Diary 15 – 5 August 2014

Arctic studies

Many inhabitants of Zackenberg Research Station have heard about the Arctic bacillus, which tends to infect people in the Arctic, forcing them to come back over and over. Some at the station might even have caught it already.

This week even more than earlier, however, we were acquainted with another pest of the Arctic; the Arctic mosquito. It is a companion in all aspects of life when in season.

Omnipresent at all times of the day, the mosquito leaves you wondering (although it actually never *leaves* you..) how it always knows exactly where the holes in your mosquito net are, how it survives in areas without many warm-blooded creatures, and if it does, why it will not leave you alone in that case!

When in the mountains, you wonder what it is doing at 1200 meters height, with only bare rocks and no vegetation or water around. When hiking, you wonder what causes the kamikaze-like tendencies making it roam around your face and being so easily inhaled.

Brave scientists put action behind unsolved questions, and this Saturday, a few dug into the depths of mosquito essence combined with waste ethanol ("Stings like 10.000 mosquitoes"), just to disinfect against that Arctic bacillus lurking around.

Others continue to do field "observations" instead. This week, a new eddy covariance tower was raised by Marcin, intended to measure the CO_2 and CH_4 exchange over the Zackenberg delta for just this season. He has been working hard and carrying a lot of gear and batteries through mosquito hell, but has sometimes managed to escape them in a breeze at 4 m height, when working with and fastening the sensors to the mast.

Another, almost focus-group-like study of the mosquito behaviour was a side effect when Palle this week ringed his first bird. A dunlin, which was handled very carefully, although his fingers were full of mosquitoes. Being rather low on observations of oxen, all kinds of birds and even lemming nests, the plentiful presence of insects should, however, brighten up the day for the BioBasis team anyway.

A good study needs a control group, and as such, the Blæsedal team were isolated from the Zackenberg mosquitoes for one and a half day this week, when they went back to the Windy Valley to finish their fieldwork there. This meant a lot of sailing, which also brought Mikko to the Ice Cave, a melt water river under the ice on the way to Daneborg, where he took "only" 70 pictures.

The GeoBasis team has had its observations of mosquitoes as well this week, when levelling the riverbed, or working around the fen – personally, I have mostly tested the mosquitoes' reactions to non-chemical defence techniques from humans, while Line on the other hand has experimented with the human reaction to mosquitoes in large quantities. Preliminary results suggest that walking fast or swearing does not deter mosquitoes. Humans can, however, reduce the swelling caused by mosquitoes by simply sticking it out and getting used to the bites; the reactions seem to become smaller and smaller.

Tomorrow is my flight day out of Zackenberg after a 7-week season for GeoBasis. With my flight, Mikko will also be leaving and bringing his insect traps which have done a – some would say "insufficient", Jannik perhaps "optimistic" – attempt to free us from the mosquito load. Fortunately, for the crowd left behind, Oskar has put up even bigger tents around the valley

and is determined to continue Mikko’s efforts for another two weeks.

The best of luck to everyone and thank you for a great season.

Laura Helene Rasmussen, GeoBasis assistant.