Ends of The Earth



67. John Innerdale, *Towers of Paine*, Chile, chromacolour, 50 x 60cm, 2002.

DAVID HAMILTON

Ski Mountaineering on The Frozen Continent



68. Mt Vinson summit, looking north to Mt Shinn, Mt Epperly, Mt Tyree and Mt Garner. *(David Hamilton)*

Long after all the other mountains in the world have been documented and climbed there will still be unexplored ranges in Antarctica. The logistic challenges, extreme climate and high costs of Antarctic exploration mean that only a few lucky climbers visit the interior of the icy continent each year. I have been fortunate to work as a guide in Antarctica for six seasons, mostly leading groups on two popular programmes: 'Last Degree' ski trips from 89° South to the South Pole (four times), and ascents of 4892m Mount Vinson (12 times).

Antarctica's highest peaks all lie in the Sentinel Range (part of the Ellsworth mountain chain) at S 78° 30' W 86° 00'. Basic 1:200,000 USGS maps have been available for this area since the 1960s. The recently

produced 1:50,000 Omega Foundation map has more detail and greater accuracy. Studying this new map gave me the idea of making an exploratory ski mountaineering journey among Antarctica's highest mountains.

The key to travelling self-sufficiently for two weeks lay in using lightweight plastic sleds to transport our equipment. I had used a variety of sleds in other environments and knew that we needed an effective way of controlling the sleds during ski descents. A little research led me to Ed's Wilderness Systems in Minnesota, USA, where I purchased rigid fibreglass towing bars plus aluminium stability fins for the sleds.

I convinced my employer Antarctic Logistics and Expeditions (ALE) to allow me to range freely for two weeks at the end of the 2009/10 season



69. Starting out from Vinson Base Camp at 2,100m on the Branscomb glacier. *(David Hamilton coll.)*

and I persuaded Patrick Bird, a suitably fit and capable climbing friend, to join me for the trip. I led a 'Last Degree' ski trip from 20 December to 1 January followed by a few days as manager at Vinson Base Camp (VBC). On 7 January Patrick arrived and we were ready to start our trip.

In the afternoon we made a short trip from VBC at 2100m to Ski Hill 500m above to get a feel for the landscape and snow conditions. We followed an easy ridge line and were surprised to trigger a large surface layer avalanche in the bowl to our right as we climbed. Conventional wisdom holds that avalanches are very rare in Antarctica but in recent years ALE guides have observed several slides of recently deposited, wind-transported snow. The descent was fairly typical for high altitude Antarctic snow: variable breakable crust in places and a hard windblown surface in others. I hope that I am never asked to write advertising copy extolling the virtues of Antarctica's highest peaks for skiing. The truth is that while the base can be over 3000m deep, the surface layers rarely offer great skiing. Smooth, hard and windblown is usually as much as can be hoped for. Just occasionally a few centimetres of new snow on top of this can give a good surface. More frequent are patches of polished blue ice and iron-hard sastrugi. A ski trip

to Antarctica's Ellsworth Mountains will always be about the unique location and magnificent scenery. Rarely will the quality of the skiing justify the formidable economic and logistic challenges of getting there.

It is possible to overplay the extreme nature of the Antarctic environment to make any expedition sound like an epic feat of endurance. Certainly those involved in very long unsupported crossings of the continent may experience conditions that can overwhelm even the best clothing equipment. A short trip at the height of the Austral summer need not be a traumatic experience. Temperatures at VBC vary from -10°C to -20°C during the climbing season and Vinson summit is normally around -30°C to -40°C. Used correctly, modern 8000m clothing can cope quite comfortably with these temperatures. Strong winds need to be treated with considerable respect as they are the main enemy of both comfort and safety.

My clothing system has been tested on the summits of Everest and Vinson many times. I was confident that it worked well and ensured that Patrick was similarly equipped. My one concern was for my feet. Leaving my trusted 8000m boots behind, I had to find a way of making my ski boots work at -40°C. For anyone with feet smaller than a size 12 the solution is simple: a shell one size larger than normal with extra insulation added via customised inner boots and extra socks. When one is already using the largest ski boot shells available the options are more limited. The answer was a combination of lightweight inner socks, vapour barrier liners, lightweight wool ski socks, custom-made intuition ski boot inners and a neoprene overboot. It took a bit of work to perfect this system. It was only when I removed the ski boot tongues and attacked the inner boots with a craft knife that the correct mix of comfort and performance was achieved.

Patrick and I left VBC on 8 January following the standard climbers' route on Vinson along the Branscomb Glacier as far as Low Camp. We each took about 40kg of supplies split into 10kg in a rucksack and 30kg on a sled. Under a cloudless sky and a merciless sun we were very hot on the long, gentle climb. Later that evening as the sun disappeared behind the bulk of Vinson the temperature in the tent dropped below -20°C.

Most of our planned route lay on the high-altitude plateau, above 3700m, that makes up much of the central Sentinel Range. The first challenge we faced was to get our supplies and equipment up to this height. We did this by making two carries on consecutive days to High Camp on Vinson's standard route. After the first carry we descended to Low Camp by ski. It is debatable if there was any advantage in using skis here given that we had to carry the extra weight uphill for the slim reward of a difficult descent on a steep slope with crusty snow. After two big load carries we were ready for a rest day but the weather forecast persuaded us to try and snatch the summit of 4660m Mount Shinn (Antarctica's third highest peak) before a predicted period of poor weather. Mount Shinn is one of my favourite Antarctic peaks and this was my third ascent. The route is varied and interesting without ever being difficult. The summit ridge is spectacular with several false summits and very large 'stable' cornices. From the summit



70. Patrick Bird skiing down the route of the fixed ropes between Camp 2 and Camp 1 on Mt Vinson's 'normal route'. *(David Hamilton)*

there are great views northwards towards 4852m Mount Tyree and 4575m Mount Gardner, the second and fourth highest peaks in Antarctica. We struggled a bit with the altitude but the weather conditions were ideal: clear skies, bright sunshine and little wind. We reached the summit in 7 ½ hours and made a ski assisted return to camp in three hours.

We appreciated our delayed rest day the following day, and then had a second rest day imposed upon us by low clouds and strong winds. It was still quite windy on the morning of the 14th. By early afternoon conditions had calmed and we were able to pack up camp and load the sleds. We followed the standard route towards the summit of Vinson. This climb is not steep and gains 1200m over 6km, but it was a real struggle to pull the heavily laden sleds up the icy sections of the route. After a day of sun and clear skies we were enveloped in swirling winds and mist just before reaching our intended campsite at 4700m on the col between the main summit of Vinson and a satellite peak called Sublime. In poor visibility we set up the tent in a cold shaded wind-scoop fearing that we would be hidden from the sun the following day.

At 10.30 the sun appeared from behind a rocky ridge. The tent soon warmed up and we were able to enjoy breakfast in some comfort. By 12.30 we set off to follow the straightforward ridge to the summit of Vinson, reaching it 90 minutes later. The air was still and clear. We could see the entire length of the Ellsworth Mountains stretching to the north and south. To the east and west the flat expanse of the Antarctic ice sheet extended as far as the eye could see. The view was not unlike looking out over a sea of clouds below; only in this case what we were seeing was not a cloud inversion seen from above but an uninterrupted sea of ice that stretched for thousands of kilometres in all directions.

We descended to camp for lunch before packing the tent and loading the sleds ready to continue our journey south-east. We crossed the high-altitude plateau of the Vinson Massif with its dozen subsidiary summits before the ground fell away into a gentle slope leading to Hammer Col. The sleds behaved reasonably well on the descent with only a few flips. Soon



71. On the summit ridge of Mt Shinn, looking towards the peaks at the northern end of the Sentinel Range. *(David Hamilton)*

72. Mt Tyree (Antarctica's 2nd highest peak) seen from the summit slopes of Mt Shinn. *(David Hamilton)*





73. Leaving the Corbert/Clinch Col at 4700m on the Vinson Massif. *(David Hamilton)*

we were adept at keeping them upright even as we executed some fairly aggressive ski turns. Camping at 3850m on the Hammer Col was unbelievably warm. There were no surrounding peaks to cast their shadows over the camp and it was exposed to 24-hour direct sunlight. The temperature in the tent never fell below 20°C. It was so hot and bright throughout the night that we found it difficult to sleep.

The next day was clear and sunny on the high peaks although we could see some distant clouds at lower elevations. Leaving the tent and sleds behind we set off on the gentle 8km climb towards the Craddock Massif, which culminates in Antarctica's ninth highest peak. We knew that the highest point, 4477m Mt Rutford, had received only one previous ascent via the steep west ridge. Although our ski approach from the north was a considerably easier climb it was a new route on the peak and the first ski ascent. The summit was just out of view for almost all the climb. The wind would threaten to increase and then die down. The clouds would threaten to obscure the route and then clear. There was just enough uncertainty about the climb that we were never quite sure if we would succeed until we removed skis 70m below the top and set foot on the final steep tower of rock and ice.

The summit block was the strangest piece of mountain architecture that I have ever seen. A huge crack split the overhanging summit rock block. A snow cone piled on top of the block had been eroded by wind channelled up through the crack. This had created a symmetrical concave feature in the snow resembling a modern sculpture. We photographed this for several minutes and looked

along the lengthy summit ridge linking the other three principal summits of the Craddock Massif before descending to collect our skis.

The climb had taken 5½ hours. The ski descent took only 1½ hours and this included several stops to take photographs and admire the views. After another warm night in Hammer Col camp we started our homeward journey retracing our route back to the Vinson Plateau 6km distant and 1000m higher. The winds grew steadily from the west as we climbed and the heavy sleds slowed our progress. By the time we reached our intended campsite on the col between Corbet Peak and Clinch Peak the wind was gusting at 30-40 knots, funnelled through the gap in the mountains.

We searched in vain for a sheltered spot to pitch the tent and settled for a small shelf partially protected by a low ridge of rocks. The wind and spindrift howled around us as we struggled for more than two hours to cut a platform for the tent and pitch it. We dragged the heavy sleds into the flapping fabric to hold it in place while we fought with the poles and stakes. Finally, with three ice axes, two snow stakes, and a heap of rocks we secured the tent in place and crawled inside. We had been looking forward to completing a 'hardship free' expedition but the Antarctic weather was not going to let us leave without a taste of what a serious low temperature storm feels like. We were happy to be safely inside the tent with no cold injuries as the wind continued to shake the tent throughout the night.

By the morning the wind had dropped to 20-30 knots. We loaded the sleds inside the tent, dropped the tent quickly and 'rafted' the sleds together for the start of the journey. A few hundred metres lower we escaped the worst of the wind. We separated the sleds, reconfigured our loads and started to ski. We expected a quick simple downhill run to regain High Camp on the regular Vinson route. Few things in Antarctica work out exactly as planned. It took several hours of frustrating work to drop 900m over 7km to reach our goal. Along the way we encountered hard blue ice and giant sastrugi. Inaccurate altimeter readings caused us to drop too low before a crucial traverse. Wearily we resorted to skins to facilitate the climb back to the correct line of travel.

By 6pm we skied into High Camp and met almost 20 other climbers. We had grown used to having the entire mountain range to ourselves and it seemed strange to be back in the company of others. The forecast for the following day was good. Although we had accomplished all of our goals we had not done as much 'proper' skiing as we had hoped. Neither pulling sleds up or down really meet the requirement for 'enjoyable' skiing. So I suggested that we make a repeat ascent of Vinson the next day, unencumbered by sleds, before descending to VBC. Patrick was initially surprised by this idea, but realising that we were well acclimatised quickly agreed.

We made a fast ascent to the summit carrying light loads in five hours. To make a change from our earlier ascent we followed the 'Right Hand Variation' that deviates from the standard route 250m below the summit. This enabled us to see a different side of the peak and make a traverse of the summit. It was -35°C on the top with moderately strong winds so we did

not stop for long before heading down the standard route to a point where we could put on skis at 4750m. From here we made a swift return to camp in less than an hour.

We were looking forward to a quick descent to VBC but our difficulties were not over. We had not appreciated how hard it would be to lower the sleds down the fixed ropes from High Camp to Low Camp. Abseiling with the conjoined sleds was a tough challenge and it took three hours to get from 3500m to 2800m. Low Camp was enjoying the evening sun but the route to VBC was shrouded in low-lying mist. We had been anticipating a smooth ski down gentle slopes to VBC. Instead we endured a tense descent



74. Patrick Bird (left) and David Hamilton on the summit of Mt Shinn. *(David Hamilton)*

through fog with visibility of no more than a few metres. Only the faint marks left by the ski poles of a previous party and an occasional marker wand indicated the correct path. After a 13½ hour day we staggered into VBC to be welcomed by the ALE camp staff with a bottle of champagne and a hot dinner.

The trip had lasted 14 days. We had covered 90km, much of it above 4000m, and summited three of the highest peaks in Antarctica. Patrick added up the figures and concluded that we had climbed a total of 8125m and descended 6625m on skis. I reminded him of our conversation six months earlier. When I had invited Patrick to ski with me in the Vinson Massif he had said that it sounded like a lot of money to climb one mountain. I had replied 'you get yourself down there and I will make sure you get a chance to climb more than one mountain'. I had kept my side of the bargain and we both agreed that it had been a great trip.

Summary: An account of a ski mountaineering expedition in the Sentinel Range of Antarctica's Ellsworth Mountains by David Hamilton and Patrick Bird in January 2010, including ski ascents of Mt Vinson (4892m), Mt Shinn (4660m) and Mt Rutford (4477m).

DEREK BUCKLE

Chile Relish

The 2010 Alpine Club expedition to Chile

It was hot when we arrived in Santiago at the end of January, in marked contrast to the cold prevailing in the UK at the time. It was here that we met up with Carlos Bascou, our Chilean member who had worked hard on planning our itinerary. He and Mike Soldner had conceived this expedition some years previously and had eventually decided on exploration of the mountains surrounding Tupungato from a base in the upper reaches of the Rio Colorado. Both had visited this area once earlier as part of their preparation for the first Chilean expedition to Nanga Parbat in 2007. At



75. Alpenglow on Tupungato (6570m), one of the highest peaks of the Chilean Andes. (*Derek Buckle*)

6570m, Tupungato is one of the highest of the Andean peaks, yet it does not attract the hoards regularly seen on Aconcagua, its close neighbour and the highest mountain in South America, despite being only 70 km from Santiago. The relative remoteness of Tupungato compared with many other Chilean mountains undoubtedly accounts for some of its reduced popularity, but the need for access permits to the upper Colorado valley is a second factor. Permits are required from both the Chilean border control agency and the Alfalfel power plant harnessing the waters of the Rio Colorado. As Carlos had arranged these prior to our arrival in Chile our access to the valley was a remarkably smooth affair.

Suitably equipped with detailed maps and a vast quantity of food, we left