

## **Diary 4 – 31 June 2013**

### **Zackenberg: a hospitable place for researchers and its various visitors**

On this spot you are supposed to get a weekly update of what goes on in Zackenberg research station, but since everyone here at Zackenberg research station is always very busy with his/her work it took a newly arrived strict depute of the scientific leader a lot of convincing and kind words to get someone to write about what has happened in and around Zackenberg research station during the last weeks. After two weeks of continuous sunshine and excellent weather, it was only until today that some hard wind and rain (the tops of the mountains that surround Zackenberg valley have become freshly white overnight) persuaded me, and most of us in Zackenberg, to do some office work. I have gotten rid of a backlog of data entry and still have a few hours left to write this newsletter. I think I know what most of you in Europe (slightly jealous because of the bad summer weather?) will probably think when reading about our nice days with plenty of sunshine: mosquitoes! We will have to disappoint you, though. Due to the very dry summer, the days have been very mosquito-poor, so far. That's a new, but by most of us welcomed, experience up here!

One of the many advantages of doing fieldwork in the High Arctic is that the continuous daylight makes it possible to spend a lot of hours in the field. Dina prepares very tasty and healthy dinners and keeps everyone happy all the time, whether we prefer meat, fish or vegetarian dishes. And she does so not only with her cooking but with her always cheerful presence. She keeps up her tradition to bake the most amazing cakes every day. For that reason, there is hardly a need to rush home in the evening. Jesse and I, biologists who study the breeding biology of sanderlings (an amazing, long-distance migratory bird that breeds in the High Arctic), bring the cakes with us during fieldwork and when we get slightly hungry in the evening, we have no excuse to not walk yet a few more hours in search of sanderling nests. The many delicious cakes by Dina are obviously a subject of the conversations here. Admittedly, this is a luxury problem, but it is difficult to choose which of the cakes to bring with you in the field (taking into account that the one that you prefer might not be there anymore once you return in the evening!). Jesse and I noticed that the Danes are particularly fond of cakes that contain pink raspberry foam (or how was this called again?). Certainly, those are very nice cakes, but to our opinion not more tasteful than the chocolate brownie-like cake with nuts. My favourite cake so far has been the one containing orange-jam and had a nice sugar icing on top. I am still hoping for the one with the poppy seeds, which has this sugary, crusty layer.

It took Tomas (note that he studies Arctic food webs!) at least five summers in Zackenberg and the alert observations of his master student Kristiina to find out that cakes are an important component of the researcher's field lunch. We do not need to wait after dinner to try out the new, tasteful wonders that Dina has created. His, until this year, biased view on Arctic diets could perhaps be caused by his study method. Tomas reconstructs the diet of animals by studying what they leave behind after they have eaten. Woolly (and any other) bears are no longer demanded by him, but this summer we can make Tomas very happy with every dropping that a bird left on our trousers or on rocks especially if they are fresh. The same counts for the hard-working guys of BioBasis, who are always interested in fox faeces collected by us. This results in interesting conversations over the radio; I hope that our neighbours in Daneborg, who can follow our discussions on the radio, are equally interested to hear whether fresh fox shit can best be kept in vials or plastic bags.

To stay with this subject, it is not only Dina that keeps on doing a wonderful job; also the other logisticians, Henrik and Kim, succeed very well in keeping the station functioning, clean and safe. Jannik complimented Kim for the fact that the toilet looked really clean after he had been there... to clean the bathrooms. But cleaning is obviously not the only task of the logisticians here; while we are in the field, they maintain the roads, the water system (not the easiest task in a dry summer like the current one), prevent everything that has the potential to break down from finally doing so, keep track of in- and outgoing researchers and their cargo, try to make sure that French expeditions have something to sit on...and co-organise (but thanks a lot, Kirstine and Maria, for your input!) a nice celebration of Sankt Hans with a bonfire and a whole array of games such as boot-throwing, darts, dog running followed by a cosy get-together. It was nice to have Troels and Michael from the Sirius patrol with two of their sledge dogs joining us for the celebrations and to celebrate Kirstine's birthday at the same time. Clearly, the logistical team succeeds very well in making Zackenberg a hospitable place for anyone. I believe that this was especially proven by the fact that we were able to host a group of ca. 20 guests in this small station, among which were the Danish Crown Prince, and the Danish and Greenlandic Ministers of Education. Everyone seemed very happy and impressed with the place and the interesting research that is being done here. Also special was the volleyball match between the Icelandic Twin Otter pilots and "the rest of the world"; I would not be surprised if this was the first time ever that such an interesting bunch of people played volleyball together.

Another special visitor that was kindly welcomed by us was a polar bear spotted by Maria from house 1. After clear notifications by Henrik via the radio, most of us were able to safely observe this magnificent animal walking in the old river delta and on top of the Triangle, where it briefly inspected an old muskox carcass. And while I am finishing this letter, on Sunday morning after a Saturday evening with nice conversations, good company and drinks, another polar bear was spotted by Julie in the fen area close to Kamelen. This time it was a very clean and white bear, unlike the one that we observed the previous Sunday. Julie could warn Tomas and Kristiina by radio. They were on their way to their experimental set-up in the field and could have ended up quite close to the bear in the field. It was too late for one of Tomas's malaise traps to be saved, though. The polar bear found it a nice toy and ripped it completely apart. Pictures have been taken of this incidence, which can be used as proof for the insurance company, might Tomas want to get a new insect trap. The bear has an obvious interest in our biological research; it was also sniffing and possibly even chewing on one of the automatic camera's that BioBasis placed near of the fox dens. Unfortunately, the cameras were not programmed to detect motion anymore, but to make time-lapse photos to count the number of fox pups in the den. Still, there is a chance that the polar bear was trapped on camera; we are all excited to hear whether Lars, Palle or Jannik return with some nice polar bear shots.

On the sanderling front it has been going very well. Jesse and I have now found 17 sanderling nests (one nest per ca. 20 km of walking...). The fate of these clutches are now being monitored with small loggers that measure the temperature between the eggs and thus will indicate when they are no longer incubated and discovered by a predator. Last summer lemmings were relatively abundant in Zackenberg. Lemmings are Arctic rodents and the favourite snack of Arctic foxes who fare well and reproduce well when there are many lemmings available. It is not a big surprise that now many fox dens are occupied and contain hungry pups. Lemmings are however much less abundant this summer compared to the

previous, so the foxes will have to search for alternative food items. Unfortunately for the birds, this will likely be bird eggs. We thus expect a higher predation pressure this year compared to previous years. Until now, only six of the 17 sanderling nests have been discovered by the foxes. The first clutches are expected to hatch and contain chicks on 2 July, but most sanderlings have to manage to hide their eggs for predators until 10-15 July when we expect a peak in hatching.

We will (try to) keep you updated with the Zackenberg adventures in the weeks to follow.

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