

Rooftop Expedition

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When I retired I decided to write up my time at Halley Bay, in case any of my family one day wanted to know more about that time. Since then this project has drifted forward, competing with other interests, so that it took nearly two decades before I reached what seemed to be the end. I had often thought of trying to get it published, and now that I saw the vast size of my manuscript (longer than anything by Dickens) I realised that heavy trimming would be needed to produce a publishable version. I'm now in the middle of that process.

In a way, trimming seemed a pity – not only would some worthwhile tales vanish, but it might be letting down those generous people who have answered my questions over the years, filling in details and giving me their memories. One solution would be the BAS Archives, and so I'll see that a version of the full text is lodged there. The BAS Club Magazine offers a more immediate and less obscure way for me to pass on some of the trimmings to others, so here's a start. This one goes from rooftop to below floor level.

At Halley Bay in 1964 we had three main huts, the oldest being the IGY hut, built in 1956 and with the floor now about 40 feet below the surface. A sloping Dexion ladder and an ice tunnel led up to what we called the Main Hut, dating from 1961 and with the floor only 20 feet down. A ladder in a vertical shaft led to the surface and the newest hut, the "Office Block" that we had erected that autumn. The bunkrooms were in the Main Hut but the manning had now grown and outnumbered the spaces there. I was one of those who had been allocated a place in the loft of the IGY hut, and I slept on a mattress laid out under the slope of the pitched roof.

During the winter of 1964 a drip developed above my bed, which was a surprise. Despite being older, this roof was in far better shape than that of the main hut which notoriously had a flat roof. There seemed only one solution, and that was to get on to the roof and see what was causing the leak. The second-years assured me that in the ice-cave above the roof there was space to get about, and that it had been done from time to time. Coincidentally, when Phil Cotton and I had been looking for some small pieces of Dexion someone had recently suggested searching on the roof.

The most obvious place to get on to the roof seemed to be near the bottom of the Dexion ladder linking the two huts. This was in the middle of the hut, but a closer look showed that the gap between the ice and the eaves was nowhere more than about six inches. Next I looked from the Klondike, and this was the obvious answer.

The Kitchen Shaft was forty feet deep, from the surface down to one of the end doors of the IGY hut. An ice tunnel from the kitchen, in the main hut, led in this direction and opened into the shaft halfway down, with a timber ledge that we called The Klondike. It was often used for hauling goods up and down, and with a drop of nearly twenty feet below it there were timber railings to give a degree of safety. By ducking under these and stepping across an alarming gap, with little other than slippery ice for handholds, one could reach the roof of the IGY hut which was at about the same level. At that point the gap between the roof and the ice above it was enough for someone to go further in a crouch. The light from the bulb beside the Klondike seemed only to penetrate a few feet along the roof, adding an air of mystery to what lay ahead.

Phil Cotton and Mike Turner joined me for what was, in a schoolboyish way, an expedition of our own. We would be exploring places that we had not seen since arriving months ago, and as far as we knew no one else had been up there in that time.

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Torches were prized possessions there, but we had two between us. These showed us that the ice cavern above the roof of the hut had surreal curves with no obvious explanation although they were probably related to which zones in the loft below were heated. In some places we could stand, while in others we had to creep through gaps down to a couple of feet high. The icy vault above us was striking but so, in a very different way, was the rubbish scattered across the sloping roof. At times the warmth from the hut melted a little of the ice above, and the water ran down the sides of the ice-cave to vanish somewhere beneath the hut. Meanwhile, the weight of snow above forced more down so that there was a continuous process.

Any foreign objects in the snow would drop on to the roof as they melted out, and we could see pieces of wood, wire, and other small bits of debris from earlier years. My torch showed a tiny red object embedded in the ice above me, and when I scooped it out I found that it was a little Christmas tree, a table ornament an inch or two high. How on earth had that been lost on the surface? I carefully put it in my pocket so that at Christmas dinner I could have my own distinctive ornament by my place. For the next Christmas I would be in the field and so it would be eighteen months before I next sat down to a Christmas dinner at a table, and when that day did arrive I had long since lost it. Right now, the merry hunt for trophies continued.

My bunkroom was near the far end from the Klondike and so we began to move cautiously along the ridge of the hut. I kept scanning the roof with my torch, looking for any other souvenirs, and then saw what looked like a pile or layer of something well down the slope of the roof. What might it be? Coal? A closer examination ruled that out, but we were unable to identify it until someone suggested that it looked like chicken droppings.

That set us thinking. There had never been any chickens that we knew of, but there had been various cats during the life of the Base. Could that be why we never saw any droppings in the coal bunker, reputed to be Kista's equivalent of a litter tray? The size of the pile looked a reasonable match for an accumulation of several years.

On we went, crawling in places where the ice above us came down close to the roof, and seeing new surprises all the time. A huge metal picket, eight feet long, was still half embedded in the ice above with its exposed point aimed at the roof. Given another year or so it might have driven right into the hut, above the Survey loft as far as we could judge, but we hacked it out with a strip of fallen Dexion and laid it safely on the roof. We passed a chimney, unsure which one, but with the piping kinked and contorted by the compression driving it all downward.

Clearly much of the meltwater ran down the sides of the ice cave but in places it dripped on to the roof. Where such drips landed on one of the colder zones of the roof, one or two refroze and built up stumpy pillars of glass-clear ice that could be several feet high. What to call them? The English language doesn't seem to have a word for the upward-pointing equivalent of an icicle, an icy stalagmite in effect. An "icymite", perhaps? Whatever; I was glad that I had my camera and flashgun.

Above my bunkroom we found the source of the drips inside. Some large Dexion structure, probably an abandoned instrument stand of some sort, was emerging from the ice above and one corner was beginning to gouge into the roof. I would need to return with tools to dismantle or saw off parts, to relieve the pressure, and I might need to patch the hole. Meanwhile, for completeness, we continued to the end of the roof and our most exciting find. Embedded in the snow above us were two wooden crates, appearing again several years after someone had let them get drifted over and lost.

The schoolboy aspect of our adventure reached its climax, as if we had found the door to the tuck shop unlocked overnight. What might be in the cases – goodies of some kind? Nutty (local slang for chocolate of any kind), perhaps, or tinned peaches? Using the scrap piece of Dexion we gouged the cases free and down on to the roof. The Dexion was not strong enough to get the lids off but the massive picket did it easily – we wanted first grabs of any goodies – and then the truth was revealed. They contained cartons of Persil washing powder. In our excitement we had not even noticed that they lacked the red painted bands signifying food boxes. Nevertheless, it was something to show off publicly.

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Back we went, carrying and pushing the boxes towards the distant patch of light by the Klondike. Near there we suddenly saw a movement, and our torches confirmed it: Kista was padding along the roof towards the patch of mystery material. We allowed her some privacy while she scraped and then squatted in the gloom, returned to the end of the hut, and jumped back to the Klondike much more nimbly than we had done. A coincidence, but a useful one to confirm our suspicions.

Like medieval emissaries bearing gifts we paraded into the lounge and laid our boxes proudly at the feet of Ian Buckler, who was not impressed. He was in charge of non-food items, and soap powder was not a problem. A shortage of toilet paper was his current worry. (Later he found some misplaced crates of that, and to show his delight he composed and pinned up a poem celebrating the event and the glories of Bronco paper. We would no longer face using newspaper for the last few months of the year – but would that have been a change for the worse, or the better? There was some disagreement on that point.)

Over the next few weeks I returned several times to the roof, getting almost as adept as Kista in swinging across from the Klondike. I dismantled the exposed part of the stand and salvaged some Dexion though the drips continued until I nailed an old groundsheet over the damaged roof timbers. At least the drips were only meltwater. I had been relieved to see that Kista's chosen toilet area was well away from my bunkroom.

This tale may link in to another, a year later. We had heard the theory that a substantial pool of water could develop beneath the floor of a heated hut surrounded by snow but as it was usually out of sight it seemed irrelevant. Two of the new arrivals, Jeremy Bailey and "Doc" John Wilson, now found that the water level beneath the IGY hut had risen so that puddles appeared in the lowest sections of the very uneven floor. That included their offices and John's bunkroom. Their first defence was to construct duckboards, like large wooden bath mats to keep them above the water level as they walked about. Later a pump was installed and the water piped into the ice cave by the coal store, where it vanished into the porous snow.

There was much debate over the origin of the water. Jeremy declared that it must be from the gash pit in the main hut, the only substantial source of liquid in this frozen environment. This added urgency to his complaint as the various liquids that went down the gash pit would certainly be unhygienic and possibly a health hazard. (The two toilets were simply wooden seats above this pit.) Other people looked at the horizontal distance that would have to be travelled in some underground stream and argued that it would surely freeze solid long before reaching the IGY hut. They favoured some source much closer to where the problem was now seen, and I sided with them.

During my excursions on to the roof the previous year I had seen the cave formed as the ice above was steadily melted away by heat rising from the hut. That meltwater could only escape by flowing down the sides of the cave, or even down the roof, and ending up below the hut. There, presumably, it would initially seep down a short distance through the snow before freezing. This would build up a solid, impervious layer of ice until it extended widely enough to impound all future meltwater. That was when a pool would start to accumulate beneath the floor.

This mechanism also suggested that an alternative to pumping was to cut a hole in the floor and drive a steel stake downward and into this ice barrier. If it was not too thick the ice could be pierced or shattered to let the water rush out through the plughole, as it were. I looked forward to seeing whether this would work but by now the pumping (for several hours at a calculated rate of 300 gallons per hour) had taken the problem out of sight beneath the floorboards and people lost interest.

Lewis Jukes

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Photo 1

Phil Cotton on the roof of the IGY hut, with a crumpled chimney pipe, in 1964. Water-clear “icymite” behind him, on the left.

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Photo 2

Phil Cotton with a picket found in the snow above the IGY hut in 1964.

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Photo 3

Ian Ross working his way along the roof of the IGY hut in 1965. Scrap wood and debris is emerging from the snow overhead, beyond him.

Layout of Huts and some Tunnels at Halley Bay, 1964

(Grossly simplified)

