

Diary 10 – 30 June 2014

“Is Greenland always as hot as this? I mean, seriously, these clothes are the same that I wore on Madagascar!” Mikko is sweating, panting, and considering shedding even his t-shirt. The heat is relentless; the air over the runway vibrating.

“I bet this hurts, but my hands are too numb from the cold to feel a thing” says Mikko, poking his thumb with his forceps in disbelief. That is easy to believe, when you notice the bluish tinge of the skin, and the light shiver in the whole limb.

Between Mikko’s two statements, ten days have passed – half of them warm and sunny, half of them freezing cold and foggy. While the cold spell felt rather long, this is the Arctic at its most typical. Here, no years are brothers, and within years, the weather can change drastically in weeks, days – or minutes.

For an insect at these latitudes, there is but one thing to do and that is to contend with the climatic roller coaster. Yet, they are amazingly adapted to the fluctuations: as soon as there is a clear break in the fog, you will see flies and wasps taking buzzing around. When the temperature drops, you will see them simply shut down and sit still wherever they happen to be – waking to life again when the next opportunity arises.

Arctic bumble bees are the most amazing at all. Their attitude of waddaymeancold amazes me year after year. You can sit huddling in the coldest wind on a mountain top, wishing your presumed endothermy would serve you just a little bit better. Then by whooshes the happiest bumblebee you have ever seen, not even registering the fact that it is supposed to be frozen stiff.

While the polar bear is always portrayed as the straight-faced epitome of Arctic endurance, see here a worthy challenger for the title. Try hiding as a helpless larva, immobile pupa or frozen hibernator, in a ground permafrosted from below and flooded by melting water from above. Attempt surviving without an inner furnace, in an average temperature below zero. Being a mammal then starts looking like the easy way out...

During the week that passed, Lars gave us one of the most visual demonstrations of how arctic animals survive in their reign. For this, he used one of the animals which did NOT survive. During the winter, many tens of muskoxen have succumbed, and BioBasis is now taking samples of them. During one of many days of bad weather, he took us to a corpse of an old cow freshly melted out of the snow, and “opened the hood” with a scalpel and bone saw to show us the machinery. He cut open the different compartments of the digestive system and showed the intricate linings of compartments doing different things. While I did have my share of anatomy as an undergraduate, seeing the inners of the animal in its harsh surroundings was as powerful a lesson as anything: see here to construct a large animal to make it survive on the scantiest tundra plants.

The week did include a big bang – or more like a quiet flurry of white feathers. While I first identified it as an unusually fat-looking glaucous gull, a second look left no doubt: this was an adult male snowy owl passing through the valley. Majestically, it took its throne on a sandy hill, only to have all pretensions ruined by stuka-diving turnstones,

ridiculing ringed plovers and essentially anyone who could make it to the dirt-throwing party. Sighing deep, it took to its wings and swept northwards through the valley. Judging from the movement range of these birds, it may already be on its way to Peary Land, or why not Arctic Canada.

As I myself will be defecting to a temperate Helsinki tomorrow, I feel honoured to have had this chance to meet with both the smaller and larger rulers of the Arctic. Trying to understand how they live in this environment is a thrill, and I much look forward to returning again next year.

Tomas Roslin, Spatial Foodweb Ecology Group, University of Helsinki

P.S As I know that many are reading these diaries to learn more about how their friends are doing, I should remember to end on a more anthropocentric note.

The week that passed has been full of festivities. It started already with the National Day of Greenland (June 21), then continued with combined St-Hans-and-Kirstine's birthday, and continued with Jannie's birthday. The Danes have an odd birthday song where the birthdayee gets hailed by different instruments which he or she can chose him/herself. I did not quite get the melody of the singing part (everyone seemed sing to their own tune), but when it came to the instrumental part, the place just exploded. Moray's solo on a chair-made-bagpipe was simply mind-blowing, and more Scottish than haggis may ever aspire to be. If started with this type of a salute, I bet both Kirstine and Jannie will have a great next year.

The ample celebrations have clearly not stopped us from working. Jannik and Jannie have been making valiant efforts at catching skuas with geolocators. (For what a geocator is, see the diary of last week.) As the birds are not breeding, this calls for some supernatural talents, but that is exactly what J&J have. They have been inventing techniques ranging from small nooses tied on chicken wire for snaring the birds (it actually works!) to shooting them flat out of the sky with net guns (forget it...). The next invention might be building a snowy owl for them to hate and attack – and getting caught in the process.

Laura and Kirstine are each day walking the muddiest-ever road to the bridge, and to other sampling sites. Along this Dementor Road, every step tries to suck your socks off your heels, your boots off your feet and your will to live out of your chest. How the GeoBasis team still manages to be so ever-cheerful, kind and hardworking is essentially just beyond me.

On Thursday, Laura saw a polar bear – which had actually seen her first, and was scouting her out (from a distance) on its hind legs. Laura retreated in good order, and alerted everyone to the presence of the visitor. Given the dense fog, having a bear lurking around in the area made the afternoon even more exciting than usual.

The sanderling team is marching their feet off, as always, and returning with good humour and fresh reconnaissance for us Finns on where we can find our study species in flower. Jeroen is getting good support from Tom and Moray, who join forces in

dragging him up the hills and down again. So efficient are they in this that one day, the team was even home in time for dinner. This caused Dina to wonder aloud whether her radio was broken, as the team had not called in their regular apologies for being late to see you in some hour.

As whipped cream on the top of the kringle, the logistics team of Kenny and Jørn are working around the clock to maintain Zackenberg as the most amazingly well-kept field facility anywhere on the globe, while Dina fuels us with heavenly food and hellishly good cakes. Their work allows us to get our research done under perfect circumstances.

In short, life at Zackenberg is absolutely exactly as it should be.