

Dave and Talfan's Fieldwork Diary...



We are both PhD students doing research projects on volcanoes in the Afar region of Ethiopia – here are some pictures and stories from our first Afar fieldtrip in Jan/Feb 2008:

1: UK to Addis Ababa

Of course the first big thing you need to do on most big trips is to get on a plane. However, for us the first big task is to get us and all our equipment from Cambridge to the airport (we didn't actually take the bike!). Despite some car trouble we managed to get to the airport check in desk quite early but we spent about an hour having our



luggage weighed and checked (unfortunately we had all our batteries confiscated as they weren't sure if they were safe to take on the plane – better safe than sorry!). The equipment we have is called a 'spectrometer' – once we reach Afar Talfan plans to use it to measure some lava flows (more on this later). We leave

Talfan plus all our gear outside the Geography Department at Cambridge University

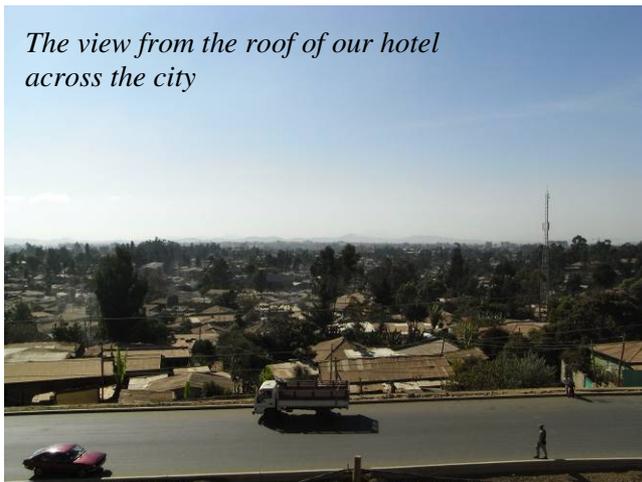
London at 9pm and arrive in Addis Ababa, Ethiopia's capital city at 7am the next morning.

Once we land at the airport we have to go and talk to customs about bringing in the spectrometer - they decide that we have to leave it at the airport until we can bring a letter from some of the people we are working with at the Addis Ababa University to explain what it is for. So with considerably less to carry we catch a taxi to our hotel and



our first day in Ethiopia. The taxi winds its way through the bustling streets towards our hotel, a small friendly place set on a hill with a fantastic view over the city. We drop off our belongings and take a break in the rooftop bar, exhausted but at the same time wide awake on the adrenaline of our first visit to such an interesting country. Addis

The view from the roof of our hotel across the city

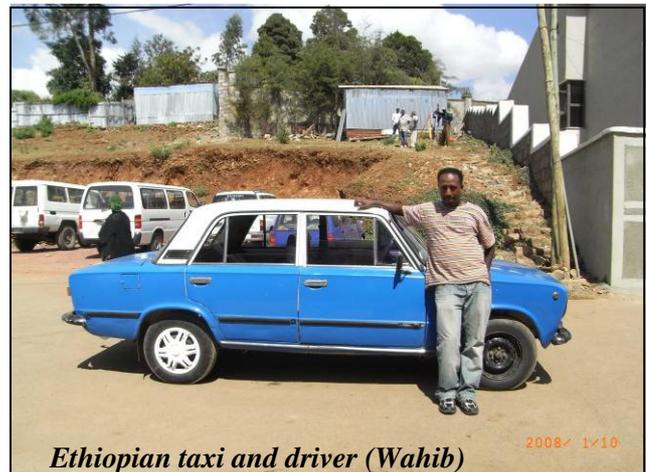


Ababa is over 2000m above sea level, which means the mosquitoes that carry Malaria don't survive and we don't have to worry about bug-bites and anti Malarial drugs - but it does mean you get breathless going up the stairs if you're not used to the altitude. It also makes the climate very mild for the latitude the city is at – a nice place to

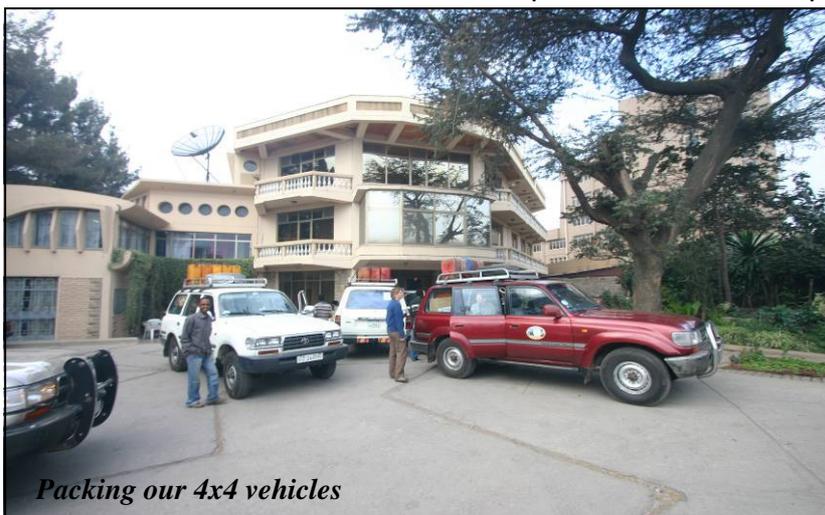
start getting used to hot weather after arriving from Britain in the middle of winter. We'll have to acclimatise again when we get to Afar, which is significantly hotter than Addis Ababa and the Ethiopian Highlands – this is due to Afar's lower altitude, in fact Afar contains the lowest point in Africa at 120m below sea level. We can't enjoy the view for long, however because there's work to be done – we need to contact our colleagues at the University of Addis Ababa and shop for supplies....

2: Getting ready to leave for Afar

Although we have already come a long way (3600 miles) our 8 hour flight was short compared to the 3 day drive we now have between Addis Ababa and our destination in Afar. Afar is one of the remotest (and hottest!) places on Earth and we will have to take all our food and water with us. Before we leave Addis we spend almost a week in buying supplies and arranging to have the equipment released by customs (not an



easy job – Talfan needed 3 different letters and spent 2 days sitting in the airport!). We are part of a large research project and our camp will be big enough (~ 20 scientists) to employ a cook to come with however some of our group will be going on a camel trek to a remote volcano and so we are charged with getting all the supplies for this trip - a lot of pasta, biscuits and nuts! We found a supermarket that had everything we were looking for, but it took a couple of days and several laden taxis to get everything we needed back the hotel. On the last trip with a boot full of pineapple slices and powdered



milk we almost didn't make it back and had to get out and push our unfortunate taxi up the hill to the hotel. We also have to buy cooking gear, plates cups, rope, gifts for the local children and most importantly plenty of sun lotion. We also have time

to try out some Ethiopian restaurants and especially the coffee. 6 days after we landed we are ready to leave - we have four 4x4 vehicles (no roads in Afar!) but only just managed to cram in all our stuff.

A note on Ethiopian food

Ethiopians don't use knives and forks to eat with instead food is rolled up in a piece of flat bread called injera. It's a bit like a big pancake and food is usually served in little piles on a big plate on top of an injera. To eat it you pull off bits from the side of the injera and pick up some of the food with it. Ethiopians are experts at this – we badly needed



Sharing a meal: Having a meal out in Addis Ababa. Different dishes are shared out on a communal plate and eaten by ripping off pieces of bread and picking up a small amount with the bread.

to practice, it can be very easy to drop your food before it reaches your mouth! The food is often flavoured with a spice called 'berberi' (a mix of chillis, ginger, coriander and some other stuff) and can vary from lots of different dishes with various meat and vegetables to a basic bean paste called 'shiro' – the further we are from large towns the more basic the food becomes. A



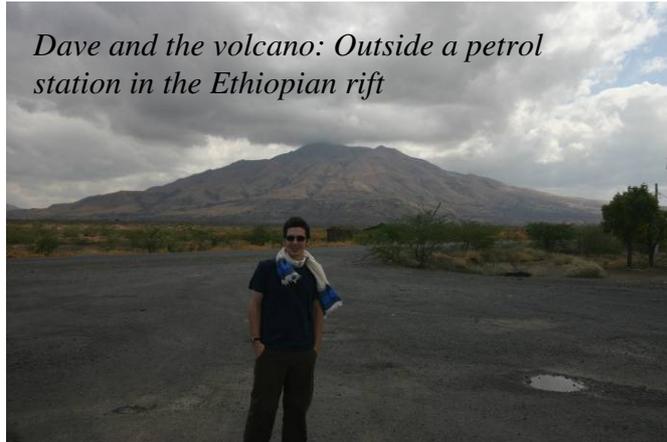
Shiro and injera at a roadside stop

particular culinary favourite in Ethiopia is 'Kifto' – this is literally just raw beef and is actually quite tasty! There's also a fantastic range of beers on offer in Ethiopia, every town seems to have a beer named after it! We also sampled Tej, an alcoholic drink made from fermented honey with a very distinctive taste.



3: To the desert

Our first day driving takes us to a town called Nazaret, where we find a hotel for the night. The hotel has a central courtyard which becomes a restaurant at night. We eat outside while Ethiopian pop music videos are projected onto a large screen. Many of the songs are performed by Teddy Afro, a very famous Ethiopian singer, with traditional Amharic dancing which involves a lot of shoulder wiggling. We are now in a region with mosquitoes and have to sleep with nets over our beds. Next we have a long drive to a



Dave and the volcano: Outside a petrol station in the Ethiopian rift

place called Semera, this is the capital of the Afar region and before we can go any further we have to get permission for the local government. On our way to Semera we see our first volcanoes and the landscape becomes much more arid. The road we're driving along is the main route to

the port in Djibouti through which a lot of Ethiopia's imports and exports are transported, so the road is very busy with trucks and lorries driving back and forth from Djibouti to Addis Ababa. There are plenty of truck stops along the way where we can stop for lunch and to pick up snacks and fresh fruit.

Semera is a brand new city (it's still being built) and despite having a museum and a university there are no restaurants or cafes and we have to drive to the nearby town of Logia to find somewhere to eat. While Semerra is new, neatly laid out and well planned, Logia is a truck stop



Talfan checks out what lies ahead...

that has grown organically along the road to Djibouti. It is a bustling place with many shops and cafes set along the side of the road and houses set behind them. In contrast to the modern concrete buildings of Semera, the buildings of Logia are constructed from wooden planks and poles. We eat in a café with large murals of the Golden Gate Bridge (or was it the Sydney Opera House?) on the walls, and typically have chilli scrambled eggs for breakfast and shiro (bean paste) and injera for dinner.



Mosquito net over a bed in the guest house in Semera

There is a guest house in Semera for government visitors and we are lucky enough to be allowed to stay there. When we leave we also have to take a local policeman with us who can help us to explain to the local inhabitants what we are doing. After a night in Semera we have another long days driving to our final destination in the Afar

desert. After a few hours the road ends and we are driving across dusty plains and across dry stream beds (hopefully someone knows the way!). At a village along the way we meet up with a truck carrying all our water for the trip as we can't be sure of finding any when we arrive so we need to take enough to cook, drink and wash with for a month. After an hour or two negotiating winding tracks and awkward stream beds we finally emerge onto a wide, flat dusty plain dotted with small volcanic cones under a huge, blue, late afternoon sky, and drive at speed to Digdiga. We arrive at Digdiga, the small village where we intend to camp, just as it is starting to get dark. Our arrival

The end of the road: the final part of our journey is over sandy plains



causes much excitement and we are instantly surrounded by all the village children. The village chief allows us to camp in the grounds of the local primary school – it's too late and dark to set up our tents so we just lay our mats and sleeping bags out on the ground and sleep under the stars. Over the next few days more and more scientists from the UK, America, France, New Zealand and Ethiopia will arrive at the camp as well as a helicopter that will help transport people and equipment over the rough terrain.





First nights accommodation in Digdiga



Thirsty anyone?...A months supply of water stored in the local school



As more scientists arrive our camps gets bigger and bigger



A camel train passes through Digdiga at sunset



Local Afari children

4: Getting down to some fieldwork



Finally, we are ready to start collecting some data and rock samples! In Afar the Earth's crust (the thin rocky bit that we live on) has been stretched very thin by the movement of tectonic plates and this allows hot melted rock (magma) to make its way upwards from deep in the Earth and to erupt at the surface. We

are here to study some of the volcanoes that have grown from all these eruptions of lava. It is a very exciting time to visit the area as there have been two recent eruptions and lots of earthquakes – unfortunately there are none whilst we are there! Our time is divided between collecting samples from different lava flows and taking measurements using the spectrometer. This usually involves a lot of walking over (and up) volcanoes – which can be quite hard in the 40°C heat. Most days our team consists of us, an Ethiopian student called Mohammed, our driver Teddy and a local Afari from Digidiga. We need to have an Afari with us as we often have to explain to local people why we are filling our rucksacks with bits of rock. Our Afari carries a gun, which is usual for people in Afar and the only time he uses it is to try and shoot an antelope (he missed!). Some of the areas we needed to visit are not accessible by car, even with a 4x4, so we have to use the helicopter.



Using the spectrometer to measure an old lava flow

A passing Afari (+ camel) stops to see what we are doing



We took a short trip by helicopter to the site of a volcanic eruption in August 2007, when basalt lava flowed out of a fissure - or a large crack - in the ground. The lava has now frozen into solid rock, but it is still steaming from the heat trapped within it. The surface of the frozen lava is a jumble

of broken slabs with very sharp edges – you have to be careful not to fall over. Despite the fact that the area appears remote and deserted, within a few minutes of our arrival some local Afar people come to see what the fuss is about. No matter where we are, people appear as if from nowhere – they're usually friendly, and sit and chat with our guides while we go about taking measurements. Despite appearing such an inhospitable environment to us on our arrival, we've learned that the Afar region provides resources and livelihoods for a large and vibrant community – you just have to look at the landscape with Afari eyes to know how to survive.



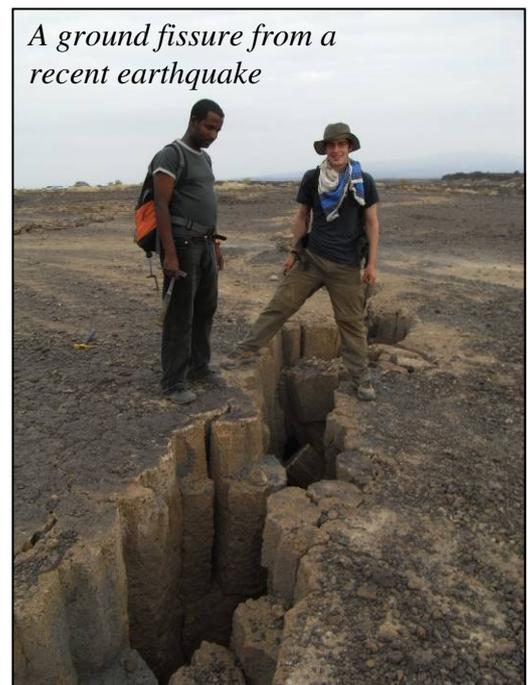
A lava flow, erupted in August 2007, still hot enough to produce gas and steam

As well as doing short flights we are also dropped off in a very remote area for 2 nights where we join some other geologists who are camping there. At this camp there are no tents so we sleep on mats in the open air. As well as tents to sleep in the main camp there has plenty of luxuries such as an outdoor

shower and freshly roasted coffee. In camp our diet mostly consists of bread, pasta, rice, potatoes and vegetables (carrot/cabbage). These are made by our skilled cook Meron and all taste fantastic considering we are a two day round trip to the nearest shop! One thing we can't escape is the dust and every day strong winds whip up the dust and



Taking sunlight measurements



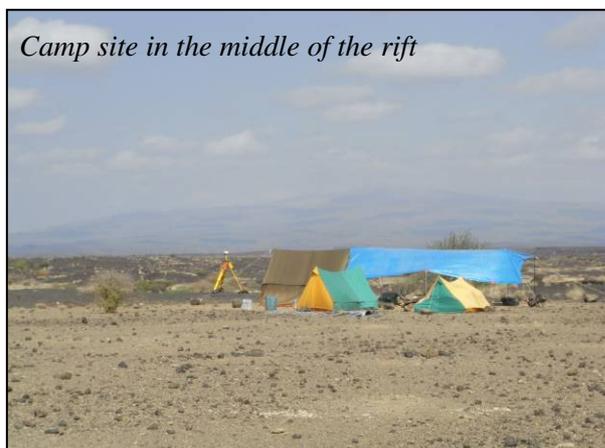
A ground fissure from a recent earthquake

deposit it in our tents. Also, in the afternoon powerful 'dust devils' start to appear, which resemble small tornadoes sometimes tens of meters high that suck up dust and form

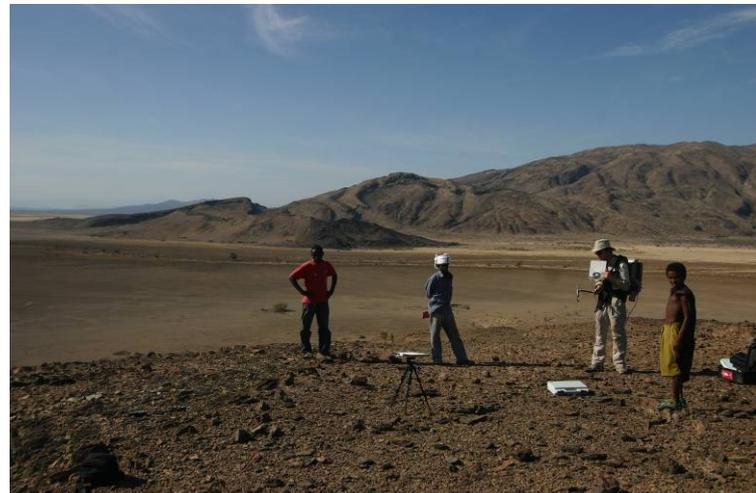


dusty swirling columns that sweep across the plain around Digdiga. Whenever one of these passes through camp we have to cover up our faces to stop the dust going into our eyes and noses. We have a couple of nights with high winds too, and suffer a few collapsed tents.

The local wildlife provides a lot of entertainment as well. The camp is visited regularly by donkeys and goats wondering through looking for scraps during the day, and at night a family of cats come scavenging, the mother looking for food while the kittens just sit by some unfortunate persons tent and yowl like crazy. Its amazing how loud kittens are when they're hungry. At night foxes would come to visit too, prowling around the fence outside the school making strange laughing noises. When walking to the outdoor toilet block in the middle of the night we would see glowing eyes in our torchlight just on the other side of the fence – quite a spooky experience when you're far from the tents, and everyone else is asleep in a noisy dust storm. We also found some hyena tracks at the entrance to camp one morning, so who knows what those glowing eyes out in the darkness were...



An important part of our work in Afar is to support an aeroplane that has flown all the way from Oxford in the UK to take photographs from the air that we can use to map the different types of rock produced by volcanoes in the area. The plane also has a laser pointing downwards beneath it to measure the shape of the ground and produce a 3D map of the volcanoes and lava flows around our camp. Unfortunately, as soon as the plane arrives and begins flying the sky clouds over and a thick haze of wind blown dust is whipped up which neither the camera nor the laser can see through. The weather stays bad the whole time the plane is in the Ethiopia, so in the end it has to leave without collecting any data. This is disappointing, but there is always the risk that something will go wrong during fieldwork – it's all part of doing research. And you can't control the weather, whether you are in Afar or the UK.



A note on the Afari people

The Afar are one of Ethiopia's oldest ethnic groups and have lived in the same region for at least 2000 years. Many people still live in a traditional tent called an 'ari' which is a small domed wooden frame covered with mats and cloth. Many Afari's are still nomadic so they can easily move these tents when they travel around looking for fresh grazing for their goats are trading in different areas. One of the most striking things about the Afars is their appearance (particularly their hairstyles). Despite living in one of the planet's harshest environments Afari's still



manage to have immaculate and elaborate hairstyles - the most popular of these are Afros for men and carefully braided hair on woman. Another very obvious feature of Afari men is that they are often carrying a gun, which is generally used to protect their goat herds from wolves, hyenas and foxes. At first it can be a bit disconcerting when you are

approached by someone carrying a machine gun - but we soon became used to it! Often local people were suspicious when we turned up near their home and started picking up rocks (who wouldn't be!), however when our local guards explained what we were doing they would often bring samples of rocks and minerals that they had found to show us.



5: Back to Addis

After over three weeks of fieldwork and camping we have to start our trip back to Addis Ababa (we are also all desperate for a cold drink). Our journey back involves much less people than before and we only have one car. Instead of driving back the way we arrived we decided the drive up to the Ethiopian highlands and back to Addis that way. This gives us a chance to see some more of the country and it is a pleasant change to



Changing a flat tire in the highlands

see some green vegetation and flowing rivers after the dusty plains and bare rock of Afar. Following a two day drive we arrive back in Addis - more than ready give up our sleeping bags for a real bed. Before we can fly home we still need to arrange for

all our rock samples to be sent back to the UK and some more paperwork (it never ends!) to export the 'spectrometer'. First stop is the Mercato market – the biggest in Africa – to buy some wooden crates to pack our samples into. Before we take them to a shipping company we need to make a list of all the rocks we want to export, weigh each box (we have 11), get a letter from the University to explain that we are doing



Packing up samples in Addis hotel

scientific research and then get approval from the Governments' Ministry of Mines! After all this we find someone who can arrange to fly the boxes back to Britain. We also need to get some letters explaining that we are taking all the equipment we brought with us back out again. All that's left now is to say goodbye to all our Ethiopian colleagues and get back to start analysing our samples (and prepare for next years trip!).

