

Diary 4 – 28 June 2010

The arctic summer

Some of us did not believe it. The weather forecast, it is. It will be snowing on Sunday in the Zackenberg area, was the ominous prediction. Only in the mountains, said someone. But when we woke up on Sunday morning, fluffy white flakes came from the sky and covered the whole landscape. Snow, indeed. It turned into sleet around noon and to rainfall in the afternoon. No rain in Northeast Greenland, we heard again the old wisdom. It happened on my caterpillar-feeding day, so I noticed with anxiety that the flowers of the mountain avens (*Dryas*) had got all wrinkly: what if they all wither? How can I feed hundreds of hungry mouths? Well, luckily my worst fears did not come true. The flowers were all wet though, and I found quite a few drowned tiny *Sympistis* moth larvae in the miniature water bowls the *Dryas* petals formed. Apart from the still rather chilly but drier Monday we have been indulged by nice weather since. It favoured both us humans and our fellow organisms sharing the tundra with us. The two sorts of mosquitoes occurring in the area have been competing for our blood. Only when it gets cloudy and suddenly becomes too cold for their blood-hunting quest, they crawl in to the next nectar bar. Not surprisingly it is usually a *Dryas* flower, unquestionably the most popular public house in the Arctic Region. So, if you happen to swallow a mosquito by accident and feel a hint of refreshing nectar taste in your mouth, do not be surprised: your spiteful visitor has just come from the closest pub.

After ten years spent in the tropics, Claus has now become a real High Arctic entomologist. Every day he walks out to his plots to observe the flower visitors (by definition, he has just become one himself) at certain hours of the day, wearing all possible protective layers against cold or, if the weather is shiny, regiments of thirsty female mosquitoes. Claus is like a medieval knight in his armour, a gentle giant faithfully fighting the elements and battling with his huge butterfly net to achieve his sacred duty. Only the Holy Grail has been replaced by some sophisticated insect pollinator data. *Any luck?* – I ask when he walks by while returning from an observation session at a patch of mountain avens. *No, no flight. It's very cold* – he answers my question and utters: *40 minutes for poppies*. Nothing to add to that.

Some remarkable findings were made during the past week. Sighted only once previously in the Zackenberg area, a dead stickleback, a small fish with three spikes on the back, was spotted in the old delta of Zackenberg River. Its distribution area is now to be corrected some 200 km northwards. But the most sensational observation was made by Claus. It looked like a computer screensaver virus – you know, a little bug walking across the screen of your laptop. Although being mostly harmless, such a thing definitely bugs you when it happens to *your* PC. Claus runs any available anti-virus software to clean his computer. No effect. He turned it off, but the bug still continued its random walk across pixels. Then Claus showed this remarkable phenomenon to Lars who – in spite of being a wildlife biologist – actually found out what it actually was. A *mite* has somehow crawled inside the laptop and squeezed itself between layers of the screen. By now it has deceased and remained as a black spot on Claus's screen (and in his mind). Needless to say, something like this may only happen to an entomologist.

Edward came into our lives this week. He is the ultimate loser, Jeroen says. Edward usually shows up too late to pick up a nice girl and in the single case he got lucky and everything looked fine, their children died in a fatal accident when the kids were inadvertently internalized by a clearly absent-minded arctic fox. Of course Edward is a sanderling, who decided to raise its family just three metres away from one of our caterpillar pitfall lines. So far they have made it all right in spite of the nazgûl-like long-tailed skuas gliding over their nest and spreading fear to anything smaller than a fox. And there is more to fear. The arctic foxes, trotting around in the vast tundra and detecting any scents of dinner with their high-tech noses, always appreciate a sanderling egg or two. In fact, the foxes are way too efficient and hence, too many nests are destroyed every year. But for now, Edward is doing fine for the

very first time in his life: with four eggs in his replacement clutch and the incubation shifts shared with the lovely Eden, his new girlfriend and mother of his ummm ... eggs: who could wish for more? The idea behind Jeroen's and Jan's daily exhausting walks is to uncover as many episodes as possible of the vast sanderling soap opera continuing every summer in Greenland – although our Dutch ornithologist friends might wish to formulate their goals and findings in a more appropriate way to please the scientific audience...

Moulting is the season's hottest trend in the tundra. The arctic fox has lost its long white fur on the face, legs and upper back. So it actually looks like wearing a giant fluffy diaper, which makes its appearance really ridiculous. The musk oxen have too started to get rid of their winter coats. The pink-foot geese have arrived from Iceland to refresh their costumes. Billions of caterpillars and other insect larvae moult as their old skins get too tight. The Arctic summer fashion show does not leave cold anyone – or if does, just for the time of a passing snowfall.

In the caterpillar catering business run by Tomas and – currently – myself, some tens of parasitoid wasps and flies have already hatched from their host caterpillars. Nearly every day happens something fascinating that has never been observed before. The structure of this Arctic food web, composed by plants, herbivorous caterpillars, their primary parasitoids and the parasitoids of the latter ones, is being uncovered day by day. Jannik, Jeroen, Jan, Julie, Claus, Lars and Dina have all contributed to our research by carrying woolly bear caterpillars in various vials, plastic bags and disposable gloves, their bare hands or even in their sandwich packs, onto my desk. Also Jón has come by to the rearing facilities to find out more about the miracles of this hidden world.

Julie continued her utterly optimistic attempts to make various instruments – aiming at monitoring environmental characteristics of the soil, water and air – working smoothly. Lars and Jannik did their weekly scheduled tasks. In addition, Lars monitored plant phenology and the breeding success of fox families (i.e. went out in the night to watch puppies), while Jannik mainly searched for bird nests with some very nice success. Henrik, Jón and Dina were taking care that everything goes smoothly in logistics. Dina is, just like me, in the catering business. While she prepares food for ten people, I keep myself busy to feed ten species. But the main difference is in quality. Dina should surely get a Michelin star for her gourmet cuisine, but if she continues doing her excellent job here, the only Michelins she gets will be some of us more and more resemble the Michelin man. Or perhaps we should follow the strategy of the woolly bear caterpillars: Get on your feet early in the season, eat as much as you can, moult (human equivalent: buy at least one size larger trousers), spin your hibernaculum (hang your hammock) to a nice place and just wait for the next Arctic summer.

This week we passed Midsummer. I do not know if it is just me, but I did not quite notice how nights have begun to lengthen. In any case, we did celebrate Midsummer night – in continuous sunshine. The program as well as the food and refreshment section were carefully planned, prepared and served by Henrik and Dina. Dina's elegant Arctic cocktail was followed by some delicious barbeque. Then, when we could hardly move any more due to excessive feeding, the rubber boot throwing game started. Lars exhibited both technical perfection and precision, and well-deservedly won the competition. Then Henrik lighted the bonfire. Having a bonfire in Zackenberg was somewhat surprising, considering that the nearest trees grow in Iceland some 700 km south. Of course pieces of old plywood and wooden packing material did the job nicely.

On Saturday afternoon, while observing a long-tailed skua being ringed by Jannik and Jeroen, we received a message on the radio: a Twin Otter would be landing at Zackenberg in just a few minutes. We did not expect a flight for another ten days, so we thought it just might need some fuel to return to Constable Point. But as I learned ten minutes later, we got visitors. A French Arctic team of ecologists could not land at their destination 100 km further north and therefore was forced to return to Zackenberg. Then the most unexpected thing happened: I suddenly realized that our old friend Olivier is here. He is from our old research group in

Helsinki, who attended an expedition to Madagascar together with Tomas and me back in 2003. We even shared a tent (together with several leeches) for 2.5 weeks in the rainforest. Olivier is here with his family and friends – what a pleasant surprise to crown my week!

Gergely