

## **And the birds are heading south ... ugebrev nr. 9 b, 31. juli 1999**

In the past week we have been blessed with impressingly nice weather, sunshine from a clear sky and a gentle breeze. Beautiful, except from the mosquitoes that have been more annoying than ever before. Luckily the sky has now clouded over with severe wind from northeast.

The past week also became the week where most of the birds disappeared. You can now walk several kilometres through the valley without a sight or a sound of a single bird. However, you can count up to 100 shore birds in the Zackenberg delta. They are now on a fattening diet before the nonstop flight to Western Europe where many of them will be wintering. Some are still here, however, those who have young ones not yet ready to fly. Those are the common sandpipers as well as 16 barnacle goose-families around Lomsø with their 25 half-grown goslings.

Now that the high summer is almost over it is time to make up the account. The huge masses of snow meant that melting was 10-14 days later than the previous 3 years from which we have data. All through early July, skis and snowshoes were used in the terrain. The slow snow-melt meant delays of up to 3 weeks in growth and blooming of all plants growing at snow-covered places. Not many flowers are found here, while in snow free areas you will find more flowers than earlier registered. But the number of flowers is primarily controlled by the conditions the year before the blooming as the growth and blooming season of arctic plants are so short that most of them start the buds already during summer the year before.

The birds broods were also delayed and more species even bred at a strongly reduced rate. Common sandpipers and sanderlings started the egg-laying six days later than the 1998 average, but the turnstones were 12 days delayed and more than half of them abstained from breeding. They occupied their usual territories, displayed when you came too close but disappeared at the end of June and beginning of July in accordance with the experience from other areas in High Arctic. If the shore birds can lay their eggs around 1 July at the latest, they will gather in flocks and start the fattening diet for the autumn migration. The young ones who will not be ready to fly until after mid August would not have time anyway to grow big and strong enough to make the migration across the North Atlantic. In fact, they will not be going until primo September when winter begins. The grown-ups are also eager to take-off as early as possible, as they will have to moult all their feathers, which take more than 3 months, as well as building up a thick layer of fat before winter.

Most migratory birds only stay 1-2 months during summer in Northeast Greenland. Not only was the breeding time delayed, the birds also laid fewer eggs, and a larger part than previous years was eaten by foxes and skuas. The explanation might be that because most of the tundra was covered by snow, when the birds started to lay eggs, less food was available to produce the egg clutches almost the weight size of the mother-bird herself. And the increased number of eggs ending in the stomachs of foxes and skuas is likewise due to the fact that the smaller snow free areas holding nests makes it easier for the predators to find them.

Furthermore, the lemming population is low after the peak year in 1998, so foxes and skuas have no food except for bird's eggs and young ones. These results altogether may indicate what is going to happen if climate were to get warmer and render more precipitation in Northeast Greenland.

This is precisely what the climate models predict. The several hundreds of kilometres wide belt of pack ice off Northeast Greenland, which is creating the continental climate so vital for much of the wildlife here, has long been on the decline. This may lead to more oceanic climate with mild winters and more precipitation, which again leads to late melting of snow. This may make the vegetation expand and to cover many of the now barren or sparsely vegetated habitats which are free of snow during winter. This may increase the number of lemmings, and accordingly ermines and foxes, many bird populations will decline, while muskoxen may face a more uncertain future, on one hand they may get more lush forage during summer, but on the other hand may be a greater risk of ice crusting during winter with a consequent mass death as happened several times earlier here in Northeast Greenland.

We will see, i.e. those of us living long enough to experience the complete effects of the future climate changes.

/Hans Meltofte