

**Ugebrev 15 – den 27. september 2009**

**White out and “hold on to your hat”**

Friday, when I first finished this news letter it was all white outside. Snow drifts of up to 1.5 m had built up between the houses and our local oracle (the small weather station in House 9) said “Hold on to your hat”..... A great advice since strong northern winds made it snow quite horizontally. Of course I could not leave you in the middle of a snow storm with a weather forecast predicting more snow for the weekend – too much of a cliff hanger. So here we are - it is Sunday morning - clouds are low - it is still snowing, still blowing and the air temperature is close to zero.

Yesterday we had a lot of snow in the afternoon and no wind. In a few hours a nice 10-20 cm layer of snow covered everything. But then the northern wind returned and within a few seconds all the snow was moved around and built in to even bigger snow drifts.

No worries about the water situation, now we have plenty of water - at least in solid form and Jørgen even asked us to take a long shower or wash some clothes before he refill the snow/water tanks outside. Maybe it was just a polite hint!! The Zackenberg River which normally supplies the station with water is more or less dry/frozen up by now and ponds and lakes are covered by 10-15 cm of ice. But you never know what can happen. In 2007, we had a small flood in late September and in 2008 there was a huge outburst of water in late November!! At least there are no problems in crossing the river at the moment!!

Now, skies are essential to get around or at least it makes transportation a lot easier and more fun than walking in snow drifts (it only takes a very short trip to realize that). Actually, the skies were all ready in use last week where we had to test them.... - have to be prepared!! We carried them across the valley (so much yesterday!!) and used them to walk up the slope of Aucella to see if we could find more of the “warm” wolf tracks that Line observed the day before. And we did – the wolf had been visiting a fox den 250 m a.s.l. A few days later the wolf tracks were also observed near the lakes by Norbert and Casper – so it is definitely somewhere in the area....

Along with all the snow, the musk oxen have returned to the valley. After a period with almost no oxen around here (two weeks ago Line counted a low of only 16 on her weekly musk ox counting which cover a big part of the valley and the slopes of Aucella) they are now gathering out in the fen. It seems that the number is increasing “exponentially” from day to day and at

the moment more than 150 are walking around out there between automatic methane chambers, gas flux towers and CO<sub>2</sub>-analyzers. It is amazing to work between these animals and so far we get along very well - you just have to be patient and sometimes make a detour or wait for a while before you can enter your sites and check the equipment. With all the analyzers running out there, not a single greenhouse gas molecule is supposed to escape or enter the fen area without being registered, and actually the same is true for musk oxen! Right now, Norbert and I pay close attention to the methane equipment and are anxious to see any signs of a methane outburst from the fen like we did in late September 2007. In terms of soil freezing, air temperature, precipitation and other climatic factors, this month seemed to be very similar to September 2007 – but with all the snow this is no longer the case. Now, the chambers are more or less buried in snow – the automatic lids are struggling and the set-up needs more careful “nursing” than usual in order to keep running.

Before the snow storm we had several daily observations of gyrfalcons. Sometimes they were lining up to get the best seats on top of the antenna mast from where they had an excellent view of the snow buntings that gathered in groups of several hundreds. On photo documentation by Jørgen you can see that the antenna mast can host at least two falcons at a time...and it is also documented that not all snow buntings will make it further south this year!!!

It was also the week where we celebrated yet another birthday. Norbert turned 25 a few weeks ago and now Casper turned 28 (-they came up as young guys and will return from the arctic as real “one year older” men!!). As part of their transformation they also had a swim in the fiord when it was packed with drift ice. Line and I was only close when we collected water samples from the partly ice covered lakes.... However, we are just waiting for a thin layer of new ice on the fiord and then we are ready....

We are all well, except maybe for the small fox pup that was more or less integrated in our little community. I think it is 4-5 days since our loyal little friend have been spotted.

Well, it is time to face the drifting snow. “Hold on to your hat and put on your goggles”

Charlotte