



**Imperial College
Mongolian Cycling
Expedition
2014**



11th July – 15th August

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Introduction



Aims and objectives

The overall aim was to cycle off-road unsupported in Mongolia, for a period of 4 weeks. We chose the northernmost province, Khövsgöl aimag¹. This is one of the most beautiful and diverse areas of Mongolia and we set out to cycle a route of 800 km, across planes and through mountains. We had a subsidiary aim of hiking up some of the mountains in the West of Khövsgöl aimag, but objective peaks were not decided on until we were there as there is little information available. None of the members had been to central Asia before and Mongolia offered a very unique environment. It is also the fourth least densely populated country so the team would truly have to work together to ensure a safe and successful expedition.

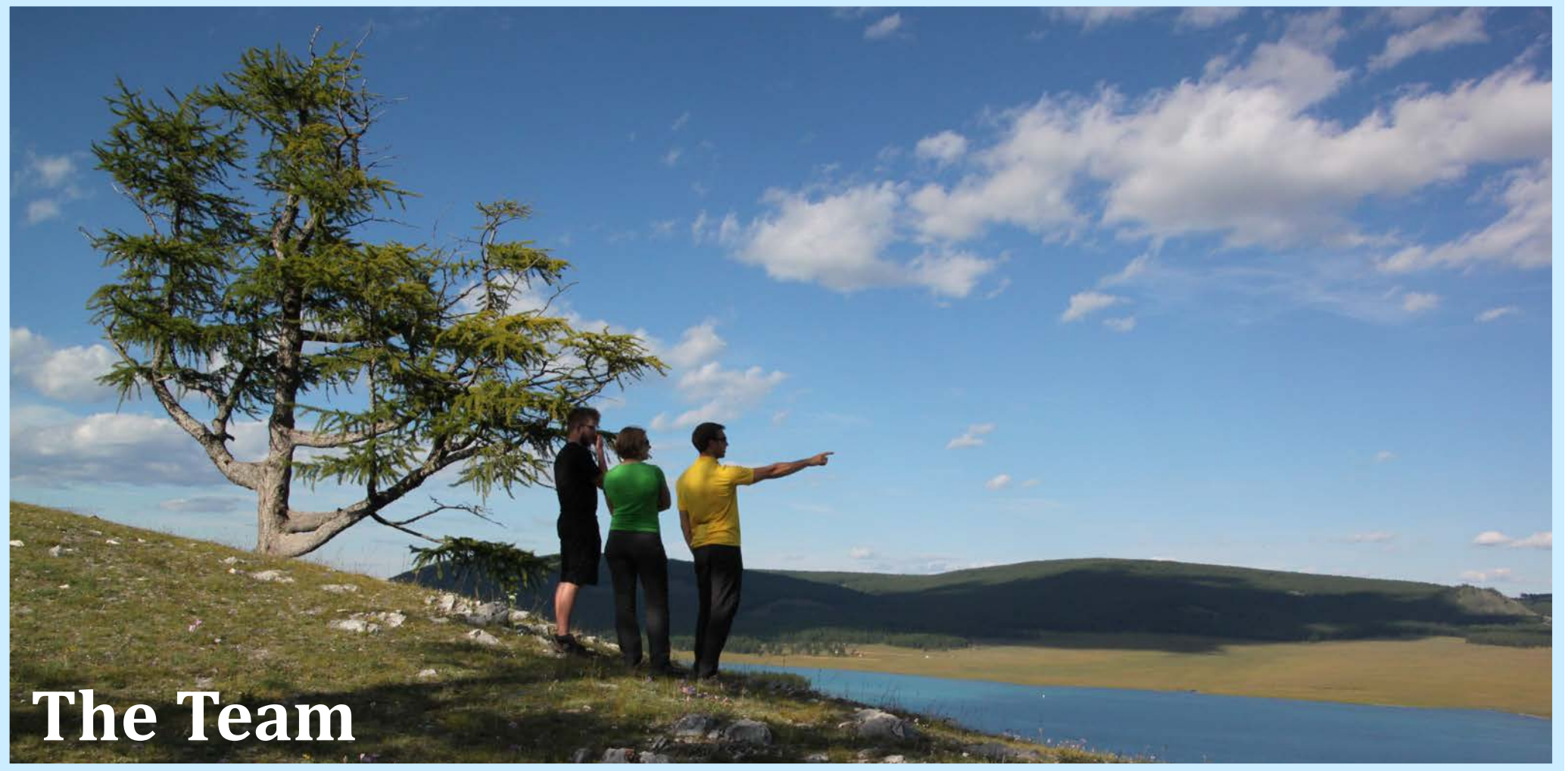
Our pre-departure objectives

1. To return as we will leave: safely back in one piece and as friends
2. To cycle 800 km in 28 days, ascending the mountain ranges and tackling the tough off road terrain
3. To meet the local people and experience the nomadic culture
4. To encourage others to just get on their bike and go, even if it's just to go safely to the shops

Subsidiary objectives

1. Hike some peaks in the West of Khövsgöl aimag
2. Take photos and film footage (GoPro, camcorder or SLR)

1. Aimag is the Mongolian term for province



The Team

The team were 4 members of the Imperial College Outdoor Club., from a diverse a range of backgrounds and ages. We all share a passion for the outdoors and pushing ourselves to the limits. We had been on many weekend trips together with our club and had shared experiences in a whole manner of activities, from climbing, running and biking to crawling back in a white-out in 70 mph winds (Scotland can be brutal). Consequently, we all had a good base of outdoor skills, from navigation to repairing tent poles, from cooking couscous on gas stoves to eating the lukewarm result without a spoon. In short, we are hardy folk; prepared by the time spent organising and leading outdoor activities. We were looking for our next big adventure.

Gemma Milman

Role: Leader and Photographer

Age: 28

Academic background: Final year PhD student (Chemistry dept.)



Gemma has cycled since a young child but only began mountain biking one and a half years ago and loved it ever since. Her interest in the outdoors began through climbing, through which she has explored Norway, the Alps, Pyrenees as well as the more local, Scottish and Welsh mountains. She has experience navigating in extreme weather conditions, and as part of her role in the Outdoor Club has lead and organised many group outdoor trips. Bike experience includes the London to Paris bike ride in 2012, as well as many other long bike rides. She regards herself as a good cook, but her reputation is in doubt after making fishy pasta, let's just say it did not become a staple on the expedition

Harriet Hillson

Role: Medical and Equipment

Age: 21

Academic background: 3rd year Mechanical Engineering undergraduate

Harriet began hill walking in UK from young age through Scouts, Outward Bound and D of E award. She became involved in the Outdoor Club as Equipment Officer (2012-13) and rose through the ranks as treasurer (2013-14) and is now Chair. She has gained a wealth of experience organising trips and tours, buying and carrying out safety checks on equipment, budgeting, organising weekly climbing sessions . Outside of the club she has undertaken 3 week community project with Raleigh International in Borneo, 4 weeks experience alpine mountaineering in Chamonix and Les Ecrins National Park, 2 weeks winter walking and climbing in the Cairngorms, 1 week ice climbing in Cogne, Italy and Competed in OMM 2014



Ryan Perkins

Role: Finance and Liaison

Age: 22

Academic background: 4th year undergraduate Physics student

Ryan has been cycling of sorts since the age of three and developed a passion for mountain biking aged 15. Since then he has been on numerous mountain biking trips around the UK, favourites include most of the 7Stanes and Coed y Brenin. He has also done various long day outings including London to Brighton (2012). Other Outdoor experience includes hill walking, mountain leader training and lead military summer mountaineering expeditions as a member of



the University of London Air Squadron. He has organised and ran many weekend and longer trips as Secretary (2012-13) and Chairman (2013-14) of Imperial College Outdoor Club. Consequently, he is a seasoned navigator, in all conditions and terrain with few features.

To summarise, he has Three weeks alpine mountaineering experience, three weeks of Scottish winter experience and 50+ days UK summer mountaineering, competed in four mountain marathons to date. Supposedly he knows how to fish, though the team has still never seen any evidence.

Noah Smith

Role: Bikes and Training

Age: 18

Academic background: 1st year Geology with Year Abroad undergraduate



Noah's burning desire to explore was ignited long ago on family holidays to Cumbria and Snowdonia National park, however it was not until Imperial College provided the opportunity, funding and support required to finally quench his thirst for adventure. Noah loved cycling since he first learnt how to ride a bike aged 7. Since then he has cycled in many of Britain's National parks and trail centres.

Country profile

Terrain, geography and climate

Mongolia is located in Eastern Asia, landlocked between Russia to its North and China to its South. It is the World's least densely populated country. It has a population just shy of three million and a huge area that includes the Gobi Desert in the



South, vast steppe in the middle and East, and numerous mountain ranges in the North and West. We visited Mongolia's northernmost

province, described by a local as 'Mongolia's Switzerland', which turned out to be a fairly good description.

Khovsgol Aimag (Province) is popular with tourists, both international and particularly Mongolian, for its huge National Park and fresh-water lake. The whole province is situated about 1600 m above sea level and has mountains over 3000 m.

There was one asphalt road in the province, which stretched between Mörön and Hatgal. All others were dirt tracks of varying quality and cycling in the area required strong mountain bikes and off-road tyres. Our route led us over passes as high as 2800 m and across a 50 km flat grass plain.

The climate in Khovsgol Aimag during the summer months is not far dissimilar to that in the UK, with average daytime highs of a little below 20°C and 80 mm of precipitation. However, we found the weather to reach greater extremes and to be quickly changeable.

Many days started sunny and required a liberal dollop of factor 50, wind was gen-

erally mild, and conditions were pleasant for cycling (although Noah, our token Northerner, struggled with the rays initially). Later in the day the weather often deteriorated with clouds building over the mountains, followed by moderate winds and heavy rain showers.

Mongolia's landscape gave uninterrupted views for tens of kilometres into the distance which allowed us to see when bad weather was on its way – fortunately we were often able to get our tents up just in time!

At night the temperature dropped dramatically to around freezing, so our down sleeping bags were a necessity. The super low light pollution and elevated altitude meant breath-taking views of our galaxy on cloudless, moonless nights.

Language and culture

Mongolians use the Cyrillic alphabet and speak Mongolian. The language has many different sounds to English, which caused some difficulty in our learning. In Ulaanbaatar some people spoke English but in Outer Mongolia very few spoke any English. We used the few translation pages in our Lonely Planet guide and many hand actions to communicate with locals outside of tourist hubs.

Mongolians are known for their hospitality and it is common practice for Mongolian travellers in Outer Mongolia to stay with locals in their gers. Knocking on the door is not part of Mongolian custom – rather, one should shout 'Hold the dog' and walk straight in. We often approached a ger in the evening to ask if we could pitch our tents nearby. Every family that we asked welcomed us – and many were bemused to see Westerners on bike in what seemed to be the middle of nowhere! Most families offered us breakfast in their ger – usually bread and cream – and it was custom for us to give a gift in return.

When out cycling, we found that many Mongolians would stop on their motorbike to say hello and see what we were doing. Some would ride over from their ger on their horse to check us out. This was particularly helpful for directions!

Itinerary

Overview

Overall we spent 19 days in the saddle. The remainder being spent in Ulaanbaatar prepping and waiting to extend our visas, travelling by minivan and resting.

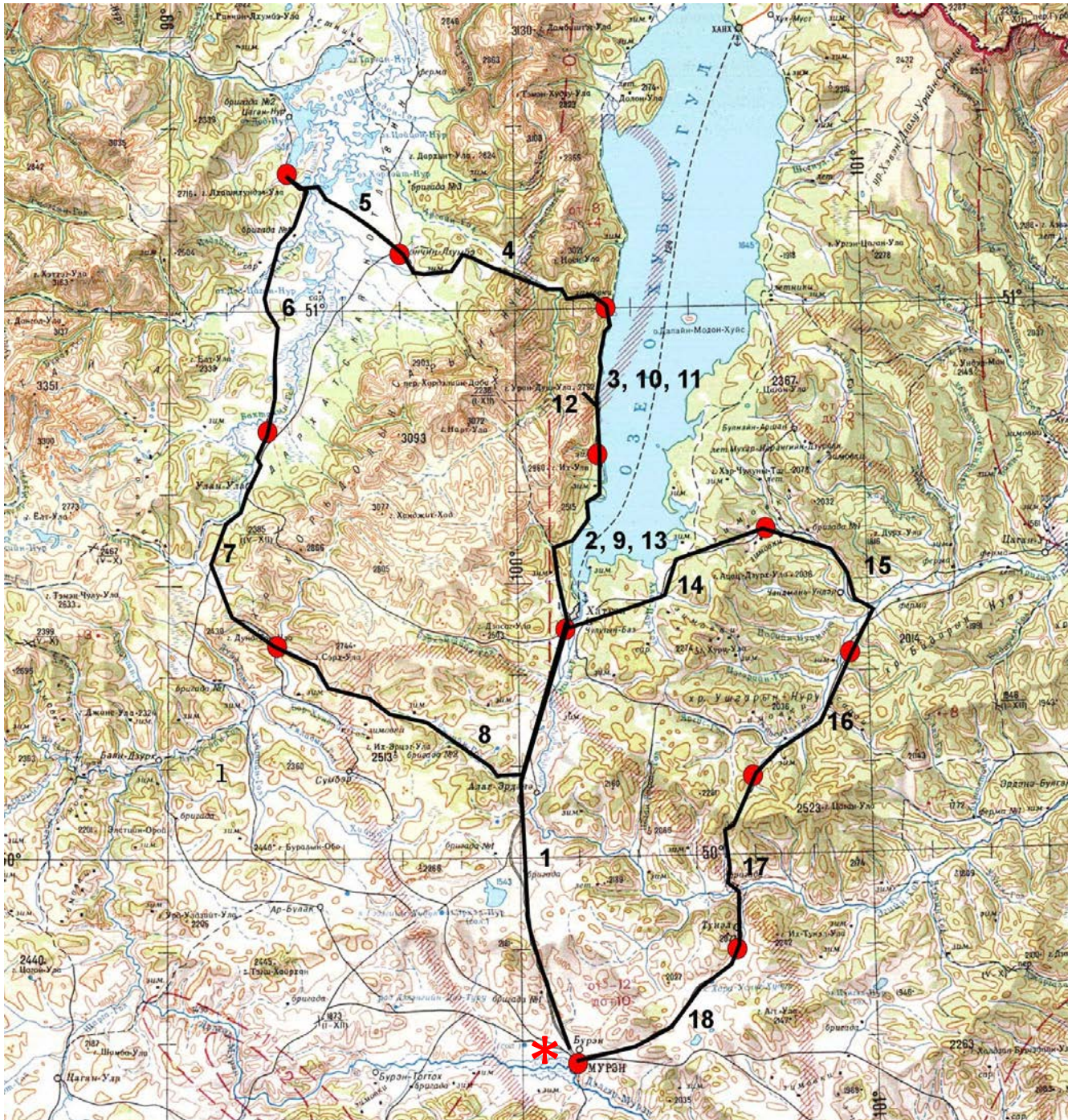
Day	Activity	Description
1	Depart London	London – Beijing – Ulaanbaatar
2	Arrive in UB	
3	UB	Government office for visa extensions closed for 5 days due to festival
4	UB	Bought enough food for two weeks
5	UB	Day trip to local national park
6	UB to half way to Mörön	Extended visas on the way
7	Second leg to Mörön	Travel by minivan
8	Mörön	Assembled bikes, bought final supplies, acquired border guard pass
9	Mörön to Hatgal	100 km on tarmac
10	Rest day in Hatgal	
11	Hatgal to Toilogt	Gravel road and dirt track
12	Toilogt to Jiglegrin Am	Dirt track, some very muddy sections and river crossings
13	Jigleg to Renchinlkhümbe	Hard day over a pass, lots of pushing, river crossings and flys!
14	Renchinlkhümbe to Tsagaan-nuur	Vast, flat grassland
15	Rest in Tsagaannuur	Camping by a lake
16	Tsagaannuur to Ulan-Uul	
17	Ulan-Uul to Toom	Pleasant route ending in an epic 12 km downhill
18	Toom to Hatgal	Long day – 85 km, finished after 9pm
19	Rest day in Hatgal	Harriet ill for four days, so we rested
20	Rest day in Hatgal	

Day	Activity	Description
21	Rest day in Hatgal	Gemma, Noah and Ryan explore the East side of the lake by bike
22	Rest day in Hatgal	
23	Hatgal to Toilogt	Attempt to cycle around the lake
24	Toilogt to Jiglegrin Am	
25	Jiglegrin Am to Toilogt	No passage shortly after Jiglegrin Am – forced to turn back
26	Toilogt	Hiking
27	Toilogt to Hatgal	
28	Hatgal to Chandmani-öndör leg 1	No rest day needed – onwards in the grim weather!
29	Hatgal to Chandmani-öndör leg 2	Dirt tracks on the more remote East side of Khovsgol Nuur
30	Chandmani-öndör to Tünel leg 1	Camped by local gers and tried many culinary surprises
31	Chandmani-öndör to Tünel leg 2	
32	Tünel to Mörön	Final day of cycling
33	Mörön to UB leg 1	By minivan
34	Mörön to UB leg 2	
35	Rest day in UB	Buffer day in case of delays
36	UB to Beijing	18 hours in Beijing
37	Beijing to London	

Table of itinerary. Grey indicates prolonged period of not cycling, either due to logistics of health reasons. Green indicates the first cycle route undertaken and blue the second loop. UB = Ulaanbataar.

Map of Routes

The map illustrates our route which took the form of a figure of 8. Each number on the map represents the sequence of days cycling (or legs) but excludes rest days. Starting in Moron (marked with a red asterisk, *), we headed north to Hatgal (leg 1 on the map). This small town became our base for the three tours we did. From Hatgal we first headed up the west side of the lake, over the pass, up to Tsaagannuur and then due south before heading west back to Hatgal (legs 2-8). From Hatgal we ventured back up the west side of the lake (legs 9-13) before reaching an impass and returning to our base. As you can see, there is a track marked on the map which follows the west coast all the way to the northern most point of the lake. However, this was not suitable for bicycles and thus we had to return. Leg 12 is where we spent the day hiking. The third tour went along the east side of the lake, looping back down to Moron (legs 14-18). The red dots indicate our campsites during the expedition. The map is from the database of Russian Army maps (loadmap.net), the place names are in Cyrillic, the scale 1cm:10km.





Diary

Day 1

Saturday 12th July

We arrived at the time of the Nadaam Festival, which meant everything was shut. The banks were closed and therefore no money; the immigration office was shut and therefore no visa extension. Worse still everything would be closed for five days which meant we were stuck in Ulaanbaatar until then.

Fortunately the hostel owner was very helpful and his wife a shining example of Mongolian hospitality, offering to lend us the Mongolian Tugrik until we could get to a bank to change our US dollars. This meant we could go out for dinner that evening and Gemma could replace the toothbrush that was currently still in Beijing, along with other valuable items like clothes and sleeping bag. Her luggage had not arrived with everyone else's.

We had opted for US dollars as you couldn't get Mongolian Tugrik in the UK and it seemed like a very fluid currency. It is easy to exchange US dollars in Mongolian banks where they offer a very good exchange rate of 1800 MT:1USD. Thus, once the banks reopened we all would finally be millionaires. Unfortunately, we had to wait until Tuesday for that momentous occasion. In the meantime we took up the offer of our kind host, although there are ATMs on every corner in Ulaanbaatar so we would have been able to withdraw money if necessary.

Most of us took a nap that afternoon to make up for the lack of sleep during the flights. Noah however, doesn't believe in the concept of jetlag and was in fine form. We wondered whether this had anything to do with the fact that he had stayed up all night the day before the flight. Consequently he slept the whole 10 hours from London to Beijing, despite the crying children and persistent snorting from a few seats behind.

That evening we found a wonderful Mongolian establishment on Peace Avenue called the Kentucky Grill where we ate chicken curry, Hungarian goulash, pork sweet curry and grilled lamb. A good first impression of Mongolian cuisine.

Day 2

Sunday 13th July

We set out first thing to explore the super markets, researching the kind of foods we could take with us cycling. Ulaanbaatar is surprising and impressive. Firstly, there is a booming construction industry. Popping up amongst the colourful roof tops around the centre of town are many new, tall glass buildings, and several western style shopping malls. The biggest of which reminded Noah of Debenhams only cheaper. The most surprising of all, was the collection of outdoor equipment which included high altitude mountaineering boots. This is probably not that surprising if you remember the proximity of its industrial neighbour, China, where the vast majority of commodities are manufactured. However, despite the



comprehensive Outdoor section, Ryan could not find a replacement for the head torch he had left back home.

Gemma had recuperated her lost luggage that afternoon, relieved that it had come on the next flight. The afternoon was spent napping, still catching up on lost sleep before going out to explore what Mongolian cuisine had to offer.

Day 3 Monday 14th July

Today the banks reopened after the Nadaam festival and so we were finally able to do the food shopping for the expedition. This mainly consisted of 10kg of pasta, 6kg of tinned fish, 4 kg of dried fruit, peanut butter, instant cereal drink called cereal king, other snacks and some food for the 2 day car journey.

That afternoon Harriet and Gemma visited the Mongolian National Museum, an outstanding educational experience which highlighted the rich region we were in. Ryan and Noah were content to watch the building fires in the area, fascinated by the action and comportsment of the Ulaanbaatar fire brigade.

Day 4 Tuesday 15th July

We still had one more day to wait for the Mongolian Immigration Office to open. Having achieved our task of getting tugrik and food supplies, we decided to take a tour of the local national park. On the way we stopped to visit the gigantic statue of Chinggis Khan, made with 250 tons of steel, and visited the museum inside. Outside there were the usual tourist attractions: sit on a horse and hold a golden eagle. The eagles were extremely impressive.

Later that day we visited a monastery which had hundreds of Buddhist proverbs bordering the path leading up to it. We also climbed up turtle rock, being climbers we couldn't help but try a little bouldering, it turns out Harriet is much stronger than the rock.

Gemma had discovered that morning that one box of my muesli bars, brought especially all the way from the UK, was missing. Fortunately this was the only loss suffered during the trip.



Day visit to Chinggis Khan statue and museum

That night was the last time we could contact loved ones for a while.

Day 5 Wednesday 16th July

Today we began our two day trip in an old Soviet minivan. It had no seat belts. It smelled overbearingly of petrol as the engine was only separated from the cabin by a meagre trap door.

The first task was to cross the potholed streets of Ulaanbaatar to the immigration office. Our host, Gan, had told us that the office opened at 8am and so we had left shortly after 7am to get an early start. It would be a long day driving. We reached the Immigration office a little before 8am. The driver went out to check the opening time and then returned saying “nime, nime”. We shook our heads in disappointment, understanding “nime” to be nine we prepared to wait an extra hour.

It took the driver, Toksom, two phone calls to the immigration office to find someone who spoke English to make us understand.

Immigration officer: what do you want to do here?

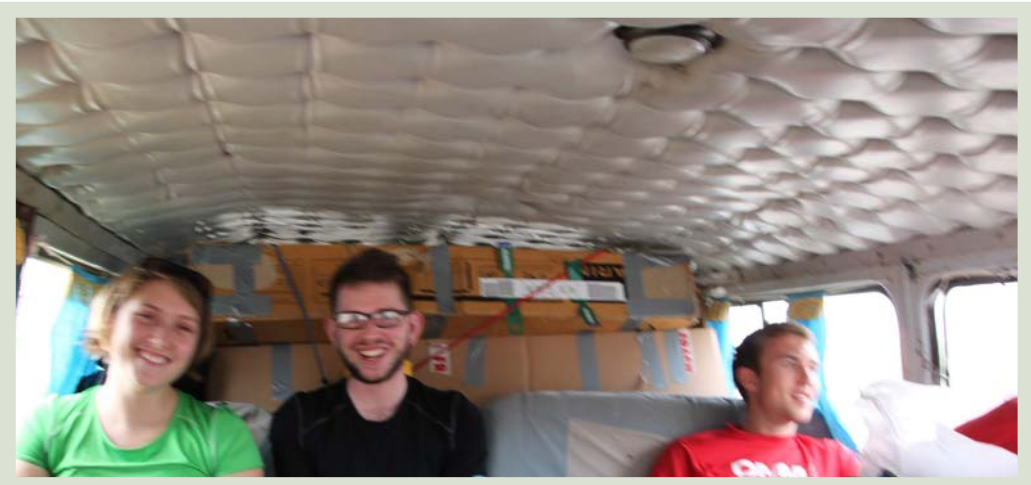
Gemma: we want to extend our visa.

Immigration officer: then why are you still in the car?

Feeling foolish, we quickly descended from the minivan and filed into the building. We asked the officer what we needed to do and it quickly transpired that we would need passport photos and a photocopy of our passports. We had the photocopies but not the photos. Returning to the vehicle we rapidly explained to our driver, using hand gestures and showing him the form that we needed passport photos. The immigration officer had explained there was a photographing facility not too far away. However, it was shut when we arrived. A couple of phone calls later and Toksom had found us another photo shop which opened up especially for us. Anything is possible in Mongolia.

We piled back into the van with our coveted passport photos and headed back to Immigration. After filling out the forms and queueing back up we got back to the same officer who looked at our forms.

Top: Russian minivan. Bottom: group members inside Russian minivan



Officer: Have you paid yet?

Gemma: No

Officer: You have to go to the bank and pay first

Despite rising before 6am, we did not leave Ulaanbaatar until midday. It was another 3 hours before we had lunch and the day's events did not stop there. Soon after lunch the drive shaft fell off the minivan. Since leaving the capital we had been travelling along a fairly smooth tarmac road, and we began to wonder how the vehicle would hold up against the dirt track to come.

We felt pretty useless when the prop shaft fell off. Not speaking any Mongolian there was no way to help our driver, not even pass the tools. The best we could do was to “be good tourists and sit quietly” (Noah’s wise words) and not interfere whilst the driver worked hard to get us back on the road. An hour and a half later and we were heading west toward the large mining town of Erdenet.

That evening after picking up some car supplies in Erdenet, the driver organised for us to sleep next to a Ger camp. Our Mongolian hosts were in high spirits and brought over some treats as a welcome gift. This included fermented mares milk and an assortment of other dairy products. The mare’s milk was particularly memorable, commencing with a sweet, cider-like taste and deteriorating into a stilton after taste. The acidity of it strongly provoked the gag reflex. None of us could stomach much of it, fortunately our driver could down the stuff like water. This greatly helped us get through the 2 litres which our hosts were eagerly expecting us to drink.

That evening the driver worked on the vehicle until well after dark. Ensuring we would get to our destination of Moron the next day.

Day 6 Thursday 17th July

On the road again. Today the metalled road ¹ ended and we had to endure 200km of off-road driving. The recent rain made the tracks boggy and thus more difficult to navigate. Mongolia is currently building a national highway between the capital

1. Metalled road – a road made of concrete or tarmac, road in good condition



Top: Toksom assessing the damage. Bottom: fixing the prop shaft back onto the vehicle

and Moron, most of which was built. On reaching the end of the tarmac we found ourselves constantly zigzagging across the unbuilt road. The unbuilt road was smooth and flat and consequently very enticing. However, because there was no tarmac yet, the construction workers had clearly worked hard to deter drivers from using the unbuilt road, building huge barricades with the excavated dirt. Drivers got onto the unbuilt road at any opportunity, offering relief from the constant jerking and slow pace of the dirt tracks. However, it was usually a waste of time as you spent a while searching for a way round the impassable barricades.

Trying to avoid another breakdown, the driver drove delicately yet decisively through the hive of dirt tracks, avoiding the boggy and rocky sections. But it was to no avail. Whilst avoiding mechanical failure we ended up stuck in the mud. However, many of the Mongolian tourists heading to Mörön on holiday had less suitable cars for traversing the bog. Thus being many people in the same situation, we all banded together and got through the sticky situation.

The Toyota Prius is well known as a hybrid city car and little is known in the west of its competencies off-road. Whilst it doesn't have any specific technical features which facilitate off-road driving, a bit of obstinacy and a few friends will definitely get you through the bog. So if you ever are considering buying an eco-car with off-roading features, consider the Toyota Prius.

At 8pm that evening we arrived at Begal's Guesthouse, the driver was completely exhausted and went straight to bed, sleeping a solid 12 hours. We were grateful to be back on *terra firma* and not still jostling about in a Russian minivan.

Day 7 Friday 18th July

This is the longest I haven't cycled in well over a year

Ryan Perkins

Another day of waiting as Begal, our hostess, organised our permits for the national park. We tried to visit the tourist office but it was not very obvious. It was only after to and froing that we located it. Finding it shut, we returned to the guest house for lunch and waved goodbye our driver.



Finally on the road after a week of waiting

That afternoon we returned back to town and found the tourist office open. However, the occupant didn't speak English. On returning we found Begal who had sorted out our permits. However, on reading them we noticed the towns on the east of the lake had not been included. Begal said this wasn't a problem and she would sort it. Considering it was 7pm by this point, we wondered how this would be arranged in time for tomorrow morning. Turns out she simply hand wrote the town names and included a phone number in case someone wanted to verify this. In the end we only needed to show the pass once.

Day 8 Saturday 19th July

101km north to Hatgal. We had planned to take 2 days for the journey to the lakeside town of Hatgal. However on finding that there was an immaculate metalled road all the way we managed it in one day, about 10 hours of cycling. The day started well, slightly overcast, a comfortable 23°C and light breeze. After lunch the sun came out and the temperature soared to 30°C. Approximately 30 minutes after that, a storm came in and the temperature plummeted to 11°C. The rain fell thick with spats of hail and with the wind picking up our average speed fell to a pitiable 11km/h.

We quickly put on our jackets but didn't cover our legs as "lycra dries quickly". It didn't take long before our shoes were filled with water. We had cycled 70km, we were tired, we were cold, we were hungry. Gemma had wanted to stop for the day, set up camp and get warm. Ryan wanted to push on. Hatgal was only 30km away, perfectly achievable in fair weather and on flat roads. And then the wind picked up. The going was slow. The going was up.

We put on extra layers and instantly everyone felt a bit better. Ryan would advance ahead and then stop to hand out food, fuelling us as we cruised past. The rain had eased, only our feet were still in puddles of water. We kept going and at 9pm that evening we were rewarded with a toasty warm Ger¹, with the fire roaring, a plate of hot food, copious amounts of tea and a toilet with a seat!

1. Ger— white round tent in which Mongolian nomadic families live



Above: Noah towing the trailer. Below: permeable panniers are repaired with duck tape

Today had been our first day cycling and it had been epic, least of all for Noah. Noah had drawn the short straw and had to pull the trailer loaded with food and electronics. We had cycled 20km before we met our first real descent. Ryan and Gemma let gravity take them down reaching 50km/h. Harriet descended steadily and Noah carrying the trailer was cautious, or so he thought...

On reaching the bottom, Gemma stopped to check on the others. Harriet had quickly rejoined her but Noah was nowhere to be seen. Thinking that he was just taking his time we waited. As time ticked we began to suspect that something was wrong and so turned to begrudgingly cycle back up the hill. Fortunately, Noah reappeared soon after with a big smile on his face, chuckling about his misadventure.

I wasn't even going fast

The trailer, being heavily laden, was very unstable at speeds above 20km/h and Noah had found it hard to keep his balance on the decent. Luckily, a safety feature of the trailer meant it detached when unbalanced. This meant that the trailer went flying across the road, with the panniers whilst Noah managed to stay upright on his bike. When Noah stopped to pick up the mess, he found that the trailer was in good shape but the panniers were no longer waterproof. One had a broken clip meaning it wouldn't fix back on to the trailer. A few cable ties later and we set off again, needless to say Noah was even more cautious than before.

On the whole, the day was a good experience. The road was busy by Mongolian standards but the drivers were really respectful giving us a wide birth, beeping to let us know they are passing. We attracted a lot of attention from other travellers, who would always beep and wave as they passed. At first the constant beeping was a bit disconcerting. In London, the car horn is used as sign of aggression or annoyance. In Mongolia, the beep is a happy beep. They beep for awareness, they beep to say hello or they beep simply because the sun is shining.

Day 9 Sunday 20th July

Today was a well earned rest day. We were all exhausted after yesterday's cycle and so we spent the day relaxing: reading, eating, taping up the ripped panniers and preparing for our tour into the mountains. After speaking with the host we learned



Top: arrival at the Khovsgol lake. Bottom: Noah cycling across the Darkhad Depression with a wet towel to keep his head cool

that the track up the west side of the lake was impassable. Apparently we could cycle for about 1.5 days before we would have to turn back.

Prudently, we would do an out and back journey to test the conditions. We would take food for four days and leave the trailer behind at the tourist Ger camp.

Day 10

Monday 21st July

Finally we were off-road, what we had been waiting for. However, we were on the only accessible track to the lake and so there was a lot of through traffic, churning up the dirt creating lots of dust clouds. Due to the proliferating potholes, the continuous ascent created the first bit of chafing. However, it was all worth it when we caught the first glimpse of the lake at the top of the pass.

The descent was fun and with no trailer to hold us back we quickly reached the expansive, clear blue, tropical waters of the lakes. Considering Mongolia is a land locked country, we quickly understood why this was such a popular destination for Mongolians.

This was a touristy destination, and it was 10km more of cycling before we passed all of the tourist camps and were finally on our own in the wilderness. We also had our first dog encounter. They had jetted out of nowhere to chase away another dog, accompanying some herders. This stopped us dead. Having witnessed their aggressiveness, we didn't want to attract their attention. More importantly, Noah was out of sight again and so we had to wait in the dog infested area for him to catch up. A lost bolt had slowed him down, meaning his rack was loose. Suspicious of the dogs, we decided now wasn't the time to fix it and so we slowly crept past them, being careful not to attract their attention. All was fine and we continued on to find a great spot to camp that evening, sandwiched between the lake and mountains. Noah made a fire from washed up wood, we sat around warming our hands, revelling in the first real day of our expedition.

Day 11

Tuesday 22nd July

Having been told that this part of the lake was impassable we had planned to just cycle as far as we could and then turn back to Hatgal. Our destination for the day was a small settlement



Photo: chance encounter with Swiss gave us good information about the pass and the terrain the other side. It was because of this information that we decided to cross the pass to the Darkhad Depression instead of returning to Hatgal



Above: Noah, Harriet and Ryan crossing icy spring water, one of many crossings. Overleaf, Left: Noah and Harriet ploughing through with Shoes off. Gradually we accepted to get wet shoes. Right: Ryan pondering the shortest route across the painfully cold river.



called Jigleg, about half way along the western shore of the lake. It is from here that you cross the mountains in order to head over to Tsaagan nuur. There was some very nice single track along this section and the day was going pretty well. We began to wonder what they had meant by “impassable”, perhaps they had just never ridden bicycles before. We encountered two bogs, but they were quickly traversed, without even wetting our feet.

On the final ascent, 10km before Jigleg we bumped into two Swiss cyclists who were touring the world. They had just cycled over the pass that day. And so we exchanged with them some information about the terrain the other side and how easy it was to find food. They gave us some very promising information; the most reassuring of all was that you are never two days away from food.

On reaching Jigleg, we found the settlement completely deserted. It appeared to be a winter settlement, a place where Mongolian herders head when the harsh winters come in. It differed from the traditional Ger camps we had seen in that there were wooden huts and shelter for the animals, something which is non-existent in the summer pastures.

We set up our tents just before the rain arrived, ate our dinner of soupy-pasta and discussed our options for tomorrow. We had two days left of food and the next town, just the other side of the pass was only one day away. The last two days had shown the track to be pretty good. We each retired to our tents to mull over the options.

Day 12 Wednesday 23rd July

In the morning, we were all in accordance with each other: we would head over the pass and finish at the next town of Renchinlkhümbe. We ascended from 1660m at the lake to 1920m at the top of the lake. We managed to cycle a good two thirds of the way up and then had to push the last section, climbing 100 metres of altitude. The main con of pushing is that we were slow, slower than the flies. This is a major disadvantage when deep into the infamous mosquito territory. The horse flies took a particular liking to Noah, who was baffled as to why. It emerged that he had forgotten to put on repellent that morning.



Photos: customary camp fire by the Khovsgol lake, made using washed out wood collected from the shore (right). Overleaf is a picture of our campsite next to a traditional Mongolian Ger, where we would stay for security (top). Picture of Harriet cycling, who on telling friends she was going to Mongolia responded with “can you even ride a bike” (bottom).

It was tough pushing up but mainly due to the swarm of flies. At the top it wasn't much better, being boggy and not firm enough to cycle through. Eventually the ground improved, and we would swap between freewheeling and pushing through the bog. The area was spectacularly quiet, not a person or animal in sight. The way out of the valley was long, hard in places, involving several river crossings. Although we could ride through some of the crossings, everyone got wet feet that day.

The first glimpse of our destination town was met with some relief; however it was already heading on for 7pm and we still had a few kilometres to go. RENCHINKHUMBE is a town of about 1000 inhabitants, with wooden houses arranged into grids with high wooden fences and no street names. Not having a clue where to start looking, the GPS came in very useful in locating the only guesthouse in town, where we could set up our tents for the night.

Day 13 Thursday 24th July

The previous night had not been good, all the insect bites had made sleeping uncomfortable and the huge thunderstorm in the middle of the night woke everyone up. In the morning it was hard to get going, we only started breakfast at 9am and it was 2 hours later before everyone was ready to leave. And yet we still had to get some provisions which meant we didn't leave town until midday. That is to say, we left when the sun was at its highest and hottest; hardly efficient.

We took the wrong path soon after leaving town, whilst we were heading west a network of rivers ahead meant it would be impossible to get to the other side of the depression. We had already travelled 15km, the route to Tsagaannuur is only 35 km and we would have to back track all the way.

Whilst heading back east toward the bridge, Ryan spotted a possible river crossing. It looked like a place where the animals crossed. He tried it first without the bike, finding that the ground was firm and the current gentle he quickly came back to tell us. Unfortunately, Noah suffered a puncture and delayed the crossing by 40 minutes.

We were heading due north across the Darkhad Depression, aiming to intersect the path we had failed to take. The ground was full of animal holes, and so our pace



was very slow. It took us an hour and half until we reached the path again. It was such a relief to finally get back up to a pace of 20km/h. We quickly reached the floating bridge, operated by an elderly Mongolian. Harriet suggested they put one of these floating bridges in London, just to annoy commuters.

Fortunately we had eaten a strong breakfast that morning as we only stopped for lunch at 4pm; tinned fish, bread and some birthday chocolate spread for Gemma. We still had a fair way to go and unfortunately there were some steep ascents ahead; not something we looked forward to after such a heavy lunch. However, the descent was fun and we managed to freewheel most of the way to Tsagaannuur, some 10km. We found somewhere to wild camp just outside of town. We had difficulty deciding on a suitable location; we wanted to be close to the water yet away from other settlements. In fact, there seemed to be people everywhere.

Day 14

Friday 25th July

Noah's birthday and our rest day. The weather was fair permitting us to do some washing. Harriet and I went to the town and tried to find the museum there. Tsagaannuur is famous for the Reindeer people whose way of life is unique and protected. Tsagaannuur is the last town before heading into their territory, and from which it is a 2 day trek before meeting the first settlement. The museum there tells the story of their way of life, the funds of which goes directly back to the Reindeer people. However, like most of the Mongolian towns we had come across, there are no sign posts or street names and so we couldn't find the museum. It was hard enough asking where the petrol station was (we needed to fill up for our stoves). So Harriet and Gemma settled on buying some tinned fish and brought back a jar of strawberries to celebrate Noah's birthday.

Day 15

Saturday 26th July

We traversed 60km today, without a real break, in the direction of Ulan Uul. What is spectacular about Mongolia is that you can see for tens of miles. This means we could see the warm front we were approaching. We wisely ate lunch before entering the bad weather front, before spending a good few hours in the drizzling rain with Noah working on his geological time scale. That is to say SLOW. Every time we



Photo above: a typical Shaman shrine, usually found at the top of hills and passes. As well as offerings of blue cloth to represent the sky, Mongolians also offered their empty bottles of vodka.

stopped to put on coats or de-layer it seemed to take forever to get going again. However, the good thing about the rain is that there are no flies.

We camped near some Ger camps that evening. Our host in Ulaanbaatar had suggested camping near them for our safety as the dogs would protect us; however, we would also have to watch out for those same dogs, as they have a real disliking for people on bicycles. There had been tales of bandits stealing stuff from herders in the middle of the night. The area we were in is fairly wealthy by Mongolian standards, and without dogs we could have been an easy target. Luckily we never met this kind of trouble and always locked our bikes up well.

Day 16 Sunday 27th July

Our nomadic neighbours invited us in for breakfast, offering us slightly salted tea, cream, bread and yoghurt. It was delicious. We sat around the Ger trying to converse using our meagre phrase book. The family consisted of a father and his two grown up daughters, the eldest of which was studying engineering in the capital, who was just home for the summer. It seems that everyone has the right to education in Mongolia and the literacy rate is well above 90%. In fact, nomads have a very high status in Mongolia, even if you move to the city to make money the Mongolians always return home at Nadaam despite maybe having to travel 2-3 days in a rickety ex-korean bus.

We exchanged a small gift of biscuits with our hosts. We had originally brought toothpaste as gifts as we had heard that Nomads found it hard to get essentials. This family clearly could get the essentials and we felt embarrassed to give them such a meagre gift, especially since they had such pearly white teeth.

We waved goodbye to the father at about 10am, drinking a farewell vodka that tasted faintly of cheese before parting. We had another 60km to cycle. This would involve two big climbs, the first to 2100 m and the second at 2230 m of altitude. The first climb seemed like it would never stop. It was too steep to cycle with our luggage and so we spent the best of the afternoon pushing up. We saw our first patch of snow, left over from winter, it reminded us of how harsh it can get here, up to minus 40°C in the winter. We were all starving but had decided that we

wouldn't eat lunch until the top; past experience had taught us vigorous exercise on a full stomach was not a good idea. Reaching the top we were greeted with a row of huge shaman shrines, covered in swaths of blue material. The blue represents the sky and we were ever so grateful to finally reach them, to reach the summit. Unfortunately the only blue cloth we had was Gemma's t-shirt, thus we did not make an offering that day.

The second ascent was not as steep as the first, but still painful. This time we were greeted by only one shaman shrine; however, the descent was phenomenal: 15km of pure downhill. Harriet suffered her first puncture, and Noah had to keep stopping to put his panniers back on. The Crosso panniers weren't as hardy as the Ortlieb panniers when it came to mountain biking. Whilst they were fine on smooth surfaces, the constant bouncing of the rough roads meant they would ping off the rack, particularly on the descents.

At the bottom of the valley was a small settlement called Toom bar (pronounced Tom Bach) and we went to find a quiet place to camp slightly east of it. It was a beautiful clear crisp evening, but the spot was not as quiet as we had anticipated. Later on, a huge family party descended into the area to have a BBQ and camp. We were a bit weary at first but then two small boys came over to see us. They stood around curious as to what we were doing and what we were eating. Noah gave them his flint to play with, which they found fun until they decided to start wrestling each other, got bored and then went on their way.

Day 17 Monday 28th July

We had planned to do the final leg back to Hatgal in two days of about 40km of cycling. We did not leave until about 11am that morning. Harriet and Gemma were exhausted from the previous day's efforts, and on top of this Harriet was beginning to feel sick. This was not obvious until we started cycling and she was incredibly slow.

She felt dizzy and so we took some weight off her and decided to take it easy until lunch, when we would review the situation. We had been informed that there was not much water in the area we were traversing, thus Noah was already carry-

ing an extra 6 kg of water and so could not take much additional weight. Ryan was already at the weight limit for his rack and so we tied a 1.5 litre bottle of water on to the frame and Gemma took whatever else she could. Front panniers would definitely have been useful considering the weight restrictions of the rear rack.

Remarkably, Harriet felt much better by lunch and was able to eat her allotted tinned fish and crackers. We had already covered 30km by that point, and the next 10km passed swiftly along flat pastures. We even passed a few lakes and a river which made us rethink the usefulness of the extra water Noah was carrying. By 3pm we had covered 40km, it seemed a bit early to camp and everyone seemed to be doing fine so we decided to push on.

There were two options to get back to our base at Hatgal: directly east and then join the metal road heading north or take a track north and join the logging track back to town. We had planned to take the off road route but the path to the logging road no longer existed, probably due to the sparkling metal road ahead which made reaching Hatgal so much easier. We spent an hour trying to navigate through the tufts of grass, covering less than 500m before we decided to head directly to the metal road. Another tough ascent followed by a wonderful descent of 20km.

The descent was less fun for Gemma whose rack was showing cleavage. It had fractured at one of the welds. This was most likely due to an overloaded rack in combination with the rough tracks. It looked like it might survive the trip back to town, so we redistributed the load and headed delicately down the valley. This was a well-travelled track which meant that the stubborn grass tufts created rumble strips, making it very difficult to avoid turbulence.

It was 7.30 by the time we reached the metalled road and it was 15 km to town. We didn't see the point in camping next to the road, and with the thought of a warm fire and a hot meal we struggled on. It was tough, and the wind picked up making it even harder. We arrived just after nightfall and the broken rack just made it to the corner by the hostel. At which point Gemma forgot the delicate nature of her rack and took a drop doing a U turn. A well-timed mistake.

Photo: day trip up the east side of the lake, finally arriving at the shore after battling strong headwinds. In the distance is the mountain range we had crossed to get to the Darkhad Depression and then subsequently on to Tsagaannuur.



Day 18

Tuesday 29th July

Harriet fell ill: Diarrhoea and vomiting. There was not much we could do other than make sure there was a supply of fresh water. We could not work out what caused the illness as we had all eaten and drunken the same food and water. The rest of us took the day as a rest day. For lunch we bought some smoked fish which was delicious despite the copious amounts of tinned fish we had eaten during the last week. Gambat the Mongolian electrician had said “if you eat too much fish you die”, a bit of an exaggeration but we could understand the ethos.

Gemma set out to fix the broken rack, and just as she was starting to unscrew the bolts Gambat came over and declared that this was no work for a woman and that he would fix it. Although the plan was not to fix it but rather to exchange it for the trailer, Gemma accepted the offer preferring a half broken rack to lugging around a third wheel. The rack was aluminium which made welding it back together impossible. If only it had been steel... Nevertheless a metal rod in the tubing meant that it was solvable.

Day 19

Wednesday 30th July

Harriet was still sick but managed to eat something without vomiting. Ryan set out on a mission to eat as much as possible before our next voyage. Gemma and Noah socialised with the Mongolians, Gambat and Battar, by drinking a fair amount of vodka. The ability of Mongolians to drink is exceptional, perhaps a remnant left over from their soviet past.

Ethanol is extremely unpleasant, the closest thing to it that we drink is vodka and few people drink that neat

David Nutt, Drugs

Clearly David Nutt had never been to Mongolia where they drink neat Vodka by the mug. Needless to say Noah and Gemma suffered the next day. In contrast the Mongolians were up bright and early and back at work, seemingly unaffected.

Day 20

Thursday 31st July

Harriet stayed in bed, still suffering from traveller’s diarrhoea. Our hosts offered to get a doctor for Harriet, if not they could cook plain food. The rest of us were itching to move again and so went out for a day trip along the east side of the lake. This also served as a reconnaissance mission: we had heard that the track this side was abominable. Apparently an American had tried to cycle there a few weeks ago and had broken 4 out of 5 of his spare spokes and ended up coming back. We wondered whether this person knew how to ride a bike.

Whereas the track along the west of the lake follows the coast, on the east the track goes further inland and is also less protected from the wind. It didn’t matter what way we cycled we always had a head wind. We could see the local weather depression, with blue skies collecting up sombre clouds. By chance we had circled this depression in the wrong direction, which is why we had a head wind the whole journey, despite going all 4 direction of the compass.

We had covered a total distance of 59 km. Gemma’s new rack had held out. Ryan and Noah had raced a motorbike down a hill, and won. When we got home we were tired and Ryan and Noah finally began to suffer some saddle sores. At dinner we researched Harriet’s symptoms which had ameliorated a little. It did not seem normal to have diarrhoea for so long but Dr. Ryan diagnosed it as irritable bowel syndrome (IBS) as 5-10% of patients with gastroenteritis suffer IBS afterwards.

Day 21

Friday 1st August

Harriet was still ill but doing a little better. We discussed our options. If Harriet didn’t get any better by tomorrow, then Noah and Ryan would do a short 2-3 day out-and-back voyage up the west of the lake and Gemma would stay with Harriet. If Harriet got better then the group could reconvene on the western shore as we had already covered that ground and it being a single track it would be quite easy to relocate each other. Worst case scenario Gemma accompanies Harriet to a hospital in Moron, 100 km away, and leaves a message at the hostel for Ryan and Noah.



Day 22

Saturday 2nd August

Retracing our steps, since it was so beautiful, we decided to head back up the west side of the lake to see how far north we could get in the time we had left. Originally we had wanted to do a complete circuit of the lake which is 136 km long and 35 km wide. We had previously gone up to Jigleg, where there is a pass west in the depression and a very high pass north. To go north you first have to go over the first pass before heading north, continuing up very steep ground. However, on the map there was another possible track which followed the coast bypassing the steep ground. It is this latter route which we planned on taking.

Harriet felt much better but was still delicate. We took it easy that day, covering only 40 km camping at our favourite spot. Towards the end of the day, Harriet began to feel sick again from the constant jarring of the dirt track. The entertainment that evening was Ryan and Harriet's reading of the book *Life at Bletchley Park*, followed by some brain teasers set by Ryan: what is the theoretical horizon of the best theoretical telescope imaginable*.

Day 23

Sunday 3rd August

Today we had cycled 38 km and camped in a quiet spot just before the settlement of Jigleg. We had another campfire, but no stars that evening, just rain. Harriet was

* Answer: Three times the speed of light multiplied by the age of the universe

feeling much better although she was considerable weakened from not having eaten much the last 5 days.

Along the way we explored some springs, which in our excitement we had misinterpreted as hot springs. Well, they were hot in that it was warmer than ice, but not much warmer.

Day 24 Monday 4th August

Gemma : How's the tea?

Harriet: Good, nice to hold, it warms the hands. Not so nice to drink.

After a leisurely start to the day we headed 5 km north to find the coastal track. A couple of hundred meters away from our camp site we found two other campers, French Canadians who were trekking around the lake. Their huge packs were full of noodles and dried fruit, which made me very grateful for our bikes which permitted us to carry heavier items such as tinned fish and chocolate.

We followed a track that went just past Jigleg but then quickly terminated. We walked up a hill to explore the coast and assess possible bike access. We were disappointed. There was access but the steep cliff meant we could not get our bikes down. Even if we did, the beach was quite narrow with no trail to speak of. Possible only if you were hiking.

On our return we met the Canadians again, we consulted them on the route ahead, suggesting it would be possible, and wished them farewell. We had been gloating over the last three weeks about how efficient cycling was. Obviously, this is not the case when the trail ends.

The plan now was to return to Hatgal with a day of hiking in the middle. We had spotted some interesting peaks half way along and the map told us they were under 3000 metres, meaning we were covered by our insurance.

At lunch, we were visited by an old man with a big smile and his quiet son. They had raced over to greet us, traversing the 100 metres or so from their hut by motorbike. He asked if we were American, where we had come from and where we were going and then asked if we would like to buy some fish. With our mouths watering we



Contrast of fish, top: the mysterious tinned fish that we ate for lunch. Often resembling a fishy stew. Bottom: delicious smoked fish, caught in the Khovsgol lake and cooked by the local fisherman

bought five. With the few words we knew, this exchange took place entirely in Mongolian without the aid of our pitiful phrasebook.

In total we cycled 25 km, which felt like a rest day by our standards. Whilst having dinner we met an entourage of Mongolians on their way to Renchylkhume who also decided our camping spot was a good place for dinner. Noah and Ryan, having practised stone skipping earlier that day decided to challenge the men to a competition. This backfired, as they were soon plunged into a series of wrestling matches, a favourite past-time amongst Mongolians. Noah was confused by how it happened, he went to give a handshake, which suddenly became a double handshake and then he was on the floor. It was a friendly social exchange, and both men returned with a big smile on his face. Little did they know that this little practice would come in useful later on.

Day 25

Tuesday 5th August

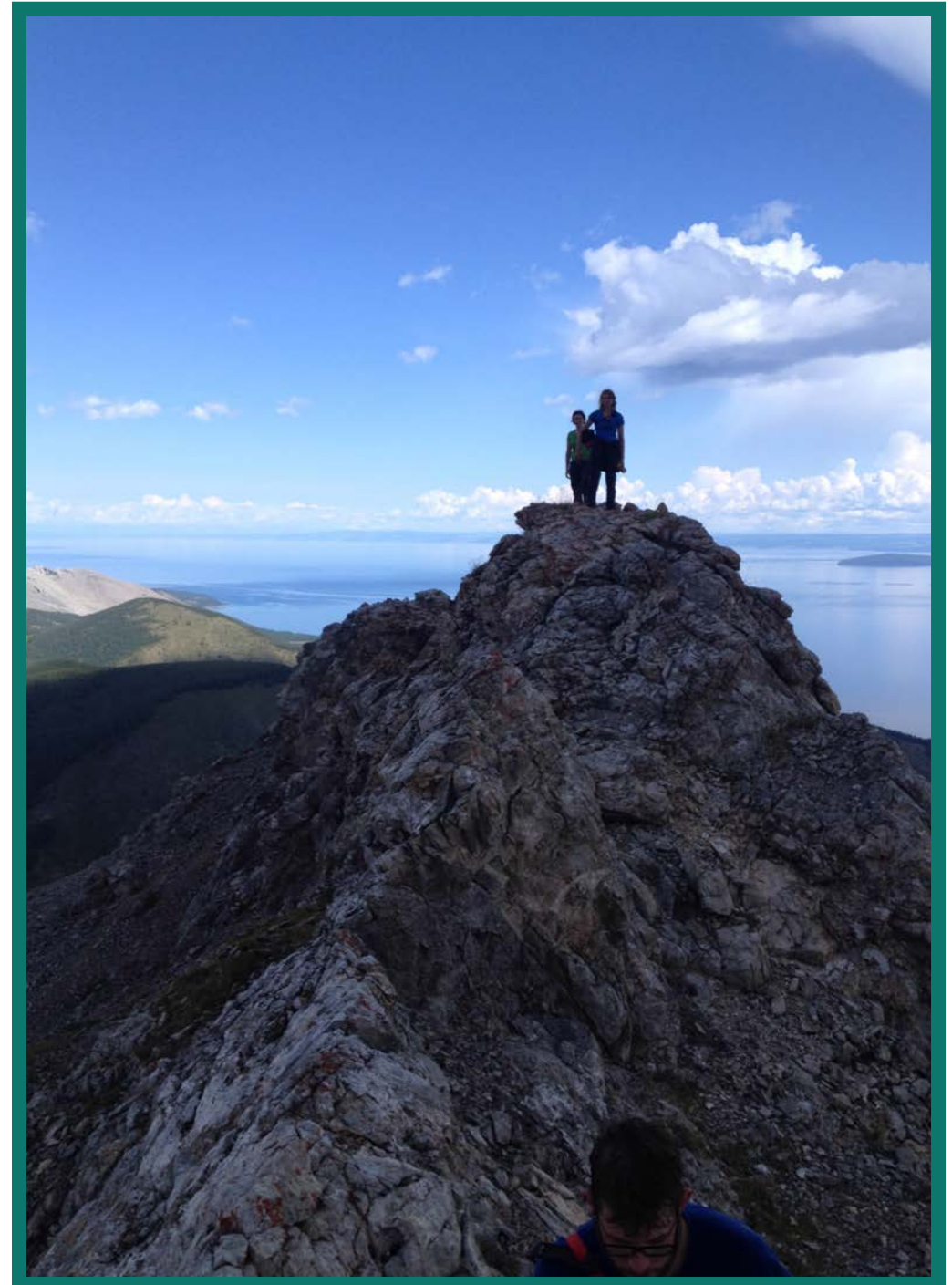
Life on two feet: we parted early for the first time in a while. We cycled to the base of the climb and hid our bags and bikes in the bushes. It took us two hours to reach the summit of the ridge. It was fairly arduous, as it was not well tracked, the only visitors being the occasional horse. The grass was long, so our feet got wet very quickly. At the ridge Harriet and Gemma decided to return after having a bit of lunch. They wanted to conserve their energy for the days ahead. Ryan and Noah continued on to another spectacular, table-top shaped peak at 2800 m of altitude, from where they could see the lake to its full extent.

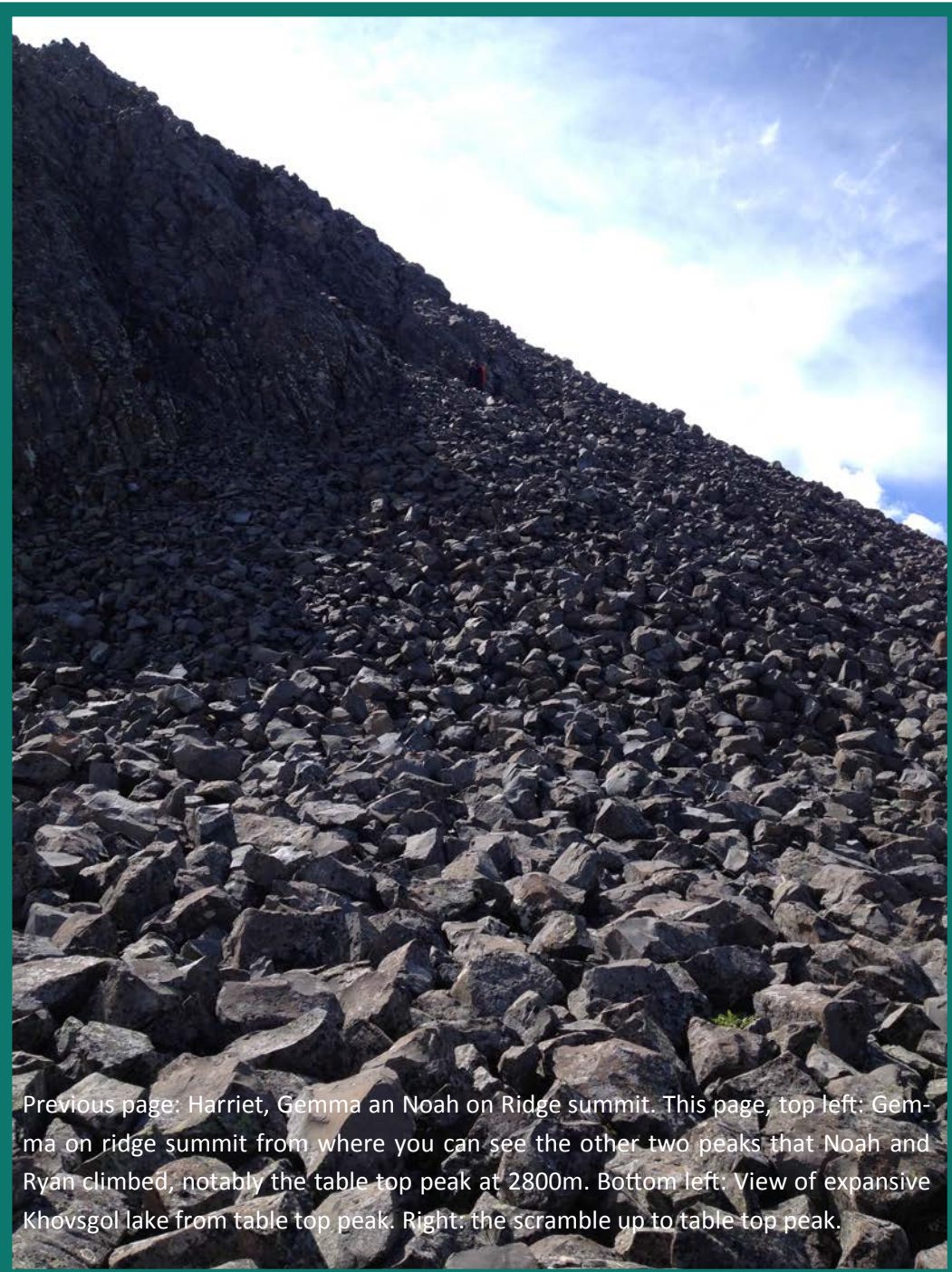
Back at the lake Gemma and Harriet did some washing and relaxed. Ryan and Noah returned about 1.5 hours later. Preferring to have dinner than to push on another 10 km down the lake, this stagnant position meant we would have to cycle some 60 km tomorrow back to Hatgal.

Day 26

Wednesday 6th August

Cycling 57 km next to the lake, it was hot day and our legs were sore from the previous days hike. On our return leg we bumped into the old fisherman who was returning from selling his fish in Hatgal. He stopped to say hello and to introduce his





Previous page: Harriet, Gemma and Noah on Ridge summit. This page, top left: Gemma on ridge summit from where you can see the other two peaks that Noah and Ryan climbed, notably the table top peak at 2800m. Bottom left: View of expansive Khovsgol lake from table top peak. Right: the scramble up to table top peak.

wife to us, this time he had no fish to sell to us.

We also had to face a horrendous hill which we had so happily cycled down on our outbound journey. Four days of easy cycling, today would be pay day. Harriet was the only one to succeed at cycling the whole way up. Apparently, she kept thinking it would end at every twist and turn. Ryan was eager for two portions of his favourite meal, beef and egg noodles, his legs kept beating to the mantra *beef, egg, beef, egg, beef, egg*.

Four kilometres from the hostel Noah got his second puncture, and Gemma's rack broke for the second time, this time the inner bar had sheared. Why didn't we get steel racks?

Day 27 Thursday 7th August

We finally said goodbye to our favourite hostel and set out on our voyage back to Mörön. It rained the whole of previous night and it rained the whole day. This meant the once passable track on the east of lake was now a slippery mess, and this time we were taking the trailer. We all found it hard navigating the thick slimy tracks, but Noah had it the worst. Towing the trailer he would just handle the bike through slick patch and then have to counter the trailer sliding all over the place. In contrast, Harriet had recuperated her energy and was on form keeping pace with Ryan.

It took 5 hours to slide 30 km. We wanted to do 60 km. A little further ahead the path became less greasy but it was still raining. Worse yet, the path due east to the town of Chandmonnan-Ondur was not very clear and thus we wasted a good deal of time verifying which track was the right one. We met a driver who spoke good English a bit later on who confirmed we were indeed on the right track.

Despite the fact that the ascents were nowhere near as big as other days, this day was by far the hardest. We were tired, and agreed to stop at the next watering hole to camp. We asked at the local Ger if we could camp next to them, and were surprised to meet the driver we had passed who was also staying there for the evening. The reason he spoke such impeccable English is because he had studied in



Ireland for 7 years and he had only returned to Mongolia two years ago. He said he missed Ireland but that was not evident since it had rained as much today as it does in Dublin. Our neighbour explained that he was from Hatgal originally and that he works here operating the tourist boats during the summer and then works as a fitness instructor in the capital, Ulaanbaatar, the rest of the year.

Day 28

Friday 8th August

This morning we waited for the rain to stop before packing up to leave. Ryan helped herd some sheep on his mountain bike, trying to stop them from merging with the neighbours flock. As there are no fences to separate livestock, it usually falls to the children to do this. However, the kids were somewhat distracted by us and our shiny bikes that morning.

The track to Chandmonnur-Ondur was much quieter than other tracks we had followed, the only signs of life were two drunken hunters on motorbikes, carrying shotguns. They were very social drunkards and as we passed they insisted we take a shot of Vodka with them. We said our thanks and quickly continued on. We passed them later sitting on the side of the road accosting some other people, perhaps their friends.

The first 30km was fast and flowing but after the town we faced a couple of hills and lost our way a few times. It was beautiful but the lethargy in our legs meant we didn't care. Harriet discovered her rack was broken but not seriously. That evening we camped in lake-side settlement and had another encounter with drunken Mongolians. Something we missed in our risk assessment. But was harmless, and involved a few bouts of friendly wrestling for the lads.

Day 29

Saturday 9th August

Ryan and Noah were feeling a bit worse for wear this morning, so we set off a bit later than usual and Harriet took charge of the trailer, and Gemma the navigation. Today we had a big pass to summit for which the ascent felt never-ending. Unfortunately, the trailer only fitted one bike, and so we had to swap bikes in order to pull it. Harriet didn't like Gemma's bike and so ended up pulling the trailer for the



Our kind Nomadic hosts invited us in for high tea also offered us to sit on a horse. How could we refuse. Ryan is sitting on the beast. Gemma, Noah and Harriet in background



Photo: Tamed Mongolian Horses resting on each other before a hard trek lugging around tourists. They are short , stocky and strong and spend a large amount of time bobbing their heads up and down.

most of the journey. Gemma took the trailer for the final 10 km, which meant Noah was riding Gemma's bike. He too had problems with it, and it was quickly apparent he would rather pull the trailer than ride Gemma's bike. We cycled until just night fall, with the full moon lighting our path. We wanted to camp next to a water source, and so carried on in the darkness, not being able to discern the bumps and holes in the dark earth.

Day 30

Sunday 10th August

This morning a family in a truck stopped to ask us for water. In exchanged they gave us a heap of blueberries (jymus) that they were on their way to sell in Moron. Harriet could really feel her legs in the morning, but the Mongolian pastries bought in Chandmonnan-Ondur really helped get everyone through the day.

It was a short day, covering 30 km most of which was downhill. We passed through another settlement called Tunel, picked up some water supplies as there were no water sources in the stretch ahead. We were making good progress and could potentially have made it back to Moron that day. However, we preferred to camp one more night in the Mongolian countryside before heading back to town. We found another Ger to camp beside, where we were very warmly welcomed. Our hosts were a large family consisting of three generations and they invited us in for high tea. In place of cucumber sandwiches we sampled the delights of sheep's gastro-intestinal tract followed by rice and intestine soup. It was far tastier than it sounds.

Day 31

Monday 11th August

Today was shorter than the previous with 24 km of descent. We were back at Begal's guesthouse in Mörön before lunch. Gemma and Harriet went to do some food shopping for the journey back. That afternoon we met an American medical student doing her summer project in Mongolia. She was collecting data on fatty gall bladder disease which is a huge problem in Mongolia due to their fatty meat-based diet. We asked her how the medical system works here and explained how she was surprised by how clean it was but that in Ulaanbaatar the system differed significantly from the American system. Being a former soviet state all the departments are centralised, so that there is only one maternity hospital and one cardiac hospital etc.

Day 32

Tuesday 12th August

The return to Ulaanbaatar: the driver arrived about 10 am but having driven through the night to get here he went to take a nap before setting off. At midday we loaded the minivan, this time a Japanese Mitsubishi with seat belts. The bikes were boxed and on top of the vehicle. Begal assured us it wouldn't rain and so we didn't need to cover the boxes. The truth is that it rains every day in Mongolia, and a few hours later we had to stop to cover the cardboard boxes.

This driver, Toksuer, knew about as little English as the previous driver but was less talkative. Thus we spent the next two days in silence playing the occasional car game. On the plus side, he was an exceptionally good driver and the vehicle didn't break down a single time.

Day 33

Wednesday 13th August

We had Buuz for lunch, which is essentially like dim-sum but much larger. It was nice but the uncooked onions gave us all gas, making the final leg a little more uncomfortable. We arrived in Ulaanbaatar at about 8pm, in the thick of rush hour. Toksuer was clearly happy to see his city appear, the end in sight, and so were we. The city had changed since leaving. At the time of the Nadaam festival, we had got the impression it was a calm and peaceful city. With all its inhabitants returned, and in full swing of their day-to-day lives, the city brimmed with activity. The traffic proved a bit much, and Toksuer spoke out for the first time to shout at some crazy city drivers who had cut across us. It was a relief to arrive back at our spacious chilled hostel.

Day 34

Thursday 14th August

Last full day in Mongolia, Ryan, Harriet and Noah headed to the black market "to see the real Ulaanbaatar". Harriet and Noah had a blast, discovering all the knick-knacks the market had to offer. Noah could not resist the fluffiest hat he had ever seen and returned with a three-tailed foxes hat. Harriet indulged in buying obviously fake designer clothing such as "Galvin Klein". Ryan got a hair cut and Gemma went for some real ground coffee.



Day 35

Friday 15th August

Return flight from Ulaanbaatar to Beijing. Staying overnight in Beijing, we had hoped to sample the famous Peking roast duck but it was too late by the time we arrived.

Day 36

Saturday 16th August

Whistle stop tour of Tiananmen Square before catching the flight back to London Heathrow. The size of the square was impressive but the sheer volume of tourists was even more impressive. Noticing the immense queue to cross the street, we unfortunately didn't venture onto the square itself.

We arrived back in London at 1pm with all baggage intact.

Flora and Fauna



The Khovsgol Province is a varied landscape consisting of a 2 million year old lake and several mountains ranges interspersed by vast grassy plains. It hosts the southernmost border of the Siberian Taiga forest, populated by the Siberian larch and homing rare wildlife such as wolves, brown bears and wolverines; although, you are more likely to see marmots and ground squirrels. Hunting of endangered animals is illegal in Mongolia, and in particular a recent law forbids hunting of marmots; however it became evident that this is hard to enforce when we were offered freshly shot marmot for dinner.

The country boasts 427 species of birds, and though it is a semi-arid country we chanced upon two spectacular waterfowl; the Demoiselle Crane and the Eurasian Spoonbill. Cycling along the shores of Khovsgol Nuur we wished we had invested in a bird book, the variety and beauty of the animals was incredible, though we struggled to identify



anything more than the common, crows and ducks. Whilst the country is famous for the golden eagle, we only saw captive ones in and around the capital of Ulaanbataar.

The region we travelled in is home to over 3.5 million heads of livestock, and thus we saw plenty of cattle, yak, sheep, the Cashmere goat as well as domestic and wild horses. Whilst the goat yields most of the income for Mongolian nomads, it is the most damaging to the landscape as it nibbles at the grass roots perturbing regrowth. Where the livestock had not yet grazed, one could see an explosion of wild flowers and long grassy meadows.

There are very few fences in Mongolia and so livestock roam freely around the grasslands close to the herders' gers. Consequently, many Mongolians spend a large portion of their day chasing animals. We had no problems with any animals, except mosquitos and horseflies, which came in swarms near to the lake. Deet and headnets were a must.

Photo of a grassy meadow by the Khovsgol Lake (top), some Demoiselle cranes (right) and an Eurasian spoonbill (bottom left)

Finances

	Description	Income (£)	Expenditure (£)	Notes
Grants	IC Exploration Board	3000		
	Lord Mayor's 800th Anniversary Trust	600		
	RCSA Trust	500		
	C&G Old Centralians' Trust	2000		
Equipment	Group equipment		445	
	Personal Equipment		1177	
Training	First Aid	100	100	IC Exploration Board funded
Medical	Vaccinations		768	
	First aid equipment		148	
Transport	Flights		3218	
	Internal		528	
Hospitality	Accommodation		741	
	Food		687	
Insurance	BMC	506	506	IC Exploration Board funded
	Global Rescue	790	790	IC Exploration Board funded
Personal contributions		1612		
Total		9108	9108	



The group as a whole were already fit and could all ride a bike. However there was a range of ability in terms of both cycling proficiency and general fitness. Harriet had not ridden since being a child so a particular focus was to get her more comfortable with cycling.

We knew the route in Mongolia would be primarily dirt tracks which could potentially become more hard-going in the mountainous regions we would be going through. Because of this, all members of the group would need basic off road skills. Group training days/weekends included both endurance training on roads and bridleways, and riding more technical trails to improve off-road skills. Navigation skills could also be practiced. Another aim for these weekends was to improve group bonding. The group had spent much time together on Outdoor Club trips including in fairly tough conditions so we were confident that we worked well together. However we had not spent five weeks in each other's company, so it was important to learn as much as we could from the training weekends. In terms of general fitness, each member of the group was responsible for their own weekly training regimes.

Group Training

Date	People	Location	Activity
18/1/2014	Gemma Harriet	Richmond Park	40 km in London, aim to get Harriet more confident riding a bike
25/1/2014	Gemma Harriet	North Wales	Did part of the Marin trail for some basic off-road training for Harriet
8/1/2014 - 9/2/2014	Gemma Harriet	Peak District	Endurance training – longer route on roads and bridleways
8/3/2014 - 9/3/2014	Gemma Harriet Ryan Noah	Lake District	Day 1: loop round Coniston, Ryan tried out a trailer - the rest of us let him. Day 2: Borrowdale bash trail – practice more technical off-road skills
15/6/2014 - 18-6-2014	Gemma Harriet Ryan Noah	Brecon Beacons	Three day trial run with fully loaded bikes: cycling on road and trails, river crossing, pushing bikes up steep sections. Trailer had not yet arrived, so no trailer nor panniers for Noah, Thus Noah carried all his kit in a ruck sack. Fixed teething problems, particularly with Ryan's bike which did not have standard fittings.

Equipment

Group Kit	
Cycling Equipment	Camping
4 x mountain bikes	2 x Terra nova quaser tents
2 x bike pumps	Tent repair kit plus seem glue
Extrawheel trailer	2 x MSR omnifuel stoves
2 x trailer panniers	2 x MSR fuel bottles
Waterproof cycling map case	2 x Alpkit titanium pans
Expedition first aid kit	Flint and lighter
1 x Leatherman and 2 x multitool	Water filtration pump
2 x spare folding tyre	Water purification tablets
Spare spokes	Solar panels plus external battery
Spare nuts and bolts	Battery adaptors
Chain lube plus cleaning equipment	
1 x D lock plus cable lock	General equipment
Rear bike rack	Satellite phone
2 x Bottle rack	Lonely planet guide book
1 x speedometer	GoPro HD video camera
Front and rear bike light	Large duffel bag for travel
Break bleeding kit	DSLR Camera
	2 x Duct tape
Navigation	Gifts for Locals (vodka)
Old Soviet maps of Khovgol	6 litre folding water container
Tourist map from Ulaanbaatar	
GPS	
Compass	

Personal Kit	
Cycling Equipment	General equipment
Puncture repair kit	Sleeping bag plus liner
Helmet	Knife, fork and spoon
Cycling gloves	Roll mat
Padded cycling shorts	4.5 litre personal water capacity
2 x waterproof panniers	Head torch plus spare batteries
2 x bike rack bungee cords	Rehydration sachets
Dry bag/rucksack	Mobile phone
2 x inner tube	Head phones
Clothing	Watch
2/3 x T-shirt	Pen/paper
Long trousers for evenings	Reading material
Insulated jacket	Penknife
Upper and lower waterproofs	
2 x underwear	Toiletries
3 x socks	Small tube of toothpaste
1 x micro towel	Toothbrush
Cycling shoes plus flip flops	2 x bar of soap
Warm hat and gloves	Moisturiser
	Lip balm
Documentation	Toilet roll
Passport	Sun cream
Extended visa	Insect repellent
Military checkpoint Permit	Deodorant – Noah
Global rescue/BMC insurance card	
National park permits	

Food

Maintaining a sustainable diet is one of the most important factors to consider on any expedition, especially on high energy consumption expedition like cycle touring. During our research we found knowledge of food resources within Mongolia to be scarce. This added to the difficulty of planning our route and was the cause of our buying of the extra wheel trailer, however as it turned out the trailer was not necessary.

We cooked in two groups, Gemma and Harriet as one group, Noah and Ryan as the other. This made cooking easier with the pan sizes available and allowed the groups to create an efficient system when setting up and dismantling camp. It also made it easier for Noah and Ryan to consume more calories closer to the recommended 2500 for males.

Initially we planned to buy as much high calorific value food as possible in Ulaanbaatar however upon talking to our Mongolian hosts we only acquired food enough for 12 days at 2000 calories per person. Our hosts informed us of the quality and quantity of small shops and supermarkets in our area of interest. Whilst cycling, space was more of an issue for us than weight which enabled us to carry dense foods and tinned foods e.g. fish for protein.

Cereal bars and malt loaf along with chocolate and other home comforts made the expedition easier.

A typical days food:

Breakfast

- Muesli or Mongolian porridge with powdered milk
- Coffee or Cereal King

Lunch

- Bread with jam, peanut butter or tinned fish



Dinner

- Spaghetti
- Powdered soups

Snacks

- Biscuits—these became known as dog biscuits due to their lack of taste, texture or moisture
- Chocolate
- Dried fruit
- Gemma’s Saucisson

Transport

Internal transport in Mongolia is something that could not easily be planned in advance so was left to be organised when in Ulaanbaatar. It was decided flying to Moron, the main town in Hatgal would be too expensive with bikes and there would be no room for our bikes on the public buses. Online sources had also stated that public buses were known to wait in Ulaanbaatar until full which could take a matter of days. Our host in Ulaanbaatar was very helpful with organising and instructing private drivers for our journey to and from Moron. He explained the driver's expectations and informed us of our duties for the driver.

We flew from London to Beijing airport with Air China where we transferred on an Air China flight to Chinggis Khaan international airport. A taxi organised by our host was waiting for us which dropped us off at the hostel. On our return journey we had an overnight transfer in Beijing allowing us to see a fraction of the city.

Our two day journey to Moron was in an old Russian minivan which is perfect for the terrain in Mongolia. It was also ideal in that even when the crank shaft fell off the vehicle our driver was able to repair it single handed on the roadside. The return journey was made in far greater comfort in a Mitsubishi minivan. The bikes were dismantled and enclosed in the bike boxes; these were then strapped to the roof and waterproofed using a shower curtain. All parts of the bike were taped to the walls of the box to keep everything safe. During the drive we were responsible for feeding the driver. We would pull up to eat at a restaurant for breakfast and dinner and the driver would eat the food we provided in the evenings.



Medical

Two members of the group took the Fieldwork First Aid course which was paid for by the exploration board. Although there was the intention of also undertaking expedition first aid this did not happen because of the course not running before we left. This was not such a problem for us because the activities we were planning on undertaking were not particularly high risk. It would have been advisable to start planning first aid training for the expedition as early as possible.

The group took one main first aid kit and each member took a smaller individual first aid kit. The contents of these are detailed below.

Group First Aid	
	<i>Antibiotics</i>
Amoxicillin 250 mg Capsules	
Flucloxacillin 250 mg Capsules	
Ciprofloxacin 1 × 7 day course, good for chest/urine infection	
Augmentin 2 × 5 day course good for chest, abdominal infection, urine	
Fluconazole 1 × 7 day course anti-fungal, good for thrush etc.	
Metronidazole (200 mg) 4 × 4 day course for abdominal abscess or anaerobic gum infections	
Augmentin (500 mg) 3 × 5 – 7 day course for dental swellings and pain	
	<i>Creams and ointments</i>
Burneze Spray 60 ml	
Caneston Cream 15 mg – Anti-fungal cream	
Savlon Cream 60 g – Effective on grazes and more serious blisters.	
	<i>Pain killers</i>
Aspirin 300 mg Caplets (16) – For small pains	
Ibuprofen 500 mg Tablets (64) – For sore muscles, tendons and joints, also anti-inflammatory	
Co-codamol/ paracetamol 30/500 mg (32) – Very strong painkiller	
Codeine (prescription)	
Diclofenac (prescription)	
	<i>Other Medication</i>
Dioralyte Sachets (20) – Rehydration sachets.	
Duclolax 5 mg (20) – To cure obstipation. Drinking enough should also help.	
DulcoEase® Pink™ Stool Softener	
Diclofenac 50 mg tablets (16) – Strong anti-inflammatory. Should be avoided when having stomach ulcers or asthma	
Loperamide	

<i>Dressings and instruments</i>	
Antiseptic Cleansing Wipe (20)	
Blister plasters	
Crepe Bandage 7.5 cm (4)	
Eye Dressing (2)	
Gauze Swabs 5 × 5 cm (8)	
Melolin Dressing, Non-Adhesive (6)	
Plasters, Adhesive, Assorted (50)	
Paperclip – can be used to pierce through nails to treat a blood blister under the nail.	
Scissors, Medical	
Steri-strip Large (3)	
Steri-strip Medium (10)	
Thermometre (forehead)	
Triangular Bandage (2)	
Safety Pins (10)	
Survival Blanket	
Zinc Oxide Tape 25 mm x 5 m	
trauma dressing 3	
Individual First Aid Kit	
Sunscreen spf 50	
Insect repellent	
2 dressings	
Zinc oxide tape	
Triangle bandage	
Penknife	
Personal medication	

Appendix: Prevention of accidents and illness

We will be travelling in remote areas with very limited access to medicines or medical treatment. We will require first aid and expedition medicine training and must carry sufficient medical supplies to deal with any injuries, the most likely being a sprain and cuts and the most serious being a broken limb. The emergency response is detailed in the next section (see risk assessment for likelihood and seriousness).

Illnesses and medical conditions: One team member has asthma, others still have an appendix. Suffering an asthma attack or appendicitis is possible and can be serious, and the response and prevention is detailed in the risk assessment.

Certain common ailments and conditions are preventable and are listed below.

Thing we will need to consider regularly: weather, terrain issue (is it too muddy, too steep, deep rivers), medical issues, bike checks

Dehydration

Dehydration is a serious problem for cyclist and can be fatal. Cycling on rough, steep terrain will be physically demanding and cause excessive water and salt loss due to sweat. This may not be obvious in warm or windy conditions where the sweat is wicked away from your skin, leaving you feeling dry. It is imperative to stay hydrated by drinking regularly and increasing the recommend daily intake of 2 litres of water to 4-6 or more if it is hot. Should a member of the team start to suffer from dehydration, they should increase their sugar and salt intake – sugar in tea, salt with food – as a large part of dehydration is solute loss or imbalance. In severe cases, a rehydration sachet should be administered.

A final comment on protecting from the heat: wear a hat or light coloured buff to keep the sun off of the head (potentially causing heat stroke).

Common cycling ailments

Vibrations from the handlebars can cause a tingling or numb sensation in the arms and fingers. Using foam handlebar grips can reduce this.

Chafing and rashes in the groin area is also common, it is important to keep the area clean by washing daily and wearing clean underwear (take a minimum of 2 pairs of undergarments, washing them regularly).

Diarrhoea and dysentery

Diarrhoea is commonly caused by dirty water and isn't an immediate cause for concern as it usually clears up on its own within a few days. The risk of *the runs* can be minimised by treating water with filtration, iodine, chlorine or boiling. A bigger concern is dysentery, which is recognisable by blood and/or mucus in stools and should be treated by a doctor – in remote areas Metronidazole or Flagyl should be taken (prior-consultation needed on what drugs to use).

Water purification

According to the US Environment Protection Agency, 90% of the world's fresh water is contaminated in some way. It is important to treat water in order to kill pathogens like the amoebic cysts that cause dysentery. Distinction must be made between toxic water and biologically contaminated water. The latter can be treated whereas toxic water cannot. Toxic water is typically caused by runoff from pesticides or industrial waste. We are visiting a national park and so chemical contamination should be limited; however, it is important to follow local advice wherever possible. As general rule, clear running water is better than still or cloudy water. Water treatments for biologically contaminated water are listed overleaf.

- Boiling water to 100°C will kill all pathogens
- Heating to 85°C for a few minutes or 70°C for 30 minutes will also do the job
- Chlorine water purification tablets, typically takes 10 minutes for 1 tablet to purify 1 litre (5 l x 5 people x 20 days= 500 tablets min)
- Iodine solution or crystals; cost effective and lightweight for treating large volumes of water. There are some health issues: not suitable for pregnant women or those with thyroid problems or on lithium. Some people who are allergic to shellfish are also allergic to iodine. Iodine can be precipitated out by addition of vitamin C to eliminate the taste – wait 30 minutes post treatment so sterilisation takes effect.
- Water filter, which cleans water but does not eliminate viruses

Vaccinations

The following vaccinations must be up to date: Typhoid, Hepatitis A, Tetanus

The following are highly recommended: Hepatitis B, Tuberculosis, Rabies

Party separation/ lost member

If the party is separated for whatever reason, either call using mobile phone or attract attention with six short sharp blast of a whistle (or torch if it is dark). If alone, wait in the area you were last seen, the group will come and find you.

Equipment

The team had one satellite phone and one local mobile phone sim card to make emergency calls. However, the Mongolian sim card did not have signal in the region we were cycling. We had a GPS unit so that we could locate ourselves precisely. We took with us Russian geographical maps that allowed us to navigate to more suitable terrain for emergency evacuation. We each carried an emergency

contact card with a list of all emergency phone numbers: the British Embassy, the insurance company emergency line, evacuation company, emergency advice doctor, and college security.

Participants first aid training

Imperial College Exploration Board kindly offered to fund Fieldwork First Aid training for all members of the team; however, only Harriet and Gemma could attend. No members undertook Expedition First Aid training.

Insurance

Insurance was obtained from the BMC under their Alpine policy, costing £126 per person for 5 weeks. It was necessary to we subscribe to an evacuation service,. We chose Global Rescue for remote evacuation and repatriation only, and which did not cover medical costs. If you do not subscribe a \$5000 dollar fee is required before they will mobilise an evacuation. The BMC insurance will not underwrite this at the time, but has to be claimed back after the event.

Telephone numbers

Sat Phone	Temporary
Emergency medical contact: Dr Kushalinii Ragubathy	Tel: +44 7886 451 153/ +44 1494 438 826
Mongolia emergency services - police	00976 102
Mongolia emergency services - ambulance	00976 103
Mongolia – pick pocketing department	00976 93022480
Insurance provider	TBC
Imperial College security	00 44 20 7594 8910
British embassy - Mongolia	00976 11 458 133
FCO 24hr global response centre	0044 207 008 1500

Appendix: Incident response

In the event of an accident resulting in one or more injured members of the team, the following action will be taken.

Step 1: Initial Response

Are you safe?

Think carefully: assess the situation, what you want to achieve, and your immediate assets and limitations.

Is the casualty in immediate danger (e.g. on the road, at risk of further injury)?

Step 2: Casualty analysis

You have assessed the situation; formulate a plan and act upon it.

Discuss the plan with the casualty, but consider the extent of their injuries and factor this into how much they input.

If separated from the other team members, consider whether you need them and their assets.

Should you be unable to reach them, wait as close to the incident location until found. Try and reach team members on mobile phones or whistles to attract attention.

Continue to assess the ability to get to your destination (ideally close to the track where you were last seen by your team members).

Step 3: Medical assistance and evacuation

Document the following:

Name and satellite phone number

Position – latitude and longitude

Accident/illness description

Clinical description:

Conscious level – AVPU.

Airway.

Breathing – respiration rate, depth.

Circulation – bleeding, skin colour, pulse.

Disability - obvious injuries.

Treatment given (e.g. splinting).

Next course of action.

Assistance required.

Additional information (e.g. weather, other relevant information).

Establish casualty priority:

Priority 1 Immediate evacuation, if possible from accident area.

Priority 2 Evacuation needed soon.

Priority 3 Evacuation needed, but not life threatening.

Priority 4 Evacuation not needed, advice required.

Should evacuation be required, follow the Evacuation Plan.

Step 4: Post incident

Each team member will write a personal report.

As a group, document the list of decisions made with approximate times and locations. Use the list to discuss how you felt prior to, during and after the incident.

Complete Imperial College incident reporting form.

If required, speak to UK contact to discuss incident.

Any major incident will involve a full debriefing on return to London. Debrief to be led by Expedition Leader.

Appendix: Evacuation plan

There are four options available should we encounter and injury or illness during our expedition. These are:

- See to the issue ourselves and carry on with the route
- Evacuation by a local contact with a vehicle in the area
- Mongolian emergency services evacuation
- Evacuation by helicopter

The option chosen will depend on the nature and seriousness of the situation, and the availability of the relevant option. A step by step guide to the procedure is detailed below.

If possible two members should carry out Steps 1 and 2 simultaneously, with 2A, 2B and 2C carried out separately as required.

Step 1: Medical Advice

If medical advice is required, call UK based **[emergency contact doctor, tbc]**

Step 2A: Local Contact

Get in touch with local contact

Brief contact of the situation and reason for evacuation, including:

- Assessment & diagnosis of casualty
- Whether medical advice has been obtained
- Provide exact location (long/lat)
- Action being taken (if immediate first aid response is needed)

Instruct local contact to keep us informed of actions being taken

If unable to contact local contact proceed to Step 3

Step 2B: Emergency Services

Contact Mongolian emergency services: 00976 103

If helicopter evacuation is required, proceed to step 3 and organise helicopter evacuation through the insurance company.

If helicopter evacuation not available, actions need to be taken to move to the nearest airstrip (locations in Appendix)

Step 3: Contact Insurance Company

Call insurance company

State intention to evacuate and brief insurance company on the situation, including:

- Reason evacuation is necessary
- Assessment/diagnosis of casualty
- Whether medical contact has been sought/consulted.

Step 4: Contact Imperial College

Leave message with Imperial College Security, who will contact Dr. Lorraine Craig.

Telephone: 0044 20 7594 8910

Include:

- Casualty location
- Your location
- Action being taken

If you have not spoken to insurers, instruct home contact to establish contact with and brief insurers.

Step 5: Standby

Standby and await further instructions.

Avoid unnecessary use of satellite phone to allow emergency services to contact you.

Await help.

for list of hospitals.

Helicopter evacuation procedure

A great deal of coordination is required from the grounds man to prepare a landing area, it may be advisable to take a radio for this scenario, as the grounds man will have to communicate with the pilot.

- Flat area of less than 10-degree slope, approx. 25x25 m during the day and 33x33 m at night.
- Area must be free of any obstructions, note any trees, wires, poles, buildings
- The ground must be firm
- Mark the area clearly with whatever you have to hand that won't blow away and is not a flame.
- Walk the area to determine any hazards near the Landing Zone, such as power lines, which are difficult to see, especially at night
- If setting up a Landing Zone at night and power/light poles are noted, walk to the pole and determine where the wires go from the pole
- If landing at night, once the landing zone is confirmed by the pilot, you may be asked to turn off all white lights
- Location of the Landing Zone – e.g. "Two miles north of town"
- Wind direction and speed - e.g. "270 degrees at 5 knots"
- Hazards around and near the Landing Zone - e.g. "Wires to the east of the

Landing Zone at tree height and fence to the north"

- When you can see the helicopter. At this time, please direct the pilot, if he hasn't seen you, by telling him to turn east, west, north or south, or to his left or right (may need radio).
- Mark the wind direction for the pilot
- On approaching the helicopter, wait for the propellers to stop, approach in full view of the pilot, crouch and do not run
- As the rotors warm up and cool down they can flap and cause serious injury. The rear rotor is often at head height – steer clear of it. Try to approach from the front at all times.

In the case where helicopter evacuation is not available we may need to move the casualty to more suitable terrain, the nearest hospital or the nearest airstrip. This may mean acquiring donkeys or vehicles from locals to transport the casualty. Cash will be carried in order to pay locals for such a situation.

Ulaanbaatar is the best location for medical attention, having many hospitals. Some medical evacuation services have their own clinics. See Appendix

Appendix: Risk Assessment

Risk/Hazard	Consequence	Who might be harmed	Control measures	Likelihood	Seriousness	Risk Factor
Biological Health Risk:						
Dirty water	sickness and diarrhoea	All members of expedition	Most water is clean but may be contaminated by livestock. Check water sources up stream for any obvious contaminants. Always filter and sterilise water.	6	2	12
Dehydration	Serious injury or death	All members of expedition	Carry enough water for conditions. Research water supplies along the route through web sources and the local populous. Carry spare water for emergencies. Check weather forecast, long term and short term to assess for periods of drought. Know the symptoms of dehydration.	2	2	4
Food poisoning	sickness and diarrhoea	All members of expedition	Avoid uncooked food from locals. Use hand gel/soap.	2	2	4
Medical ailments		All members of expedition				0
Sunburn	Irritation of skin, can lead to serious blistering.	All members of expedition	Cover up skin, wear a hat, use Sun cream.	2	1	2
Heat stroke	Major injury	All members of expedition	Replenish water perspired. Stop regularly. Avoid midday sun and cover up skin with loose clothing to stay cool. Look out for symptoms	1	6	6

Equipment Failure:						
Bike malfunction	Time delay and the inability to travel	All members of expedition	All members will be trained to maintain their own bike. Appropriate tools will be taken and spares for each bike. Each bike will be looked over before departure.	6	2	12
Stove malfunction	Inability to cook/sterilise food	All members of expedition	Take a spare miniture stove. Much of the area is covered by forest. In an emergency this could be used to cook		1	0
Environmental Risks:						
road traffic accidents	Injury or death	All members of expedition	Lights, helmet, high visibility clothing. Avoid cycling at night when drivers might be drunk and it is harder to be seen. Pull off the road for breaks and checking of maps and cycle in one straight line.	4	8	32
Bike crash/fall (none car related)	Minor injury	All members of expedition	Wear helmets/gloves and avoid cycling at night when it is harder to see the trail clearly i.e. pot-holes. Ensure bikes are maintained properly. Cyl-ce at the same pace and stay in one group.	8	2	16
Bike crash/fall (none car related)	Serious Injury	All members of expedition	Wear helmets/gloves and avoid cycling at night when it is harder to see the trail clearly i.e. pot-holes. Ensure bikes are maintained properly. Cyl-ce at the same pace and stay in one group.	4	6	24
Theft	loss of posesions	All members of expedition	Should only occur in big towns/cities. Take locks, where it is not feasible to carry all luggage with you a member will stay with the bikes. Keep documents and money on person at all times.	4	2	8
Bears and wolves	Serious Injury/Death	All members of expedition	Take advice from locals to avoid known bear habitats. Keep food in a separate tent. Bears are on the decline and unlikely to attack in the region we are going to.	1	8	8

Flash floods	Person(s) being swept away by flood	All members of expedition	Khuvsgul is not a region prone to flooding. Check the route and observe land topography for areas of danger. Check the weather forecasts as often as possible.	1	6	6
River crossings	Person(s) being swept away by current	All members of expedition	Carry out training exercises practising crossing rivers. Carry rope to use in emergencies.	4	4	16
Getting lost	Time delay, lack of supplies	All members of expedition	Take mobile/satellite phones for emergencies. Use GPS along with map and compass. Training to ensure everyone is a proficient navigator. Confer with locals.	4	8	32
Political unrest	Stranded in Mongolia, may lead to civil unrest. May lead to serious injury or death	All members of expedition	Research the political situation. Keep a close eye on the situation whilst in the country. Form an evacuation plan, possibly more than one dependent on the area of the province.	1	4	4
Fire	Fire at camp may cause serious injury or death. Will destroy equipment and supplies	All members of expedition	Keep fires away from the camp and equipment. Put fires out before bed and keep fuel out of the sun and in a safe fuel container	1	6	6
permits	Minor injury or arrest	All members of expedition	Research on the internet and ask locals of any permits required to enter certain areas.	9	1	9
Lack of fuel	Inability to cook/sterilise food	All members of expedition	Find fuel supplies along the route and take enough fuel to last for the route. Fire wood can be used in emergency	2	1	2
Lack of physical fitness	Inability to travel. Increased chance of physical injury	All members of expedition	Ensure each member trains in the period before the trip and organise a strict training regime. Carry out a fitness test before the expedition	4	4	16
Temperature conditions	Hypothermia, Hyperthermia	All members of expedition	Ensure each member has adequate clothing and spare layers	6	8	48

General Risks:	General Risks:	General Risks:	General Risks:	General Risks:	General Risks:	General Risks:
Strain	Less efficient travel, delays	All members of expedition	perfect cycling technique to reduce likelihood of strain and stretch regularly during the expedition.	6	4	24
Sprained/broken bones	Inability to travel, delays	All members of expedition		4	8	32
Minor injuries	delays, slower progress	All members of expedition	All team members will be first aid trained	6	2	12
Major injuries	Large delays, death or permanent harm.	All members of expedition	Some team members will have advanced first aid training. Satellite phone will be on hand for evacuation and spare supplies and clothing will be accessible in the event of major delay.	4	8	32
Exhaustion	delays, increased chance of physical injury and illness	All members of expedition	Carry spare supplies incase of delays, build in rest days to the cycling schedule, cycle at the slowest members pace and rest often.	2	2	4
Group seperation	delays, increased chance of physical injury	All members of expedition	Ensure each member is aware of the route and key place names. Ensure each member has ample supplies on their person. Cycle as a group at the pace of the slowest team member	1	6	6

Appendix: List of hospitals

SOS MEDICA MONGOLIA

4a Building, Big Ring Road,
15th Micro District, 7th Khoroo,
Bayanzurkh District, Ulaanbaatar, Mongolia
Tel: +976-11-464-325/6/7
Fax: +976-11-454-537
91913122, 99096175/After Hours Emergency/

HOSPITAL NUMBER 2

Located at the west side of the British Embassy or opposite the Naran Shop in the 13th micro-district.
Dr. Bayasgalan, General Director (Fluent English speaker)
Tel: 976-11- 7015-0200
Cell: 976-9911-0437
Fax: 976-11- 7015-0201
Dr. Ukhnaa, Vice Director
Tel: 976-11-7015-0201
Cell: 976-9923-4474
Reception: 976-11-70150233
Emergency: 976-11-70150234, 70150235
<http://www.sgh.mn/>

SongDo Hospital

A new Korean facility, run by Korean and Mongolian staff
Choidog St. – 5
1st Microdistrict, Sukhbaatar District
Tel: 976-7012-9000; 7012-9004
Fax: 976-7011-1164
Working hours are Monday – Friday: 8:30 AM - 5:00 PM
Saturday: 8:30-12:00

TRAUMA HOSPITAL

Open 24 hours. Doctor examination costs 100,000 T.
Inpatient service (board and meal) – 356,000T/ day for foreign citizens.
Tel Reception: 976-70180136
Dr. Otgongerel, Director
Tel: 976-11-687-795(o),
Cell phone – 976-9911-3471
Dr. Shagdarsuren, Vice Director (he doesn't speak English, but he's in charge of Human Resource, therefore would recommend English speaking doctor of the hospital)
Most of the doctors speak French language.
Dr. Munkhbat, Vice Director
Tel: 976-11-687-796 (o),
Cell: 976-8811-1964
Emergency: 976-11-687-792

HOSPITAL FOR INFECTIOUS DISEASE

Microdistrict 13, behind Black (Central) Market
Patients are referred to this hospital in cases of serious infections that cannot be treated at other facilities.
This is generally not a general admission hospital, but NOW during the pandemic of H1N1 in Mongolia anybody who has symptoms of the flu is encouraged to visit the Hospital and get lab analysis done. There are standard wings, which charge local prices, and a private VIP wing, that charges 20,000 Mongolian Tugrugs per day.
An English-speaking doctor and nurse are provided in the VIP wing. There are 2 VIP rooms with 4 beds totally.
Dr. Nyamkhuu, Director
Tel: 976-453994
Dr. Surenkhand, Vice Director. Tel: 450492
Reception: 450491

GERMON DENTAL CLINIC

German – Mongolian joint Germon Dental Clinic offers you the customer-friendly environment with well equipped modern dental facilities and services that meet the international standard requirements. Owners are Mr. Schopj (German) and his wife Nomin (Mongolian), both English-speakers.
The clinic has 4 dentists. The staff is very friendly and communicating in English is no problem. The Clinic is clean, and they practice excellent infection control procedures. Good quality supplies and materials from Germany and the USA are used.

Working hours: Monday - Friday 10:00 a.m. – 5:00 p.m.
Saturday 10:00 a.m. – 4:00 p.m.
Tel: 976-7740-4488, senior doctor: 9914-7526, 88000225
Narkhan town, Khan-Uul district, 15th khoroo, Apt.57-02
On the left side of new Chamber of Commerce



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