
Expedition Reports



'Waterfall (at Dawlish, Devon?)', J S Barth, undated, watercolour touched with body-colour, 57.1cm x 44.7cm. (*British Museum*)

SUMMARISED BY ADAM BUTTERWORTH

Mount Everest Foundation Expedition Reports

The Mount Everest Foundation (www.mef.org.uk) was established as a registered charity following the successful ascent of Everest in 1953. It was initially financed using the surplus funds and subsequent royalties from that expedition. It provides financial support for expeditions of an exploratory nature in mountain areas, and is administered by trustees appointed by the Alpine Club and the Royal Geographical Society.

The exploration is mainly of a geographical nature but may also cover disciplines such as geology, botany, zoology, glaciology and medical research. In return for funding the MEF requires only a comprehensive report, and copies of these reports are lodged with the AC and the RGS. The reports can be consulted at these establishments or online via the MEF website.

The MEF has made total grants of well over £1m to more than 1,600 expeditions with members from the UK and New Zealand. Donations to allow us to continue this work are always welcome. We particularly encourage donations from former beneficiaries of MEF grants. In 2022, 24 MEF-supported expeditions made it into the field with a number achieving notable first ascents or bringing back valuable scientific data. The following notes summarise the reports from these expeditions.

NORTH AMERICA

British Kichatna Expedition 2022 – Mike ‘Twid’ Turner and Mark Thomas

Taking advantage of a season that saw remarkably good weather in the region, Turner and Thomas established a new route on the east face of Kichatna Spire, the highest of the granite peaks comprising Cathedral Spires. Their line *Thunderstruck* (VI, A3+/A4, 6c) takes a slender pillar on the right-hand side of the face, following a crack-line for much of its length before mixed rock and ice terrain leads to the summit. The pair referred to the route as “the best climb of our lives” and note that the large east face has significant potential for continued route development.

MEF Ref 22-05

Meltwater Drainage through the Mackenzie Mountains –

Benjamin J Stoker, Sophie L Norris and Helen E Duffer

All three members of this expedition are researchers with a focus on the ice sheets of North America – their extent, their deglaciation and the associated effects on the landscape. The central aim of this fieldwork was to better

understand the drainage network created as glacial meltwater passed through the Mackenzie Mountains during the last deglaciation and how this fresh-water flux to the Arctic Ocean may have impacted ocean circulation. On 22 June, following a short delay caused by bad weather, the team flew into the Mackenzie Mountains from Norman Wells, setting up base camp next to their landing site. Over the following days, they conducted short forays into the field of 3-5km, observing the landscape and taking a sample from a boulder deposited by an historic outflow. With their research completed in good time, they flew out on 27 June. It is hoped that their observations, combined with the dating provided by the rock sample, will allow them to reconstruct the region's drainage network.

MEF Ref 22-17

Baffin Island 2022 – Maria Parkes, Neil Chelton and Owen Lee

The team flew into Pangnirtung from where they travelled up Pangnirtung Fjord into Auyuittuq National Park. Their primary objective, Mount Turnweather, is located just east of the park boundary. Based on pre-expedition research, they had planned to climb the mountain via its north face but on inspection they decided that the rock was too loose to be viable. They turned instead to the north-east face, where a series of continuous crack systems allowed them to forge a path to the summit. Their new route *Rainy Day Dream Away* (VI, 5.9, A4, 70°) was climbed capsule style, with some use of fixed ropes on the initial section. The team encountered poor weather, with rain almost every day. At the summit tower, they found evidence of previous expeditions in the form of bolts but believe that earlier parties climbed both the summit tower and the mountain by different routes.

MEF Ref 22-20

'Alder in the Arctic' – Millicent Harding, Calvin Heslop, Lauren Church and Nicholas Daley

When two members of the expedition tested positive for Covid-19 on arrival in Alaska, this team were forced to alter their plans, relocating the planned site of their research from Umiat to the Yukon-Koyukuk area in the sub-Arctic. Here the team sampled four tundra sites at varying altitudes, gathering data that will allow them to better understand the plant life of this rapidly changing environment.

MEF Ref 22-22

Sex Differences in Cardiovascular Acclimatisation to High Altitude – Dr Lydia Simpson, Dr Jonathan Moore, Dr Mike Stembridge and Dr Alex Williams

Based at the Barcroft Research Station in California, US, the aims of this research expedition changed to focus on examining the effect of high altitude on vascular function in men and women rather than its effect on cardiac function. Over two weeks, the team examined intra-arterial blood pressure as well as vascular and blood flow responses to high altitude at rest and during

exercise in male and female participants. Additionally, the team were able to assess several aspects of blood pressure control at rest. They characterised sympathetic nervous system activation at high altitude and investigated the role of both elevated pulmonary pressure and the input from the body's main oxygen sensor (peripheral chemoreceptors) in eliciting these responses in males and females. Due to the large quantity of useful data collected, the team expect the expedition to result in several peer-reviewed publications.

MEF Ref 22-33

SOUTH AMERICA

Altitude Physiology Expedition (APEX) 6 – Dr Oliver Vick, Dr Alastair Woodhead, Dr Suzanne Green, Dr Isla Petrie, Dr Katie Flower, Dr Ben Warrick and 32 undergraduate students

This scientific expedition from the University of Edinburgh travelled to La Paz in Bolivia and onward to a high-altitude laboratory at Huayna Potosí. The aim of the expedition was to collect physiological and genetic data from individuals exposed to moderate (3640m at La Paz) and high-altitude (4775m at Huayna Potosí) environments in order to improve understanding of the body's response to hypoxia (low oxygen levels). Over three days in La Paz and eight at Huayna Potosí, the expedition team gathered data from a series of experiments investigating the effect of hypoxia on dark adaptation and retinal function, menstrual bleeding, the predictive validity of different measures of lung oxygenation function, white blood cell gene expression and neutrophil survival. Analysis of these results is expected in due course.

MEF Ref. 22-32

GREENLAND & ICELAND

Medusa Climbing Expedition – Tim Luke, Ed Luke and Sasha Doyle

Setting sail from Glasson Dock (UK) on *Medusa*, a Vancouver 34C yacht, the expedition party arrived in Nanortalik, south Greenland after an arduous three-week crossing. After repeating some of the established routes in Tasermit Fjord, they moved to Tininnertup valley where they made an attempt on Tininnertup 4 (T4) Spire but were unable to reach the summit. Windy conditions led them to relocate to Semersq Island where they established a new direct line on Punta Alboran (1060m). Following this, the expedition undertook the long journey to Greenland's east coast where they hoped to find more unclimbed objectives. Sea ice prevented them from accessing the Mythics Cirque so they headed instead to the Fox Jaw Cirque where they repeated two existing climbs, made the first ascents of two new routes and made an unsuccessful attempt on an unnamed peak.

MEF 22-18

Greenland Sea to Summit 2022 – Bronwyn Hodgins, Jacob Cook, Kelsey Watts, Zack Goldberg-Poch, Angela VanWiemeersch and Jaron Pham

This team of six set out from Ummannaq on 5 July, paddling north through fjords and tidal mud flats before portaging a 20km section of land which connected a series of small lakes. Once past the portage, the party were able to make two first ascents on the impressive red granite domes on this section of coast: *Fish are Friends* (5.9+, 200m) and *Wears Your Paddle?* (5.11-, 250m). Further north, they arrived at the cliff known locally as Agparssuit. Here the three men repeated *Seagull's Garden* while the women established a new route *Time is a Construct* (5.11/A2, 400m) in a 50-hour push. However, the expedition's main objective was the first free ascent of Qaersorsuaq (also known as Sanderson's Hope), a 900m wall which rises directly out of the Arctic Ocean. In this they were successful, overcoming challenging weather across 20 days on the wall to establish *Sea Barge Circus* (5.11+, 900m).

MEF Ref. 22-27

Angmagssalik Expedition 2022 – Will Rowland, Mike Bauermeister, Noel Williams and Simon Tietjen

This expedition's initial objective was to complete a 25km traverse of several peaks on the west side of Ikasagtivaq fjord. Once underway the team quickly realised that, due to the poor quality of the rock, the full traverse would take four days rather than the three they had planned. After the weather deteriorated on the second day, they abandoned the attempt and relocated to a cirque of peaks on the opposite side of the fjord. Here, along with repeating a number of existing routes, Rowland and Tietjen also succeeded in the first ascent of a 700m rock route on the west face of Niniartivaraq.

MEF Ref 22-35

INDIA

British Chombu Expedition 2022 – Mick Fowler and Victor Saunders

Having attempted this unclimbed peak twice in 2019, first in April and then in October, this pair returned in the hope of finding better conditions in May. Despite promising signs upon their arrival, the weather quickly deteriorated with a degree of snowfall every day. This left the mountain's north face heavily loaded. They turned their attention to the west face, but here the risk of rockfall was too high and so they returned to the north-east Spur which they had climbed to 6,107m in 2019. After waiting for an injury suffered by Saunders to heal, the team began their attempt on 4 May. They made it to the base of the north-east spur on 07 May where foggy conditions forced a bivouac. Additional snowfall followed and the team retreated, considering the risk of continuing to be too great.

MEF Ref 22-04

2022 East Karakoram Expedition – Derek Buckle, Jamie Goodhart, Steve Humphries, Steve Kempley and Howard Pollitt

In September 2022 five members of the Alpine Club travelled to India

intent on exploring the Rassa glacier and attempting the first ascent of one or more of the many 6000m peaks which rise from it. Flying via Delhi to Leh (3500m) in Ladakh, they first spent four days acclimatising to the altitude before crossing the 5370m Khardung La to the Nubra valley. After spending a night near the village of Tirit, the team then began a three-day trek up the Tirit Phu to establish a base camp at 4750m. Having identified and optimised access to the lower Rassa glacier, an advanced base camp was subsequently established on a sandy depression in the moraine at 5100m. Further forays identified a suitable high camp on the glacier proper, at the foot of the unexplored second glacial spur. From this camp team members extensively reconnoitred this glacial spur and two members successfully made the first ascent of Peak 6365m (Dagarpheth Kangri) via its east-southeast ridge at alpine AD. Further exploration was precluded by the onset of bad weather, forcing a retreat to base camp and an early return to Leh.

MEF Ref 22-07

Chiling II North Face Expedition 2022 – Alex Mathie, Tim Elson and Innes Dean

Travelling from Leh, the expedition arrived at base camp on 8 September. After establishing ABC at 4500m, they reconnoitred their primary objective, Chiling II (6253m), discovering that a recent landslide had made accessing their intended line on the north face impossible. They turned their attention to the north rib of Lalung I (6243m), but found this to be an unattractive proposition, consisting of little more than frozen earth. Searching for new objectives, the team entered an unexplored side valley of the Lalung glacier where they found a number of attractive unclimbed peaks. They decided to make an attempt on an unnamed peak with a Google Earth spot height of 6048m but abandoned their attempt after triggering a small slab avalanche, which narrowly missed one of the team. Concluding that the conditions were unlikely to improve given the forecast, they packed up early and returned to Leh.

MEF Ref 22-14

British/Irish Barnaj II Expedition – Dave Sharpe, Will Harris, Callum Johnson, Tom Seccombe and Matt Glenn

Upon arrival at their base camp in the Zanskar valley this team found very dry conditions, the monsoon seemingly having failed to arrive. However, the very next day, 1ft-2ft of snow fell at base camp, with possibly more higher up. The fresh snowfall made acclimatisation heavy going, but over a few days, the whole team rotated up to 5,700m and back to base camp. Abortive attempts on the east face of Chiring and Barnaj II's north face followed on 30 September but, after a couple of days' rest, Glenn, Seccombe and Johnson set out for what would prove to be a successful attempt on the north face of Barnaj II. The trio climbed to a subsidiary peak, Barnaj II East (6303m), over three days via a 1400m route which they dubbed *Seracnaphobia* (ED M5 AI4). Upon reaching this subsidiary summit, they elected not to continue

along the ridge to the mountain's north summit, reasoning that it would likely take at least three days to complete the traverse and descend. They rappelled their new route on abalakov threads, leaving no in-situ gear behind.

MEF Ref 22-31

NEPAL

British Ganglung Kangri Expedition 2022 – Nick Colton, Ed Douglas, Julian Freeman-Attwood

After obtaining their permits in Kathmandu, the expedition team flew to Simikot from where they began the long trek to base camp. The journey took eight days, during which the weather was consistently unsettled and the expedition party faced difficulties navigating boulder fields with mules. Once base camp was established at just shy of 5000m, an ABC was sited below the access to the Ganglung glacier at 5333m. On 4 October, two of the team scouted their objectives, ascertaining that while Ganglung Kangri was too distant for an attempt, Chandi was definitely a viable proposition. Unfortunately, this clear day of scouting was to be the last good weather of the trip. Late, persistent monsoon weather arrived in earnest, forcing a difficult retreat from ABC by Colton and Douglas. With snow covering the boulder-strewn approach, the team found themselves trapped at base camp with no obvious route back down. A sat-phone call confirmed that mules could not reach within four to five days of base camp and, out of concern for both themselves and their base camp staff, they called for an air evacuation which picked them up on 11 October.

MEF Ref 22-06

British Jugal Expedition 2022 – Paul Ramsden and Tim Miller

The idea for this expedition was born when Ramsden, who was browsing satellite imagery during a Covid-19 lockdown, spotted an impressive north face in the Jugal Himal. Further research revealed that, despite being one of the closest 6000m peaks to Kathmandu, the mountain (Peak 6563m) remained unattempted. He and Miller travelled to Nepal in April 2022 and, after setting up base camp next to the Lingshing glacier, they combined acclimatisation on the west ridge of Dorje Lhakpa, with reconnaissance of their intended face. A break in the weather afforded them a view of a potential route, a thin ice line that seemed to extend almost the full length of the face but with short, blank sections that cast doubt on its viability. Nevertheless, the pair set out to investigate. Climbing alpine style over five days, they succeeded in making the first ascent of the mountain by their intended route, discovering that the blank sections they had observed could be surmounted by three pitches of awkward chimney climbing. They named their route *The Phantom Line* and offered a grade of ED+. Following the ascent, they dubbed the mountain 'Jugal Spire', but subsequently learned that it has also been referred to as 'Dorje Lhakpa II'.

MEF Ref 22-11

PAKISTAN

Virjerab Sar 2022 – Peter Thompson, Philip De-Berger and Murilo Lessa

Having struggled to recruit porters for their approach to base camp, the team was forced to split at Carpogoro with Thompson concluding that he would be unable to make the 26km carry to Virjerab Sar's ABC. De-Berger and Lessa reached their ABC two days later. They made two attempts to access the mountain, first via the north col and then by the west. Despite climbing through the night in the hopes of finding colder conditions, they were forced to turn back by poor snow and the added challenge of navigating significant crevasses in the dark. On 1 July, having relocated 6km down the glacier, the pair were able to make what they believe to be the first complete ascent of Peak 5880m, simul-climbing the entire way. Lessa's GPS measured a height of 5905m on the summit.

MEF Ref 22-08

British Slovenian Gasherbrum Expedition 2022 – Tom Livingstone and Aleš Česen

This pair planned to attempt the south-west ridge of Gasherbrum III but were forced to abort due to strong south-westerly winds. Believing that they might find more success (and shelter from the wind) on the mountain's north face/ridge, they relocated and made an attempt from this side of the peak. At 7,800m, they came upon a large tower which could not be bypassed and which required more difficult climbing than they were willing to commit to given the altitude and weather. They were therefore forced to retreat.

MEF Ref 22-16

Yawash Sar I-IV 2022 Expedition – Nicholas Hurdall Smith, Nigel Bassam, Tom Bell, Paul Winder, Ross Bell and Karim Hayat

This expedition hoped to make the first ascent of Yawash Sar I, a 6258m peak which they accessed via the West Ghiddims valley. Despite making three attempts on the peak; once by the south face, which was turned back by rock and ice fall, and once each by the south-east and south-west ridges, which were abandoned due to loose rock, they were ultimately unsuccessful. However they did not end the expedition empty-handed. Expedition member Karim Hayat and assistant chef Waseem Shah made the first ascent of Peak 5742m in alpine style at a grade of PD. Subsequently, Bassam, Smith and Hayat also made the ascent of Peak 5798m, again climbing alpine style via a route they considered to warrant PD+.

MEF Ref 22-24

Muchu Chhish 2022 – Murilo Gimenes Lessa and Stephen Ashworth

The world's second highest unclimbed peak has had several suitors over recent decades, to which this pair now add their names. Travelling to Pakistan in August 2022, they encountered appalling conditions as the country experienced its highest level of rainfall in 30 years, with widespread flooding.

The poor conditions hampered their approach to base camp but by the start of September, they had succeeded in establishing camp one at 4,900m, just below the mountain's south ridge. At this point, they received a poor weather forecast for the days ahead and decided to abandon their attempt, concluding that they would not have enough time for a serious push. They returned to Aliabad before relocating to their secondary objective: Pregar II (c6000m). Finding their intended route on the mountain's south face to be in poor condition, with scoured, dry rock and loose scree, they called it a day, ending the expedition without success. The team concluded that future attempts on Muchu Chhish would be advised to plan for a longer, six or seven week expedition, with acclimatisation carried out on an alternative, safer peak.

MEF Ref 22-29

Shimshal Expedition 2022 – John Burgess and Rob Reynolds

Taking place two years later than originally planned, this expedition faced difficulties arriving in Hunza, but once there experienced little in the way of bureaucracy and had a more pleasant onward journey to their base camp in the Gunj-e Dur valley (c4400m). High spring temperatures had left the valley very bare, with icy faces where one would expect to find snow slopes. Even so, the team were able to identify two potential summits which could be accessed from the same col. They made their attempt on 29 August, electing to climb to the col and choose between the peaks once there. Upon reaching the col, they noted that the higher of the two summits, Peak 5775m, could only be accessed via a complex rocky ridge. With Reynolds suffering from acute mountain sickness they felt that they could not commit to this approach and chose instead to attempt the lower summit via its more amenable snow slope. However, after only a short distance, the snow conditions worsened and they retreated in the face of significant avalanche risk.

MEF Ref. 22-30

CENTRAL ASIA

Alpine Club Tajikistan Expedition 2022 – Tom Davis-Merry, Alex Hale, Chris Lewis, Alex Metcalfe and Sarah Wysling

This expedition planned to visit the Zaroshkul glacier in the Rushan range of the Pamirs and to attempt a number of the surrounding unclimbed peaks. Despite erratic weather conditions, (this was the hottest Tajik summer on record but also saw the arrival of snow in August), they were successful. The whole in-country team achieved the first ascent of Peak 5357m in alpine style via a route 1km in length with 200m of height gain and an approximate difficulty of PD. Subsequently, Hale and Lewis made an attempt on the west ridge of Peak 5357m but were forced to turn back 300m from the summit due to a combination of fatigue and objective danger. It should be noted that the expedition's original leader, Tom Davis-Merry, was unable to fly out due to illness.

MEF Ref 22-23

EUROPE

Izvor Licanke Expedition 2022 – Christine Grosart, Richard Walker, Mark Burke, Louise McMahon, Osama Gohara, Mauro Bordignon, Luke Brock, Mitchell Parry and Velimir Vrzic

The Izvor Licanke cave system in Fužine, Croatia has been visited by cave diving expeditions for the last seven years with many of these teams receiving support from the MEF. This year's expedition discovered 938m of new cave passage, both above and below water, bringing the total cave length to some 2819m. This included the diving and mapping of sump five and the discovery of sumps six, seven and eight. Beyond sump 8, the cave continued with a high canyon leading into a huge dry chamber at the end of which was a ninth sump. This sump was not dived during the expedition, but was explored via video and looked promising.

MEF Ref 22-36

ANTARCTIC

Interdisciplinary South Pole Innovation & Research Expedition (INSPIRE 22) – Prof. Chris Imray and team

The aim of this scientific expedition was to build on the work that has already come out of the MEF-supported metabolic research registry, GPAMRR, by assessing the metabolic tariff imposed on both male and female participants by prolonged polar travel. In the process, the researchers also planned to test wearable technologies designed to measure physiological activities and to assess the psychological impact of prolonged polar travel. Following a preliminary expedition to Norway in March 2022 and training exercises in the UK, baseline measurements were taken at University Hospitals Coventry and Warwickshire NHS Trust in October 2022. The team left the UK on 7 November and, following testing in Punta Arenas, Chile, arrived in Antarctica on 21 November before being flown to the starting point of the Messner route on 24 November. Over the next 47 days, the team of nine (three women and six men) skied to the south pole, averaging 23km a day with two rest days. Diet was monitored throughout, with on-ice testing taking place every five days with all participants remaining on freeze-dried food for two days after reaching the Pole in order to obtain additional measurements. The researchers note that all of the participants lost weight. This weight loss was generally concentrated in the fat compartments and was accompanied by the addition of muscle mass. Men appeared to lose more absolute weight and had a greater percentage weight loss. Analysis of the data is ongoing.

MEF Ref 22-03

EAST ASIA

Mulu Caves 2022 – Andrew Eavis, William Yu Pearson, Anthony Radmall, Christopher Blakeley, Colin Boothroyd, David Nixon, Gareth Davies,

Rostam Namaghi, Richard Walters, Rida Rambli, Judith Calford, Martin Holroyd, Christopher Howes, Kevin Munn, Zarris Kem, Andrew Farrant, Ashley Gregg, Peter Hall, Timothy Kent, Andrew McLeod, Joanne White, Andrew Smith, Robert Eavis, Stein-Erik Lauritzen, Christos, Pennos, Hazel Barton, James Koether, Derek Bristol, Jonathan Beavan and Maya Williams

This large expedition party worked in several teams; exploring surveying and photographing 6.5km of new cave passage, as well as resurveying 5km of previously discovered passages. They also made a diving connection between Clearwater Cave and Racer Cave, increasing the length of the Clearwater Cave system by 10km, making it the eighth longest cave in the world. Additionally, laser scanning of 4.5km of cave passage yielded an impressive 3D image of the cave. This scan is likely to confirm Clearwater as the largest cave in the world by volume. Finally, scientific research was conducted into the corrosive quality of the cave air and, in particular, its deleterious effect on artificial fibres. Analysis of the results of this research is ongoing. The expedition team note that there is significant scope for further exploration of the cave system but caution that most of the more easily travelled passages have likely already been discovered.

MEF Ref 22-10