ANTARCTIC QUEST 21
The Shackleton Anniversary Expedition
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‘Short’ Expedition Report;

“The Shackleton Commemoration Expedition – Antarctic Quest 21” – Written by Lt Cdr Paul Hart RN

It’s never easy to organise an Antarctic expedition, especially when that expedition is going to travel well away from the commercial routes, operated by Polar Tourism companies and, thereby, well away from their Search & Rescue services. While it is normally a herculean task to raise the money, secure the Foreign Office Permit, prove the qualifications and experience of the team, and get all the food, equipment and people to this frozen land, organising an expedition where the only rescue option is by the teams own efforts, is just a completely different level of challenge.

These were the circumstances that faced the team of the ‘Shackleton Commemoration Expedition – Antarctic Quest 21,’ but on top of all these hurdles, it had to all happen during two years of Covid restrictions on travel and group gatherings. Leading the team throughout this period and the two preceding years, was Lt Cdr Paul Hart RN. In his own words, Lt Cdr Hart explained; “the four years of planning and preparation were simply unrelenting in their challenge. The original concept for the expedition was to make a crossing of the Antarctic Peninsula to undertake science and exploration. The expedition was going to celebrate and commemorate the life and achievements of the famous Polar explorer Sir Ernest Shackleton, on the centenary anniversary of his passing on 5th January 2022. However, when the planning began in 2018, I, just like everyone else, was blissfully unaware that the whole world was going to be thrown into confusion by Covid. From 2020, through to the latter months of 2021, we had to do almost everything via Zoom. This included all our fund raising and liaison with our science collaborators, as well as our team meetings. It also really restricted our training programme and, as most of Europe was out of bounds, we had to resort to doing training on the beaches of Devon, where we practised hauling sleds and doing crevasse rescue using sand instead of snow, under the heat of the summer sun. People would watch us with a complete sense of disbelief as we did ‘kick-turns’ up sand dunes, while wearing our skis fitted with a carpet bottom to protect them from abrasion from the sand.”

The expedition team, consisting of eight people, nevertheless, progressed their plans over the four years and finally managed to do a pre-departure mission rehearsal in the French Alps in late November 2021. Even at this point though, Covid was still creating real challenges, such as a sudden closure of Switzerland to foreigners, which meant some of the team could not make it out to take part in the training. Finally though, the team departed the UK in early December 2021 and made their way to join the Ship SeaVenture in the Argentinian port of Ushuaia. Once on board, the team set about getting all the equipment ready for an early morning delivery onto the Antarctic Peninsula, at a location known as Portal Point. Unfortunately, the ‘Drake’s Passage’ crossing between Argentina and Antarctica is one of the roughest open water crossings in the world and it was certainly rough; leaving some of the team completely stricken by sea sickness. However, on the 15th December 2021, the team were finally dropped onto the ice of the Antarctic Peninsula. So

began a battle with the elements that was to test the team to their very core and not simply because it was unremittingly ferocious.

A little more about the expedition and the team though; Sir Ernest Shackleton had departed Plymouth on the 24th September, 1921 and was on his way to Antarctica to conduct a science and exploration programme; his fourth return to the Antarctic continent that he had been instrumental in unlocking in his previous expeditions. However, fate intervened in Shackleton's plans and he suffered a fatal heart-attack while on board the Quest in South Georgia. Shackleton's demise was widely regarded as the end of the "Heroic Age of Polar Exploration," where explorers had stepped into the unknown and pitted their wits and endurance against the harshest of environments in the pursuit of science and exploration. His final Quest Expedition was designed to undertake science in the Southern Ocean, but with his death, the work undertaken did not match the expectations he would have anticipated. Knowing that Shackleton had died on board the Quest on 5th January 1922, provided the team a suitable date by which to celebrate his achievements in life as well as commemorate his passing.

The team was drawn from a cosmopolitan background. The leader, Paul Hart, is a serving member of the Royal Navy and has significant Polar and mountaineering experience from previous expeditions as well as being a Polar Survival expert. Three other team members had been part of the British Services 2012 Antarctic Expedition and knew the conditions of the Peninsula well; Lt Cdr Martin Densham (Rtd) had been the expedition science lead in 2012 and it was largely through his continued work that the science programme for AQ21 was developed. SSgt Richard Simpson was serving with the Army ATG and is an accomplished skier and mountaineer, and was the communications and power lead, both in 2012 and for AQ21. Major Phil Carotte is also a skilled mountaineer and skier, and was logistics lead in both 2012 and for this expedition. Dr Antony Jinman, is a well known Polar Explorer and former naval surveyor, who had skied to the both the North and South Pole. Antony agreed to lead the educational outreach and social media operations through his specialist web platform: www.LikeToBe.org. Rickard Berg is a member of the Swedish Coastguard, and also an instructor in Polar operations and Polar survival. The Antarctic experience of this group of people amounted to many dozens of years and provided the underpinning expertise to operate in this most challenging of environments; something that proved essential as they faced the increasingly savage storms that continually beset the expedition.

The two other members of the team were Major Alex Cross (Reserves), who agreed to be the expedition Doctor and Catherine Cameron, who was both a mountain leader and also undertaking an M.Sc. with focus on Microplastic pollution. Neither had Antarctic experience, but they had both undertaken significant cold weather and mountain environment training, which, when supported by the other team members, provided them with the experience to operate in the Antarctic .

Having been dropped on the Peninsula and watched their ship sail away, leaving them alone on the ice, the team were to feel the full force of the Antarctic winds almost immediately. Katabatic winds smashed into the teams tent and broke the poles and tore the tents within hours of them being set up. These winds continued for not just hours, but days making movement impossible. Finally, when the winds abated, the team made necessary repairs and continued on their journey towards the Forbidden Plateau. Man-hauling 44 days of supplies of food and fuel, plus 10 days contingency supplies and all the other ancillary and science equipment, meant moving some 1.6Tonnes of gear over the ice. This included up slopes that would have been graded as black runs in ski resorts in the Alps. For each mile moved forward, the team had to do at least five miles in multiple runs to depot the gear and establish new camps. The going was arduous and demanding on the team and it was continually made worse by the ever-contrasting weather conditions. On some days, the temperature would hover above zero with snow falling and turning instantly to water on the team. This would make all the team and their equipment sodden wet. Then, the temperature would suddenly plummet to well below zero leaving everything frozen. On other days, there would be continuous snow-fall and zero visibility, increasing the avalanche risk and making travel through the crevasse fields extremely perilous. Finally there were the hurricane force winds, which demolished the ice walls built around the tents to protect them and then smashed the tents so violently that the poles were

continuously broken. At one point, the team ran out of spare poles to repair the tents and things were looking quite serious in terms of their ability to survive a further oncoming storm. By sheer luck, it turned out that the teams 'Probes;' rigid Poles used to check for crevasses, had exactly the same length and diameter segments as the poles of the tents, so by dismantling them the team were able to rebuild the tents. Despite all the efforts of the team, the weather was a continuous hindrance to making progress. In 33 days on the ice, there were only 8 days of weather that were conducive to hauling through the extremely challenging terrain and none of these were consecutive to one another. There were only a further seven days when hauling was possible, but with significant risk due to either increased potential for avalanche or likely crevasse fall. Beyond this, the weather or other environmental conditions made it just too much of a risk to move.

Having progressed to a crux point where the terrain was more like an alpine traverse slope than a slope to haul heavily laden sleds over, the team learned there was another storm set to hit them. Worse still, they were also told that the ship that was programmed to collect them from the ice wouldn't be coming back for them, because of an outbreak of Covid on board. This was about as bad as news could be for the team, who still had some three weeks of planned time on the ice. As it was, a desperate search then ensued to find an alternative vessel that could collect the team and return them to Ushuaia, but initial searches proved fruitless. The predicament of the team could not be underestimated; to push forward without a guaranteed return route could lead to a real survival situation and the need to call in a rescue that simply would not happen. However, without a definite vessel to collect them there was little point in trying to return to the original pick-up point. The decision was made to remain at the camp location the team had reached, but to take exploratory forays forward with the intention to push on if the opportunity allowed.

The team carried on their science and exploration programme, but even then, they were continually beset by ferocious storms. After, pushing forward across hugely challenging terrain, the team reached a point where they needed to commit to setting up a fixed line system to be able to move the sleds to cross a 45 degree slope. However, this needed at least three days of good weather to enable the move to happen and this good weather just didn't arrive. At this point the most serious storm of the expedition arrived and so did the news that a vessel called the S.H. Minerva might be able to alter her programme to pick the team up. For this to happen though the team would have to move all their gear back to the original start point in a matter of only six days, as opposed to the twenty-plus days it had taken them to reach their final camp. This was regarded as the only option to prevent a potential emergency situation arising later down the line, so the team began the process of removing themselves and any trace of their visit from the Antarctic landscape. Despite continuing bad weather, the team were able to arrive back at Portal Point for the pick up along with their science samples. So what was the science?

The team had collected multiple data samples for investigation of the presence of microplastics and metal contaminants. They had also collected data about the level of UV light reaching the Peninsula and the impact it might be having on life (UV light is used to sterilise water). Finally, they had collected data on the level of ice accumulating and being lost on the Peninsula, to corroborate models used to predict climate change. All of these projects will feed into our understanding of what is happening in Antarctica in relation to climate change and contamination. The expedition science lead, Martin Densham, said; "We really pushed to collect science samples in all weathers and despite all the challenges thrown at us, because we understood the importance of these samples in confirming that our current models of climate change in Antarctica are correct and where they aren't what the alternative realities could be."

For the team, what had the expedition meant? Well they had a chance to Commemorate Sir Ernest Shackleton and had held a ceremony on the ice that was relayed back to the UK and across the world using AST technology. Their live stream had been broadcast into schools as part of the educational outreach programme, reaching over 35,000 young people. It had also been the number eight item on the BBC news of the 5th January 2022. They had met the challenges of the Antarctic weather and continued to operate positively in the fiercest of conditions and having to deal with the psychological demands of being continuously 'at risk.' The expedition had been set around a tribute to the 'Spirit' of Sir Ernest Shackleton and his extraordinary resilience in just such

conditions, and the team all felt that they had lived up to the example he had set. The team had been supported by a special supplementation package of vitamins and mineral nutrients, provided by Better You Ltd and the team all felt this had contributed to their physical and mental well-being; something that Shackleton hadn't had in his trips and which accounted for Shackleton's regular exposure to Scurvy. Richard Simpson said; "We used magnesium spray's to relieve the muscle stiffness of hauling the heavy sleds up extremely steep slopes and it seemed to work really well as none us had any real muscle soreness, despite the repeated physical hardships."

The expedition leader, Paul Hart, summed up the expeditions overall impact on all the team when he said; "We wanted to open up Antarctica to people who couldn't go there and who would be unable to operate in the environment. Our science programme was intricately linked to our educational outreach programme and media activities. We were able to connect all these aspects and, using the amazing AST Satellite Technology, send video of what we were doing and experiencing, back into classrooms and homes across the world. We hope we provided a fitting example of what the military can provide in terms of experience and capability, into this area of science and exploration in an unforgiving environment, just as Shackleton and Scott did a hundred years ago. For us, as a team, the bonding that happened between us to allow us to operate in such a high-threat environment and totally dependent on each other, affirms to us the value of our military backgrounds. We formed friendships that will last for life and we, as a team, our now planning on a return to complete work that we couldn't do as a result of the early extraction. We intend to face the Antarctic, just like Shackleton did, one more time in 2024/25."

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