

## Diary 20 – 6 September 2012

### New house rules and another generator breakdown

Another week has gone and yet another chapter in the Zackenberg story is to be told. The week started with the arrival of 14 people of whom Maria (GeoBasis), Julie (PhD) and Kirsten came back for the second time this season. Spanggård also came back after having closed down the ZERO house in Daneborg. The last ten (Bo, Hanne, Carsten, Ulla, Riikka, Stephanie, Jordan, Ulli, Peter and Daiga) are all part of the CENPERM (Centre for Permafrost) team.

New people, means new house rules. Now breakfast is at 7am, lunch at 12 and dinner at 6pm allowing us all to make the most of the day light and work one hour more. Over the weeks house rules have changed yet one remains. Clothes pegs (laundry boys in Finish) are still not to be left on the clothesline as the raven takes them. Another change at the station is in House 2. Carsten has made a nice sterile lab where he does DNA and RNA extractions from soil samples taken in both the active layer and the permafrost. Temporarily, ZERO calm 1 had a neighbour this week. A 600 kg fine lady named 'Boring Betty'. It is a drilling rig and the drilling team (Ulli, Stephanie, Jordan and Hanne) successfully reached 21 m and got lots of permafrost cores. Jørgen (Station Manager) also took part in the drilling in order to get drilling skills. Betty will be moved to another location in the week to come.

Lars has been rather busy keeping track of all the new CENPERM project making sure all are satisfied with the locations for drilling. Frida, Mats and Tora have accomplished what they set out for; that being permafrost cores and flux and VOC (volatile organic compounds) measurements and are treating themselves with a three-day hike into Store Sødal and A.P. Olsen Land. Lone and Jordan were lucky enough to see a Polar wolf at the other side of the river and Maria has claimed that it is almost too hot to work (it was 5°C). The sauna is frequently used and volleyball is played.

In my own schedule, the week started with Bo bringing a new transformer for the LGR (methane analyser) to replace the old one that broke down two weeks ago. Once it was fixed, the LGR was nicely running meaning I could continue my measurements ( $\text{CH}_4$ ,  $\text{CO}_2$  and  $\text{N}_2\text{O}$ ) at the gradient (a slope going from very dry condition into the fen). It was indeed nice to be back in the field when accompanied by nice clear sky, sun and hardly any wind making it all very silent. The autumn sun created long shadows even at midday and the day was wrapped in beautiful golden light making the scenery absolutely fantastic. My favourite view is towards the Lindemansdalen; golden yellow arctic cotton grass with the musk oxen wandering about, red/brownish mountains with snow-covered peaks and the light grey Zackenberg River with all the rocks now being visible as it is slowly dying out. Standing next to Tørvedammen makes it a double up as it is all mirrored in its calm blue water. I guess this is the most beautiful office one could ever wish. Well, back to work. The LGR was logging data every tenth second (indicated by a little beep)... or was it? I could not hear it and I feared something was wrong.... And yes, the generator had stopped. After several unsuccessful attempts to make it run again I brought it back to the station in the wheelbarrow. Over the weeks, I have had some problems with the generator and therefore taking it back and forth to and from the field. After almost two month in Zackenberg, I am beginning to get tired of moving stuff in the squealing wheelbarrow. I am tired in my wheelbarrow arms and I am tired of the squealing wheelbarrow itself. The problem seems to be too much sand inside blocking the fuel to run properly through the system.

Now with the generator running again - thanks to Jørgen - off to the field I go. Meanwhile parts of my permafrost plots have collapsed due to thawing. The chambers I use for measurements used to fit perfectly into these 30x30x60 cm holes but not anymore. The temperature is below 0°C and the collapsed soil is frozen making the removal of soil a bit more complicated. Another day another challenge. But when in Zackenberg I can nothing but enjoy

it. This summer I have collected data for my master thesis and hopefully I get the opportunity to come back one day.

Katrine Maria Lund Johansen,  
Master student, Physical Geography, University of Copenhagen