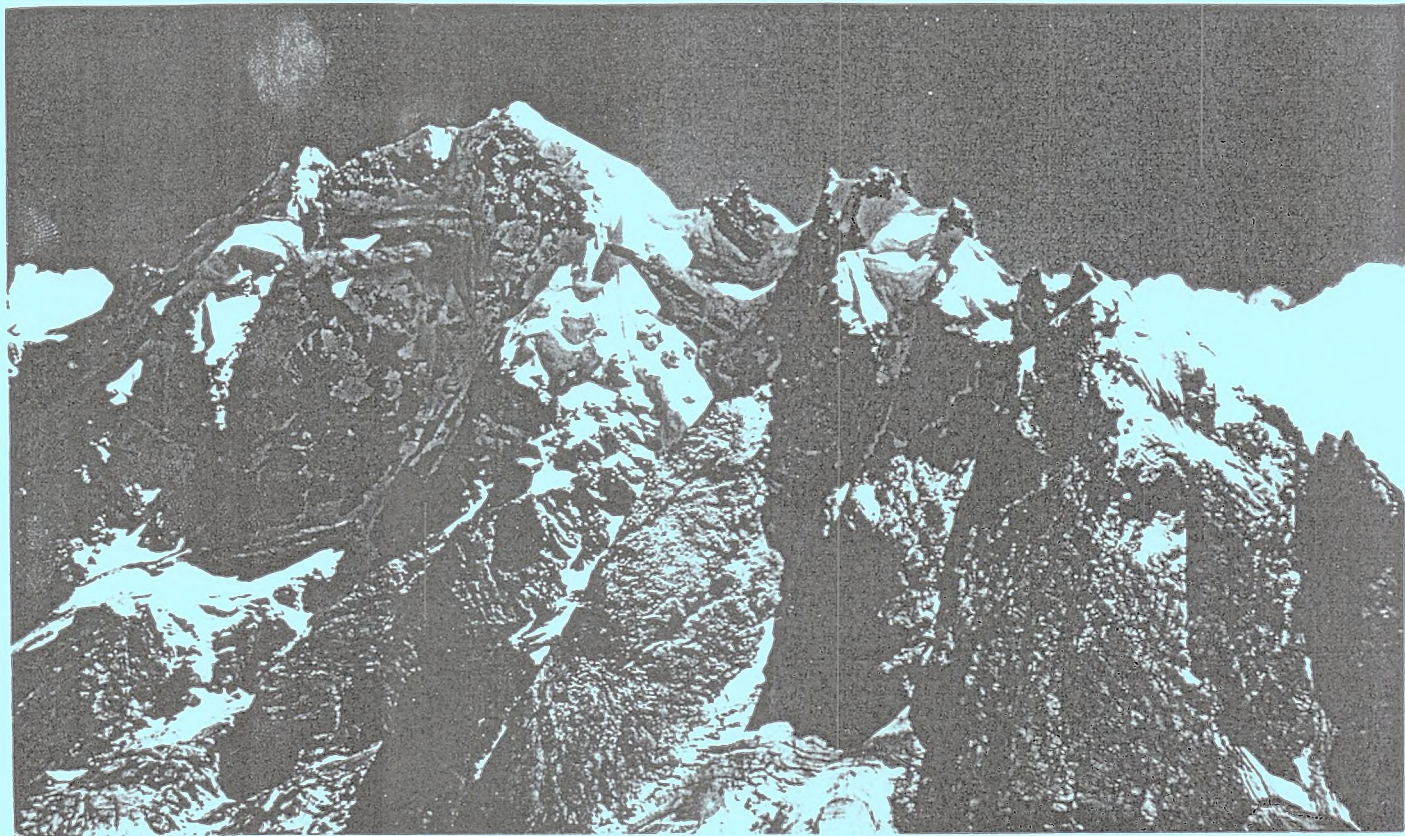


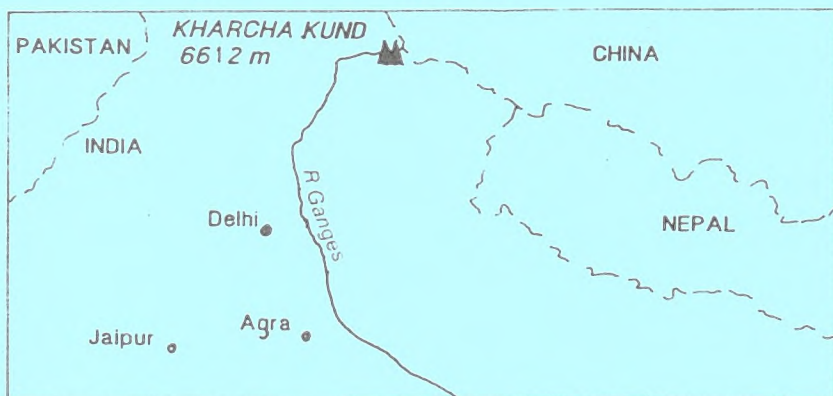
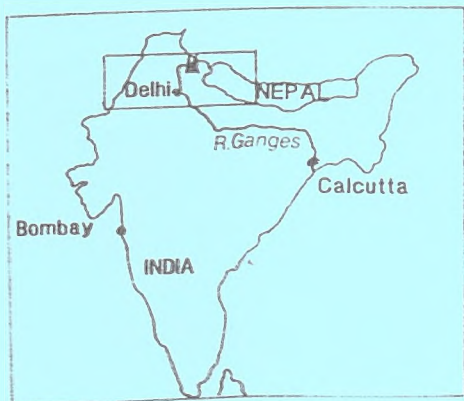
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KHARCHA KUND NORTH RIDGE EXPEDITION 1987

Patron: Sir Jack Longland



Kharcha Kund: North Ridge follows right skyline.



Pete Scott

Bobby Gilbert

Robin Beadle

Rob Tresidder

KHARCHA KUND NORTH RIDGE EXPEDITION

1987

An expedition to the Gangotri Glacier area of the Garhwal Himalaya, India by four members of the Oread Mountaineering Club, from 18th August until 30th September, 1987.

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Cover photograph: Neil McAdie

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Burtons Biscuits	- shortbread
J W Thornton Ltd	- fudge
Phoenix Mountaineering Ltd	- helmets and tent mending kit

For supplying their products at a discount:

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Allcord Ltd	- Cousin ropes
Berghaus Ltd	- cagoule
Faces	- large quantity of gear at discount
RAB Down Equipment	- duvet jackets and sleeping bags
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- loan of bag taping machine
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- purchase and packaging of
hill food

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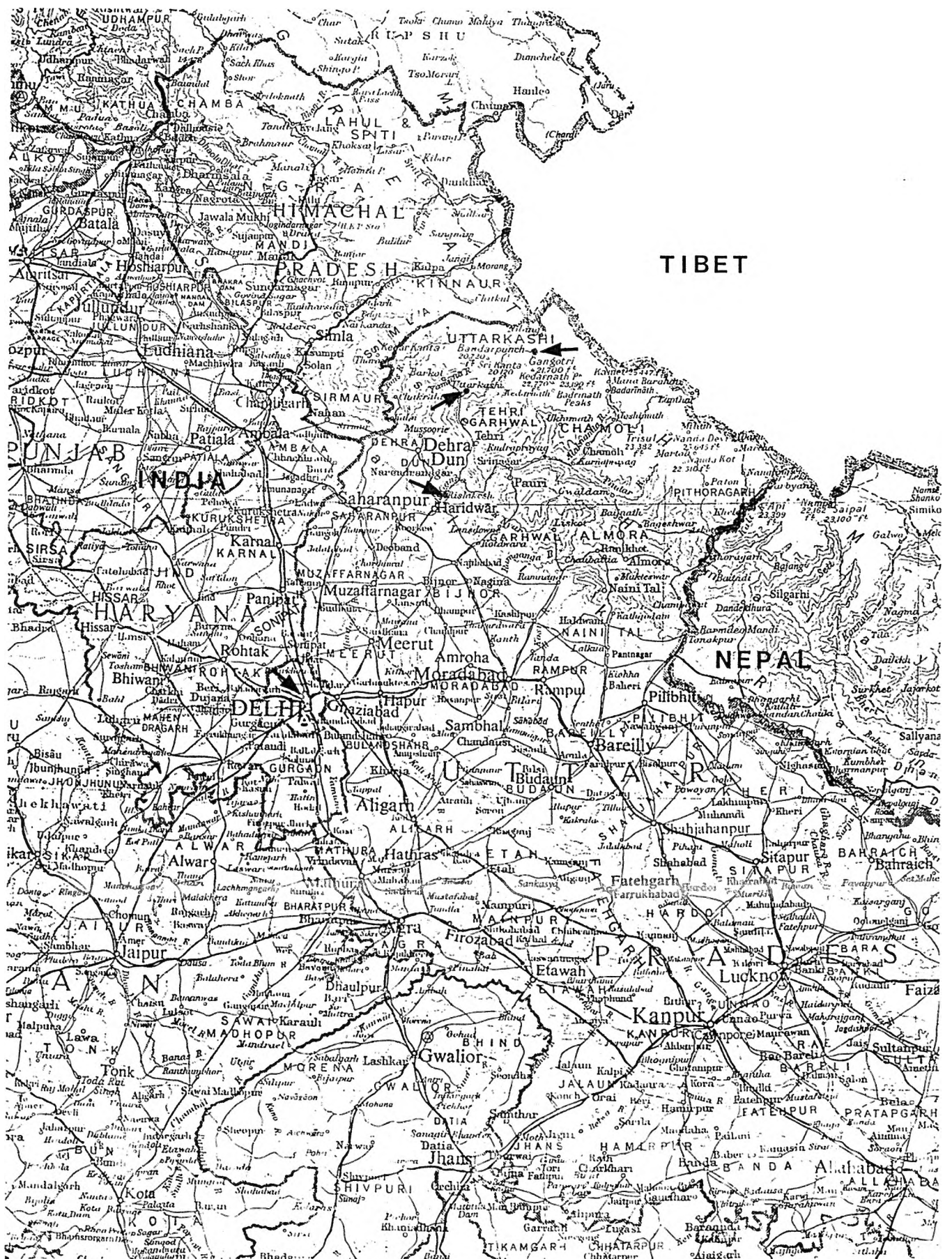
Sir Jack Longland, our patron, for his active involvement during the planning, and encouragement at all times;

Dave Mackintosh for lending us his tent when he heard that an expedition tent had been stolen.

ABSTRACT

A British team comprising Robin Beadle, Bobby Gilbert, Rob Tresidder and Pete Scott, all of the Oread Mountaineering Club, climbed the North Ridge of Kharcha Kund in Alpine style. The mountain is 6612m in altitude and situated in the Gangotri Glacier area of the Garhwal Himalaya, India. The summit was reached on the morning of 18th September, 1987 after a 5½ day ascent and a 1 day approach from base camp at Sundaban. Descent was by the normal West Ridge route and took 1½ days to base camp. Difficulties were encountered on rock up to Alpine VI, A1 and ice up to Scottish V. It was the first ascent of the ridge, and first British ascent of Kharcha Kund.

Figure 1 General Map



1. INTRODUCTION

In the early summer of 1986, Bobby and I had independent, but as yet ill formed plans to climb in the Himalaya in the near future. Having sounded each other out and decided to combine forces, we needed to select a suitable objective, and two more suitable members for the team. Neither task was easy!

Our constraints were:

1. Must not be prohibitively expensive.
2. The climbing season must correspond with the period we were available to go.
3. The route must be suitable for a small team in Alpine style on their first Himalayan expedition.
4. It should be a new route, preferably on a virgin peak.
5. To justify going to the Himalaya, the mountain should be an order of magnitude bigger than an Alpine peak.

A trip to the RGS revealed that the Gangotri met our requirements fairly well, and there was plenty of information from previous visitors available. The area, situated 200 miles north of Delhi, also had the advantage of relative ease of access. Initially, too much emphasis was placed on the objective being an unclimbed peak. We are indebted to Neil McAdie: firstly for persuading us to go for one of the area's more major summits rather than some insignificant, albeit unclimbed, spot height; and secondly for inspiring us with his photo of the route. After seeing Neil's photo and deciding the route was feasible, we immediately requested permission to attempt it from the Indian authorities. In retrospect, the way we finally found our objective was much more satisfactory than using a process of elimination, selecting peaks purely on the merit of being unclimbed.

Rob joined the expedition in its early stages during October, but finding a suitable fourth member with the necessary holiday available took a long time. In February, just soon enough for the MEF's interview for a grant, Pete (who was one of the first people we had asked to join us) found he could after all secure the leave required, and decided to come. By the end of February then, we had a full team and our objective was booked.

Two previous expeditions had made successful ascents of Kharcha Kund, and the North Ridge had seen several attempts. The mountain was first climbed by a Japanese expedition in 1980. After failing on the North Ridge, probably near the Five Pinnacles, they put two parties on the summit via the West Ridge using fixed ropes. In 1982 Rick Allen and Ernie McGlashan of Roy Lindsay's Scottish party failed on the North Ridge at about 5500m, just below the Five Pinnacles. They encountered very bad conditions: powder snow on boiler plate slabs. The second successful expedition was in 1983. An Austrian team led by E. Lindenthaler climbed a new route on the NE Wall and also made two ascents by the original West Ridge route. Both routes were climbed in two day pushes. In 1984 Pat Littlejohn and John Mothersele narrowly failed to make the first British ascent, climbing the West Ridge in Alpine style. They retreated 250m from the summit due to exhaustion and altitude sickness. Subsequently a German expedition failed to make any progress on the North Ridge because of excessive snow cover. They were climbing in May 1986 rather than in the more usual August to October season. We found some evidence of these previous attempts as far as the Five Pinnacles, and there were many fixed ropes on the descent ridge.

2. PERSONNEL

The expedition members were:

Robin Beadle, 25, research assistant, British, 8 years climbing, 4 Alpine seasons (North Faces of Badile and Dru, Walker Spur, Bonatti Pillar), Peruvian Andes 1984 (Yerupaja, 6634m), Mnt Kenya 1985 (Diamond Couloir).

Bobby Gilbert, 21, student, British, 4 years climbing, 3 Alpine seasons (North Face of Eiger, Walker Spur, Bonatti Pillar).

Rob Tresidder, 41, joiner, British, 24 years climbing, 10 Alpine seasons (North Faces of Eiger, Badile and Cima Grande).

Pete Scott, 44, college lecturer, British, 25 years climbing, 18 Alpine seasons (North Faces of Eiger, Matterhorn and Grandes Jorasses, and all the Brenva routes on Mont Blanc from the Old Brenva to the Peuterey Ridge), Arctic Norway (1965), USA (1979), Mount Kenya (1981).

Although no training was undertaken specifically for the expedition, the team members had climbed together on rock, ice and in the Alps.

3. ADMINISTRATIVE AND LOGISTICAL REPORT

3.1 Peak Booking and Visas

Indian regulations stipulate that expeditions intending to climb mountains over 6000m in altitude must book in advance and pay the appropriate peak fee. They must also be accompanied by an Indian liaison officer, who is equipped and fed by the expedition. The Indian Government pay his or her wages. We were very fortunate with our LO, and indeed, he was very much a friend to all of us.

In early January we applied to the Indian Mountaineering Foundation in New Delhi for permission to climb three unnamed peaks surrounding the Swachand Bamak (a glacier, see Figure 2). Permission was refused for all three by the end of the month, and unacceptable alternatives offered. In the light of continued research, an immediate request for Kharcha Kund was lodged, and a provisional confirmation of the booking received in late February. In early March payment of the peak fee of US\$ 900 was arranged by direct transfer from the expedition's bank (Nat. West) to the New Bank of India, New Delhi. There was considerable difficulty with the transfer, which was eventually received and acknowledged by the IMF in June, thus finalising the booking.

Visas were applied for in February from the Indian High Commission, London. They cost £20 and were issued in May.

3.2 Insurance

The expedition was insured by Devitt Midlands Ltd via the BMC brokers. The premium attracted was £449.

3.3 Travel, Freight Arrangements and Local Transport

Delhi was reached by a direct Air India flight. We were kindly allowed 20kg per head of free excess baggage on the outward journey, so we each had a total weight of luggage of approximately 40kg plus 15kg of hand luggage. Even so, big boots etc were worn onto the plane. The totals included 14kg each of hill food. There were no unusual customs procedures.

Our gas canisters were air freighted by SOS Air Cargo, Manchester Airport. It took 3 days of negotiating to retrieve them at Delhi Airport.

Travel to Uttarkashi was by a 14 hour bus journey, leaving the Inter State Bus Terminus in Delhi at 10pm and changing buses approximately halfway (in terms of time) at Rishikesh (Figure 1). All the base camp food and fuel was bought in Uttarkashi. Porters, a cook and all base camp equipment (kitchen tent, stove, utensils etc) were hired here from Mount Support trekking agency.

A six hour bus journey was taken to Gangotri, where a day was spent acclimatising. The walk in to base camp took three days, camping overnight. Details are given below.

3.4 Acclimatisation Details for the Approach and Climb

<u>Place</u>	<u>Altitude</u>	<u>Date of Arrival</u>
Delhi		RB & PS 18/8/87 BG & RT 29/8/87
Uttarkashi		BG & PS 28/8/87 RB & RT 30/8/87
Gangotri	3100m	31/8/87
Bhojbasa	3875m	2/9/87
Tapovan	4400m	3/9/87
Sundaban (base camp)	4700m	BG & PS 4/9/87 RB & RT 5/9/87
Foot of Ridge	4925m	RB, BG & PS on recce 1 6/9/87
Five Pinnacles	5500m	RB & BG on recce 2 9/9/87
Bivi 1	5117m	12/9/87
Bivi 2, Five Pinnacles	5450m	13/9/87
Bivi 3, col below	5840m	14/9/87
Bifurcated Pinnacle		
Bivi 4, top of Great North Tower	6085m	15/9/87
Bivi 5, Tower in Col	6020m	16/9/87
Bivi 6, North Col Sup	6000m	17/9/87
Summit	6612m	18/9/87
Bivi 7, on West Ridge	5500m	18/9/87
Return to Sundaban	4700m	19/9/87

4. DESCRIPTION OF WEATHER CONDITIONS

The weather conditions were exceptionally good in the Gangotri region during the 1987 "post monsoon" season. The monsoon itself never actually materialised, so the rock pitches were completely clear of snow. Unconsolidated powder through to very hard ice was experienced, but on the whole, snow conditions were good.

The sky was generally clear during the day, although cloud built up early behind the ridge at the end of the glacier and poured over it as the day progressed. Nights were also clear and cold (minimum night time temperature was -15°C , generally -7°C). The worst weather we experienced was an afternoon of mist and light snow showers at the North Col.

Base camp was usually warm and sunny enough for sunbathing. Night time temperatures were also low here though (generally -5°C).

5. ROUTE DESCRIPTION: KHARCHA KUND NORTH RIDGE

Alpine rock grades and Scottish winter grades have been allocated to rock and ice pitches respectively. 120m of 7mm rope was carried by the expedition and fixed where stated to facilitate retreat, had it been required. Five rock pegs were also left.

Base camp was at Sundaban (alt. 4700m), and the mountain reached from here by crossing the Ghanohim Bamak. On a reconnaissance we discovered a comfortable bivouac at the foot of the ridge (alt. 4925m).

Scree slopes on the west side of the ridge were climbed to meet the ridge at a notch at the start of the difficulties. The first bivouac was made here. The same point could be reached by scrambling up the ridge itself for about 250m, as on reconnaissance, but this was found very loose.

The ridge was followed with no great difficulty (III) for about 250m until a short crack led to a 6m traverse across a slab (IV, fixed rope). A short descent was made to scree covered ledges which were followed leftwards. (These ledges lie at the top of a couloir falling to the foot of the ridge on its left hand side.) Unprotected, loose rock (III) was then followed diagonally up leftwards, to a point on the ridge ahead above the first tower (Robin's Flake).

The right arete of a slab above (V, fixed rope) was taken to a diedre. An exit on the left by a short, steep corner crack (V) led to an excellent platform on the crest of the ridge. The compact boss of rock ahead was surmounted (IV), and the ridge then followed easily for a pitch. A line keeping to the left of the crest was followed until an icy gully was reached. Here we found it easiest to move back right onto the rib, and continue upwards until a 6m leftwards traverse led to a snowpatch (III).

The snowpatch was climbed (50m). This led to a steep section of rock from which a leftwards exit led to a shoulder on the ridge (V). A sentry box was climbed to a belay. A flakey crackline followed (V, 50m) leading to the top of the first of five pinnacles (alt. 5500m). This pinnacle was descended by abseil, as was the second (fixed ropes). The third small pinnacle was crossed with no difficulty, and a bivouac made on a ledge system on the eastern side of the fourth.

A descent on the eastern side bypassed Pinnacle 5 to reach the foot of a snow slope. This was climbed for two rope lengths to a rockband which was passed by a leftwards fault (Scottish III) giving access to the upper snow/ice wall. The wall was climbed for 250m to the right of a large serac band. An excellent bivi site is available at the top of this wall. The snow/ice arete, conspicuous from the glacier, was taken easily to its end on top of a pinnacle (alt. 5874m). A scramble and abseil (fixed rope) were made down the back of this pinnacle, and a steep snow slope on the immediately following "Bifurcated Pinnacle" ascended. We passed through the gap in this pinnacle to reach the eastern side, traversed some flakes and made a diagonal abseil (fixed rope) to bypass the bulk of the pinnacle. A short climb up a diedre (10m) regained the ridge, and the third bivouac was made at the col behind the pinnacle (alt. 5840m).

A steep snow/ice crest was climbed, almost to the foot of the next impressive rock buttress, Longland Buttress. A traverse left on soft snow gained mixed ground on the east of this buttress (Scottish IV). From here, a steep snow slope was ascended diagonally back right to gain a corniced ridge. This gradually steepening ridge was followed to the foot of the initial pinnacle of the Great North Tower (GNT), where a traverse right led to a good belay. Two excellent ice pitches (Scottish IV) on the right of the pinnacle regained the crest of the ridge. The ridge was then followed for three pitches towards the main part of the GNT (rock move IV, mixed move Scottish IV). At a large bergschrund, a leftwards traverse across snow was made to the eastern

edge of the tower. Here a system of grooves led for one pitch to a snow patch on the summit of the tower (VI, A1 3pts). We made our fourth bivouac here (alt. 6085m).

From the snow patch the crest of the GNT was climbed for two pitches, blunt at first, but after a notch becoming a really classic knife edge ridge (III/IV, 1 rope move). Two 50m abseils were made into the unknown down the very impressive South Face of the GNT, to arrive at the North Col Inf. (alt. 5957m). From the col a steep ice slope was climbed up leftwards for two pitches, followed by a difficult traverse left on ice, bypassing a gendarme on the ridge (Scottish V). This gained a cave below a chimney (V, A1 2pts) leading to the very summit of the Tower in the Col (alt. 6068m). One abseil was made down the far side of the tower, and poor snow climbed and traversed for a pitch (Scottish III/IV) to a notch before the next small pinnacle. Here the fifth bivouac was made in a "V" between ice and rock on the crest of the ridge (alt. 6020m).

The traverse along the ridge was continued for 10m, and a 20m diagonal abseil made on the east side to a snowy ledge (left a jammed abseil rope). A traverse on poor snow (25m, Scottish IV) was made to the North Col Sup. (alt. 6000m). We bivouacked here in a snow hole, but a rock ledge is also available.

Easy snow slopes were climbed to the summit (6612m, approx. 3 hours).

Figure 3 Topo of Kharcha Kund North Ridge

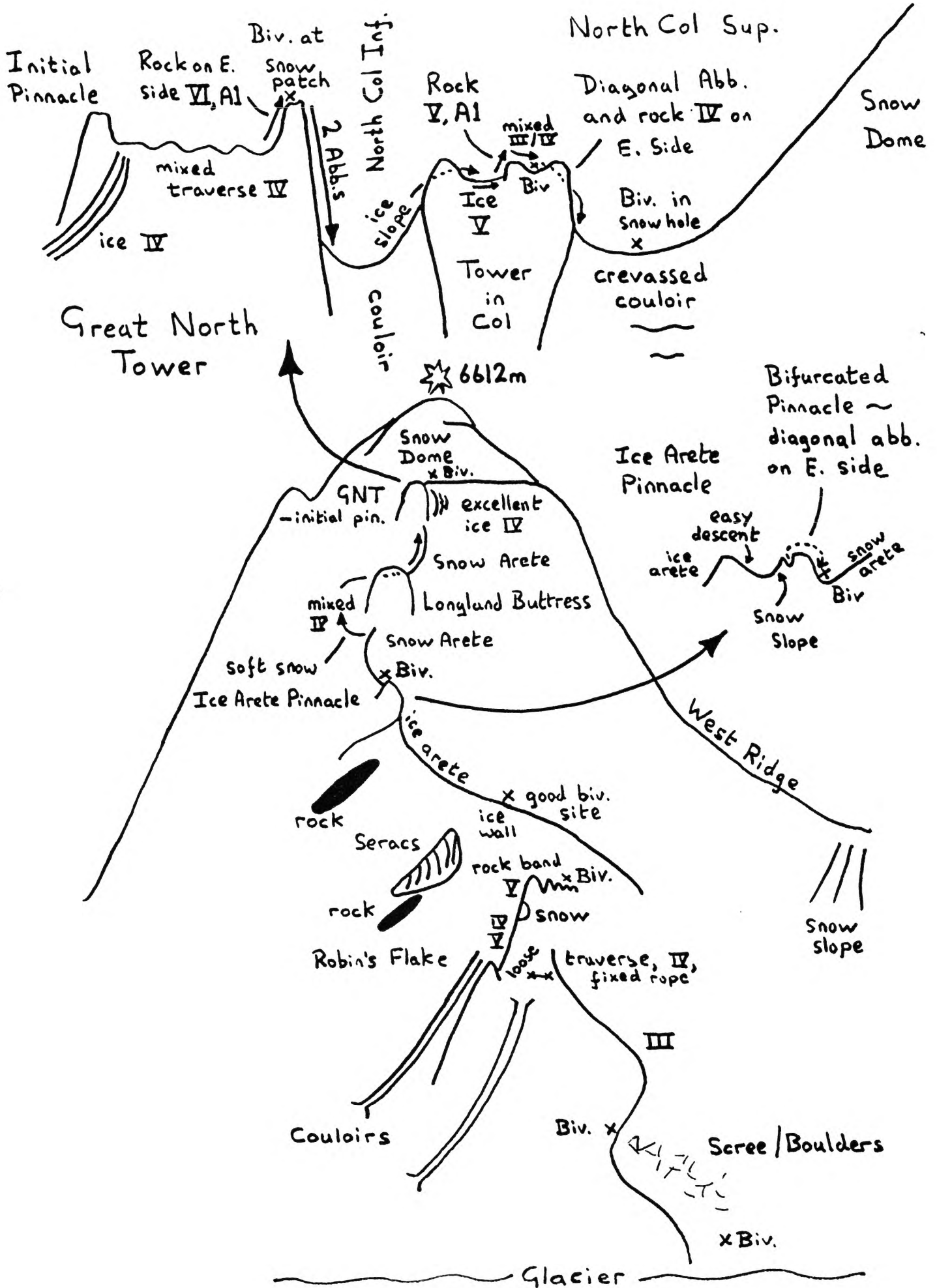
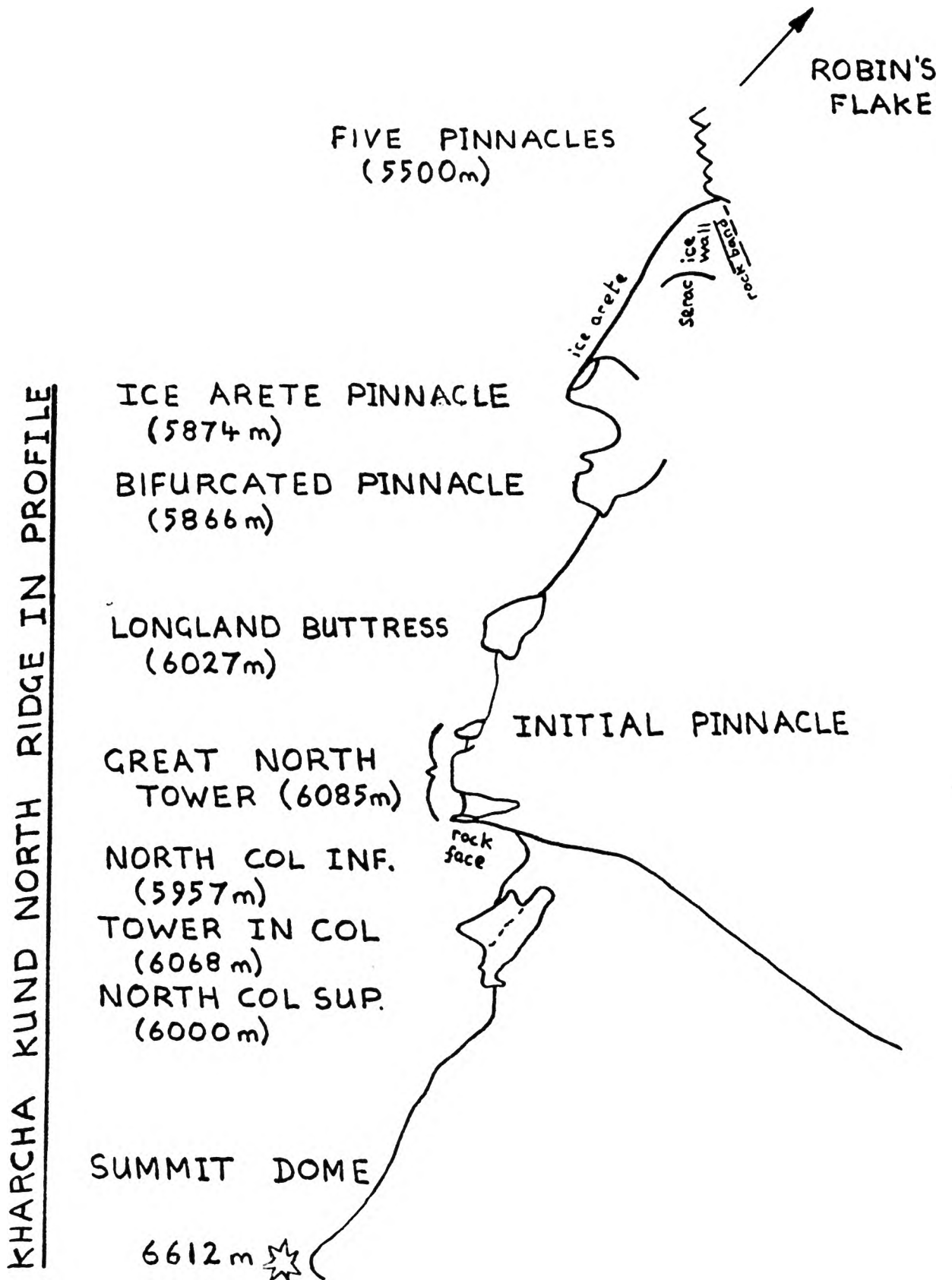


Figure 4 Kharcha Kund North Ridge in Profile

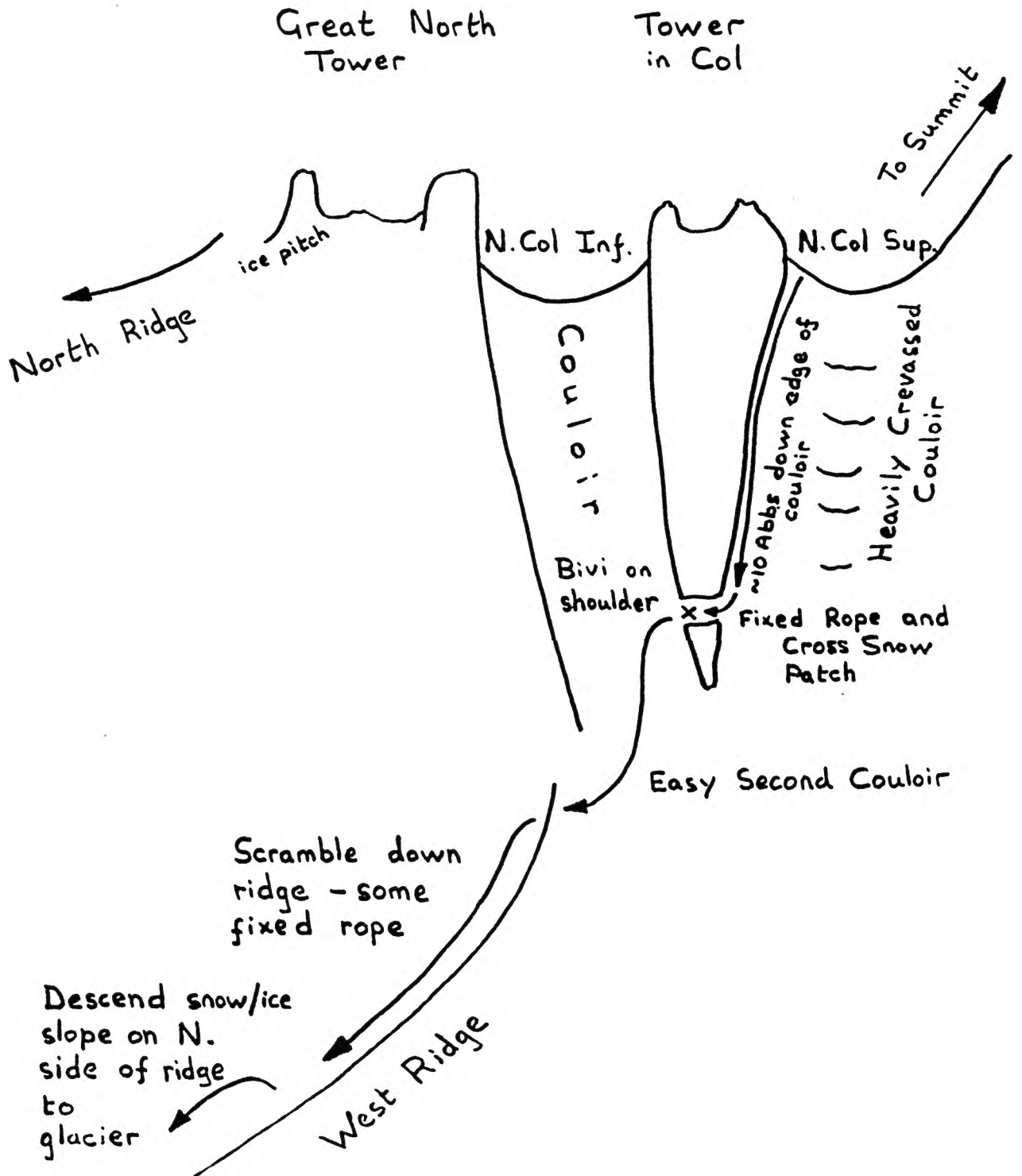


6. DESCENT DESCRIPTION: KHARCHA KUND WEST RIDGE

From the North Col Sup the big steep couloir to the west was descended. This was achieved by 10 to 12 awkward abseils, keeping to the rock on the north of the couloir to avoid the heavily crevassed centre. Fixed ropes led to a snowfield, which was crossed to a shoulder and our seventh bivouac.

From the shoulder a second ice couloir was easily descended until the crest of the West Rib could be gained. This was descended (scrambling, some fixed ropes/abseils) until a snow slope on the northern flank was reached, and descended to the Ghanohim Bamak.

Figure 5 Topo of the Descent of Kharcha Kund by the West Ridge



7. CONCLUSIONS

7.1 The Gangotri is a suitable area for a first Himalayan expedition. The area is receiving a lot of attention however, so there is competition for the best unclimbed routes. Bookings should be lodged with the IMF as early as possible.

7.2 For parties seeking a sustained, mixed route, Kharcha Kund North Ridge offers high quality ridge climbing from 5000m to 6600m. There are many other routes in the Gangotri worth repeating (see references listed in Section 8).

7.3 September is perhaps the optimum time to visit the Gangotri. The monsoon has then passed and the cold weather and snow experienced later in the year is also avoided. Our own expedition benefitted from the excellent climbing conditions brought about by the lack of monsoon this year.

7.4 The expense (peak fees and liaison officer's gear) and bureaucracy (booking/negotiations with the IMF) involved in climbing a 6000m+ mountain in India are significant drawbacks. The alternatives of a trekking peak in the Himalaya or any mountain in South America are therefore worth considering.

8. RESEARCH MATERIAL, REFERENCES AND MAPS

Extensive research was done through the pages of Mountain magazine's Info. column, and visits were made to the RGS map room and Alpine Club library.

The following references were found particularly useful:

Moran, Martin, Views on the Gangotri, 1986 Alpine Journal, pp 57-64, (overview and accounts of Bhagirathi I West Ridge FA and Sunshine Pillar, Kedardome FA);

Mountain 84, pp 22-27, (overview, photos and account of Shivling East Ridge FA);

Lindsay, Roy, The Scottish Garhwal Himalaya Expedition 1982 Final Report, (Ascent of Kirti Stambh and attempt on Kharcha Kund North Ridge), AC library.

Also useful are the notes on mountaineering in India available from the BMC, and the Expedition Advisory Centre's factsheet for expeditions to India. The renowned Lonely Planet guidebook to India is invaluable for survival as far as the roadhead.

The following maps were used:

Garhwal-West, 1:150,000, Swiss Foundation for Alpine Research. We used a photographic enlargement of this map on the hill. BMC may supply a photocopy on request.

Mountaineering Maps of the World, p217 has a Japanese map, excellent for identifying peaks (Figure 2 of this report).

APPENDIX 1 MEDICAL REPORT

Rob Tresidder

Happily, this was a medically uneventful expedition, so it is difficult to comment on the adequacy or otherwise of our arrangements. Owing to gaiter failure, one member suffered mild frostbite in the snow on the summit dome. In addition there were the usual gut complaints, perhaps exacerbated by the repetitively spicy diet at base camp. On return to England, one member was diagnosed as suffering from giardia lamblia.

Immunisation was obtained before departure against tetanus, cholera, typhoid, hepatitis, polio, and rabies, and a dental check was advised.

Acclimatisation was achieved by the time honoured method of gradual height gain, without recourse to drugs such as Diamox. Apart from the danger of using a drug that may induce a false confidence, there has been a lamentable lack of debate in the climbing press of the ethical issues involved with this drug.

Members of the expedition were urged to put together their own kit for the walk in, to include: plasters, mild painkillers, sun screen, lip salve, anti-malarial drugs, insect repellent, water purification (4 drops, ie 0.2ml 2% iodine solution, to 1 litre of water). In addition, I kept a base camp kit and two mountain kits whose contents were as follows:

Base camp:

plastic sandwich box
contents and use list

cleansing:	cotton wool 50g; gauze swabs 20; mediswabs 25; 2% iodine solution 25ml
dressings:	plasters (20 assorted knuckle and fingertip); Elastoplast strapping (5cmx1.5m); melolin (4x 10cmx10cm); bactigras (4x10cmx10cm); micropore (1 roll 2.5cm); triangular bandage; conforming bandages (7.5cmx4m and 10cmx4m)
tools:	IV canulae (4); syringes (2x2ml); needles (5x 21gx40mm); Mersilk hand held suture; scissors; fine tweezers
ointments:	Timoped (30g); Cal-a-cool (40g); Lanacort (15g); Autan (30ml)
inhaler:	Salbutamol (100 micrograms)
pills:	Diazepam (15x2mg); Chlorpheniramine (20x4mg); Vermox (12x100mg); Paracetamol (100x500mg); Metronidazol (28x400mg); Dulcolax (20x5mg)

Mountain Box:

plastic container

contents and use list

cleansing: Mediswabs (5)

dressings: gauze swabs (10); triangular bandage;
steristrips (3x6mmx75mm and 5x3mmx75mm);
melolin (1x10cmx10cm); Bactigras
(1x10cmx10cm); conforming bandage (1x5cmx4m
and 1x10cmx4m); 5cm Elastoplast dressing
strip; assorted fingertip and knuckle plasters

tools: syringe (1x2ml), needles (5x25gx16mm)

ointments: Chloramphenicol (10g)

suppositories: Anusol (6)

IM injection: benzyl penicillin (10x600mg ampoules) and
water in ampoulespills: Paracetamol (40x500mg); Pentazocine (50x25mg);
Erythromycin (50x50mg); Imodium (30x2mg)books: Richard Dawood ed. "Traveller's Health" (OUP 1986)
Peter Steel "Medical Care for Mountain Climbers"
(Heinemann 1976)

APPENDIX 2 FINANCIAL REPORT

Bobby Gilbert

Expedition Accounts

<u>Expenditure</u>		<u>Income</u>	
<u>In England</u>	£		£
peak fee	592	Mount Everest Foundation	600
transport	10	British Mountaineering Council	450
air fares and airport tax (4x£380)	1520	Derbyshire County Council	200
food exported *	190	Oread MC	100
team equipment	292		
LO's equipment	178		
gas (inc. freighting)	186	Matlock Mercury	
medical equipment	80	(for newspaper article)	<u>25</u>
camera film	225		1375
insurance	449		
administration:			
reports and maps	9	member's contributions (4x£954)	3816
photographs	17		
printing of prospectuses	25		
printing of reports	20		
photo's for sponsors	24		
miscellaneous			
(postage, 'phone etc)	<u>90</u>		
	3907		
<u>In India</u>			
general travel in Delhi			
and sightseeing	129		
travel from Delhi to			
roadhead and return	57		
base camp food	86		
base camp fuel	5		
accommodation and food			
for 70 man days	305		
porters including their			
travel expenses for			
196 man days	543		
cook inc. his travel			
expenses for 27 days	95		
hire of mess tent and			
cooking equipment	45		
130 postcards of Kharcha Kund	<u>19</u>		
	1284		
TOTAL	<u>£5191</u>	TOTAL	<u>£5191</u>

* This refers only to communally owned equipment. Members also bought personal equipment to the value of around £200 each, according to requirements.

Notes on Fundraising

Funds were raised mainly by application to grant awarding bodies and from members' own resources. However, another "hidden income" was in the form of discounts on members' personal gear, and on expedition gear and food. The various grant awarding bodies and sponsors are listed in the Acknowledgements. Special mention should be made of Rab Carrington, who let us have some prototypes of his new down jackets at a very cheap price.

Air India gave us an extra 20kg each baggage allowance on the outward journey, and 5kg each on the return. This is equivalent to £1000 worth of excess luggage!

Most other sponsors gave us discounts of 25% to 30%. If this hidden income is taken into account, along with the amount spent on personal gear, the total budget comes to over £6000, compared with our original estimate of £7000.

APPENDIX 3 FOOD

Rob Tresidder

Hill Food

An early decision was made to buy all the food for consumption above base camp in the UK, and to buy all the food to be eaten at or below base camp in India. Before we left home, I planned for two 10 day attempts on the ridge. We decided to eat only food which did not need to be cooked above base camp, and use all our fuel for melting snow. I could find no figures for the energy requirements for high altitude climbing, so somewhat arbitrarily settled on 3000kCals/day. Given the low temperatures and high energy output, we would probably have actually used 5000kCals/day or more. I am still not certain whether high altitude loss of appetite is something that should simply be lived with or whether it should be fought against. The daily allowance was as follows:

g	kCals
80 muesli	320
28 chocolate drink	170
100 cheese	430
66 2 crunch bars	300
100 Thornton's fudge	450
100 nuts and raisins	500
50 pumpernickle	120
100 sausage or cheese	430
80 Burton's Royal Edinburgh shortbread	204
734	3024

Of the above foods, we found that the Burton's shortbread, the cooked sausage, the crunch bars and the nuts and raisins were by far the most palatable items. All of us had problems with the cheese. In the event we took five days food on a climb that lasted seven and still had a little left on our return to base camp. One climber found that he had lost 20lb on return to the UK. Three gas cannisters per head were easily enough for six bivis.

Special mention is due to Burton's Biscuits and JW Thornton Ltd for donations of their products.

Base Camp Food

All base camp food was bought in Uttarkashi. A shopping list is included for reference:

rice		30kg @ 6Rs	180Rs
pakora flour		1kg @ 8Rs	8Rs
flour (chapattis)		10kg @ 34Rs	340Rs
kerosene		40 litres @ 2.6Rs	104Rs
sugar		15kg @ 8Rs	120Rs
tea		0.5kg @ 52Rs	26Rs
oil		8kg @ 30.25Rs	242Rs
spices (4 types)		1kg	45Rs
salt		2kg @ 2.5Rs	5Rs
dal (5 types)		2kg @ 13Rs	26Rs
		4kg @ 8Rs	32Rs
		4kg @ 9Rs	36Rs
		5kg @ 59Rs	295Rs
powdered milk		2kg @ 26Rs	52Rs
porridge			
greengrocery	potatoes	10kg	394Rs
	onions	10kg	
	garlic	0.5kg	
	ginger	0.5kg	
	green bananas	2kg	
	pears	2kg	
	apples	2kg	
	lemons	1kg	
	eggs	150	
soup (4 types)		17 pkts	103Rs
washing powder		1 pkt	9Rs
sauce		1 bottle	12Rs
pickle		1 jar	11Rs
jam		2 jars @ 17.5Rs	35Rs
biscuits		10 pkts @ 3.4Rs	34Rs
toffees		120	52Rs
chocolate bars		4 @ 4.25Rs	17Rs
candles		12	12Rs
matches and cigarettes for cook			36Rs
jerry can		2x20l @ 32.5Rs	65Rs

The exchange rate was approximately £1 = 20Rs

APPENDIX 4 GEAR LIST

A list of all equipment taken follows for reference. Items in bold were carried on the route.

Personal

balacava, silk balacava, 2 pairs mitts , 2 pairs thermal gloves, thermal vest and long johns, salopettes, fibre pile jacket, duvet jacket, double boots, Yeti gaiters, Goretex jacket and overtrousers, 4 pairs long thick socks, long, warm thin socks, 1 long sleeved warm shirt, combination of pullovers.

light cotton trousers, tracksuit bottoms, 3 T shirts, underwear and socks (4), strong trainers, shorts, swimming trunks, sun hat.

Climbing:

harness, helmet, axe and hammer, crampons, 3 prussic loops, 2 screwgates, sticht plate, nut key, rock boots.

Miscellaneous:

large and small rucksacks, holdall, sleeping bag, sheet liner, Karrimat, Goretex bivi bag, light poly bivi bag, camera equipment, headtorch +spare bulbs +4 batteries, whistle, compass, poly map cases, snow goggles and cheap sunglasses, 2 paperbacks, waterbottle, kfs, plastic mug, bin liners/poly bags, alarm watch, handkerchiefs, toilet kit and towel, 4 toilet rolls, penknife, lighter, matches, repair kit, personal first aid kit, lip salve, sunburn cream, glacier cream, mosquito repellent, small padlock.

travel documents, money, travellers cheques, pens etc.

Shared

Climbing:

each took: 2x8ft slings, 1x4ft sling, 10xlightweight krabs, 5xquick draws, 1 50m x 8.5mm climbing rope

each pair took: 1 set Rocks 1 to 8, 6 pegs , 6 ice screws

shared between 4: 1 45m x 9mm spare climbing rope, 1 x 120m x 7mm rope, 5m abseil tape, 1 set Friends 0.5 to 3, 1 set hexes 6 to 9, 10 mild steel pegs, 1 sky hook, 2 deadmen, 1 set Jumars, 1 bolting kit, 1 snow shovel.

Tents: 1 Quasar, 1 Phreedome, 1 Ultimate Tent, 1 Backpacker 2.

Stoves: 2 Camping Gaz Bleuét S 200 stoves with tower billy systems, 1 primus stove with fuel bottles, filters and spare parts.

Medical kits: base camp, mountain.

Miscellaneous: 5 cheap karrimats, spring balance, mending kit, tent mending kit, drinking tube, maps, guides (photocopies of useful references, India on a Shoestring), Travel first aid book, spare snow goggles, spare balacava, 2 packs playing cards, chess and orthello, bailing twine and big needle, monocular.

Liason Officer

Retained by him: rucksack, boots, dachs, thermal gloves, hat, gaiters, socks, waterbottle, duvet jacket, windproof suit, walkman + couple of cassettes, knife.

Returned to the Expedition: harness, crampons, ice hammer, sleeping bag, karrimat.

Consumables other than food

48 propane/butane mix fuel cylinders (supplied to order), fluorescent stars to mark boxes/use as route markers.

APPENDIX 5 ADDRESSES

Mount Support Trekking Agency,
Post Box No 2,
BD Nautiyal Bhawan,
UTTARKASHI - 249 193
(UP) INDIA

telegrams: MOUNTPOTER

Indian Mountaineering Foundation,
Benito Juarez Road,
NEW DELHI - 110 021
INDIA

telegrams: INDMOUNT
telephone: 671211