KCLAMC Sarychat/Fersmana 2011

Gareth Mottram, Edward Lemon, Hannes Granberg & Charles Evans

Team

Gareth Mottram – Expedition leader
Age: 33
Occupation: free lance developer and researcher

Edward Lemon – Kyrgyz liaison / Russian translator
Age: 23
Occupation: free lance journalist

Hannes Granberg - Medic
Age: 25
Occupation: medical student

Charles Evans
Age: 37
Occupation: full time carer

Rationale

In 2009 Edward Lemon and Gareth Mottram were part of the MEF funded expedition to the Sarychat glacier. The team were the first recorded venture into the lower Sarychat and managed a number of first ascents in spite of having only a short climbing window. The team were limited in the available time as the driver dropped them off 25km short of the base camp meaning that they needed to load haul for an extra nine days beyond the planned approach.

One of the key target mountains for the 2009 expedition was a glacial pyramid near the head of the Sarychat at the time referred to as Fers III (for Fersmana III) first attempted by the Slovenian Free Approved expedition in 2007. The lack of time caused by the extra load hauling meant the team did not have the opportunity to attempt this peak.

The 2011 expedition was designed to make ascents of this peak and the sentinel peak which defines the divide between the Sarychat and Fersmana valleys.

Logistics

Transport

The in country logistics were handled by ITMC as for the 2009 expedition. This entailed them organising for our border permits, for transport in and out of the border zone and also accommodation in Bishkek and Naryn for days when camping was impractical. This role they performed admirably. We used a UAZ-452 for transport as this is the cheapest and one of the most reliable vehicles ITMC possess, it was more than adequate for the transport of the four man team and 230kg of food, fuel and equipment. It only suffered one major breakdown, the alternator failing on the outbound leg, which lead to a three hour delay.

Our flights were booked with Aeroflot via Moscow. This was slightly more expensive than the cheapest advanced booking price through BMI but had the advantage of a more generous baggage allowance and extra baggage costs were not unreasonable.

Food

Our food planning was helped on this expedition by the contributions of Pulsin' energy foods and Be-Well expedition rations. Both companies made us generous offers of

discounts on their respective goods, this ensured that we had a core of rations which had a well balanced nutritional value and high density calories to carry us through the hardest parts of the expedition. We also obtained some boil in the bag meals to add variety.

Be-well dried rations:

- 36 breakfasts (~700kcals each)
- 36 evening meals (~800kcals each)
- 1.5kg b-fuel energy drink (powdered)

Pulsin Foods:

- 72 energy 50g bars (~200kcals each)
- 72 protein 50g bars (~10-14g protein +~200kcals each)
- 750g protein powders, 250g each of Pea, Hemp and Whey protein to mix into meals.

In Kyrgyzstan we purchased bulk rations for our normal, ie non-mountain days.

- 3kg Oats
- 1kg Cracked Wheat
- 500g Raisins
- 500g Apricots
- 1kg Nuts
- 1kg Milk Powder
- 1kg Sugar
- 200 tea bags
- 28 breads (local flat)
- 5 loaves (rye)
- 2kg Pasta
- 3 pots of Tomato Paste
- 32 noodle blocks
- 3kg onions
- 1kg carrots
- 500g dried mushrooms

- 2 cloves garlic
- Bottle of Soy Sauce
- Bullion
- Mint
- Chili Flakes
- Salt & Pepper
- Carraway seeds
- Bay leaves
- 40 bars turkish sourced chocolate (superior to the russian chocolate in both calories and taste)

Of the bulk rations the noodles proved to be the most versatile, combining to form soups and stir fries often with protein powders to improve the feeling of satisfaction from the meal. The local bread lasted well, as had been the case in 2009, however the rye bread lasted even better and was easier to eat. It is worth recommending it as an excellent, locally produced expedition ration. Hannes experimented with dehydrating some carrots and onions in the flat in Bishkek in order to provide some longer lived variety in the meals. This experiment can only be considered a resounding success, the dehydrated ingredients lasting until they day before pickup, when the last batch were consumed.

The be-well dried rations were generally well received catering for the vegetarian diet of the team leader and the more omnivorous tendencies of the rest of the team. The

vegetable casserole and the two Chilli (con and non carne) were generally considered to be the tastiest. The whole team found the breakfasts a little too sweet, occasionally making consuming the whole pack difficult. However this was rectified by adding a pinch of salt to the packs prior to adding hot water. This is a tactic that we would recommend to anyone considering taking these rations with them.
The Pulsin' bars proved to be an excellent choice the combination of stimulant enriched energy bars and protein bars keeping the team's energy levels stable through most of the expedition. The raw chocolate vegan energy bomb was unanimously declared the best flavour; the protein bars had a more mixed reception, but were all comfortably consumed. None of the team would have any hesitation in using these products on future long range endeavours.

Equipment
In terms of clothing there was quite a mixed bag in use, with a variety of sources of insulation chosen. Páramo Directional clothing generously provided extra equipment for team members on this expedition, including waterproof mountain trouser, wind proof and waterproof jackets/smocks and plenty of base layers. All the equipment performed as desired with a special mention for the torres smock synthetic insulation, proving tougher and more versatile than any expectation. Also the Velez trousers, which dealt far better with heat than expected and still worked well as waterproof and windproof leg wear, even making it to the peaks Georgina and Annika.
There were softshell clothing in use from both arc'teryx (Evans) and Rab (Lemon) which by all accounts did well.
Socks were a mixed bag, dominated by Bridgedale and Smartwool but with an honourable mention for Teko too. All socks performed according to spec, the only real difference being in personal preference for fit and warmth.
Boots were split into two manufacturers, Scarpa (Phantom Guides warn by Evans and Omegas warn by Granberg) and La Sportiva (Spantiks warn by both Mottram and Lemon). The Phantoms were probably the best performing boots, being warm enough for the high mountains and also waterproof and sensitive/flexible enough for the walk in and scrambling. The Omegas worked well but were a little short in the ankle for soft snow and showed some serious wear by the end of the trip.
The Spantiks were excellent on snow and ice and fine for climbing but made the walk in difficult for days when an approach shoe could not be substituted. Also Mottram's Spantiks showed serious damage by the end of only their second expedition. All repairable but a little frustrating.
Sleeping bags were a variety of Rab (Quantum Endurance 800 and Alpine 600) and Mountain Hardwear (Banshee), all performing well, though Granberg found his Alpine 600 on loan from Rab a little short to accommodate his size 12 feet.
Living tents were Terra-Nova Quasar and Hilliberg Nallo 2. The quasar did well dispite being 7 years old and snapping a pole on the second day, held together by gaffer tape for the remains of the trip. The Nallo was super light and stable but had issues with space and condensation for the extended month of use it was put to.
Bivy tents were generously loaned by Mountain Hardwear, an EV2 and EV3. Both worked better than expected at altitude and in snow, proving to deal with water vapour well. However when Granberg was forced to spend 2 nights in an EV2 at lower altitude when Evans was ill it proved very damp and uncomfortable. These were however very good tents for cold and high conditions providing protection from a twenty hour snow storm for Mottram and Granberg.
Climbing hardware included crampons, technical ice axes, ices screws, offset nuts, variety of pegs and some camming devices. All of the ice tools worked well, grivel Taa-K-oons, Petzl Nomics (2010), Quarks (2009) and Black diamond Vipers (2009). The only issue

really was wear on the Nomic picks after the 28 hour push on Fers III/Eggmendülük.
The crampons in use were all Grivel G-14's with the exception of Evans using Airtech's also from Grivel. All worked well, though Evans had issues fitting the Airtechs to his Phantoms and nearly lost one whilst climbing. This was resolved by tightening the main adjuster on the crampons.
The majority of the ice screws in use were Grivel Helix 16cm, and these were the perfect screw for the conditions, long enough for security, fast handling and simple.
The variety of Petzl and Grivel Pegs were excellent and proved vital for protection at times.
The DMM offset nuts that both teams used continued to demonstrate their versatility and stability, though on a few occasions were outshone by Wild country super light rocks.
Snow anchors in the form of DMM deadmen and Petzl snow tubes were also employed. Both offering some degree of protection on steep snow, there was little to choose between them in terms of utility, the DMM racking better but the Petzl being a little simpler to prepare.
The stoves in use were a Primus omni-fuel and an MSR dragonfly. Both burning 93 octane unleaded petrol. Both stoves worked well when clean, though the nature of the fuel meant they did need regular cleaning. The Primus proved easier to restore to top performance and the MSR tended to soot up a little quicker. However both were robust and easy to use in most circumstances. The Primus would however be the optimum choice for the whole team if that option were available, the ease of lighting and draining tipping the balance in its favour.
Communication was provided by and InMarSat iSatPhone Pro. This is a geostationary based sat phone service. The phone worked well and one charge lasted the expedition with circumspect usage. The down side of the geostationary system is limited coverage in valleys as the topography could obstruct the line of sight to the satellite. However it was more reliable than our experiences with an Iridium handset in 2009.

Medical Summary – Hannes Granberg
Being a final year medical student I brought along a bigger medical kit than might have been otherwise. Contents as follows:

16 days Ibuprofen (anti-inflammatory)
14 days Diclofenac (strong anti-inflammatory)
2 tubes of Ibuprofen Gel
14 days Co-Dydramol (Paracetamol and Codeine pain killer)
6 days Paracetamol
8 doses Buccastem (anti-nausea tablet, mouth dissolving)
1 pack of combined Apirin, paracetamol and caffeine, good against head aches
12 days Ranitidine (indigestion relief as anti-inflammatories are harsh on the stomach)
1 course Flucloxacillin (antibiotic particularly useful against wound and bone infections)
1 course Metronidazole (antibiotic against bacteria penicillin isn't that useful against)
1 course Co-Amoxiclav (very broad spectrum antibiotic)
2 courses Ciprofloxacin (antibiotic against various stomach bugs)
1 tube Chloramphenicol eye ointment (antibiotic against conjunctivitis)
1 tube Aciclovir (against cold sores)
3 days Dexamethasone tablets 8mg x 2 x 3 (against brain oedema)
1 day Dexamethasone injections 8mg x 2
1 Salbutamol inhaler (some evidence to treat lung oedema)
5 days Nifedipine (to treat lung oedema, some of it is from a stall in Kathmandu and it is obvious what it is as it is written in biro on the back)
14 days Azetazolamide (Diamox, to help with acclimatisation and treatment of any altitude illnesses)

Local anaesthetic
Suture pack
Sutures (3-0 and 4-0 mono filament, non absorbable)
3 pairs of sterile latex gloves
Steri-strips
Assorted scalpels
Assorted syringes
Assorted needles
Assorted cannulas
Assorted dressings
Gauze
Army field dressing
Neurotips (sharp thing for poking people with)
Iodine tablets
Saline wash
Tape
Disinfectant wipes
Tourniquet
Stethoscope
Oxford Handbook of Clinical Medicine

With this I was quite happy being able to treat most things that wouldn't necessitate urgent rescue. We ended up using quite a lot of it, particularly on myself. Some medication that would have been much appreciated would have been Metoclopramide or Cyclizine. Both are potent anti-nausea medication that can be used intravenously or orally. The reason we didn't bring any was because of us opting for Buccastem instead, unfortunately it isn't as effective for nausea but works better when actually vomiting.

Having met one of the of the Slovenian climbers crippled by sciatica sparked the thought that we should have brought Gabapentin, originally a anti-epileptic medication that appears to work very well on nerve pain. A couple of doses might be very helpful if a team member develops nerve pain.

We should have brought more diorilyte as we didn't have enough if we would have needed any larger amounts of it than we did. Only an oversight and not a planned decision

As for actual medical problems we were lucky and only encountered relatively minor medical complaints that could be treated with the medical kit we had. Having had more first aid supplies might have been useful, particularly more tape to treat blisters with. Leukoplast can be recommended for that purpose, but we had spare supplies in the end.

Scientific

Geology/Geomorphology

Much of the general geomorphology and geomorphology has been dealt with in the 2009 report. The broad sweep of the region is made by the contrast between granite and limestone. The flora were analysed in greater detail on this expedition.
The new insights gained on this expedition were to confirm that indeed the solidity of the rock improves towards the Chinese border. The rock on the major buttress and awkward step of Fers III/Eggmendülük being a relatively well consolidated if granular slate. The rock at this point, where loosened by frost action has broken off into large angular blocks rather than the small fragments typical of shale found further to the north in the Sarychat.
Viewing the Limestone landscape to the east from the plateau above base camp showed a

distinctive series of large synclines dipping from the plateau peaks along the Aytali into the zone annexed by China in 2005.
These landforms are generally characteristic of regions which might be suitable for oil exploration. Coupled with the evidence of the shales in the Sarychat divide and the fact that it is on the border of Uighuristan (Xinjiang), China's largest oil and natural gas, producing area would suggest potential petrochemical reserves in the annexed zone, though there are also almost certainly worthwhile shale gas reserves still on the Kyrgyz side.

Illustration 3: View into the Chinese annexed zone from the plateau between the Malitskovo and Sarychat valley systems. Showing the dip of the limestone bedding planes

The toe of the Sarychat glacier was found to be at 3,890m, this is a little higher than the 3,840m found in 2009. Coupled with the extension of the Gent Ice fall to the north, implies that the temperature and precipitation conditions for the last two years have been inadequate to maintain the glaciers volume. The extension of the ice fall and the increase in crevasses above 4,000m but a reduction bellow this indicates that the rate of travel of the glacier has increased, suggesting a more warm, lubricated base.
We were not equipped to measure the depth of the ice but some evidence of scaring on the valley sides implies that the depth of the glacier has reduced.

Fauna

As in 2009 there was plenty of evidence of ruminants, such as Ibex and Marco polo sheep. However the large herds of herbivores witnessed in 2009 were not apparent. This may be the result of the much warmer weather experienced during this expedition leading to shifts in their migration sequence.
The giant marmots were also less in evidence than in 2009.
However we were able to identify flocks of Choughs as well as the expected Tibetan Ravens. These ravens seem to have moved down to a lower altitude than in 2009 and were often seen at base camp, which never occurred during the previous expedition. We also saw a range of raptors including falcons and large eagles of uncertain species. The largest birds seen near the camp were confirmed as some kind of vulture, though the exact species is unknown. The plumage was white on the underside and light brown on the back. These vultures appeared to be nesting above base camp.

Illustration 4: Raven seen at base camp ~ 1.5m wingspan

FLORA

On the drive-in and approach to base camp we passed through spectacular, herb-rich alpine meadows. The best opportunity to enjoy the abundance was on the gentle southern slopes of the Aytali, between our Intermediate Camp and Base Camp (highest point c.3700m, lat: 41° 8' 3" north, long: 77° 31' 30" east). We spent several days hauling loads in and out through these and they were easy to reach from Base Camp for an afternoon of rest and enjoyment with a camera. A stunning orange poppy was in full flower, along with a rock-rose, an edelweiss and gentians.

Here the Aytali is mainly of limestone, with cliffs and scree above and with some sink-holes. However, among the dry meadows were damp and boggy plots with some standing pools. We crossed these with ease, but I suspect even the dry meadows stream with water during the spring-melt, as in places the under-layer of dead grass runs downhill, flat to the ground. In the satellite image currently displayed on google – time of year unknown – these meadows are dusted with snow. No humans or livestock are to be found, but marmots graze here in abundance and grow fat and we saw a large herd of ibex on the high-ground above the meadows. The crest of the col between the Kotur and Aytali (4200m) is relatively bare of vegetation, as is the moraine of the Sarychat and Fersmana beyond Base Camp. All of the plants listed and illustrated are from the Aytali, between Intermediate and Base Camps.

Since our return to the UK, we have been able to identify most of the flowers captured in photographs to the level of genus, thanks to the interest of staff at Kew Gardens – many thanks to Marcelo Sellaro, Shahina Ghazanfar and Jo Osborne.

Dry meadow plots

01 **Papaveraceae** *Papaver tianschanicum*

Poppy with large flowers and petals which turn from yellow to orange

02 **Cistaceae** *Helianthemum*

Rock rose with yellow flowers

03 **Unidentified** A grass with stigmas that trail with the wind

04 **Asteraceae** *Leontopodium* possibly *Leontopodium ochroleucum* Beauv.

Edelweiss – small herbaceous plant with felted, greyish leaves and stems

05 **Crassulaceae** Orpine family

06 **Campanulaceae** Bellflower family

07 **Unidentified**

08 **Orobanchaceae** Broomrape family *Pedicularis*

09 Unidentified

10 Unidentified

Damp meadow plots

11 **Gentianaceae** *Swertia* possibly *Swertia marginata* Schrenk.

White-flowered gentian – abundant

12 **Caryophyllaceae** *Silene* possibly *Silene apetala* L.

Campion.

13 **Unidentified**

GPS systems

One of the core components of this expedition was to field test an experimental GPS logger system for hands free field surveying.
These systems were custom built for the expedition but only finished with less than a week to go before departure. This meant that there was no opportunity for a shakedown trial. Sadly this meant that the base station unit suffered from a dry solder joint and was DOA. This meant that the intended DGPS processing was impossible. However the roaming unit coped rather well and recorded data both on the Ascent of Fers III/Egmendülük and on part of the ascent of peaks Georgina and Annika.
28 Hours of continuous high resolution GPS data of traceable quality is of significant utility and so the field test can be considered a qualified success, however there are quality control and a few usability issues to be considered for the next iteration of the devices. Reducing the bulk and fitting a lower profile switch are the priorities.
The analysis of the gps records taken from the summit of Fers III/Eggmendülük, filtering for records based on less than 7 satellites and those which suffer dilution or have clearly experienced drift relative to the previous and subsequent records, yields an altitude of approximately 5231-5233m. This is consistent with mapped versus measured altitude from the previous expedition, also Granberg's altimeter registered 5218m on the summit, this altimeter had consistently read 20-30m low relative to Mottram's altimeter (the battery of which had failed by the summit day) and to GPS altitudes derived from the iSatPhone Pro satellite phone.

Itinerary

- Departed London 23rd July 2011
- Arrived Bishkek 24th July 2011
  - met at airport by Ed with a taxi
  - Osh Bazaar begin buying supplies
    - dried goods and fresh vegetables.
- 25th July Bishkek
  - acquire remaining supplies
  - Ed acquires permit to travel to border zone
  - assemble pre-bagged breakfasts and soup mixtures
- 26th July depart Bishkek
  - acquire a mixture of local flat bread and rye bread
  - camp south of Naryn
- 27th July arrive at Kotur galcier bellow the col leading to the Aytali
  - Ed and Hannes haul a load to the top of the col
  - Gareth and Charlie establish first haul camp
- 28th July begin hauling as a team loads go as far as the Aytali and Navilikin confluence

- 29th July charlie treated for Hyper hypernatraemia
  - more loads hauled
  - second hauling camp established by the confluence of the Aytali and Navilikin rivers
- 30th July all equipment moved to the second hauling camp
- 31st July encountered the Slovenian climbers returning from Pik Byeliy
  - haul the equipment over the Navilikin river
  - establish base camp with minimum of equipment
- 1st August finish moving equipment to base camp
- 2nd August rock climbs attempted above base camp
  - Mottram-Granberg – XS 4b, 'Soul of Milk'
  - Lemon-Evans, XS 5a, 'Petrol porridge'
- 3rd August move up to Cwm Arwyn – established high camp
- 4th August climb new route up snow coulior from the western side of the Sarychat, Scottish II/III 'Ambitious but Rubbish' to summit of Pik Lyell (2nd ascent),
  - discovered that the ridge leading to the Senitnel was laced with unstable spires of shale – abandoned the attempt on the sentinel
  - scout an alternate approach, north-east facet, to Fers III/Eggmendülük – the target route looking thin and unstable.
- 5th August
  - 04:00 depart on approach to the start of the alternate route up Fers III/Eggmendülük
  - 05:00 both teams climbing Lemon-Evans on the right, Mottram-Granberg on the left
  - 15:00 both teams have reached the crux sections in the rock band
  - 18:00 Lemon-Evans summit
  - 19:00 Mottram-Granberg summit
  - 00:00 ropes snagged and cut
- 6th August 09:00 high camp reached, rest day
- 7th August descend to level of base camp, river too high to cross so camp in sight of base camp across the Sarychat river.
- 8th August cross river to base camp – rest day
- 9th August Mottram-Granberg climb to plateau above base camp and reach small peaks on the ridge there – 4,631m (Georgina) and 4,685m (Annika)
  - snow storm closes in and confines Mottram and Granberg to a bivy tent on the plateau
- 10th August Mottram-Granberg descend
- 11th August begin retreat, haul loads to the edge of the Navilikin river
- 12th August haul loads across Navilikin to haul camp 2
- 13th August haul loads over to haul camp 1
- 14th August all loads are back at haul camp 1
- 15th August Mottram-Lemon-Evans attempt to reach a camp location on the Kotur Glacier bellow Pik Jjin weather became too unstable to proceed safely
- 16th August climb on troll head boulders
- 17th August rest day and packing
- 18th August picked up reached Naryn
- 19th August left Naryn reached Bishkek
- 20-23rd August Recover in Bishkek

Budget

Expenditure		Income	
truck	1100	MEF grant	1500
flights	1950		
food			
Pulsin	160		
Be-well	322		
Bulk and fresh food	200		
sat phone rental	125		
sat phone contract	100		
visas	240		
gps units	180		
fuel	20		
Austrian Alpine Club -insurance	168		
£	4565		1500

Climbing Narrative

The main target, a peak generally referred to as Fers III (thanks to the 2007 Slovenian Free-approved expedtion) was an unclimbed pyramid heading the western ridge dividing the Sarychat glacier from the neighbouring Fersmana with a spot height on the AAI map of 5,210m. The secondary goals of the expedition were Pik Byeliy, an unclimbed peak in the Fersmana of over 5,600m and the Sentinel peak marking the beginning of the divide between the Sarychat and Fersmana glaciers.

While the we were still hauling loads into the base camp a Slovenian team that had been camped in the Kotur, for over a week before our arrival, bagged the prize of the first ascent of Byeliy. Having a cup of tea at the KCLAMC camp on their way back over to their Kotur base they related how they had climbed the south ridge, which had been our plan, and how the climbing was not that hard, but the whole route was overhung by a huge serac which they had traversed under to the right. This focused the KCLAMC team on making a solid focused attempt on the primary target peak.

The weather had been changeable in the weeks running up to the first week of August resulting in heavy snow followed by high temperatures, even above 4,000m. The Slovenians reported heavy slush cover and unstable snow bridges the length of the Fersmana. On arrival at base camp it was possible to see that there was still an enormous amount of snow covering the eastern ridge of the Sarychat and the Senitnel peak. On the 2nd of August, the team prepared to walk up to the Sarychat to establish a high camp but decided that the weather looked unstable and instead chose to try some rock lines on limestone peaks above the base camp.

Hannes Granberg and myself (Gareth Mottram) chose a line on the southerly buttress with a view to reaching the peaks on a plateau above, where as Ed Lemon and Charlie Evans chose to climb the more northerly peak. Both teams encountered initially good quality limestone but with limited availability of gear. As approximately half height was reached Granberg and Mottram ran out of good quality rock finding a band of shattered chert and soft limestone. This lead to a retreat from the route just bellow a steep, wet crack/gully system. This, arguably incomplete, route was christened 'Soul of Milk', after the cheap milk substitute the team were using in coffee and porridge, and graded XS, 4b as the route was not highly technical but was too serious to give a more normal grade to. Charlie Evans and Ed Lemon managed to top out on their buttress even after encountering a thin smearing section near the top of their line. This yielded a route, named 'Petrol Porridge', at XS, 5a, again graded for the unavailability of reliable gear and the quantity of gardening required to find secure rock.

The day after the rock adventures, 3rd August, the weather looked much improved so the team crossed the Sarychat river and walked the 8km up to the cwm which had been used for the 2009 high camp. The upper sections of the Sarychat glacier were found to be massively more crevassed than in 2009, the Gent icefall having extended down to bellow the entrance to Cwm Arwyn. Fortunately the masking slush the Slovenians had found on the Fersmana had melted off making negotiating this set of obstacles a much simpler proposition. The avoidance of this extended icefall did add something like 2hrs to the total walk time but fortunately did not prevent access to the well protected cwm for the high camp.

On the 4th of August the team attempted to reach the Sentinel peak by climbing a gully route on the east flank of Pik Lyell (4,864m, first climbed in 2009 from the south), with the intention of traversing North down the ridge to reach the Sentinel. The route was a ~600m Scottish II/III gully with no meaningful protection, meaning that the whole team climbed un-roped. Upon reaching the summit of Pik Lyell, it's second ascent, the first being during the 2009 expedition, the team discovered that the ridge to the Sentinel was made mostly of unstable shale spires. The team therefore decided to retreat, naming the ascent route 'Ambitious but Rubbish'.

The following day, at 4am, we set off in two independent rope teams to attempt the ascent of the northeast face and ridge system of Fers III. This was a line spotted in 2009, which seemed one of the easiest lines that might yield a successful summit. Ed Lemon and Charlie Evans climbed next to the right hand bounding buttress of the face in order to have access to rock gear while Myself (Gareth Mottram) and Hannes Granberg chose to climb to the left hand edge on a continuous ice ramp, in order to avoid the fall line of anything that could be dislodged by the other pair.

This lead to a ~400m section of AI3 steepening to AI3+, up to the point where the right hand rock buttress merges with the main north ridge, the right hand mixed line being a similar length and about Scottish III or IV.

Along this ridge a point was reached with an overhanging rock step of over 30m so both teams chose to avoid this to the left. Evans and Lemon dropped lower while Mottram and Granberg stayed close to the level of the bottom of this step. However the lines of both routes then rejoined each other at a steep mixed chimney. The chimney consisted of a section of AI4 climbing leading to an M5 section totalling about 40m length at just over 5,000m. Following this pitch Ed Lemon and Charlie Evans traversed around the top of a buttress to gain an ice field bellow the final ridge access point. Hannes Granberg and myself left the top of the buttress to the right and traversed to the halfway point of the ice field by means of a steep and exposed ledge system strewn with loose blocks varying in size from house brick to refrigerator. The ice field that both teams took to regain the ridge was similar in character to the previous chimney system, AI4 converting to M5 at the finish which gave access to the narrow ridge leading to the summit headwall.

The summit headwall was found to be generally good quality snow between 50° and 60°, though not practicable to protect with anything but deadmen and snow stakes, not the most inspiring gear but adequate for the task at hand. This ridge/headwall section was approximately 300m in length staying on the left to avoid climbing directly bellow the summit serac.

By the time the teams had summated and descended to the ridge access point it was over 16 hours since the start of the climbing day and the light had failed. The descent began with two 70m abseils from the top of the second M5 pitch. The second abseil passed a number of overhangs and the ropes became irreparably snagged. This snag lead to the decision to cut the free length of the ropes and proceed with a series of short abseils and down climbing to reach the level of the top of the initial ice ramp. The ice ramp was traversed and then the remaining route height was abseiled on rock spikes down the initial line of the Lemon /Evans route.

Both routes were graded ED1 as the climbing was technical and the greatest difficulties were encountered about 5,000m as well as the significant amount of rock fall encountered adding to the objective risk and the remoteness and commitment of the routes. Hannes Granberg and myself named our route '28hrs Later' as the tent to tent time was approximately 28hrs and the team were all rather zombie like by the end. The Lemon/Evans route was named 'The Brothers Chechel' after the smoked cheese that Charlie took to celebrate the summits. The whole team agreed to name the peak Eggmendülük, Kyrgyz for Independence in commemoration of the 20th anniversary of the country's separation from the USSR on the 31st of August.

Neither team was in a state to descend on the 6th and so early on the 7th the descent began. On reaching the crossing point for the Sarychat river the impact of the 30°C temperatures we had experienced while recovering in the tents became clear. The glaciers had been melting heavily and the river was too high to cross. This meant that the whole team had to camp in the high altitude bivy tents within sight of the base camp. The evening meal consisted of three Pulsin' energy bars chopped up into a pan as a lucky dip, all the other supplies having been eaten on the extra, unplanned rest day.

Early on the 8th the river was low enough to cross and the whole team gratefully returned to the base camp.

After two days of rest Hannes Granberg and myself decided to try to reach a series of peaks on the plateau overlooking base camp. These peaks were accessed by easy climbing through scree gullies and up a snow ridge. The two fore peaks were reached (4,631m named Georgina and 4,685m named Annika, named for our very tolerant girlfriends) but a snowstorm had closed in and prohibited access to the peak marked with a point height of 4,798m on the AAI map. The route was christened 'They'd better appreciate this', PD-. The pair were then forced to spend over 20hrs in a bivy tent waiting for the storm to blow out.

This concluded the climbing of the expedition with the exception of a 10m aid route 'Fatboy Murphy', A2 Hannes Granberg climbed on a troll shaped boulder bellow camp in the Kotur during the walk out.

We would like to thank all the organisations who helped make this expedition possible, let alone the success it became: The Mount Everest Foundation,Real First Aid, Páramo Directional Clothing, Nikwax, PodSacs, Rab, Mountain Hardwear, Petzl, Beal, Pulsin' and Be-Well

Future Possibilities

There remain possibilities for major ascents in the Sarychat and Fersmana Glaciers, but also significantly slightly further east in the Palgov. The main subsidiary of Eggmendülük,

Illustration 5: Lines of '28 hours later' (green) and 'Brothers Chechel' (red) both ED1, also possible lines on the subsidiary in blue and yellow.

which is in itself above 5,000m, remains unclimbed, two major lines are clear options.

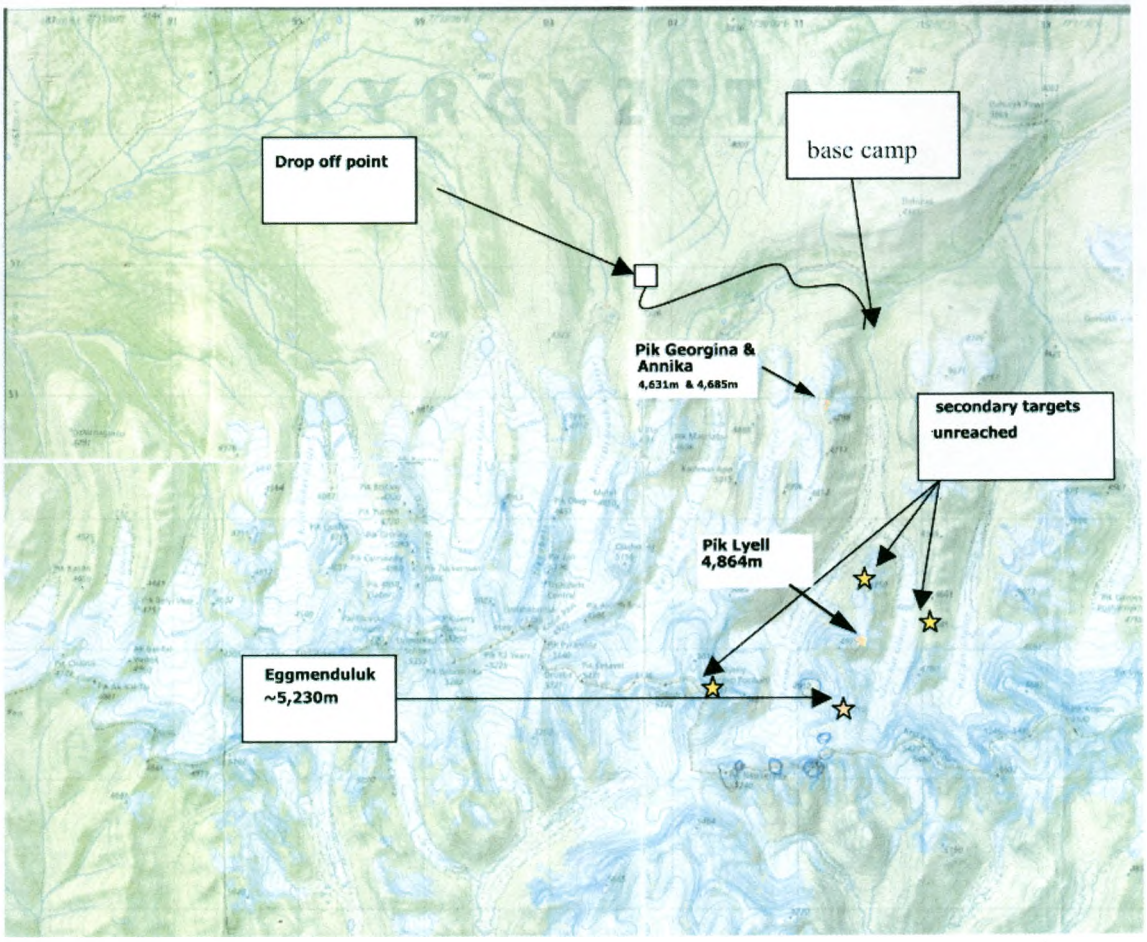
The summit of Pik Byeliy has now been reached (from the south) but there is at least one technically challenging and less serac exposed route following a buttress from the north. This would take snow/ice features visible in images from both the 2009 and 2011 expeditions. There is an alternative start possible which would take dihedral of unknown angle and difficulties (dotted).

The 'little PooBah' also appears to have a relatively safe, in terms of serac risk, route presented to the north, though even this would be a significant undertaking.

Illustration 6: Potential lines on north sides the Grand and Little PooBah's, viewed from the edge of the moraine on the divide between the Sarychat and Fersmana valleys

The Sentinel peak also remains unclimbed, the only line which seems plausible, in light of the 2011 experiences, would be a gully from the north, though this is certainly a significant avalanche risk. The easter flank being generally unstable scree and rock bands and the ridge from the south being similarly treacherous.

There are clearly a number of face routes visible on Kyril Sovetov and other mountains in the Palgov, but these have already been detailed in the 2009 expedition report. As have the likely lines of the ascents of the Sarychat ridge.


Drop off point
base camp
Pik Georgina &
Annika
4,631m & 4,685m
secondary targets
unreached
Pik Lyell
4,864m
Eggmenduluk
~5,230m