

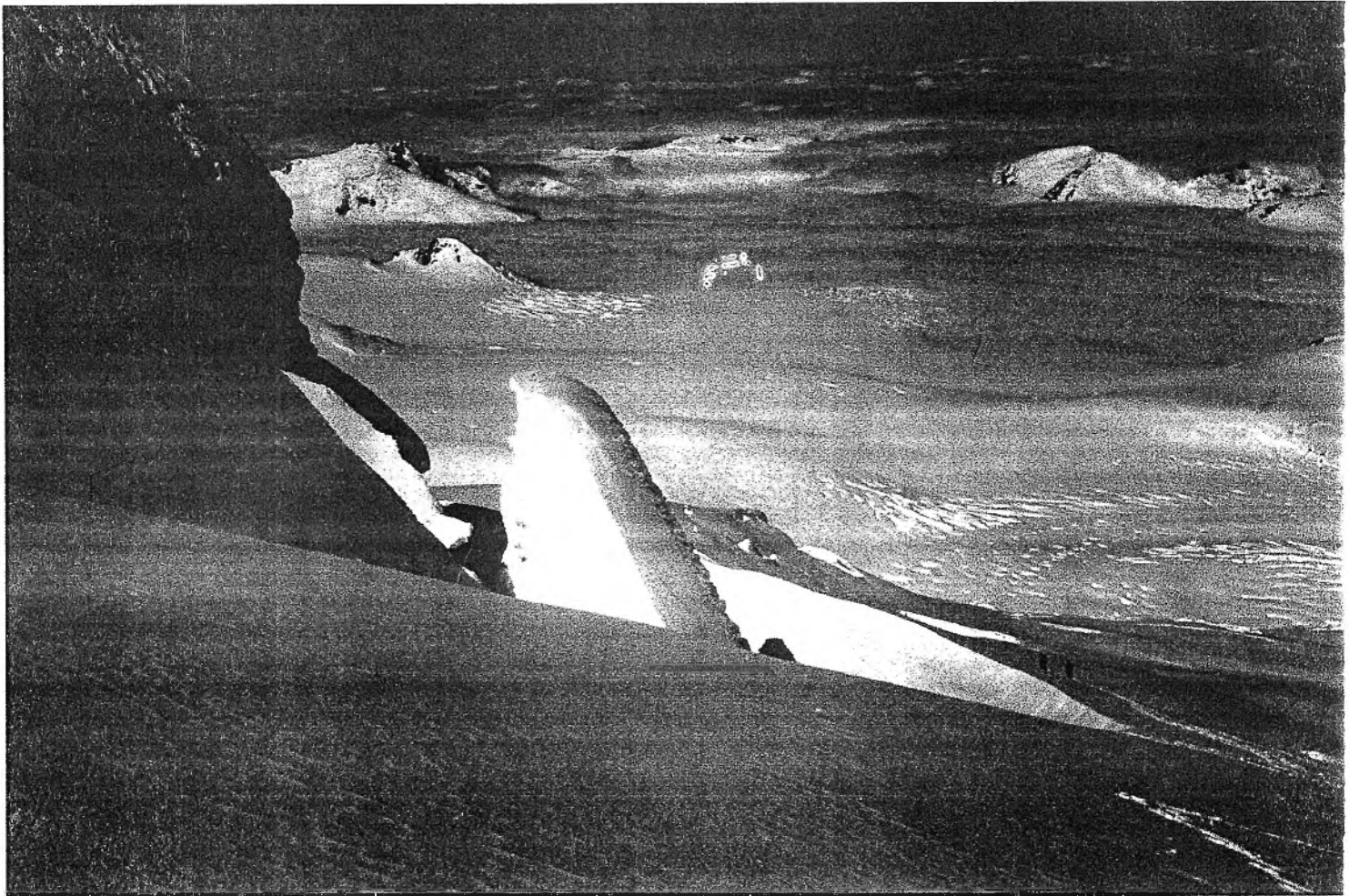
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Expedition Report
British - Italian Northern Patagonian Icefield Expedition

HIELO NORTE 1998

26 November 1998 - 5 January 1999



compiled by:

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TEAM MEMBERS

Alun Hubbard, Welsh, 29 years, Research Fellow
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SUMMARY

Between 26 November, 1998 and 5 January, 1999 we traversed a c. 200 km, north-south route across the Hielo Campo Norte from Laguna San Rafael and its spectacular calving glacier to the Baker Channel, exiting via the Steffan Glacier. Of the 5 weeks spent on the ice, we got only four days of what could be called decent weather, unfortunate even by Patagonian standards; the remaining days sat, usually towards the latter half, on a spectrum with moderate winds, low visibility and rain on one end and full tempestuous condition with driving sleet or snow on the other. Patagonia is what we asked for and Patagonia is what we got. Despite the generally appalling conditions, we succeeded; apart from the traverse we completed our scientific objectives and managed two first ascents snatched in the only (and laughably short) weather window available; Co. Pared Norte (3,005 m), Eric Shipton's original but aborted objective during his 1963 expedition, and another, unnamed peak* (2,970 m), some 2 km to the south. Neither peak was overly technically challenging (involving snow & ice up to 55°) but the latter peak was climbed in fairly hostile conditions (on the summit we were bombarded by large blocks of airborne windslab ripped up from the windward slopes) marking the onset of a storm which had us pinned down on a nearby col at c. 2,000 m for 5 days up to and including Christmas day. This delay put pressure on the final 45 km out via the long and arduously broken & crevassed Steffan Glacier, which was concluded successfully but without food. From the end of the glacier which terminated in a large berg and brash strewn lake and two large, un-crossable rivers flowing from it, we waited for a further three days (living off the 'fruits of the forest' and expending much energy chasing around any local wildlife that had the misfortune to chance upon us - these efforts proved entertaining even if spectacularly unsuccessful; not entirely surprising given our attire: plastic ski boots, salopettes and wielding ice-axes) before help eventually showed up, and we made our way out to the Baker Channel and on to Tortel by boat.

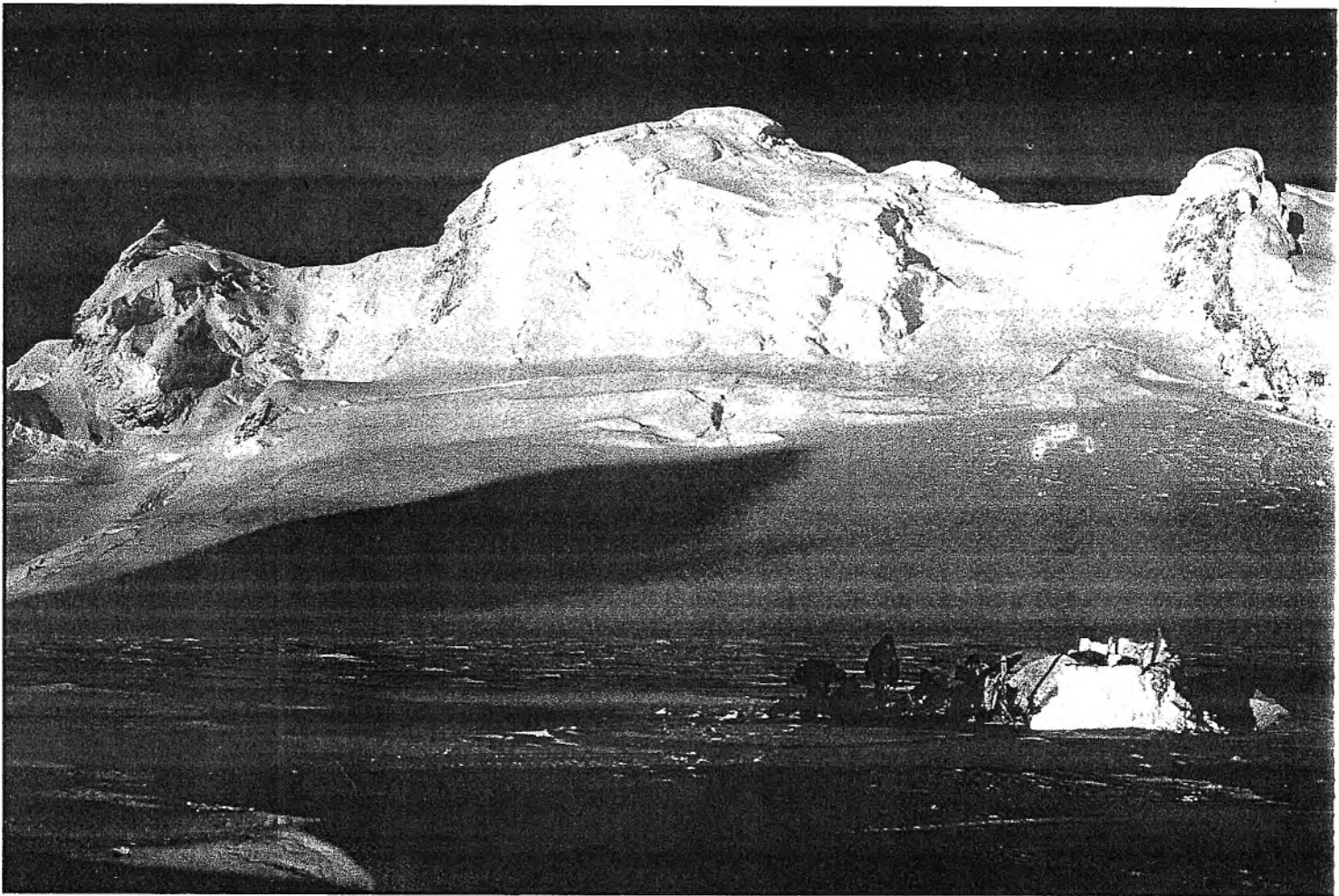
During the traverse we took 55 radio-echo sounding measurements of ice thickness and snow cover to constrain a climate change-ice sheet modelling investigation to be carried out by AH at UBC, and 15 samples for analysis of accumulation and transfer rates of persistent chlorinated compounds (PCCs) into the region, to be carried out by LN and others at the Milan based environmental consultancy, Montana, sri.

The scientific findings for this expedition will be reported separately and should be with the RGS from January, 2000.

Cover: *Nigel and Paolo descending the northwest flank of Co. Pared Norte, with the Hielo and the Pacific below.*

ACKNOWLEDGEMENTS

We are most grateful to Malden Mills - *polartec performance challenge*, the RGS and Michael Palin's Gumby Co., the Mount Everest Foundation, the British Mountaineering Council and the Duke of Edinburgh for financial support, Cassin, Sierra Designs, DayMen Outdoors and MSR for equipment and discounts and Kodak for film.



Camp XI at the Col (c. 2,000 m) where we were pinned down in a storm for five days, with Co. Pared Norte (3,005 m, centre) and Co. Cavagnetto (2,970 m, left) in the background.*

*Paolo Cavagnetto is very sadly no longer with us. He died in an accident along with two aspirant guides on Mt Blanc in July of this year. He was a joy to have been with on this expedition – his outlook larger than life all times, and he was never without humour, even in our bleakest moments. He was also the strongest and most competent mountaineer I have yet climbed with – he instilled a sense of total calm and confidence. His death is a tragic loss and although it is just a small tribute, we have applied to the IGM, Chile for the unnamed peak that was first climbed on the 21 December, 1998 to be named after him.

The Expedition

The team rendezvous in Puerto Montt on the 26th October was frenetic: after checking reservations on board the Navimag owned cruise/supply ship *Evangelistas* which, we were informed, was to depart south the next day at noon sharp we headed to the supermarket. A quick two hour nip round left us \$1000 worse off and about 120 kilos heavier and back at our temporary base we marvelled at the mound of food and gear that we were apparently proposing to haul 200 km or so across an icecap. After an substantial repackaging (which at the time seemed fairly futile) we adjourned for the customary last civilised meal, to be washed down with a few beers or so.

The following (late) evening, most unpromptly and equally unquietly the *Evangelistas* slipped her moorings. Apart from the traditional Chilean entertainment's provided, there was very little worth remarking on the three day voyage south. The weather was quite horrendous; virtually no visibility, constant gales, heavy squalls, interspersed by the very occasional burst of sunshine to keep us guessing. A days stop at Chacabulco got us official approval to disembark at Laguna San Rafael, which was surprisingly forthcoming (and not what we had learnt to believe of South American bureaucracy – *Hielo Norte Y2K?*) and we once again adjourned to a local for a few more customary last beers. We sat around a formica table, indulged ourselves with a packet of 'Advance' and visibly flinched at the sheets of rain being hurled against the windows. It struck me that the real danger on this expedition was going to be drowning. I lit up an 'Advance' and waved for another round; only 25 shopping days till Christmas.

Sailing south overnight, at 6 am of the 31st, the *Evangelistas* entered the narrow, berg-strewn channel that leads into Laguna San Rafael. The rain had stopped and even 35 km off, the colossal calving ice front of the San Rafael Glacier could be made out clearly; it was big, steep and looked horrifically broken. By midday *Evangelistas* was anchored just off the ice-front which towered above the bridge and within a couple of hours we had our kit sorted and stowed aboard one of the ship's launches which, along with two crew-members, captain Haddock had placed at our disposal. The half-hour motor to a small sheltered inlet on the SE side of the laguna was up-lifting, threading through the serene blue bergs and brash in sparkling sunlight, out in the elements and free at last from the noise, fumes and oppressive atmosphere of the guts of the ship. We put-down on a small rocky beach, quickly unloaded, said our thanks & farewells and as the launch made off and silence descended, we stood and marvelled at the rugged scenery around us. It promptly began to rain, and continued to do so, non-stop for the next five days.

We occupied a small hut not far from the shell of an unfinished hotel optimistically built by the Chilean Government back in the 1920s and within which Shipton and his team took refuge in 1963. Unfortunately for us it was currently fully booked-up by an Operation Raleigh team tracking the movements of the local wild cat population. However, our ramshackle wooden hut, if not so steeped in history became a most welcome shelter out of the deluge over the next days whilst relaying loads up the first leg of the San Rafael Glacier. It was dark and dingy but at least relatively dry. With a smoky wood fire lit, dripping clothing hanging everywhere and us happily feasting off large chunks of parmesan and bruschetta to the accompaniment idle banter and the odd thunderous crack as massive blocks calved off San Raf over a mile away, all was quite cosy; the quintessential Patagonian experience.

We slept in the tents - there not being enough room in the hut; but each morning was a ritual of mopping up the large puddles that had accumulated - a bit of a design floor in the much advertised 'seam sealed bucket ground-sheet'. Eventually, in desperation (time is short and the water rises) we resorted to a few well placed punctures to drain the indoor swimming pool that we had on our hands. The 3 km hike up to the glacier despite the cool temperatures was a fantastic sortie into dense, luscious vegetation, amok with bird and insect life and very, very damp, much reminiscent of Redmond O'Hanlons descriptions of Borneo. The first cache on the San Rafael Glacier was 4 km up the northern margin and was not quite as enjoyable. The route involved continuously hopping between the very broken and crevassed glacier onto rock spurs which abutted well into the glacier, causing chaos of the overriding ice, and which in the heavy rain with big loads involved some pretty mucky 'Scottish style' scrambling. By the 4 Dec we had run out of excuses for procrastination and no longer could justify remaining at our homely base and shouldered the last of our gear and established Camp I. That afternoon it stopped raining for the first time; it was a joy to be relieved from the myopic monotony of an isolated 10 foot grey world of mist and rain and to be able to feast ones eyes on the glorious shear granite peaks around us, at the steep, broken glacier ahead and the mellow turquoise laguna below. That evening, after a fine evening meal I ventured out onto the glacier to attempt the first radio-echo sounding. After a lot fiddling, I eventually got a decent return echo at c. 3.5 μ S which put the glacier bed approximately 300 m below. For a valley glacier of this size and my position near the margin, that was deep and coupled with its steep profile, this accounted for the high basal stresses, rapid motion at over 2.0 m/day and hence its hyper-active calving front. I slept content and dry for the first time in ages.

Next day dawned fantastic, crystal clear blue skies, and a gorgeous vista. After a leisurely start, the opportunity taken to thoroughly dry out gear, we shouldered hefty loads, (the intention being to break our carry down into just three relays each) and set off up the glacier in glorious sunshine. It was tough going, another 250 m high rock butters to deal with and constantly weaving a way on and off the steep ice-cored moraines of the margin avoiding the myriad of crevasses but in high spirits we made superb progress. The next cache was dumped on at the top of a lateral moraine marking an opening out of the San Rafael valley. The change in topography also coincided with a

change in the ice surface - it was not nearly so steep and there appeared a possibility of a crevasse free corridor making real the prospect of bringing the monster pulks into action; an end to the laborious multiple carries. After admiring the huge massif of San Valentine in the far distance and its intimidating NW ridge we rushed back down to Camp I, inspired to attempt at least another partial carry before the day was out.

Our next day was not so marvellous; rain again but the momentum gained spurred us into action. We were intent on moving everything up to the moraine, and establishing Camp II. The day was long and hard but our dynamic duo - the Italians put in a momentous effort - a hard act to follow. However, the Brits were getting stronger and despite being soaked again we were pleased that evening with the prospect of easier times and more substantial progress to be made ahead. Day 8 broke cloudy and windy but no rain, at least not initially. So with the enthusiasm of kids with new crimbo goodies we packed and strapped up the pulks; progress for the first few kms was superb, the 60 kilo pulks sliding effortlessly over the hard but level ice surface. However, we soon ran into trouble, and our crevasse-free corridor sadly whittled out. We were making for the southern edge of a nunatak, which was now only a couple of kms away, but the ice surface between our destination and us was broken and crevassed. With two to each pulk though, one hauling the other man-handling, we managed to keep up momentum and besides it was considerably better than having to shoulder multiple loads. It was still demanding, physical work though and my thoughts went out to those polar explorers who had been faced with tens of kms of pressure ridges, sastrugi and the like which must be demoralising in the extreme. By mid-afternoon we were at the margin of the nunatak, and in a fit of inspiration we went for the next obstacle which was a moderately steep crevassed slope of about 150 m where the ice spewed round a rock buttress. We hauled, two men to each, the pulks to about mid-way up this slope and from there, it was three 20 minute carries through and across a maze of seracs and onto Camp III which was conveniently placed in a sheltered niche where the ice abutted against a rock cliff.

Dec 7, dawned clear, giving us our second opportunity to dry out. However, with dark ominous clouds building down the San Raf valley, we were eager to get a move on. A few kms of good progress saw us at the base of a large, 45 step some 150 m high and which due to the very crevassed nature of the ice to the immediate south, required negotiating. Whilst I conveniently took a radio-echo sounding, the other three tied up to the first pulk and went for it. It looked exhausting work and by the time I had finished determining the ice thickness they were half way up the slope with the second pulk; I felt distinctly sheepish. Apparently, the final two pulks were a doddle with all of us harnessed up, however it was still bloody knackered and required some nimble leg work towards the top of the slope to avoid big, snow-covered crevasses. With the last pulk up and the storm which had been threatening all day now breaking, we headed for a small rock outcrop and set-up an early Camp IV.

At c. 1,100 m we now had a partial covering of slushy spring snow and thus a possibility to get skis on, which up to now had been conspicuously redundant. The Italian tent woke early, but it was still pretty bleak out. Given the threat from partially snow covered crevasses, we decided it was prudent to stay put until visibility improved, leaving Nige and myself positively ecstatic at the prospect of an extra few hours sleep; we were well and truly knackered - the week's exertions had taken their toll. By 11 we were on the move, continuing due east on a route which skirted the northern margin of the broad and crevassed ice stream marking the upper San Rafael Glacier. Eventually we wanted to cross this glacier but until now it had been a chaotic, 2 km wide nightmare of over-riding crevasses and seracs. However, now that we were approaching its upper reaches and the Hielo proper, the surface was becoming substantially more gentle and with increased snow cover, we hoped to be able to bridge it soon. We made about 10 km - best progress so far despite the late start. It remained lightly overcast all day but by mid-afternoon the sun was burning through and we got frazzled. The now thick snow cover also became a trial since the skis and pulks sunk deep into its wet, mushy surface inducing a lot of drag - we resolved to start early for best snow conditions and less sunburn. Eventually, after a small step, the expanse of the icefield opened up before us - and more importantly, it looked as if a zone to our immediate south was relatively crevasse free, with good snow cover.

We woke early, it was a cold dawn. I led due south, the snow surface firm and crispy and by 8 am we'd covered over 7 km across the upper San Rafael Glacier and were on our way south at last. It was a lovely morning, nothing spectacular, but there was plenty of low cloud about lending a mysterious atmosphere to the vista about us, keeping our interest up. Co. Torre to the east opened up for a fleeting second or so, bathed in the most glorious morning light; majestic shear granite walls providing stark contrast against the planed off featureless white surface of the Hielo. At midday we stopped again; we'd covered over 14 km, but the going was slightly harder now as our once snow surface was reduced to a soft mush with the days heat. Although the sun had managed to burn through slightly all morning, the wind was now beginning to pick up from the north brining with it some ominously dark clouds. By the time we were on the move again, it was starting to sleet but since it was driving into our backs we hardly noticed it. At this point visibility deteriorated to nothing and we took turns leading, navigating on a bearing of 165° - a novel and surreal experience indeed with nothing to orientates oneself, just the compass needle and infinite, blank whiteness. A further hour though and the situation began to deteriorate badly; although the sleet was driving into our backs, the wind was uncomfortably strong and we were wet through and cold. I called a halt and we got to work on a large snow wall. Soon we were snugly installed in our tents, protected from the raging tempest, sipping large mugs of milo & drying off over roaring MSR's. We were pleased - over 18 km and had fully

experienced the 'rather unpleasant' driving freezing sleet and snow that Shipton referred too; we'd taken the worst that Patagonia could throw at us from its formidable armoury and had just about managed.

The storm raged throughout the night and into the next day, which was noted only for its high level of inactivity. We lolled around in the tents occasionally braving the elements to clear away the accumulated snow. By late afternoon it had slacked off and although the cloud had not lifted, it had broken up sufficiently to reveal patches of sunlight racing across the Hielo and our thickly snow draped camp. We could make out vague forms of peaks in the distance but all was very ephemeral, nothing could be made out for sure. Rather than press on so late in the day with the snow surface so soft we retired back to the tents for a good start the next day. We were up at 3 am & bathed in the most imperceptibly faint pre-dawn light, the vista that was hinted at was now revealed fully before us and it was magical. We were within a broad expansive corridor lined by dark sheer granite spires and glaciated peaks rising straight out of the Hielo and around which clung wisps of cloud for mystical effect. It was nothing short of sublime and to the south where our corridor converged on the horizon, rose Cerro Arnales, bathed in a glowing fiery light as dawn broke. We headed due south, into a fantastic dawn, Co. Arnales providing a gorgeous spectacle as the vale of cloud clinging to her flanks shifted. By 10 am we'd covered 17 km and had drawn level with the cirque basins of Co. Narinja and Largo, we decided to move in on Co. Largo 'to take a quick look'. As we closed in, the Peak loomed above us; 1,500 m of vertical face and ridge draped heavily in huge cornices and bizarre rime ice sculptures. We were excited - all routes on the face looked difficult but there was obvious route via a 2 km ridge from Pico Naranja. If the weather would hold we would be in with a chance. The alarm was set for 11 pm and we got some rest.

At midnight it was snowing lightly and the wind was up. I thought to give it another hour; if conditions didn't deteriorate further then we'd try for it. The route up to Narinja involved some tricky crevasse negotiation but I thought we'd be able to get through... we were desperate to at least attempt a mountain. At 1 am, it had deteriorated heavily and we'd blown it - at least here. At 7 am it was snowing hard but the wind had dropped & feeling somewhat miffed at our bad fortune we decided not to waste time waiting for another weather window here, but to push on south and bide our time down at the southern end of the icecap.

We were now after Shipton's 'Arnales Col', a 2,000 m breach which provided access to the southern end of the Hielo. It was a good 15 km off yet but we'd need good visibility to identify it since our maps were pretty useless over this section of the ice cap - the map for this section was over 80% blank. Isolated in our own little worlds we headed southwest in heavy snow. It was not so unpleasant & soon we were warm and going strong, but then disaster... my ski binding had completely sheared in two. Suddenly all sorts of exaggerated disastrous scenarios were running through my mind... we were over 100 km from our destination. I called a halt, released my good binding and promptly sunk up to my knees in soft and heavy snow... this was looking bleak. The lads each in turn arrived at the scene & expressed either horror or sympathy; Paolo in his usual spirit started regaling us with previous total disasters involving skis and bindings which soon took the edge of my plight. Soon we were at work sawing up pieces of avalanche probe and tent poles with that indispensable item of equipment, the leatherman (that's my two last expeditions that its totally saved my bacon). These parts, when inserted inside each other for strength, fitted incredibly snugly inside the two sheared halves of the binding... it seemed a miracle. Following some ingenious wiring by Cava, the binding was solid, and given that I am still using it some three months after in B.C. is testimony to Cava's handiwork. In the hour or so that had passed, we'd got pretty cold & the weather had continued to deteriorate. It was sleeting hard into our faces but we were determined to push on further to the base of our col; I set the GPS with an approximate position and headed into the mush for another couple of hours. We stopped somewhere about 4 km short of the col and got to work on the usual fortifications. The following day didn't dawn.... another rest day.

15 Dec, started off promising... we were on the move by 6:30 am, making a beeline for the foot of the col. The snow was firm and we were able to ski to about 1700 m. Here the grade steepened to about 45° with a number of difficult exposed crevasses to negotiate but the snow was firm was progress was good. By 2 pm we were back down, ready to pick up the 2nd load but the weather had began to deteriorate - we put up a tent and waited. After an hour it seemed to improve so we quickly got on our act together and headed back up the col. Within five minutes though, it had once again deteriorated into a tempest. We stuck with it - the slope was all drifts and mini-avalanches and the previous tracks soon vanished and we were heading up blind. Eventually with dangerously high winds propelling marble sized hailstones into our faces, we emerged at the top of the slope and fought our way to the previous drop. After three hours of elaborate snow construction we'd got a 5 foot wall surrounding us and could just about get the tents up. The night was long and restless and the storm continued hard throughout the next day and night.

Dec18 -dawned calm with low cloud - we had a few laughs skiing down the west side of the col with the pulks in tow (or visa versa) but we made about 20 km in five hours on the firm, compact wind blown snow... we were back in business. Established on the southern end of the ice cap, within the upper basin of the Steffan Glacier, our proposed exit. We had 10 days of food left and about 45 km to go... under good conditions we could be out in 2 days. We reasoned that given decent conditions, we could position ourselves with five days food at another col in

between Co Arco and Co Pared Norte. Shipton had attempted to get to this col back in 1963 but was short on rations and decided to play it safe. On the extremely dodgy rationale that he'd subsequently had the best weather on the whole trip, we felt it would be foolish to miss such an opportunity; Co Pared Norte and a handful of other peaks to its south had been untrodden and they were too good to miss. The following morning, in unpromising weather we sorted our kit, cached five days of food, the scientific gear and the pulks and set off towards the col, 10 km away and 700 m above. We had yet to see it, the cloud being low, but from the map the icefall did not look too steep and we had eyeballed the beginnings of a broad steep ramp which seemed relatively crevasse and serac free. With a fraction of our usual kit we were off at a pace and were soon at the base of the icefall, which was fairly straightforward but required some intricate route finding. From the map the col was flat and broad so in zero visibility we headed 200 m to the east and got into wall building... if the wind really hit, we were in a very exposed position (see *photo*).

We were lucky – the next day dawned sublime – cloudless, calm and crispy-firm under foot – our third decent day on the whole expedition. There was no delay; we were up at 5 am to a gorgeous dawn and set off in pairs for Co Pared Norte. It was easy going – firm snow with slopes no greater than 40° and we soon covered the 1000 m of elevation reach the final slope to the untrodden summit. Fantastic views of the icefield, punctured by a plethora of amazing shear snow clad towers and the Pacific unfolded – we were euphoric - our victory all the more potent due to the adversity that we'd faced getting to it. We dawdled on the summit for an hour or more, and in baking sunshine slowly retraced our steps back down to the col, taking in the stunning expanse of the icefield stretching far and wide to the Pacific in the west and the Pampas to the east. Later back at camp, we discussed strategy. Our appetites moistened by this unexpected and joyful turn in our fortunes, we decided to stay high - hoping for an opportunity for a second summit. Unsurprisingly – it wasn't to last, by evening it was socked in and snowing hard - pinning us down for the next day. However, our third dawn at the col again looked promising – not exactly ideal – there was high cloud and a little wind. We somewhat optimistically reasoned that we could affix four or so hours to go for a peak that we'd eyeballed from the summit of Pared Norte, and still get off the col in time. Not wise; it began to deteriorate even on the approach. The last pitch was an enjoyably exposed 60° ice ridge that dropped steeply away to the glacier some 1000 m below. Towards the top of the slope, edging out of shelter – the wind hit. The large airborne chunks of windslab that had been raining down the lee-side of the mountain were now explained... the wind ripping them up from the cornices on the other side of the mountain. A large block hit me full in the face – I got to my knees and crawled the remaining distance to the summit. We laughed, shouted incoherently at each other and got off quick – a vast bank of ominous dark low cloud encroaching fast from the west. We'd got most of the way back down to the col when the storm hit – driving snow and buffeting gusts that knocked one senseless – leaving us dangerously disorientated in the total whiteout. Fortunately, enough of our tracks had survived and it was with total relief that we found our tents and the 5 foot defences around it intact and we collapsed inside.

So there we were, positioned just over 2,000 m – parked smack in the middle of broad col facing, across the expanse of the icefield falling away to the west, the Pacific. We were in direct onslaught of the full fury of this vast ocean, the mighty winds and systems that it spawned – uninterrupted by any landmass for a clear tract of literally 6,000 miles – were suddenly being funnelled up and into this col, which we'd conspired to be camped in. The storm lasted five days, up to and including Christmas day, the last few days without food save a few rations in reserve for when we eventually moved. Surprisingly enough however, conditions became more comfortable for us after the first day... a grotto of ice and snow formed around and above the tents sheltering us from the locomotive gusts that had been battering our tents flat onto our bodies. One problem however, was that the tents slowly but steadily deformed – shrinking around us under the weight of the snow above and entrances had to be frequently cleared to prevent suffocation. We spent hours on our backs, legs shoring up the tent walls enjoying the developments of the 'Patagonian Chess Championship, 1998'.

On Xmas morning, inspired by a brief lull and the grim prospect of celebrating with a couple of prunes and weak tea, we resolved to move. After spending two hours digging out tents and kit out we headed west for the icefall. The winds were horrific – we were stumbling everywhere, but there was enough visibility to thread a route back down. Once we'd dropped a few hundred meters conditions improved and soon we were back on skis, elated in the knowledge that within a few hours we were going to be back at the cache and able to celebrate Xmas and our two first ascents a little more appropriately. After five days tent-bound, it was a blessing to be on the move again – we had done our bit, felt sufficient martyrs - now the task was to get off the icecap, as quickly and efficiently as possible; at a push we had a few days food left.

Boxing day – the weather still bad but with 45 km to go, we needed to move. We packed up the pulks and headed southwest towards the Steffan Glacier in driving sleet. After 6 km of good progress we were on to the upper glacier with patchy snow cover. We were desperate for a kind ice surface but after another couple of kms our hopes were dashed and it all went a tad pear shaped... within a confluence area, the crevassed surface started to break up into a series of large lateral seracs. With a sense of dread, we broke up the contents of our pulks into two loads and started multiple carrying. The glacier became a nightmare maze of 25 m blades of ice, separated by ominous, deep

chasms. We threaded back and forth, pulks and kit strapped to our backs turtle like. It was desperate work, involving 100's of m of knee-crushing weaving, ice-climbing, precarious balancing and stumbling through the monsters to make minimal headway. After an hour we gave up for the day, exhausted. The next day was not much better, 7 km of hard won progress in drizzle and rain but by the end of the day we were camped at the glacier margin where it abutted onto a large, 800 m rock ridge. Lorenzo and I happily reconnoitred the ridge that evening... happy to be off the ice, free of packs and in amongst the heather and rock with bird-song in our ears. We climbed to the top for a full view of the glacier... it looked as if we were through the worst of the seracs but all the same the route along the ridge looked very appealing. Back at camp we discussed our options. It was decided that next day Paolo with a light load, would head out the 20 km along the rock ridge to the glacier terminus and beyond, to get to our prearranged SSB and call Tortel for a boat pickup. We were now a few days overdue and very low on food; we wanted out as soon as we were off the glacier.

Early next morning, Paolo, at a smart pace headed off up the ridge – Nige, Lor and I with not quite so much enthusiasm turned back up the glacier to fetch the second loads – it was drizzling and we were soon soaked to the skin rethreading our way back through the seracs. It was easier the 2nd round with a little knowledge of the route – but still our knees took a battering and 8 hours later we were back at camp exhausted but with all the kit down. We weren't expecting Paolo back – it was a round trip of at least 40 km but we imagined him to be wrapped up at the hut, swigging a bottle of wine and munching on food, happy in the knowledge that our boat was on its way. Dec 29, we started a carry along the ridge to the end of the glacier. All along we expected to see Paolo returning but by mid-afternoon when we dumped the kit on the scrubby slopes overlooking the glacier terminus – there was still no sign of him. We scoured the thickly wooded and boggy valley floor for signs of life - but in vain and it started raining heavily again. We turned and headed back along the ridge to camp feeling weak with empty guts and quite downtrodden. After an 11 hour day we arrived back at the camp and were much relieved to see Paolo again – he looked pale and very gaunt and brought bad news. He had found the hut but there had been no signs of life and certainly no radio. There were the remnants of an antenna fixed up but that was all – he'd covered over 45 km of hard terrain and hadn't eaten properly in two days. Our position was no longer so good – we were overdue and had been on half rations for the last few days and had little left – we resolved to get all the kit off the glacier and to the hut the next day and would consider the options from there. Paolo had however, found a good route back up the glacier which would save valuable effort by not having to climb the 800 m ridge. Dec 30, was glorious – despite our ominous predicament – with heavy loads we made good progress down the Steffan. It was a relief to jump the last steps off the glacier but then the 10 km final bushwhack to the hut took its toll and we eventually arrived in the small clearing with horrifically blistered feet and very knackered. There was indeed no radio and no sign of life but this was definitely the agreed spot. We resolved to search for possible escape options - the problem was that we were completely hemmed in - by the glacier and a series of towering granite walls to the west, by Steffan's berg strewn lake in front and by the 70 m wide outlet river to the east. We split up – Nige searched our little island for other signs of life and Paolo and Pluto followed the river east for a crossing point – it was looking very grim - in full flow, and near freezing with lots of bergs floating about. They didn't rate our chances. Finally, I negotiated the glacier and tried to recce a route through the cliffs – it was going to be an impossible undertaking – especially so in the condition we were in. We reconvened late afternoon and after a short discussion our decision was unanimous. Our position fairly hopeless – in our weakened state, any action to cross the river or scale the cliffs to the west was going to be seriously risky. We'd got to our rendezvous point with the last of our food and had now hit a brick wall. It was time to enrol outside help. So at 6 pm New Year's eve, I pulled out the EPIRB and released its pin. We were unsure of the response to this distress beacon but knew that there was a fairly constant stream of jet traffic flying overhead back and forth to Punta Arenas. Later that evening, in surprisingly high spirits, we chatted away quite happily, ate the last of the food – a fruit cake that we'd been saving – washed down with a very watery hot chocolate and shared a cigar... toasting 1999.

New Year's day was gorgeous – making our predicament all the more surreal. We stripped off and leisurely harvested berries to for a 'fruits of the forest' stew (bloody horrible). It was a balmy day – later I sat by the river and sunbathed – tentatively dipping a toe in the freezing water and wondering if I could make it across... it was cold, wide and fast flowing... but I still couldn't get the possibility out of my mind. All of a sudden, there was movement on the opposite bank. I squinted into the sunlight and eventually made out the form of a large Chilean 'mamma', dressed in black, perched on a horse. In a state of shock and total bewilderment, I jumped up, simultaneously trying to get my underpants on and started waving frantically. She looked over my way, gave a friendly wave as if to a passer-by, and proceeded a further 100 m along the bank to the lake where there was a small boat stashed in the reeds. I made my way back to the hut where the lads were snoozing and announced the news. We ran back to the bank to meet our new acquaintance and were ecstatic to feast on the mound of lard and tortas that she's brought. Our plight and the expedition were over.... well, sort of.

That evening Lorenzo headed 10 km down the valley to a broad estuary and another river crossing to the small farmstead of Aladdin Vergas. It was Aladdin who had the radio – we had been expected, but he had not received any message to install the radio up in the hut at the glacier terminus. It appears that there had been a fundamental communication breakdown between our agent and Aladdin but we were now eager to contact Tortel and divert any

rescue operation. The next day Paolo, Nigel and I headed back up to the glacier terminus and the end of the ridge to recover our final cache. After a hard and brutal bushwhack we returned to our hut to find Lorenzo, Aladdin and two Cabanerros... this looked ominous. Lorenzo explained the situation... which quickly turned from worrying to amusing. Tortel had received the distress call and made the connection that it was us who calling. As result they sent in a small patrol boat manned by the Cabanerros, but it had unfortunately gone aground in the mouth of the estuary and hence Aladdin had been called to come up and find us. Unable to reach Tortel and summon help, the Cabanerros thought it was best to get us to aid in the refloating of their vessel. With much bemusement we relayed the gear across the river and by boat, horse and foot got it and ourselves to the mouth of the estuary and to the patrol boat – it was perched at an incredibly steep angle on a gravel bank. Unfortunately its lee-board was so low that it was flooding when the tide came up. We got to work for the next day, digging under the hull and strategically inserting logs to leaver it off the bank. The tide came up swiftly and just at the point where it started flooding over the lee-board we heaved and the boat promptly shifted and came away. It was a matter of pumping out, cleaning up and charging the batteries now and after a few entertaining hours (when the boat almost took to the high seas unmanned and propelled by fierce katabatic winds), we were heading along the gorgeous coastline of the Baker Channel to Tortel. That evening, after two short debriefings – to the Harbour master and Cabanerros – we settled into Aladdin's cousin's house for the night and raided the local store for anything and everything that was edible and quaffable. The next morning, all was settled cheerfully and amicably – the agent we hired had indeed failed to get a radio through and had been called away when we were due out... he had made arrangements for someone to go up and look for us the previous week but they had unfortunately left no indication that they had been there or that we were expected... not very satisfactory but there was little we could do now and besides all parties accepted that given the circumstances there were few options available and to pull the beacon had been sound judgement. We spent a further day in Tortel, delighting in the simplicity and calmness of the place – wondering around its labyrinth of walkways, nursing our feet and eating lots. Finally on, Dec 5th we stashed ourselves and kit aboard a small open fishing boat and were whizzed the 55 km up the Rio Baker to the Carre Terra Austral and drove the 400 km back north, through wonderous arid scenary, open skies to Cohique.

Two days later we were back to the heat and smog of Santiago and heading our separate ways; the expedition now a vague collection of memories - a story encompassing confrontation, toil, pain and frustration, seemingly endless boredom, interspersed with sparks of absolute wonderment and delight during the course of a fairly abominable but then again, fairly typical Patagonian summer. on reflection - given the benefit of time – I am pretty chuffed at what we achieved down there... for sure, we had a hard time, for the most part conditions were appalling but we got it together and did all right. We worked hard to position ourselves high on that col with three days food in hand, hoping for a window long enough to snatch some of the surrounding peaks. We took the gamble and got away with it, but only just; we were pretty bruised, battered and hungry when we got off eight days later but for those two first ascents, without a doubt, it was worth it. To conclude, I am reminded of an introductory quote that I first came across in *The World Atlas of Mountaineering* when researching this expedition and which, with the luxury of experience I can say is most certainly true as ever...

"Most of the glaciers are still untrodden and the area offers a splendid field of new mountaineering possibilities to anyone willing to face the severe weather conditions which prevail."

Wilfred Noyce, 1969.

ACCOUNTS

Transport:

4 x rtn international flights:	\$4,300.00
4 x singles for Navimag <i>Evangelista</i> - Puerto Montt - San Rafael:	\$640.00
Mules & Boat up from Steffan - Tortel:	\$400.00
Boat from Tortel up Rio Baker:	\$400.00
Landrover hire:	\$225.00
4 x TransMar - Chacabulco - Puerto Montt:	\$400.00
8 x singles for Santiago - Puerto Montt:	\$200.00
Freight & Excess Luggage:	\$1,050.00
sub total:	\$7,215.00

Equipment:

2 x Expedition tents:	\$800.00
2 x MSR DragonFlys:	\$120.00
4 x snow pickets:	\$80.00
2 x Kevlar Pulks:	\$700.00
Garmin GPS:	\$290.00
2 x 50 m Single Ropes:	\$250.00
GelCells & Solar Panels:	\$230.00
Science Kit - <i>misc</i> (Ice radar borrowed from UBC & Edinburgh):	\$270.00
sub total:	\$2,740.00

Food & Fuel:

150 x man days of expedition supplies:	\$1,000.00
Terchnical Food:	\$200.00
40 li of coleman whitegas:	\$50.00
sub total:	\$1,250.00

Miscellaneous:

Accomodation & Meals:	\$420.00
Taxis:	\$90.00
Prospectus:	\$150.00
Telephone:	\$250.00
EPIRB service:	\$260.00
Maps:	\$150.00
Insurance (including scientific gear):	\$500.00
Film (20 rolls supplied by kodak):	\$200.00
CONAF Permits	\$40.00
sub total:	\$2,060.00

TOTAL OUT: **\$13,665.00**

Funds:

Mount Everest Foundation:	\$1,050.00
British Mountaineering Council:	\$1,050.00
Malden Mills - polartec performance challenge:	\$3,500.00
Royal Geographical Society (<i>Gumby Award</i>):	\$2,800.00
Duke of Edinburgh:	\$700.00
Personal contributions:	\$4,665.00

TOTAL IN: **\$13,525.00**