rover and then Snowater Creeks to an old diamond drill site. The road is in excellent repair except for the final half mile which is steep and heavily rutted from surface run-off. Long or wide vehicles would have some difficulty in a couple of places. The end of this road is very near the base of Connor Mountain.

From this old mine site a very good trail leads into the basin below the most easterly of Siwash's five peaks. In Summer this would take about one hour, but due to the every deepening snow, our time was doubled. While in the basin we found a rather substantial cabin which I had not seen, although I'd been in the basin on two previous occasions. Here the snow was about one foot in depth.

Our approach to the main peak, lay up the eastern ridge of the most easterly peak about 2/3 of the way to its summit, and then across its south face where the snow was less deep, to the main summit ridge. By this time, the snow was at least fourteen inches deep and there were many drifts over our knees.

Just below the summit, and while peering westward into a swirling veil of rising mist and late afternoon glare, Gordon and I (Eileen had remained behind on the first ridge) were sure we heard bells. Oh no! Apparently these illusions will fool a tired man at elevations above his normal habitat. At last we had gone bonkers! But wait, it was louder and closer this time. I said it had to be a grizzly bear with a bell on, but Gordon (alias Brewster McLoud) claimed it most certainly must be the good tooth fairy! Then, as the mist danced and swayed across the ridge we could finally see three goats, one with a bell, all of which had obviously been domesticated at one time. Why they had chosen the 7,700 foot main summit of Siwash and the knee deep snow for their home escaped us.

We spent several minutes on the summit beside the aluminum tripod cairn enjoying the gradually improving weather and the view towards Passmore in the Slocan Vally before moving off in a northwesterly direction to the second highest peak a few hundred yeards off. Here a large flatish cairn was found.

At exactly four in the afternoon we began the return journey over the same route. We met Eileen on the ridge, as the sun was setting and followed our footsteps back to the car, reaching it as darkness quietly descended upon the large cedars and hemlocks of the creek valley. We had made very good time considering that breaking trail through the snow was very exhausting.

Siwash presents no technical difficulties whatever during the Summer months. If one was to climb it with much more snow than we encountered, however, be on the alert for avalanches. Generally this is an easy and pleasing trip with a pleasant view of several small lakes.

MT. DOLLY VARDEN

by Rob Mills

On July 14th, I met Gordon Stein in New Denver. We then drove up from Three Forks for five miles, until we were halted by a slide. After walking a half mile further on the road, the trail to Marten Creek was easily found. It was in excellent condition, having recently been brushed out and marked (much better than Mulvey trail). An easy six hours took us to a high camp at 7,300' surrounded by Dolly Varden, Marten Mountain and Inverness.

Sunday, Gordon and I climbed Marten Mountain which was an enjoyable rock scramble up and down. We had planned to do lots of climbing, but the hot weather encouraged us to lay back and take things easy.

This area is highly recommended for climbing, expecially with the good access trail and the availability of at least six fine peaks. It may also provide a feasible route for an attempt at Mt. Cooper although it would require at least three days.

FROG PEAK

by PAT RIDGE

It was an undecided day weatherwise, Saturday, July 7th, as we met on the road near the Passmore substation - Mrs. McKay, Brian and Maureen, Phillip Laird from N.D.U., Wally Heinrichs, Olwyn Ringheim and a friend, Kim Kratke, Janice Issac, Bob Dean, Annaliese Anderson and two companions, and leader Pat Ridge. One hour ahead of us were Gordon Stein and Howie Ridge, who, with their usual gusto and enthusiasm, had set out to hike from the south along the long ridge extending to the south of Frog Peak. The plan was to meet us at the top. Frog Peak, only recently officially named, was locally known as Sugar Loaf Mountain, and is located west of Passmore, two miles southeast of Mt. Arie. It is accessible by a logging road up Arie Creek.

After several miles, we left the cars at Hoganson Creek and proceeded up the road to the next switchback, the road ends about 3/4 mi. beyond at a wash-out. From the switchback, it was straight up! to the top of Frog Peak-the young and gallant at a rate much faster than the nimble females. We went up through slash-burning, then trees, and more trees,

trying to stay between the gullies on each side. On the way, the following statement was heard more than once..."I thought this was supposed to be an easy trip!" It was "don't slip on this moss," "take it easy over that slab," "grab onto this tree,".....and keep going! Eventually we came out of the trees onto rocks and boulders, just under the south knob of the peak; the top was in sight! We scrambled up one by one across the rocks to the middle of the ridge that led to the summit. Once there, it was lunchtime, so we all sat on the north side of the mountain out of the wind.

We had a good view of Mt. Arie, the Arie Creek valley, an unnamed mountain to the west of Norms Creek, the Slocan Valley, and the Little Slocan Lakes. The sky was grey though and misty clouds were speeding from the west headed for the Slocan. It began to snow-very lightly-and someone commented that it was falling uphill! We then headed out across the south ridge for a short distance, to the next prominence, and looked back at the dark northwest side of Frog Peak which is quite impressive, as it is a long vertical wall. Despite protests from the leader, some began to play a game of boulder rolling off the edge of the ridge down the gullies to the valley below.

Even with the aid of binoculars, Howie and Gordon were nowhere to be seen along the ridge. After a lengthy survey, we walked a little further along the ridge and then started down...through brush and over boulders, to a small fresh, cool, clear lake, for a breather. What a beautiful little

spot! We found out much later that the missing two members of our party had seen two goats in the rocky area just above the lake. From there we followed the creek out of the lake, down the hill, crossed it twice, and ended up in the gully on the south side of Frog Peak. Our relaxing, enjoyable pace eventually got us back to the road, near the washout. We passed Gordons parked truck, and left a note of greeting. As we drove away in the cars, Gordon and Howie were reaching the summit of Frog Peak, having completed a gruelling traverse, and watched us, very small in the distance, pull away. At Slocan Park, we stopped for ice cream and amidst much excited conversation about the next hike which was to be the following day, we each went on our way, to meet again on another hillside.

MT. BEGBIE

by PETER McIVER

Labour Day weekend arrived, and so, with no apparent end to our perfect summer, but the forests re-opened, Bert Port and I travelled to the Shelter Bay Ferry for a car camp on Friday evening. Saturday morning saw a detour to Revelstoke to inflate a low tire and call in at our friendly cop shop to visit the climbing mounties featured in the Fall edition of "Beautiful B.C.". The gentleman who greeted us with hand on pistol butt mellowed considerably when he found what our mission was. Unfortunately his acclivitic comrades were sleeping as a result of the previous night's activities, so we drove the 2 miles back to Begbie Creek and parked.

Bert had a verbal description of the route, which was initially flagged, but after log walking, thick brush, seeding fireweed, huckleberries etc. (get the picture?) we decided we were off the route. The direction was obvious however, and we plodded on with our heavy packs up the steep ridge, not enjoying the heat especially, eventually meeting a flagged game trail on the ridge. A very steep gully of rhododendron near the final ridge wall and the benches were reached: green grass and water! Yes, dear friends, we had not filled our water bottles, and by then were parched skeletons of our former selves. After rehydration we climbed from a beautiful flowery meadow to an enchanting grassy bench with a creek beside it, and views of the surrounding mountains on all sides. Camp was pitched, our gourmet food eaten then the quiet darkness enjoyed, watching shooting stars and satellites for some time before sleeping.

The next day began with a leisurely breakfast before we ascended the rock benches above camp at 9:00 AM, then over the still hard glacier on the NW side of Begbie, visible from Revelstoke. The chosen route crossed a myriad of drainage channels and small crevasses

up to a ledge girdling Begbie, and meeting the N ridge above the steep and loose lower section. Except in a couple of spots the ledge is 6-10 feet wide, flat and grassy, quite a surprise after seeing it from below. Above it are steep broken cliffs of excellent rock with cracks, chimneys, buttresses - delightful looking climbing which we didn't have time to sample. The main ridge was pleasant scrambling over some more excellent rock to the summit which was reached at 11:00. Summit views were enjoyed andthe records read - the mountain is quite popular and was ascended by 3 or 4 parties in 1973 - before descending the ridge then the NE face to the NE glacier and deciding to have a look at Tilley, 2 miles to the E. After retrieving a forgotten camera, eating lunch, and crossing the S slopes of the ridge to Tilley it was 3:30, so we settled for climbing the flat topped ridge. From this angle Tilley is most attractive, appearing very steep and possessing a hanging glacier. The guide book lists it as easy, butthe mountain is so attractive it should be well worthwhile. A number of excellent campsites around little tarns exist on the flat areas between Begbie and Tilley, with the icefall on Begbie's NE face making interesting noises in the background.

The Tilley-Begbie valley is slightly higher than the campsite, and benches around the ridge permitted a traverse back under dark clouds; halfway through supper, the rain came - we retired to the tent and were treated to a mountain downpour during the night. Next morning the weather returned to the Summer of '73 and we descended by the correct route, finding the flags and blazes quite easy to follow in the descent, which was over much better terrain than the ascent, and took us to the highway 1/2 mile S of Begbie Creek. A most worthwhile trip; Tilley would make a good objective for a future visit.

Note

The difference in our up and down routes was so great, the correct one is worth describing in detail.

Begbie Creek, a major creek runs under the road approximately 2 miles S of Revelstoke. Proceed S, towards the ferry for 1/2 mile from the creek: here an old road terminates at the ditch (dry during this

trip). Walk up this creek on the right bank for about 200 yds., after which an old road is joined, overgrown but with a trail slashed through. Follow the road for 1 and 1/4 miles until just before it forks, then take a sharp left up the steep bank and continue on through open, but very steep forest, to the ridge. The route is blazed but not distinctly. On the ridge a game trail is followed - flagged when we travelled it - through quite thick huckleberries and rhododendrons towards cliffs. Below the right hand face of the rock cliffs a steep meadow rises almost up to the cliffs - follow this as far as possible before branching right and climbing two hundred yards through rhododendrons into the alpine areas.

THE DEVIL MADE US DO IT

by HOWIE RIDGE

The lure of unclimbed granite was too much for Gordon Stein, Peter Wood and myself, so we passed up a great Club trip to Mt. Begbie for a journey to the remote corner of the Valhallas known as the Devil's Range.

We departed Nelson at noon on Friday of the Labor Day weekend, but due to a persistent rainfall and cool temperatures spent the first afternoon and evening in Gordon's camper truck eating "seeds", telling off-colour stories, and drinking "Fernies". As nightfall came the sky gradually cleared and a few stars popped forth giving promise that the following day would be great hiking weather.

Saturday morning being clear, we left the comforts of the camper and shouldered our 45, 47 and 48 pound packs and headed into the brush. I broke trail with my rainpants and this provided Gordon and Pete with limited dryness. Drinnon Pass took two hours to reach and we stopped to gaze at the impressive sight of Devil's Dome and Lucifer Peak capped with several inches of fresh snow on a backdrop of blue sky dotted with puffy clouds. We thought a campsite near the

bottom of Devil's Dome at a beautiful lake would be within reason that day.

Dropping through Drinnon Pass, we crossed Gwillim Creek near its origin in Gwillim Lakes and worked our way across broken rocks, up a steep wall and into the fabulously beautiful meadow surrounding the lake which was to be our home for the next three days.

Soon we had camp established and someone suggested that Devil's Dome should be attempted. We arrived at its base at 3 p.m. About 500 vertical feet of solid granite lay above us. The route had ice and new snow on it.

As I had been on the first ascent of the Dome two years earlier, I led off. The route starts at the center of the south face. The first 10 feet were fairly thin over a wet layback move, then up a steep, slippery crack (pins not necessary). After 150 feet, we moved out onto the south-east corner of the Dome. Here the lichen was very wet with snow and ice covering many of the holds. The second lead went up the corner on several wide cracks, where angles and chocks were necessary, then moved right onto a wide ledge. The third pitch went free up the two sloping ledges then moved back onto the main ridge, up a chute where two more chocks were used. The sun was behind the Dome by then and it was getting quite cold. Two chocks and two pins brought me over some thin climbing to a snow covered ledge at the end of the fourth lead. Peter and Gordon came up and then

provided a standing belay off two pins on the vertical wall as I led pitch 5, by far the most difficult on the route. It was extremely wet and very cold on the hands. Two thin blades, two small angles, and two Leepers were used to reach the point where Bob Dean and I rappelled off two years be fore. Our sling and pin we had left there were still intact although very much deteriorated. Peter and Gordon were so cold by now that climbing and cleaning the route was difficult.

While Gordon and I set up a new rappel, Peter scrambled to the summit and we joined him there a few minutes before seven o'clock, in six inches of fresh snow. At seven, with the sun setting, and all photos taken, we departed. Down climbing and three rappels brought us to the bottom of the Dome in total darkness at 8 p.m., a total of five hours on the rock. Reaching camp took forty-five minutes without lights as we felt our way down the broken rock and moss.

On Sunday we decided on a first ascent of Chariot Peak to the immediate east of the Dome. A long session of side-hill traversing brought us into the wide basin at the bottom of the peak. It proved to be a very easy traverse from East to West and we complained of carrying all our hardware that far. Cairns were constructed on all three high points. From the summit, now sporting a seven foot high creation of man, we had a great view of Evans Lake and an orange float plane lifting gently into the afternoon air.

Basically the same route was used to return to camp. A slight detour was taken on the last section to avoid the side hill gouging.

Labour Day Monday dawned in clear spectacular fashion. It was decided that the three unclimbed high points between Lucifer Peak and Devil's Dome should be attempted.

We walked up the easy meadows and broken rock on a truly beautiful morning. The most westerly unclimbed peak was chosen first. It appeared as though a scree chute would lead up to the ridge where the climbing would be easy. We were looking for a rock climb so chose instead a crack and sloping chimney system leading up the face. This gave two good rope lengths. I led, Peter came second and Gordon again did a great job of cleaning! In places the route was quite thin, but the rock had a warm and friendly feeling on this cloudless day. Several thin blades, angles, and chocks were used. The summit reached, a cairn was built and the mountain named Trident Peak. Lunch was eaten here before moving eastward along the easy ridge to scramble up first "Rosemary's Baby" as Brewster called it, and then Mount Mephistopheles. Here a truly large cairn was constructed as we watched a fishing boat ply the dark green waters of Evans Lake. An easy route led down at the base of the peak and we returned to camp by 3 p.m. Gear was packed and by 4 p.m. we were on the way back to the truck, more "seeds", more "Fernies", and a late evening arrival

in Nelson.

It was a fantastic weekend and the three of us really enjoyed the companionship and the climbing. We had done a second ascent and four firsts. The mountains were Devil's Dome-9,100 feet, Chariot Peak-8,900 feet, Trident Peak-8,900 feet, Rosemary's Baby-8,900 feet, and Mount Mephistopheles-8,900 feet.

DISCOVERING THE VALHALLAS

by ROBERT COUPE

A trip to the Valhalla Range had been suggested by Peter and Nona Rowat early in 1973 to Rosemary and me. By the time we were ready to go the group had increased to eight, with Peter and Wendy Van Den Porten, Peter Koedt and Greg Shannon. Ian Coupe, and Ruby and Lena Rowat were there in addition. However, they filled the role of obligatory camp followers, nominated to that high office by their parents, being 2 years, 3 years, and 6 months old respectively. Our last member was Christiane Piquod, whom we were able to con into working as baby-sitter.

Rosemary,with the children and supplies, flew in by helicopter on June 23rd. They made up a capacity load for the machine. The rest (except for Nona and me who arrived later) hiked up Mulvey Creek on the 24th.

June 25th saw a mass ascent of Asgard by the standard route, up the east facing slope. It was enlivened by Heidi, the Portens' dog, who ran up ahead and started surface avalanches down on the hapless climbers below. The weather was excellent and remained so throughout our stay, with the exception of one day. On the 26th Peters, K and R, with Greg started some serious climbing, putting up two pitches of a new route on the south face of Asgard. This climb was completed on June 27th. Meanwhile, Rosemary, Peter and Wendy V.D.P. climbed Midgard by its north ridge, gaining the ridge from the bowl between it and Asgard. June 28th was a day of comparative inactivity. Peter and W. v.d.P. climbed the Wolf's Ears, and Peter R. and Christiane climbed Nothing by its standard route. Nona and I had been unable to leave Vancouver with the rest of the group. It was on this day that we hiked in, getting to the cabin at a respectable 5:00 pm. Our arrival was

celebrated by another mass ascent, this time of Gladsheim, the following day. The party comprised all eight of us and Heidi, who found free climbing of the Gladsheim tower too much for her. Aid climbing consisted of bodily hauling by Peter K and me. The four ropes reached the summit at different times, the last about 5:00 p.m. In descent we traversed the snow slopes north of Gladsheim to cross the ridge via the gap at the foot of the Trirene wall. This route depends on the presence of deep snow. The terrain may make it impractical later in the season.

Gimli was the main centre of attention on June 30th. Peter K, Peter R, Greg and Nona started up an unclimbed dihedral on the south face. Rosemary and I looked for the standard route, going over the Jones-Gimli col, traversing beneath the south face of Gimli, and finally to a snowfield at the base of the east gully. At this point a heavy overcast fulfilled its promise of snow, and both parties retreated. Peter and Wendy v.d.P. did likewise from their projected climb on the Batwing. Weather on July 1st was moreof the same. Peters R & K hiked down the headwall and collected edible wild vegetables which were later much appreciated. The rest of us tried our hand at taking arty photographs of mist-shrouded mountains, covered with six inches of new snow, with conspicuous lack of success asit turned out.

July 2nd was clear again. Peter and W. v.d.P., Greg and Christiane hiked out as they had planned. Peter K disappeared over the Nothing col on a reconnaissance. Peter R, the real hero of the day, baby-sat Ruby, Iain, and Lena. Rosemary, Nona and I repeated our efforts on Gimli. We reached our previous point, crossed the snow field below the east gully, and gained the east ridge by an easy Grade 3 pitch. From there we followed the ridge to the summit. The descent was by the same route, after much indecision as to whether we should follow a north facing gully direct down to Mulvey Lake. As in the case of Gladsheim, the route may be of different grade later in the season. At least part of the snowfield below the east gully overlay smooth slabs.

The last significant climb, again in beautiful weather, was on July 3rd. Peters R & K and I decided to explore the West Molar, the last tooth in the range as yet unextracted. We were joined by two

Americans who had hiked in on Saturday for a long weekend, and had climbed Gladsheim by the standard route on July 2nd. To add to the confusion of names, they provided a fourth Peter. His companion was Tom. Our approach was the slopes leading to the top of the red gully. From there we traversed slightly downwards over steep slopes to reach a narrow, steep, snow gully running below Gladsheim's east face. We climbed the lower half to a broad, long gully intersecting it at right angles. By ascending the broader gully for a short distance, we were able to get onto ledges on its far side and so circumvent a large chockstone in the continuation of the first gully. Having left at 10:00 a.m., we got to the top of the gully at noon, this summit forming a col between Gladsheim and the West Molar. At this point a brisk debate ensued as to the most feasible route. The face of the West Molar above the col, with overhangs, ledges that petered out, and cracks that went nowhere was not inviting. We finally found a route by traversing 400 feet beyond the col beneath the northwest face of the Molar. There are a series of gullies and chimneys there which go all the way up to the ridge. We climbed the route in 5 pitches; the first of about 60 feet was little more than scrambling. The second (Grade 4) was 20 feet and involved thrashing up 10 feet of chimney. The third pitch, also Grade 4, of about 70 feet, consisted of two steep, damp gullies, both with a chockstone, and intervening ledges. The fourth, on which a nut was used for protection, consisted of a move up onto a block, then a 60 foot traverse to the left up easy ledges. The fifth pitch was a scrambly traverse back to the right. This brought us just below the ridge, which afforded more easy scrambling to the summit. We reached it at 6:00 p.m. The descent was by two 120 foot rappels from the ridge directly down to the col.

The weather for July 4th was mixed. Peter and Nona Rowat hiked over the Nothing col and scrambled up Dag, encountering a lightning storm on the way. The rest of us stayed in camp. Peter K and the Rowats packed out with Ruby and Lena on July 5th. Rosemary and Iain and I flew out by helicopter on July 6th, this being necessitated by a strained ankle I got on the descent in darkness

from the West Molar.

So ended, on a relaxed note, a trip which all of us had found exhilarating, and a revelation of the climbing available in the Kootenays. We much appreciated the efforts which had gone into making the Valhalla cabin. It contributed in no small measure to our enjoyment of the area.

ASGAARD AND GIMLI

by PETER ROWAT

"Valhalla, n. Scand. Myth. the hall of immortality into which the souls of heroes slain in battle are received."

I still feel a sense of awe when I think of our visit to the Valhalla range. The overall beauty of the place is what most affects me, with its constituent parts--the beautiful valley approach passing, in its upper parts, below huge unclimbed slabs and walls; the wild headwall; the serene sanctuary of the lakes and hut with the symmetric cone of Asgard rising distantly behind; and finally, the great rock features of Gimli, Gladsheim, and Dag pressing in on one from north and south. We came, we saw, we conquered! We picked two delicious plums out of your garden, and may many others enjoy them.

Our first climb was an ascent of Mt. Asgard in billowing mist. The summit view wasn't much, but coming back along the ridge crest, we scrambled off and peered down the south face through the occasional ragged hole in the mist and were excited to discover that the highest and lowest parts of the south face looked eminently climbable. Over the next two days we climbed it, in perfect weather--

our first plum. Next day, we started climbing about mid-day, did four pitches and rappelled off leaving a fixed line. The second day we had a slightly earlier start--11:00 a.m. at the foot of the face--and attained the summit about eight hours and much sunburn later. I cannot convey how much we enjoyed this climb. In pitch (5) (see description) I swung like Tarzan onto the big jug from the left and mantleshelved; the others complained, needed help from the rope, and claimed there was an easier way on the right. The final pitch we made into a boulder problem by going straight up a smooth slab to the summit ridge instead of making long traverses right or left over easier ground.

The climb deserves to become a classic, even though I say so myself. The rock is solid and very rough, covered with little knobs and holes, provides good nut protection, and can be climbed almost anywhere at a high enough standard. Our particular line may not be the very best, but certainly the face is not an "impossible wall" (quote from the hut log book). Our climb took weaknesses so stays in the 5.6-5.7 range. Further, the face is in a magnificent position and will quickly be in good condition for climbing after bad weather since it is steep and, with its southern orientation and slightly bowl-shaped nature, collects the maximum amount of sun.

The second plum we picked was the south ridge of Mt. Gimli. The whole south side of Gimli has excellent rock and

lots of cracks but the ridge sticks out as by far the most aesthetic line to take. Besides, no connoisseur of cracks could resist the one at the foot of the ridge! Peter, Koedt, Greg Shannon, Nona Rowat and I walked up there and started the first pitch. Unfortunately, a snowstorm blew up rather suddenly so Nona and Greg ran back to the hut while we two Peters (now left together on the second pitch after a little confusion) cleaned up and rappelled off and joined the others in the snug comfort of the Valhalla hut. We were unable to finish the climb before departing from this delightful area but in September, Peter Koedt and James Hamlin returned for three days.

They finished the ridge on Gimli: did four pitches up the curving cracks on the left-hand side of Asgard's south face and rappelled off for lack of time; and did a two-pitch slab climb on the big sheet of slabs at the head (west end) of the Mulvey Lake that one passes on the way to Mt. Asgard.

Many thanks to the Kootenay Mountaineering Club for the use of your small but amazingly well-equipped hut and for the well-made trail up to the headwall.

MT. ASGARD - SOUTH FACE

ROUTE 1 - Peter Rowat, Peter Koedt, Greg Shannon.

(1) Start up obvious slanting crack in right-centre and attain wedge-shaped slot, traversing left onto face occasionally.

(2) Zig-zag up ramps and ledges in a leftward trending line to a ledge beneath an overhanging wall.

(3) Take the overhang directly, work slightly right then head back left to reach a ledge above a right-facing corner. (There is a conspicuous black water-streak diagonally left above the ledge.)

(4) Traverse right on easy ground, ascending very slightly, to stance on slab next to small black left-facing corner.

(5) Attain the huge jug on the steep wall above stance. Mantleshelf, traverse right for 10', go up small crack, then go back and forth to another mantleshelf. Traverse left and up to stance on small horizontal crack.

(6) Go up to niche beneath an overhang. Get into niche, go over overhang, then go up left and reach large diedre. Stance 40' up.

(7) Traverse left on slabs beneath overhangs on left wall of diedre, go up steep ramp that cleaves the overhangs, and continue straight up to big ledge at bottom of big diedre system with a black overhang at its top. This black overhang is a prominent feature of the climb from a distance.

(8) Easy ground in the diedre for 60', make a traverse right, then head straight back up to and over the overhang to a good stance (140' pitch).

(9) Go up left around a nose, and then straight up the nose for a rope-length--very easy on magnificent rock.

(10) Right and up for a rope-length.

(11) Ascend the final slabs directly to the summit.

Rating: IV, 5.7

Gear used: 12 pins, knife blade to 1½", 12 nuts.

N.B. It would be better to take a direct line from the top of pitch (1) to bottom of pitch (5).

ROUTE 2 - Peter Koedt, James Hamlin.

Start up the obvious curving cracks on left side of face. Four pitches on great rock take you almost to a kind of narrowing in the face. The party rappelled off from here (purely for lack of time)--the climb still has to be finished.

SLABS AT WEST END OF LAKE JUST UPSTREAM FROM HUT

-Peter Koedt, and James Hamlin

A number of black streaks run over the steeper part of these slabs, notably four major ones, the right-hand two of these being the dominant ones with the far right hand streak reaching all the way to the ground.

(1) (5.6) Start at the bottom of the far right hand streak. Ascend a small left-facing dihedral and slabs above to a small flake-crack which accepts a good piton. Move left to the next black streak to another flake-crack which accepts a dubious piton. Climb straight up to a small but excellent belay ledge with a permanent bolt and hanger.

(2) (5.5) Traverse right 10-15' and straight up to another stance about 80-100' up. The middle of this pitch was protected in a solution pocket with an innovative little device not yet on the market, and it's unlikely that anything else could be made to work, short of a bolt. It's not a hard pitch but it would be a long lead-out unprotected.

This is an extremely enjoyable climb on unbeatable rock-very recommendable for a couple of spare hours.

Gear: 4-6 pins from medium horizontal to 1¼' angle.

MT. GIMLI - SOUTH RIDGE

- Peter Koedt, Peter Rowat, Nona Rowat, Greg Shannon, James Hamlin.

From the Wolves Ears the convex south ridge of Gimli is a prominent feature. The climb takes the crest of the ridge all the way.

(1) The most southerly point of Gimli, the start of the ridge, and the hardest pitch of the climb, consists of a curvaceous jam-crack at the back of a 120' high steep wide chimney capped by an overhang. The pitch can be well protected with nuts and exits right at the top to a stance beside the overhang.

(2) Go straight up for 6' then back left onto the ridge crest and climb easier ground to the first notch (which can be seen from Wolves Ears).

(3) Go up obvious flake, aim for the obvious crack but traverse round corner to right. Continue up broken ground to stance.

(4) Continue to big flat step.

(5) Continous 5.6 climbing for 200', going right occasionally, to stance. This pitch could be divided by a belay at 50'.

(6) Continue up, circumventing the overhang on the left.

(7)-(10) Ridge rounds off gradually, scramble to top.

Rating: IV, 5.7

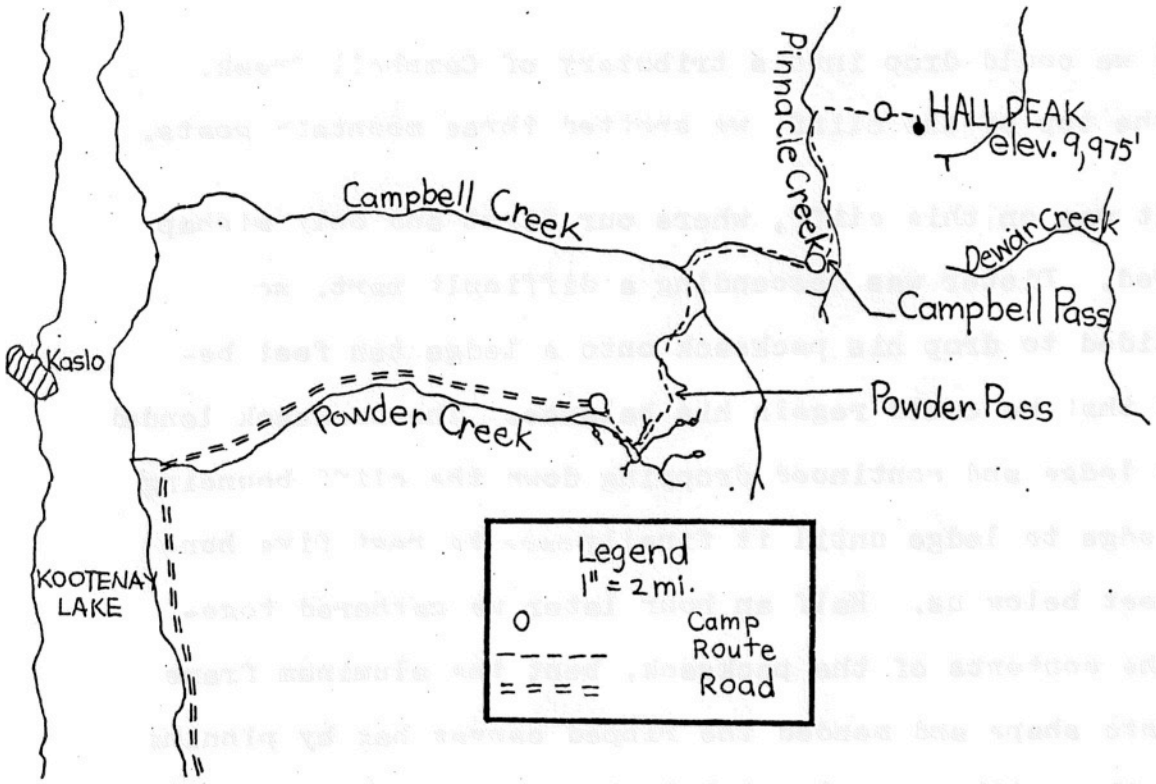
Gear: 6 pins from small horizontal to 1½", 12 nuts.

LEANING TOWER: THE HARD WAY

by ELENA UNDERHILL

On previous climbs throughout the Kootenays which included Mt. Loki and the Kokanee range, we again and again sighted a unique range of mountains in the Purcells situated east of Kaslo. They appeared as if some sculptor had carved them into beautiful 90° wedges. Gunther Offerman, Dieter Offermann and myself decided to climb the tallest peak of the range. This was Hall Peak, also commonly known as the Leaning Tower. The first ascent of the Leaning Tower was in 1933 by the McCoubrey-Neave-Blanchard party. (C.A.J. 1934-35)

The approach to the peak was to be a long and difficult one since the closest logging road was twelve miles away and no trails existed. As long as it is humanly possible it is not our philosophy to be flown in by helicopter to the base of a mountain and climb it from there. So, we had to walk the twelve miles to the base of Hall Peak through complete wilderness. The route we decided upon is marked on the map.



We planned on a three day hike. On the evening of September 13, 1973, we drove up a logging road which ends near the headwaters of Powder Creek and made camp. The following morning we were blessed with good weather. We hiked to a lake (6,000 ft.) situated at the headwaters of Powder Creek. From here we continued in a northeasterly direction to the top of 7,600 foot Powder Pass which separates Campbell and Powder Creeks. From here we could see the southerly end of the Leaning Tower group. So far the hiking had been relatively easy for the buck brush and alder bushes were not too thick. Next, we had to descend a 2,000 ft. cliff

before we could drop into a tributary of Campbell Creek. From the top of the cliff, we spotted three mountain goats.

It was on this cliff, where our first and only mishap occurred. Dieter was descending a difficult part, so he decided to drop his packsack onto a ledge ten feet below so that he could regain his balance. The packsack landed on the ledge and continued dropping down the cliff bouncing from ledge to ledge until it finally came to rest five hundred feet below us. Half an hour later we gathered together the contents of the packsack, bent the aluminum frame back into shape and mended the ripped canvas bag by pinning it together with several metal tent pegs. We continued down this tributary stream of Campbell Creek, bushwacking through a jungle of alder, devil's club and buckbrush bushes until we reached Campbell Creek. Along the way we saw many grizzly, elk and mountain goat tracks. We trekked on up Campbell Creek valley until we reached Campbell Pass (6,600 ft.) where we pitched camp. The night was clear and cold, so we were not bothered with mosquitoes.

The morning found us eager to be off for we knew we would soon catch a glimpse of the Leaning Tower. After drying out our gear we set off and were surprised a few minutes later by a magnificent view of the Leaning Tower even though it was still three miles away. Now we descended into Pinnacle Creek which was approximately 1,000 ft. below us. Huckleberries and wild raspberries were abun-

dant here. When we reached the bottom of Pinnacle Creek valley, the walking was somewhat easier for there were many rock avalanches alongside the creek. We continued down the creek for about three miles and then started climbing up to the great cirque which is directly below Hall Peak on the west side. After climbing 2,500 ft., we reached the great cirque and made camp at the 8,000ft. level. Obtaining water for supper was a problem because all creeks were running underneath rock slides. Finally surface water was found but it was half a mile away from our base camp. Spectacular views of the Leaning Tower, Block Tower, Shark's Head and the rest of the range were seen since we were directly below the peaks. As darkness set, they were aflame with colour.

The following morning we prepared for the final ascent. Firstly, we climbed a huge headwall which was about 50° in steepness. This was enjoyable rock climbing as it was solid granite with good cracks. We aimed for the col that separates Block Tower and the Leaning Tower and soon reached it which was 9,000 ft. in elevation. To our left were Block and Wall Towers which rose vertically for 1,000 ft! To our right was the northern ridge of the Leaning Tower which rose abruptly above us at a 60° angle. Here we started up. The rock face was extremely smooth and few hand and foot holds existed. We utilized the layback technique repeatedly. The most difficult part of

the climb was 200 ft. below the top where the only route was up a fine vertical crack with adjacent smooth rock. Vertical drops were on both sides of the ridge. From here, we climbed over a few more larger cracks and jutting rocks, and finally reached the top.

What a view! Mt. Loki was to the southwest, Mt. Findlay to the northeast, the St. Mary's River to the south, and the Rockies were visible in the east. Below us to the south, jutted the Leaning shoulder, Shark's Head, Bivouac Tower, and Consolation Peak. On the eastern side of the Leaning Tower Range was a mass of glaciers riddled with numerous cracks and crevasses.

In the rock cairn we found the register which had only three entries written on it - the 1933 party, the 1956 Crosby party, and the August 1973 party which consisted of several members of the Calgary Mountaineering Club. We entered our names in the register and after taking many pictures we roped up for the descent and headed down by a route more to the west. Several hours later, we reached base camp.

The next day the weather changed. Snow started to fall on the towers so we packed our gear and left hurriedly. Rain and cold followed us on our route back. Everywhere bush and rocks were extremely slippery. We made our last camp at Campbell Pass and headed out the next morning.

Upon reaching the Campbell Creek valley we were entertained by the bugling of the elk and a while later we heard shots of the search party. All together the expedition had taken us five days, two days longer than planned, so a search party had been looking for us. Due to extreme conditions in terrain and weather we could not achieve our objective in three days. Despite the time factor, the trip went according to our plans and we completed the ascent of the Leaning Tower.

Overview of Camp

by Lynn Lennox

The Ports and Woods drove on the flag route through the maze of logging roads to the helicopter landing. The remainder of us awaited the next ferry crossing and the last members of the group. After an exciting drag race behind a line of cars churning up clouds of impenetrable dust, (picture John Carter standing on a stump waving his arms wildly and yelling "They're turning back, the bastards,") we eventually all arrived at Pinkston Creek.

The Okanagan Helicopter, a ten seater Huey 204 jet, ferried four loads of climbers and gear to the base campsite above the Odin Creek headwall, elevation 6,400 feet. Within an hour the main cook tent, complete with two propane stoves and tanks was erected, beside the settling ponds. After a lunch break, tentsville appeared,-multicoloured nylon everywhere in bright contrast against the tiger and zebra striped rocks protruding from the glacier ice.

That afternoon, recci trips, during which Saturday Peak and Brewster Knob were climbed and named-first ascents* The Caribou and goats which were to be our neighbours for the next few days were sighted on the Odin glacier behind camp. The first of Ann's excellent meals was enjoyed. Oh, those rocks for chairs were hard on the behind!

Sunday July 29

The second day of what was to become monotonous weather- windless clear skies with blazing hot sunshine.

Ian H., Howie, Peter W. and Gordon set off via Caribou Peak for a high camp at Ten Cent Lake.

Gerry, Bert, Rob, Lynn, Ian M., Dave and John, climbed Mt. Odin (9,751'). After finding an alternate route around "the notch", they were on the summit after lunch and back at base camp for supper at 6:30 with exciting tales of falling rock and ice in the south facing chutes enroute to the east ridge. This was to become the regular route during camp.

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*(Claims to first ascents in this area must be viewed with caution since between 1963 and 1966 members of the Geological Survey of Canada spent seven months in the field. See; G.S.C. Bulletin 195 Petrology and Structure at Thor-Odin Gneiss Dome, Shuswap Metamorphic Complex, British Columbia. Information Canada, Ottawa, 1971. Ed.)

Sue, Jim, Helen, Bev, Gladys, Bruce, Knut and Peter M., struck off across Odin glacier to climb Mt. Gunnarsen (8,550'), a first ascent(?). They ate lunch on the top before climbing down. In camp, there were stories of Gladys' involuntary self-arrest and Jims dramatic summersault from the bergschrund. Peter M. and Knut returned rather late from a first ascent of Laag on their way home.

Monday July 30

Sue, Bruce, Jim, Knut, Helen, Bev and Peter M., climbed Mt. Odin by the regular route.

Ian H., Howie, Gordon and Peter W., climbed Mt. Kelly (9,250') by the southwest ridge, thought to be a first ascent. Just as they finished constructing a huge cairn, seven Americans, the passengers from a helicopter sighted the day before, gained the summit. The family party was from Portland, Oregon.

Bert, Gerry, Lynn, Dave, and John spent the day exploring Laag and Caribou Peak while Gladys wandered about the glacier.

Tuesday July 31

Oops! The camp slept in. Late breakfast at 7 a.m.

Ian H., Howie, Gordon, Peter W. and Gladys climbed Mt. Odin. They returned to tell us that the snow and ice the couloir was melting rapidly in the hot weather.

John and Knut steamrolled a record up Mt. Kelly from base camp, then had the traditional swim in the glacial lakes at the base on their way home.

Ian M., and Lynn had a leisurely day in the heather and glacier sink holes, growing larger daily, after climbing Mt. Gunnarsen.

Rob, Sue, Jim and Bev spent the day on Laag.

Bert, Dave, and Gerry set off around the ridges of Mt. Odin to an alpine lake camp enroute to Mts. Grady and Burnham.

Wednesday August 1

Peter M., Jim, Bruce, and Lynn set off in the direction of Mt. Kelly. The highlight of the day was watching a ptarmigan with four chicks.

Gerry, Bert and Dave gained the summit of Mt. Grady (9,450') via the west ridge by 9 a.m. By 4 p.m. they had climbed Mt. Burnham (9,350') via the east ridge. They returned late to their alpine base camp.

The remainder of the crew enjoyed "rest day"- the most obvious activity being lack of rest; what with a barefoot traverse of Carter Rock, a recci to the base of Gunnarsen to check out Caribou, and a stroll up Brewster Knob, on which Helen unfortunately cracked a rib.

Bev and Rob checked out a route to Mt. Grady that would

bypass the crevasses below Saturday Peak and the deteriorating couloir.

Thursday August 2

Gerry, Bert, and Dave returned to base camp. They just missed meeting Howie, Rob, Bev, Peter W., and Lynn who were enroute to the Mt. Grady high camp. After slogging through burn area they arrived at the alpine lakes for a swim,-br-r-r-r!, and supper. From the ridge that evening they saw a large, rapidly expanding mushroom-shaped cloud from the forest fire at Wilson Creek.

John, Knut and Gladys set off toward Monashee Park. That evening a spectacular sunset coloured the sky.

Ian H., Peter M., and Gordon also went to Gunnarsen but on a very different (insane?) mission. They rolled rocks (yes - tsk! tsk!) on the Carter party below, then spent three and a half hours digging a snow cave. A rapid melting rate, caused them to abandon their home and sleep on the glacier.

Friday August 3

Peter W., Bev, Howie, Lynn and Rob were now on "the circus", and had a miserable, hot, frustrating, slow ascent, while finding a route to the summit. Somehow Burnham and Grady had become Barnum and Bailey. Only the undaunted spirit of the National Glissading Team persevered. On the summit at 4 p.m., they decided to be prudent and turn their

backs on Mt. Burnham. A very quick return trip to high camp was rewarded by another of Peter W.'s delicious suppers (the culinary talent must run in the Woods family), and a relaxing rub-down by the B-ball coach.

Meanwhile, in the direction of Mt. Gunnarsen, John, Gladys, and Knut made a circle traverse of the boundary ridge of Monashee Park. There are some beautiful wee Alpine lakes in the area.

Ian H., Peter M., and Gordon lay in the sun solving the worlds problems until noon, then traversed the remainder of Gunnarsen ridge before returning to camp.

Dave, Sue, Bert, Gerry, and Ian M., climbed Mt. Kelly.

Bruce, Helen, and Jim climbed Caribou and Brewsters Knob.

Saturday August 4

The "circus team" returned to base camp with the sad realization that this was our last day on Odins glacier.

John, Knut and Gladys also returned to base camp.

Dave and Bruce did a traverse of Saturday Peak. Bert and Gerry climbed Mt. Gunnarsen. Peter M. climbed Caribou Peak solo and sunbathed at Ten Cent Lake. Gordon and Ian H., climbed Laag, Brewsters Knob and did a first ascent of Carters Rock. Helen and Jim traversed Jello Ridge to observe the Caribou on the glacier.

But the most spectacular climb of the day, was Ian M.'s barefoot traverse from right to left, then in reverse, of Ridge's ridge.

Sunday August 5

The camp awoke to a very cold scene of ground level fog and rain! After we were so fortunate to have eight days of fine weather, who could complain. But there was the small matter of the helicopter due to collect us from our head-wall perch at 10:30 a.m. Would the pilot be able to make the trip in these conditions?

After the usual 6 a.m. breakfast was cleared away, Howie presented the National Glissading Team Coach, Rob Mill, with a hat suitable to his office. By 8:30 a.m. camp was struck and the crew was gathered in the cook tent for protection from the raging elements and to enjoy the banter and jokes. Food supplies were raided periodically and reading material, including the latest Summit magazine, (thanks, Helen) was circulated.

Hooray! At 12:30 p.m. the whirlybird lifted over the edge of camp and settled before the cheering crew. Several fellows tried flying on their own, but soon decided to ride down. Three trips to the car park with people and gear, and Summer Camp was over.

GUNNARSEN & LAAG

by Peter McIver

The first full day of the summer camp dawned as promising as we could have hoped; cloudless skies, but none of the previous evenings wind. With other parties going to Kelly and Odin, eight of us (Helen, Bev, Gladys, Sue, Jim, Bruce, Knut and I) proceeded up the névé above camp - polished rocks, silhouetted mountains- to climb the flank of Gunnarsen. We climbed a steep snow slope onto the north ridge where we found heather, flowers and a small creek, typical Gold Range beauty. That morning the goats hadn't decided what to make of us, and were on every ledge, haughtily gazing down, then running up vertical rubble, to stop again. Knut nearly bumped into a caribou as he breasted the ridge. Later in the week both sorts of animals practically disappeared, with the caribou returning on the Saturday.

The party split after the first bump on the ridge, three climbing over the loose section of the next few hundred feet, the others skirting it via steep snow to the West, rejoining at the main ridge which gave us some scrambling over grassy ledges and rather unstable rock. We reached the top at about 11:00 o'clock and had a leisurely lunch. Knut and I decided

to have a go at the interesting peak two miles to the north, a sharp ridge falling away on all sides, with a double summit (about 8,700' on top). We descended the northwest face of Gunnarsen, traversing and trying to avoid the missiles being malevolently heaved at us, until we reached a steep couloir, glissading down, then over a ridge, up a snow slope and onto the col below our objective. We traversed the lower section of the southeast ridge of the mountain, then over apparently firm, but layered rock. It was now 4:30 and since Ann was preparing supper for 6:30, we pressed on over to the ridge, scrambling on the deceptive rock.

On reaching the apparent peak, we built a cairn, but could not decide if this was the summit, so traversed over to the next peak. The rock on the south was flaky, but firm. It was evident that we were now on the true summit, so we built another cairn, left our names there, and returned directly to camp, using a rope on the top section.

This mountain, even more than the others in the area, is very strongly layered, with pieces that have fallen and slid off the north and south faces. As a result there is a spectacularly undercut drop on the north side. A layer in the past slipped down the slabs on the south face, upended and formed a vertical wall 300' high, with trees now growing on top. In honour of these endearing characteristics, we named it "Laag" or Norwegian for layer, this being in keeping with the Nordic names of Odin, Thor, Gunnarsen and my companion.

TRAVERSE TO MONASHEE PARK

by John Carter

Knut, Gladys and I were soon across the glacier, after a short stop to examine the large melt holes near the south side. We laboured up the first one or two ridges before descending about 500 feet to a spot where we could climb around the east ridge of Gunnarsen.

After travelling around and across the gentle slopes of Gunnarsen, we pitched the tent in a lovely grassy spot surrounded by rock slabs and overlooking the headwaters of Ledge Creek and, in the distance, Mt. Fosthall. Gladys went swimming while Knut and I scaled the rugged ridge and individual "pejags" of the western half of Gunnarsen. Soon after our return, supper was on the purring primus and eyes were turning to tomorrows proposed ridge route. The setting sun turned the evening into delicate colours, while in the distance, the Wilson Lake forest fire mushroomed into greater proportions.

Friday dawned clear and hot. Breakfast was quickly devoured and then off we wandered to the ridge dividing Ledge Creek and the south fork of Vigue Creek. Numerous flowers were examined, a ptarmigan egg took several minutes to photo-

graph and interesting rock scrambling took us to the summit of a geological survey cairn where we overlooked Peters Lake in Monashee Provincial Park.

Continuing along the ridge we descended and then ascended the next peak where lunch was consummed amid blackflies. At this point, we were sitting in the most northeasterly point of Monashee Park and were rewarded with good views of Fosthall and the lakes of the Park. Several tents were in view on the lakeshores. We gradually descended the ridge amid waves of flies and were soon looking for an easy route down to the large lake below us. Ledge Creek begins at this lake and trickles down the rocks passing through numerous other small tarns before entering the thickly timbered valley.

While Knut and Gladys climbed down to the lake, I continued up the ridge to another small summit where I could look down into a southern tributary of Ledge Creek. Numerous lakes dot the plateau region of Monashee Park, perhaps a future Club trip could explore some of this country. I then wandered back to the spot where Knut and Gladys had disappeared and in a short time, reached the partially ice covered lake.

It was not long before the splash of water was drowned out by the excruciating yells of pain for the ice was only twenty feet away! During the refreshing two hour break, we spotted the "Circus Group" on the top of Mt. Grady. We were very happy for them and also pleased that we were here

and not suffering the heat as they were! By 5:30 p.m. we were back at the tent and busily preparing another gourmet meal of chicken stew and instant spuds!

Our last night at high camp is hardly describable. The sky; pink, orange, yellow and red-all kaleidoscopic, giving the rocks, moraines, and meadows equally soft colours. Gradually as night came to the Gold Range, the sky turned dark blue and the first twinkling stars appeared followed by a small moon.

Morning dawned clear and hot again, and after feasting on porridge à la instant potatoes, we gradually packed for the trip back to base camp, sorry indeed, to leave this pretty valley. Our return journey followed roughly the same route we had taken in and before long we were back to the glacier. The familiar caribou were close at hand. Base camp looked bleak and familiar, the multi-coloured tents added a colourful note, while Odin cast his shadow in the valley.

THOR ~ ODIN GEOLOGY

Thor-Odin gneiss dome is a part of a large domal complex in the central, eastern part of the Shuswap Metamorphic Complex of the southern Canadian Cordillera. The dome is characterized by a structural-stratigraphic succession divided into four lithologically distinct zones. These are: the Core Zone, comprising migmatitic and granitic gneisses in the central part of the gneiss dome; the Mantling Zone, well differentiated metasedimentary rocks ranging from quartzite and marble through calc-silicate gneiss to pelitic schist; the Fringe Zone, in part overlapping, and in part surrounding the Mantling Zone and characterized by large amounts of granitic and pegmatitic rocks; and the Supracrustal Zone that lies outside the gneiss complex, and forms a cover to the gneisses.

Each zone exhibits a characteristic structural style and it is concluded that a series of three successive fold movements can be recognized in each. The earliest consists of interfolding, in a northerly direction, of the Core Zone-Mantling Zone interface in the area of the present core. Large-scale east-west folds developed synchronously in the Mantling Zone to the south, independently of the dome. The second stage of folding reflects pene-

trative movement within the Core Zone as a whole, resulting from diapiric uprise of the Core Zone with respect to the Mantling gneisses. In the Mantling Zone, earlier folds were further compressed, partly redeformed, and strata immediately south of the core were much thinned. Structural evolution of the gneisses reached a culmination during this episode and many complex mesoscopic structural features were developed. The third structural episode is more sporadic in its development and is represented by warps, local crenulation of mica schist, and open upright folds in directions dependent upon the orientation of earlier folded strata.

Metamorphism nearly everywhere in the gneiss complex has reached the sillimanite-almandine-orthoclase subfacies, though at the outer periphery of the Fringe Zone muscovite appears in the assemblage. Metamorphic grade reached a maximum coincident with the earliest episode of folding and remained high throughout the second phase of movement. After all movement had ceased cordierite overgrowths formed on sillimanite in the western part of the Core Zone and andalusite formed on kyanite in the outer Fringe Zone. Thus heating is considered to have not only predated or coincided with the earliest deformation, but far outlasted it in some zones.

The gneiss complex is separated, in part, from the supracrustal rocks through a cataclasite zone and here, in the brittle stage of deformation, retrograde metamorphism is extensive and the regional metamorphic isograds are displaced.

The stratigraphic succession in Thor-Odin gneiss dome is broadly similar to the latest Precambrian-Paleozoic succession of the Purcell-Selkirk Mountains. The rock of the Mantling Zone did not rest on an older gneissic terrain, later to be remobilized into a classic 'Mantled Gneiss' dome. Rather, the intense migmatization and pegmatization of the Core Zone took place synchronously with the deformation and metamorphism of the complex as a whole. The core reflects the presence of an original succession of pelites and semipelites compositionally suitable for migmatization with resultant mobilization and intense internal deformation. The quartzite-calc-silicate-marble-schist succession, on the other hand, resisted penetrative migmatization and consequently provided a contrasting 'cover' for the Core Zone.

(Ed's note: for a more technical statement see: Petrology and structure of Thor-Odin Gneiss Dome, Shuswap Metamorphic Complex, British Columbia. Information Canada, Ottawa, 1971.)

KILIMANJARO – POLEY, POLEY

by HELEN BUTLING

"Keep eating, keep drinking and go slowly (Poley, Poley)". With these words ringing in our ears, at 11:40 a.m. on February 11, 1973, we walked slowly out of the gate of the Marangu Hotel at 4,500 ft. Five days later we would return, hopefully having climbed 19,300 ft. Mt. Kilimanjaro; Africa's highest mountain and the highest mountain in the world that stands alone.

"We" consisted of myself from Nelson, B.C. Michael Steward from Vancouver currently working in Tanzania, and Les and Rick Anderson father and son from Eugene Oregon, and unknown quantity who joined us at the last moment. But a more congenial and compatable pair it would have been hard to find. We were also accompanied by 2 guides, Faustina head guide and Carmillo assistant guide, 4 personal porters, three food porters and a water porter (there being no water at the last hut) We had chosen the tourist route, hopefully because it was the easiest. Our places in the three huts had been booked since November '72. There is accommodation in the huts for 18 people, this being the maximum number allowed on this route per day. We felt very fortunate that we were only four although we expected to be joined on route by some hangers-on whom we had been warned would use our guide and wish to share our food.

The first day was a delightful 12 mile walk to the Mandara Hut at 9,000 ft. with a very light day pack and going "Poley, Poley" all the way as per instructions. Faustina insisted on carrying our lunches, also tea and Scotch Orange. As we all took tea we never did find out about the Scotch Orange! For the first six miles we followed a black top road up through the inhabited slopes of the mountain. The Chaggas,

the tribe in this area seem to support themselves quite adequately from their crops. All along the side of the road were neat little houses surrounded with small plantations of corn, beans, coffee and banana trees. Water seemed to be plentiful, although after the daily downpour of rain the streams were so muddy they hardly appeared drinkable. The atmosphere was like a green house, warm and steamy. There was a constant stream of people walking up and down the road, coming to or from market, their goods carried regally on their heads. Scantily clad children everywhere, gazing at us with their round serious faces, offering flowers and begging for money. To them no doubt, we were well fed strangers who never had to worry about where the next meal was coming from. During our lunch stop under a large tree near the road, the previous days summit people came straggling down. Some wore the garlands that are awarded those who make it, others without. We couldn't held but wonder how it would be with us in five days time.

Arriving at the Mandara Hut we found it to be a sturdy stone building in a clearing surrounded by giant trees. There was a caretaker in residence who sells beer. He also tends a small vegetable and flower garden and obviously takes pride in the place. Tea and cookies were produced immediately and at six o'clock a more than adequate meal of soup, meat, vegetables and fruit served complete with table cloth and napkins.

The porters seemed to have rather cramped quarters and as far as we could see they carried no extra clothing or bedding. They must just lie down close together on the floor to sleep. To us their footwear seemed very inadequate, thongs, poor looking running shoes and some barefoot. Even the guides were wearing ordinary shoes. However, Faustina assured us that they both had boots in their bags for the last day. The two guides did carry some personal gear.

It rained hard all night, made more noticable by the aluminum roof. However, the morning dawned bright and clear and we were happily on our way by 7:30 a.m. after a substantial breakfast. The trail, or track as it is called, continued through the thick forest for about an hour and then suddenly broke out into open and after going

over a couple of ridges we had our first view of our Mountain since we had left the Hotel. It was entirely white with new snow and looked neither twenty-seven miles away nor 19,000 ft. high. However, we knew better. We arrived at the Horombo Hut, 12,300 ft. at about 1:00 p.m. This time we met the descending party on the trail but neither they nor us seemed inclined to talk, so like ships that pass in the night we continued on our way, each one engrossed in his own thoughts. "How is my system going to stand up to the 15,500 ft. altitude at the Kibo Hut"? This would be the test of whether one could go to the summitt the following day. One hears such dire tales of splitting headaches, nausea, chest pains and of course the dreaded pulmonay oedema. However, as this is most prevelent in males 25 - 30 years of age, we were not too apprehensive.

At the 12,300 elevation of the Horombo Hut we noticed that our pulse rate had increased considerably. When I mentioned that I got out of breath coming up the bank from the creek, I was glad when the others admitted to it also. However, after our tea we still had enough energy to explore a rocky ridge near the hut and pick up some interesting volcanic rocks. It had rained quite hard for the last hour before we got to the hut and we certainly would have been cold and miserable if we had not had adequate rain gear, especially as there is no way of getting anything dry again. This was the case with two of the four young men, "hangers-on" who were still with us. Fortunately they realised they were hopelessly ill-equipped for what they were trying to do and after shivering all night in their thin sleeping bags they turned back the next day. Another rainy night but again a beautiful morning. After the open moorland of the day before we were now in the land of the Giant Lobelia. Anything less like our idea of a Lobelia one couldn't imagine. Five feet tall with a cactus looking stem and dark green bushy top. Soon after leaving the Horombo Hut we came to the sign - "Last Water" and in another hour we were at the saddle between Mawenzie and Kilimanjaro. Mawenzie 16,890 ft. was an impressive sight on our right, its rocky pinnacles dusted with snow. At the saddle much to my disgust we has to loose some altitude and

tackle the final six miles to the Kibo Hut. This was really the only uninteresting part of the approach to the mountain, six miles of sandy desert strewn with large boulders. The mountain was now before us but hiding under the usual afternoon cloud. The 'silver roof' of the 15,500 ft. Kibo Hut did not look far away but seemed a long time getting any closer. Once again we met the people coming down. Fresh from their mornings effors they wished to talk, some had made it and some had not but they were all happy. Imperceptably the 15,000 ft altitude was slowing me up and I arrived at the hut about an hour after the others, but as we were to find out during the trip one of the guides always stayed with the last person and even though begged to go on they would not leave you. The porters always went ahead to secure us bunks in the huts, but always waited until we got there to open the heavy canvas duffle bags in which our gear was carried on their heads. We were allowed 40 pounds but I dont think any one of us had that much. The other two young men were still with us and had made it to the hut in three hours compared with our six but were suffering excruciating headaches as a resulf of their speed.

Faustina announced that supper would be served at 4:00 p.m. and that we should go to bed a five as he would be calling us at 1:00 a.m. It was a sobering thought to think that most of the climb would be in the dark. Being so near to the Equator the pattern is 12 hours daylight, 12 hours dark. No one felt very much like eating but, again remembering those instructions we got it down somehow. I did not manage much sleep but the others seemed to do quite well. Sweet hot tea at 1:00 a.m. and a light breakfast of a sort of gruel and dry biscuit and we were on our way by the light of two hurrican lanterns. Faustina made sure that we all had our "hot jackets" on. This was certainly the first time that I had climbed a mountain in my down jacket but due to the alittude it is impossible to go fast enough to keep warm. We estimated the temperature to be 22 to 25 deg. F.

The route to GillmansPoint 18,630 ft. is a perfectly straight forward 3,000 feet of scree. It was covered with two to three inches of snow which had all disappeared on the way down.

From Gillmans Point to Uhuru 19,340, Kilimanjaros highest point is a snow walk round the crater and is said to be the nicest part of the climb. The register is at Gillmans Point and those reaching this summitt are considered to have climbed Mt. Kilimanjaro. Our plan of action was for the assistant guide to stay with me and for Faustina to take the

others on to Uhuru. Hopefully, I would be waiting for them at Gillmans Point on their return. It took me 7 1/2 hours to Gillmans and a couple of times after over exerting myself I was well and truly nauseated, an unpleasant experience I shall never forget. Five steps and then a rest, and rest steps at that, leaning on the pole we had been provided with. Five times five and then I was looking for a suitable boulder to rest upon. For a long time the summitt did not seem to get any closer. I could hear voices up there but it all seemed a bit dream like and I wasn't making any headway. Near the top we met two lads coming down. They had followed Faustina and the men to Gillmans Point and there Faustina had asserted his authority and forbidden them to go to Uhuru in what he considered their unsuitable boots. They were shortly followed by Les and Rick. They with Mike had started for Uhuru but found themselves sinking up to their knees in the new snow of the last two days and had to give it up. Rich had also been nauseated and was anxious to get down. Mike was waiting for me on top and what a wonderful moment when I finally pulled myself over the last rock and stood on the 18,630 summitt of Mt. Kilimanjaro. It was somewhat disconcerting to be hopelessly nauseated but having got that over with I was able to attend to the pleasant business of shaking hands with the guides, gazing in wonder at the ice cliffs round the crater and taking pictures. The experts consider Kili's crater not dead but inactive. The temperatures recorded at the mouths of the fumaroles are at the boiling point of water. This is considered to be the last phase of a period if activity and Kilimanjaro is not expected to erupt destructively again.

It was now warm and sunny on top and the plains of Africa under white woolly clouds, were a long way below. Except for Mawenzie to the East there was really no startling view. We still had fifteen miles to go that day so after about an hour on top we left. Mike had been feeling nauseated but had not succumbed. Les was the only one who had no symptoms whatever. He attributed it to the glucose tablets he had taken on the way up.

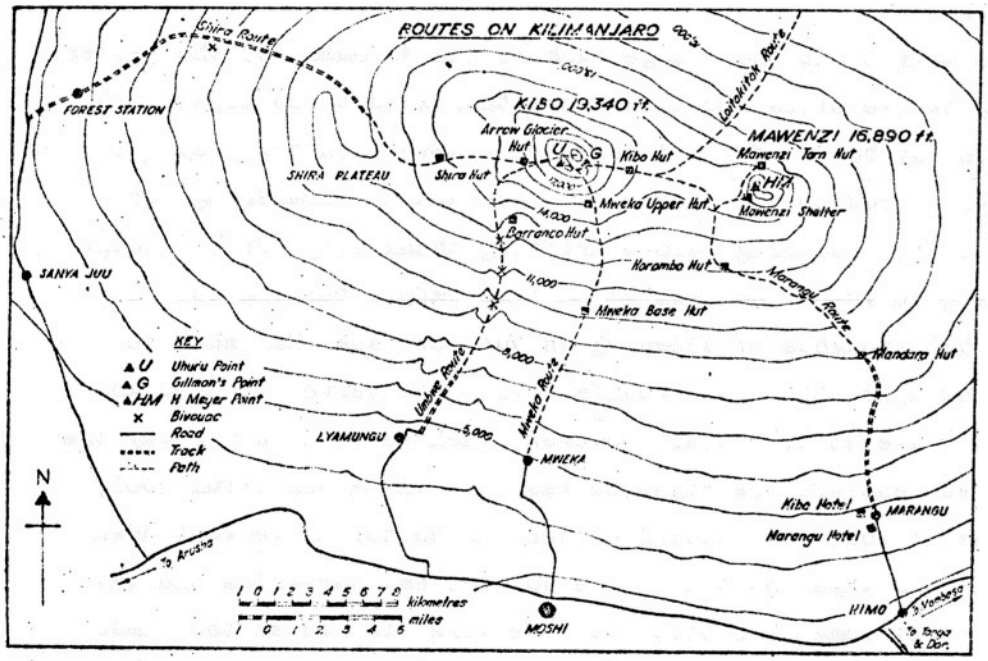
The descent to the Kibo Hut was certainly a very different

experience from going up. Faustina went ahead to prepare lunch and Carmillo escorted us down. I think we would have liked to have made it non stop but we insisted in taking our time and pausing once in a while to admire Mawenzie wreathed in white clouds. We could see our route across the desert below and again the shinning roof of the Kibo Hut. We also marveled at how lucky we had been with the weather as the day before we would not have been able to see anything. A group of young men and women at the hut were anxious to hear our story. It was now their turn to wonder what the following day would bring for them.

The less said about the trudge back to the Horombo Hut the better. It was a long twelve miles and I was more than glad to collapse onto my bunk and get my boots off. It had been a seventeen hour day. I really felt too tired to eat supper but once again remembering our instructions I ate something before drifting thankfully off to sleep. The men ate a good supper and wasted no time before turning in. I think we all had thoughts of sleeping in but not Faustina, much to our dismay. He announced that breakfast would be served at 5:30 and that we would leave at 6:30 a.m. However, when we were on our way the next morning we realised how right he was. It was a beautiful cool, morning and as it would be getting hotter and hotter as we went down we hiked along and were thankful. The sunrise was marvelous and gave us a chance to get some good pictures. We were stunned at the number of people coming up and felt that it was certainly more than eighteen, afterwards we heard there had been a mix up in the bookings and there were indeed many more climbers than accommodation in the huts.

Lunch and beer at the Mandar Hut, which we had to ourselves, and the subsequent crowning with garlands of fresh flowers made by one's personal porter was a delightful experience. We propped our cameras up on the rain gauge and took pictures of the fourteen of us, it had been such a compatable group for five days and was so pleasant there in the sun that we hated to leave. However, the last twelve miles had to be won so down we went through the enevitable afternoon downpour to the Marnagu Hotel.

The four of us joined forces over a bottle of wine for dinner and as we liesurely sipped our coffee on the veranda and thought about the last five days we felt that Kilinmanjaro had accepted us and our efforts and we were utterly content.



LAKE O'HARA

by DAVE ADAMS

When the Gwillam Lakes camp was cancelled, Stan Baker and I made hasty plans for our own August 11-17 climbing holiday. We figured it had to be in the National Park, because just about everywhere else was closed due to the fire hazard. I had wanted to go to Lake O'Hara for quite a while, but I was not sure if camping was permitted at the meadows this year. We decided to go and check this area first.

Stan picked me up on the Saturday morning, and we headed up through Kootenay Park then west to Wapta Lake. Here we called at the Warden's cabin and were pleased to hear that we could camp at the O'Hara meadows. The warden informed us that group camping had been banned earlier in the year, but the ban was now lifted.

We stayed the night at the overflow campsite, at the junction of the Yoho road and the Trans Canada. Sunday morning we caught the 8 am. bus up to Lake O'Hara. We were surprised to find the area so developed, yet still so beautiful, set amidst all the big peaks. It is good that no cars are allowed up the road or the place would end up like Lake Louise. A warden told us that a new trail is being built on the West side of Cataract Brook, and possibly when this is completed, the bus service will be discontinued.

We had to make two trips each to get all our gear over to the meadow, but as it is only 10 minutes walk each way we soon had our camp set up.

Mt. Schaffer appeared to be best located to give us a bird's eye view of the area, so we left camp atabout 11 am. to climb it. We went up via Schaffer Lake and McArthur Lake cut-off then up the ridge to the top. The view was tremendous in all directions, with Lake O'Hara just below us to the north, Lake McArthur to the south. To the

east, the chain of big mountains forming the British Columbia-Alberta border dominated the skyline. We took special note of the route into Abbott Pass and Mt. Victoria as we intended to head up there the next day. We came down the ridge as far as the col, then went down to have a look at Lake McArthur, then back to camp along the main trail.

Monday we planned to go up to the hut in Abbot Pass, spend the night there, then climb Mt. Victoria on Tuesday. We had a leisurely breakfast, then packed up our gear for an overnight stay and set off at 12:15. The trail up to Lake Oesa was very pretty, passing the Seven Veils Cascade and Lake Victoria on the way. From Lake Oesa up to the pass was a real grind - scree, a small glacier, then more scree and loose rock. Over 2,000 ft. of it. We got up to the hut at 4:15 pm. The wind was really whistling across the Pass and we saw lots of rock slides and small avalanches.

The hut was quite something, built right in the Pass. It seemed almost part of the mountain with its rock walls, and the Victoria glacier butting against the east side. It is at an elevation of 9600 ft. We had to dig a hole in the glacier to get water, but we had no trouble filling the pots. In the evening a guy and two girls came up the glacier from the Lake Louise side. The girls had difficulty crossing the final crevasse and were exhausted when they got to the hut. They told us that an army paratrooper had been killed at the weekend, in a fall from the ridge of Mt. Victoria.

The wind continued all night so we did not sleep well. We were away at 8 am. on Tuesday, and set off on a long traverse on the east face of the mountain (the usual route follows the ridge). When we were almost under the south peak, we climbed up, and made the ridge about 50 yards from the peak. Once on the ridge, the going was fairly easy. This route proved to be extremely dangerous because of the rotten nature of the rock, magnified by the fact that we had no hard hats on (never again!). About every half an hour there was a mighty roar as a chunk of ice broke off the upper glacier and thundered down onto the main Victoria Glacier. To the east we had a terrific view of Lake Louise, then the Trans Canada Highway, then the ski hill. It was strange to see the light planes flying down the valley far below.

Mt. Huber was just across the gap to the west, and Hungabee looked really inpressive to the south.

We came down via the ridge which was much easier, provided that we could keep off the ice.

We spent about an hour at the hut drinking tea and packing up our gear. Then we set off back to Lake O'Hara. I was determined to enjoy the scree going down and set off at a great rate of knots. Down at Lake Oesa I realized that I had buggered up my knee again. By the time I got back to camp (about 5 p.m.) it was about twice its normal size . . . so much for the scree running.

Wednesday was a rest day, so we got up late and had lunch at O'Hara Lodge. In the afternoon we took a walk around Morning Glory and Linda Lakes. They were very pretty and they seemed to be full of fish.

The American party camped across from us left at noon for the Abbott hut and Mt. Victoria. They were back in the evening after two of them had fallen and rolled 100 ft. just above Lake Oesa. They escaped with cuts and bruises!

My knee was no better on Thursday so we decided to go up to Opabin Pass and have a look around. We were really i pressed with the way that the trail climbed the headwall. It made walking out of what would have been a scramble. I decided to wait with the marmots at Opabin Lake while Stan went up the glacier to have a look into Tokumm Creek.

Back at camp the wind was now from the west and a storm was brewing up. We turned in early but were kept awake by a mighty thunder-storm and tremendous gusts of wind and feeezing rain. Friday morning was bitterly cold and the peaks were decked in a mantle of white. The tents were covered with ice. It did not take us long to decide to pack up the gear and catch the bus out!

CHIMNEY ROCK

by JOHN CARTER

With the usual formalities over with at the Nelway Customs, Ian Hamilton, Bert Port and I resumed our journey through northwest Washington en route to Chimney Rock in mid-June. During the afternoon and early evening we found ourselves driving to and around part of Priest Lake and during a period not exceeding 4 hours, managed to discover logging roads that I am sure the Idaho loggers didn't know existed!

Finally around 7:30 p.m. we arrived at the Horton Lookout to be met by Howie & Pat Ridge, Eileen McKerral, Gordon Stein and Andy who suggested that perhaps we had been in the Priest Lake Tavern for 4 hours!

The usual breakfast was devoured, packs loaded with climbing gear and lunches, and we were off, the girls to follow later exploring along another "Unnecessary Ridge". A short time later on the ridge we had the first good view of "THE ROCK". Before long we had glissaded down the slope and crossed the intervening head of the valley.

At the base of "THE ROCK" we pulled on extra sweaters, adjusted helmets, tied on gear and picked partners for the climb. Gordon and Howie to attempt a new route while Bert, Ian, and I would climb close to the ordinary route. I led the first rope length, established a belay point, and brought up the now cool Ian and Bert. Bert continued on to find the middle section of the usual route had fallen away leaving some rather loose blocks to negotiate. Ian followed by now reasonably cold and I followed later, practically frozen. For the last 2 hours a very cold wind had been blowing. Leading through, I continued on to the ridge and followed it to the summit cairn. By the time the others

arrived all the pleasure had gone.

A hasty lunch, quick pictures and a return to the ridge to rappel and downclimb close to Howie and Gordon's route which they abandoned due to the cold and difficulty, in that order!

Once we began walking across the head of the valley and up Unnecessary Ridge we all began to warm up.

Before long we were all back at the cars, including the girls who gad had a good day hiking. A much deserved beer break followed and then to packing the cars and heading home by the same route. I think a general consensous of opinion would pick a tropical day to climb Chimney Rock or risk hyperthermia and frost bite!

THE GREEN ROCKET

by PETER N. METHUEN

Anyone familiar with the British Columbia mountains will sooner or later come across one with the top decorated by a large rocket shaped object in the "launch" position. Be not alarmed, this is not a secret weapon, only a harmless building housing a radio communication system. It is native to British Columbia and was developed here to combat the rugged conditions and extremes of heat and cold.

Originally, equipment was bulky and required a controlled environment which included hydro-power to supply the heat and power for the transmitters. This meant a building of considerable size as it was also necessary to have standby power available. The antennaes in this type of installation were mounted on a large cedar pole close to the building and were subject to icing and ice damage as well as corosion.

In the "rocket" there are two levels; the lower level provides space for the electronic equipment and batteries, while the upper level houses the antennaes. The new solid state (transistor) equipment operates from caustic potash, which operate at very low temperatures, as the building has no heat at all.

While most of these installations are operated by the Department of Highways, the B.C. Hydro is also using the same system and I believe a total of some 150 such sites exist, many in remote areas providing the only communication link to "the outside". They also form a reliable network for the operation of these Government Departments in the event of any emergency.

Repeater Stations are installed and serviced almost exclusively by helicopter now, but the old sites were usually serviced by four-wheel drive in the summer and skis or snowshoes in the winter. To combat tower icing it was not uncommon practice to ski-doo to the offending site and use a twenty gauge shotgun loaded with #9 shot, and from about twenty yards away to clear the ice from the antennaes. This was attempted by a novice technician from twenty feet one day with devastating results. On one occasion I was ski-dooing to a site near Nelway and it snowed about an inch while I was working on the equipment. I was surprised on my return to find fresh cougar tracks on my ski-doo trail for two or three miles and discovered that it is hard to operate these machines while looking over your shoulder!

A word of caution - the major source of radio failure has been due to lightning strikes which make the building a very risky place to seek shelter. As a matter of fact, four sites were damaged while this article was being written on a stormy Friday evening early in September in the Kootenays.

(This article was prepared a year ago. The reason for the delay is a story in itself, involving communications between a local Judge and the Minister of Highways before it could be released. Ed.)

KITCHENER GLACIER

by LEO GANSNER

There may be room on any given week-end in 1973 for debate as to whether the Kokanee Creek road or the Keen Creek route provides the most convenient access to Kokanee Glacier. Correspondence published in the Daily News sixty-five years ago demonstrates that the choice of routes even then was a matter of considerable controversy. Here are a letter from J.W. Cockle as published in the issue of August 8, 1907, and a reply from P.G. Ebbutt appearing in the following day's issue:-

KITCHENER GLACIER

Editor the Daily News - It has just been brought to my notice that in consequence of the advertisement of Kootenay as a tourist resort and the unequalled scenery which is to be seen, a portion of which was portrayed in an illustrated article you published from my pen, that investigation is being made as to the practicability of erecting a mountain chalet at the Kitchener Glacier. The information I have is that the tourists must be taken up via Kokanee Creek as the south fork of Kaslo Creek is unfit for tourist travel. This is the second lying attempt to disparage the Kaslo route to the magnificent glacier and anyone who has ever been over the ground could not fail to see that the only feasible route was via Kaslo, and the finest chalet site in the world is on the Kaslo slope. This I am prepared to substantiate to anyone who will accompany me over the ground.

J.W. Cockle
Kaslo, August 6, 1907

KITCHENER GLACIER

The following letter has been sent in reply to Mr. Cockle's letter in yesterday's issue of the Daily News.

J.W. Cockle,
Kaslo

Dear Sir,

I have read with interest your letter in the Nelson Daily News concerning a proposal to create a chalet at the Kitchener Glacier. I should be interested to learn from what source the efforts are coming to disparge the Kaslo route; they certainly do not emanate from this club, which I am sure would be only too happy to co-operate with you in anything that would tend to develop the possibilities of the district as a whole from the tourist point of view.

So far as my knowledge goes no attempt is made to keep visitors away from Kaslo but on the contrary the attractions of Kaslo as a fishing resort have been pointed out by me to quite a number of visitors to Nelson this summer. Hoping to hear from you in the matter of the proposed chalet.

Yours truly

Nelson 20,000 Club
P.G. Ebbutt

Nelson, August 8, 1907

This will be the first indication to many of us that the glacier was originally called the Kitchener Glacier. If anyone has any knowledge as to when and the circumstances under which the glacier received that name the information would be appreciated by Karabiner readers.

It is of interest to find that the Prosperity and Development Edition of the Daily News of September 1, 1907, portrays two photographs each entitled "View on the trip to the Kitchener Glacier". One of these may have been taken from a rock outcropping near the Giant's Kneecap looking southerly, the other resembles Outlook Mountain covered in snow. This special edition, however, does not appear to carry the account of any trip to the glacier.

The pioneers' dream of a mountain chalet at the foot of the glacier did not materialize for which, perhaps, we should be thankful.

AVALANCHE RESCUE

by BRUCE HARDING

The Skadi avalanche radio has been developed by Dr. Lawton of Buffalo, New York with the primary purpose of permitting people caught in an avalanche to be accurately located and dug out in five minutes or less. Official studies show that the life expectancy of a victim buried in an avalanche decreases very rapidly in accordance with the following figures: 80% survival chances if found immediately; 40% after one hour; 20% after two hours; 10% after three hours; and only 5% after four hours.

Technically the Skadi is a two way radio; it sends and receives and is a 220 volt rechargeable system. It is best to recharge it every night. However, if used for only 3-4 hours per day in avalanche danger areas, the battery is capable of operating for a full week without recharging. If you are in an avalanche hazard area you turn the switch to sending. The radio gives off a barely audible but continuous "beep, beep..." If a skier is buried, everyone else with radios turns the switch to receiving; then a tiny earphone is placed over one ear. You should now be able to hear a buried skier's Skadi on sending as soon as you get within a range of 100 feet. The Skadi is in a shock resistant plastic case about 1' x 2" x 8" and weighs just under one pound. As such it fits conveniently in a pouch or pocket of most ski parkas. It is not recommended to put a Skadi in your pack as packs are usually torn off a skier in an avalanche.

Operationally, the Skadi makes finding a needle in a haystack or a skier in an avalanche a simple five minute operation. Assuming your group has observed roughly where the skier was pulled under the avalanche, the group goes to this spot and spreads out about 100 feet apart. They then descend the hill over the path of the avalanche with their Skadis on receiving. Once the radio signal is picked up all the skiers con-

verge on that area. The radios are then turned down in volume until the signals are barely audible. Moving ten feet in each direction will make the signals inaudible by moving in the wrong direction and noticeably louder by moving in the right direction. The radio is turned down again, and again, until one is directly over the skier. On lowest volume, moving the radio even six inches away will reduce the signals noticeably. All that remains of course is to dig the skier out.

On a trial basis the A.C.C. Ski Camp near Jasper at Eremite last March-April used an average of seven Skadi radios for a two week period. While no avalanches provided a life-and-death test, we experimented with a number of procedures; 1) burying a radio on a hillside already covered with ski tracks (and also hanging it in a tree!), 2) burying Peter Roxborough of Calgary for one-half hour under well packed snow with his Skadi and searching for him, 3) burying Claora Styron and Gmoser Guide Sepp Renner for 4 hours under 15 feet of snow. Part of the above tests were to illustrate how long a person can live under the snow, conditions being favourable. Finding the buried people and radios was very easy and rarely took more than three or four minutes. Our concensus was that the radios were a superb devise, probably the only known safety devise for avalanche rescue in which any real faith can be entrusted.

Hans Gmoser and his Canadian Mountain Holidays in Banff, Alberta own and use over 100 Skadi radios for their helicopter and ski mountaineering trips throughout the Bugaboos, the Cariboos and the Rockies. Hans and all his guides swear that the Skadi radio is the best avalanche device there is and these guides, who have maximum exposure to avalanche risk, will never ski in avalanche country without a Skadi.

Should you wish further information on Skadi radios, they cost between $120-$155, (depending on quantity ordered) and enquiries should be sent to Dr. John Lawton, Lawtronics Inc., 326 Walton Drive, Buffalo, New york, 14226, U.S.A.

SNOW & CROSS-COUNTRY SKIING

by GUY WOODS

Precipitation as Snow

Snow is made up of ice crystals which form in the atmosphere, and fall to the ground when they become too heavy to stay suspended in the air. Water, when frozen in the air, arranges itself in hexagonal crystals which grow larger and larger as more water is deposited on them. The form or shape which they take, however, is dependent on the humidity of the clouds, and the temperature at which they are formed. It is also dependent on what happens to the crystal after it begins to fall out of the cloud. It may pass through different conditions in different layers of cloud, or it may be recirculated through the cloud by updrafts, which can cause different changes in the crystal.

The major change which takes place in or on a crystal once it has begun to fall is the accumulation of rime on the surface of the crystal. Clouds are often made up of supercooled water droplets suspended in the air. When these droplets contact any solid object, including ice crystals, they immediately freeze on it. Thus the ice crystals falling through the cloud, or blowing back up through the cloud, accumulates a coating of rime. This coating depends on the thickness of the cloud layer which the ice crystal passes through, and the amount of uplifting caused by updrafts. The amount of moisture in the snow depends greatly on how much rime is collected by a crystal during the course of its descent. Most ice crystals are very delicately shaped, and contain little moisture, so when these large, delicate crystals are covered with rime their volume does not increase greatly, but the amount of liquid on them increases a lot.

Metamorphism

Snow as it falls is thermodynamically very unstable. It has a large surface area compared to its volume, and thus a high potential energy, a state in which nothing likes to remain. As a result ice crystals tend to change into a shape in which the volume is a maximum and the areas is a minimum so that the potential energy is a minimum. The optimum shape is a sphere.

There are several ways in which this metamorphism can proceed from the crystals to spheres, depending on prevailing conditions. If the temperature remains constant, this metamorphism will take place relatively slowly, depending on snow temperature. It continues to take place down to about -40°C, at which time equitemperature metamorphism pretty well ceases. This change of shape takes place by sublimation and redeposition of water molecules. Metamorphism is completed when the snow is reduced to rounded grains of ice.

A second method of snow metamorphism takes place when there is strong temperature gradient between snow layers. This Temperature-Gradient Metamorphism is caused by the flow of vapor from warm, high vapor pressure areas to cold, low vapor pressure areas. The vapor does not need to flow through the interstitial spaces, but can be passed along from one crystal to the next. The result of this type of metamorphism is the formation of new, different types of snow crystals. These new crystals are weak, and are often the cause of avalances. The snow can sheer off in a layer at some depth where these weak crystals have formed.

Further metramorphism, after the above two steps, is called Firnification and is caused by pressure, and melt water flow. Water flows into the spaces and freezes, filling them, while pressure of above layers compress the spaces. The end result of this is Glacier ice.

Cross-Country Skiing Technique

Cross country skiing involves walking or running on or near the surface

of the snow in as easy and as fast a manner as possible. The equipment used is a light pair of skis, with a harness which allows the heel to be raised easily to a normal walking stride, and a pair of poles which are used both for balance and for extra forward propulsion.

There are two parts to movement on cross-country skis, the kick, or forward push with the legs, and the glide, or slide between steps. Anyone who has ever been on skis or a toboggan will realize that they slide rather easily, and do not lend themselves to being pushed very hard with the feet. Since most of the power for movement on cross country skis comes from the legs, there must be some method by which this kick is accomplished. This secret method is the wax. Wax is all important to cross country skiing, and especially racing. Without it you just don't travel very fast.

Waxing for Snow

The wax used for cross country skiing must be able to both stick to the snow so that you get a good kick, and slide well on the snow so that you get a good glide. These two different desired functions, combined with the many types of snow, and the metamorphism of new snow with age lead to a very complicated situation.

The way the wax manages to both stick and slide alternately, is not really too complicated. When the ski stops moving and your weight shifts on to it, snow granules are pushed into the wax a short distance. Your kick comes while your weight is pressed down hard on the ski, so that the cyrstals hold the ski in place, and you are propelled forward. When you take your weight off the ski, the snow crystals come out of the wax and the ski can slide. Thus, what we want to do when we wax is to find the one which allows just enough penetration of the was by the crystals to give a good kick, but not so much that the crystals will penetrate it while you are moving. This is why the snow itself is so important. Before waxing there are three things which must be checked; 1) the air temperature, 2) moisture content of the snow, and 3) type of snow. Basically these all work down to the third classification, type of snow.

The air temperature is related to snow types thus. The colder the air temperature the sharper the crystal forms are when the snow is new fallen, and the slower the metamorphism away from sharp crystals by equi-temperature metamorphism.

Moisture content can also be related to snow type. Snow types that have been formed in an enviroment with a high vapor content, have a higher moisture content. Snow under rapid metamorphism due to melting would raise the moisture content also.

The Snow Classification on a waxing chart has three sections:

1. New or fine grained snow characterized by fine sharp edged crystals.

   In this type of snow slightly harder waxes are needed as the sharp crystals can penetrate the wax more easily to provide the proper amount of kick. As the temperature goes down harder and harder waxes are used, since the crystals are sharper and their moisture content is lower.

2. Coarse grained crystals characteristic of snow two or more days old.

   This is where equitemperature metamorphism comes in. The snow crystals have become more rounded and do not penetrate the wax so easily. As a result, you must use softer waxes than you would at the same temperature with new snow. This trend slows down as the temperature goes down, because the rate of metamorphism slows.

3. Crusted or corn snow is snow which has undergone complete metamorphism and is changed to round granules of ice. On the surface this is often caused by melting and refreezing or by complete metamorphism approaching firnification. The waxes used for this type of snow are softer than for either of the first two classifications. Since the snow crystals are very round, penetration is difficult, and soft waxes are needed. An additional problem arises at low temperatures however. Soft waxes tend to pick up any crystals present at cold temperatures and freeze up. Not

only that, the soft waxes tend to wear off quickly on rough ice. To combat this a tough, maleable wax is needed. One that is easily deformed by the grains, but not easily worn off or penetrated.

Cross country waxes are classified both by temperature-color codes and as hard and soft waxes. The soft waxes are called Klisters, and are soft but very tough and maleable. The hard waxes are easily penetrated and not so tough, but can be made harder, and thus somewhat tougher. The temperature-color code, going from warmest to coldest is yellow, red, purple, blue, green.

On the chart we can see a gradient from green hard wax in the lower left corner, for the newest, coldest, dryest snow, to red Klister for the oldest, warmest, wetest snow.

On the chart there are many wax types crowded into the area around the 32°F line. This is due to the rapid metamorphisis of snow at this temperature, and the difficulty of judging what will happen. New snow can change to old snow in 10 minutes and change the wax needed completely. At low temperatures however, the changes are small and slow, so waxing is easy. At very cold temperatures it becomes difficult to obtain a good glide as the crystals are too sharp and cause a great deal of friction.

(This article is a condensation of a more technical paper. Ed.)

MOUNTAINEERING MOTHERS

Anonymous

Remember all the good times you had in the pre-children days,-weekends in the wilderness, climbing, hiking or whatever? Do you hunger for life in the mountains again after having your children? Do you hate staying home while your man goes off and does his thing, while you have nothing to do but climb the walls of the kitchen, living-room or nursery?

It seems to me there are several alternatives one could try while one's children are still too young to go along under their own steam:

a. Stay home for two or three years -- the only sensible course. Forget those days in the mountains long since past, or if you must remember them, think of all the pitfalls -- shaking knees on rock surfaces, bears behind bushes, mosquioes, wet boots and sleeping bags, sore limbs etc. It should put you off for good. Also, imagine the following, (or add your own):

-Keeping one or more small children relatively clean and dry on a weekend trip, and all the extra stuff you'll need to do it (you may even have to pack a potty, for heaven's sake). Small children seem to attract twice

as much dirt and water as anyone else.

-Setting up camp after an exhausting day on the trail, at the same time minding the kids (if they are very small they trip over every stick and stone and fall into every hole) -- only to spend a sleepless night in the tent with small fry crawling all over you due to lack of familiar confines. At lease you will get an early start!

-Changing diapers above snow-line in driving rain. Think of the extra load (though I believe sphagnum moss makes a satisfactory substitute, if you can find any).

-If you have only one child, then it is fairly easy to to backpacking as long as one of you is in sufficiently good shape to carry all the gear needed for two adults and one child. However for those with two or more small children it is necessary to cultivate friends among the climbing and hiking fraternities who are childless and willing to act as porters for all the extra gear, extra kids, etc. The number of friends needed increases exponentially as the number of kids does. At this time we have discarded this idea due to having run out of friends insane eough to contemplate such a trip.

-Still want to carry on weekending in marriage? Then make sure the man of the family has plenty of money to pay for all the babysitters you need. He will also need plenty of good will and understanding -- as he'd rather go on his own by now anyway. If you conclude

that he is not sufficiently wealthy and climbing is more worthwile than he is, head for the nearest lawyer, or buy the book entitled "Do-it-Yourself Divorce" and then find a "sugar-daddy".

No good? Then---

-Take a free evening, a bottle of your man's favorite booze (to mellow him), a calendar and pen. Proceed to battle it out as to whose weekend is which for getting out. Plan to go separately. Have your own plans for your weekends made well in advance so that when the time comes, they cannot be easily dismissed as being of no importance. Though this seems the most promising solution, I think that it causes more marital problems than previously encountered, and should therefore be approached with a combination of tact, caution, and determination.

-There is, of course, another alternative which involves little backpacking, but gives the appearance of being involved. All this requires is a great deal of gall, some ability in car-camping, and a thick skin with which to face the disapproval of the general party, as kids call the camp to pre-dawn starts.

All in all, probably the best advice is to stay at home and practice the art of batik, macrame, Oriental cooking or whatever turns you on (if you haven't tried them all already). Trying out the other alternatives can at least keep you busy thinking about going out into the mountains. It is amazing how time flies while you sit at home deciding whose turn it is to go climbing.

FORGOTTEN NAMES

by LEO GANSNER

What a challenge British Columbia's place names are! It is a challenge which was taken up by Phillip and Helen Akrigg and resulted in the publication of their book, "1,001 British Columbia Place Names." On the final page of the second edition published in 1970, they invite their readers to participate in the search for authentic information as to the origin of our place names saying:

> "Perhaps you can tell us the story behind such fascinating names as the Family Humps and Sin Lake, Kaiser Bill Creek, Boomerang Mountain and Exact Point."

Wherever one goes in the Kootenays, one cannot help but wonder about the derivation of names of creeks, mountains, mining camps, townsites and even municipal streets. How often one is asked questions such as "How did the Bannack Basin near Earl Grey Pass get its name?" "After whom is Toby Creek named?" "What was the origin of the name of the Orofino Mine on Nilsik Creek?"

Some clues to these questions are to be found in a doctoral thesis prepared in 1967 by John W. Christian under the title, "The Kootenay Gold Rush: The Placer Decade, 1863-1872."* After dealing briefly with the California Gold

Rush, Mr. Christian writes at page 3:

> "Beginning, however, in 1855 with the Pend Oreille or Colville Rush north of the present site of Spokane, Washington, the Rocky Mountain Region of the Pacific Northwest became the scene of dozens of stampedes. Throughout the next decade, men flocked to the Orofino, Boise Basin, Florence, and Owyhee mines in Idaho, and to Bannack, Alder Gulch and Helena in Montana."

It seems safe to conclude that the Orofino Mine and Bannack Basin were named after early-day mining camps in Idaho and Montana.

The Akriggs at page 170 show Toby Creek to have been named:

> "After Dr. Toby, from Colville, Washington, who prospected here in 1864."

One might conclude that the Toby Creek referred to by the Akriggs is the one originating near the Earl Grey Pass and emptying into the Columbia River at the northerly end of Windermere Lake. Perusal of Mr. Christian's thesis indicates that this may not be the case at all. He says at page 31:

> "As early as 1863, a party led by a physician named Toby, left Colville to investigate the 'flattering representation' of the area made by some French half-breeds. On his return to Colville in September, Dr. Toby enthusiastically reported finding coarse gold...Although he...mentioned passing Joseph's Valley, he apparently failed to notice the riches of the nearby streams, including Wild Horse Creek, which soon became the centre of the Kootenay Gold Rush...Although there is no evidence that Dr. Toby paid any particular attention to the Wild Horse Creek area, his name is perpetuated by Toby Creek which flows into Wild Horse Creek near the site of the mining camp of Fisherville."

Fisherville, situated not far from the present site of Fort Steele, was named after John S. Fisher who was present in 1863 when the Wild Horse diggings were discovered. Mount Fisher, the peak which dominates the skyline south-east of Cranbrook, is named after him.

I hope these comments will spur K.M.C. members to further efforts in searching for the origin of Kootenay place names including among others, those of Boomerang Mountain and the Badshot Range.

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* Unpublished PhD dissertation, Washington State University.

Book Reviews

BACK PACKER
by William Kemsley
Published quarterly (March, June, September and December)
by Backpacker, Inc., 28 West 44th St., New York, N.Y. 10036
Subscriptions are $8.10 in Canada. Single copy $2.50

A new glossy print, elaborate magazine to catch the market of the "backpacker." Considerable time was spent by the author deciding on whether to print this magazine, as he felt that perhaps one more "outdoor mag" might make things worse for us who like to get away from it all.

The Summer issue has nineteen pages of evaluations, articles, charts and controversies on buying, cleaning and repairing down sleeping bags. Interesting books have been reviewed, interesting people interviewed and a highly professional series of colour photographs have all helped to make yet another magazine worth subscribing to.

The author has restricted sale of this magazine to subscription only. One may write to him for a single copy, but subscriptions are preferred.

The advertisements are a little hard to take, but with any subject like this, one must put up with a little propaganda. All in all, a good magazine.

John Carter

THE AVALANCHE ENIGMA
by Colin Frazer
Made and printed by John Murray of London, England.
301 pp., 41 illust., 14 sketches with Appendix, Index and Bibliography. $8.75 (L. J. Newstand, Trail)

Although this book has been available for some five to eight years, few copies are held by K.M.C. members. With the added interest in ski touring in the last year and more alpine areas being developed by ski area developers, everyone that skis or snowshoes should read this book.

Expertly written in simple language, it is quite thorough in describing everything from the first snow flake to the warm days of Spring. The book provides an insight into avalanches and the men in Switzerland who study them. Many factual accounts are presented, not to curdle the blood of the skiers, but to describe events leading up to and including the rescue of many fortunate and unfortunate victims.

The history of avalanches and avalanche research is vividly described throughout the book with final chapters on "Protection Against Avalanches" and a list of basic equipment required for a small avalanche team.

Perhaps after reading this book, you will realize what a powerful, sometimes silent, force snow is, and why areas of timber have been completely removed or buildings destroyed.

John Carter

WILD FLOWERS OF BRITISH COLUMBIA
by Lewis J. Clark - Sidney, B.C.
Gray's Publishing Ltd., 1973. $24.95

This recently published book on the wild flowers of B.C., has to be seen to be believed. It is the result of forty-five years of extensive botanical studies and flower photography, resulting in a wealth of information and photographs that leave one spellbound.

Dr. Clark writes: "As a result of my work with conservation groups, I have become convinced that we must concern ourselves with the protection of our enviroment. If our culture is to survive, we must become concerned. The first step is to study our flora and our fauna. Then an appreciation of the inter-dependencies of plants and animals (ourselves included) will develop an understanding of the urgent necessity to preserve the fragile complex we call ecology. In this conviction lies the fundamental reason for my efforts in producing this book."

Helen Butling

WINTER TRIP SCHEDULE

All trips, leaders and dates are open to change.

Watch the monthly Newsletter for details.

KEY: S-Snowshoes N-Nordic skis A-Alpine skis

Sun. Nov. 25	Salmo-Creston Summit S.N.A.	Ian Hamilton
Sun. Dec. 9	Snowshoes in Nelson area	Ted Baker
Sun. Dec. 30	Record Mountain and Roberts A.	A. Anderson
Sat. Jan. 19	Tour Powder Fields with well known local personality A.	Peter McIver (contact)
Sun. Feb. 10	Ski-tour near Blueberry Paulson Highway S.N.A.	Sue Port
Feb. 23, 24	Huckleberry Hut. Compatibility is essential. Otherwise, four person limit. A.N.	L. Martin
Sun. Mar. 10	Ski-touring at or near Nevada	Jack Steed
Mar. 16, 17	Overnight Snow Camp (tents) S.N.A.	Howie Ridge Gordon Stein
Sun. Mar. 31	Whitewater Ski Area (new hill near Nelson) A.N.	Helen Butling Dave Adams
Apr. 13, 14 Easter weekend	Trip into Slocan Chief S.N.A.	J. Langballe
Apr. 27, 28	London Ridge (car camp)	John Carter
May 11, 12	Whitewater (car camp) S.N.A.	Bert Port
May 25 (3 days)	Rogers Pass (car camp) N.A.	Peter McIver

1974 SUMMER TRIPS SCHEDULE

Sun., May 26	Mt. Peters A long snow walk. May need snowshoes or skiis near top. Meet at Taghum Chevron Service 7 a.m.	Leader Norm Thyer Ph. 352-5265
Sun., June 2	Mt. Eccles, Mt. Kubin, Mt. Hoover area Snow walk. Meet at Jack's home on Johnston Rd. North Shore, Nelson 8 a.m.	Leader Jack Steed Ph. 352-2196
Sun., June 9	Mt. Connor 7000 ft. in Bonnington Range. Meet at Taghum bridge at 8 a.m. Easy trip.	Leader E. McKerral Ph. 352-9471
Sun., June 16	Mt. Freya Moderate day trip. 8300 ft. in Valhalla Range. Meet at Passmore River bridge at 8 a.m.	Leader Lynn Lennox
Sun., June 23	Grey's Peak in Kokanee Park. Two sections. Easy but long hike to summit, and advanced rock climbing on rock pinnacles of main peak. Meet 7 a.m. at highway end of Kokanee Creek Road.	Leaders L. Martin and Ian Martin Ph. 362-9472
June 29, 30, and July 1	Mt. Toby in Earl Grey Pass. 10,000 ft. moderate rock and ice. Contact for departure details. Must have lightweight camp gear and climbing gear.	Leader Gordon Stein Ph. 352-9471
Sun., June 30	Texas and Paddy Peaks Easy day trip. Meet at New Denver at 8 a.m.	Leader Bob Dean Ph. 359-7759
July 6, 7	Macbeth Icefields High or car camp. 9000-10,000 ft. area of Purcells at head of Glacier Creek. Contact leader for details.	Leader K. Langballe Ph. 229-4791

Sun., July 7	Pallisades. Easy day of hiking and scrambling. Meet 8 a.m. at Passmore bridge.	Leader Pat Ridge Ph. 352-6548
Sun., July 14	Mt. McHardy. Contact leader for climbing conditions. Meet at New Denver at 7 a.m.	Leader Rob Mill Ph. 265-4451
Wed., July 17	Hiking in Woodbury Creek area. Meet at Ainsworth 8 a.m.	Leader H. Butling Ph. 825-4384
July 20, 21	Mt. Harrison in the Rockies Strenuous climbing. Contact leader for departure details.	Leader Gerry Brown Ph. 365-5730
Sun., July 21	Mt. Vingolf. Moderate day trip in Valhallas. Meet at Valhalla Lodge turn-off from highway 6, at 7 a.m., at north end of Slocan Lake	Leader Bev Mill Ph. 265-4451
July 27, 28	New Denver Glacier Must have lightweight camp gear and climbing gear. Meet at New Denver public wharf 6 a.m. Saturday.	Leader H. Ridge Ph. 352-6548
Sun., July 28	Ladies Day in Blue Grouse Basin. Easy day of hiking in alpine basin. Meet at 8 a.m. end of Enterprise Creek Road.	Leader O. Ringheim Ph. 825-4311
Aug. 3 - 11	Summer Climbing Camp	
Sun., Aug. 4	Caribou Glacier in Kokanee Park. Easy day of hiking and scrambling. Meet at beginning of Keen Creek Rd. into the park at 8 a.m.	Leader Stan Baker Ph. 359-7346
Sun., Aug. 11	Sunset Lake and Pontiac Peak. Easy scramble. Meet in Ainsworth at 7 a.m.	Leader Leo Gansner Ph. 352-3742
Sun., Aug. 18	Drinnon Peak , Drinnon Lake Splish-Splash. Easy access area; peak may involve some rock climbing. Meet at beginning of Hoder Creek Rd. 7 a.m.	Leader Peter Wood Ph. 359-7107

Aug. 23, 24, 25, 26	Lake O'Hara 4 day trip in the Rockies. Something for everyone in the family. Contact leader for details.	Leader Bert Port Ph. 365-5716
Sun., Aug. 25	Unnamed peak up Ladybird Creek. Meet at Raspberry Creek school at 7 a.m.	Leader Bill Michaux Ph. 367-7284
Aug. 31, Sept. 1, Sept. 2	Mt. Cooper. Strenuous 3 day trip. Contact leader for details.	Leader P. McIver Ph. 362-7674
Sun., Sept. 8	Rock climbing on Mt. Whitewater. Car camp in Retallack Saturday night.	Leader I. Hamilton Ph. 365-6749
Sept. 14, 15	McKean Lakes and Woden Peak. Overnight camp at lake. Contact leader for details.	Leader Sue Port Ph. 365-5716
Sun., Sept. 22	Dominion Mt. Easy day trip. Meet at Barrett Creek turn-off at 8 a.m.	Leader Bill Genge Ph. 352-5884

ACKNOWLEDGEMENTS

The Editor would like to thank Pat Gibson, Eileen McKerral and Anna James for doing the typing, and Gordon Stein for the titles.

The article on avalanche rescue by Bruce Harding is from the B.C.M.C. Newsletter, October 1973..