



EDITOR'S CORNER

Dear Study Families!

Our Study is proceeding as planned. It started in the spring 2002 and now the 6-year and some 7-year follow-up visits are going on in our Study Centers.

The European Study Monitor, Mila Hyytinen, emphasizes the key importance of the 6-year and subsequent study visits.

The Nutrition Fellow, Eveliina Lehtonen, presents the ongoing nutrition ancillary study evaluating the use of milk and cereal products beyond the intervention period.

I have written an article of the Arctic migration of aquatic birds. Bird watching is a very nice and interesting hobby. You can watch the birds almost anywhere: in cities, in woods, at the sea

Matti Koski
 Chief Editor

About TRIGR Study Visits

We are reaching a very important turning point in our study; some of the participating children have already had their 6-year birthday and the rest will turn 6 in a couple of years. We are very grateful to you, dear parents, that you have been participating so actively!

One of our goals is to define the appearance of autoantibodies related to type 1 diabetes. These autoantibodies will give us extremely important information about the process before diabetes has become manifest. We will inform you of the autoantibody results about half a year after the 6-year study visit. If one or more of the autoantibodies has been positive, the Study Doctor will discuss the results with you personally.

An oral glucose tolerance test will be performed at the 6-year study visit. The child will have a drink

containing sugar in relation to his/her weight. This test will provide important information about the glucose tolerance of your child. This test may also identify asymptomatic diabetes.

If the result of the glucose tolerance test would indicate diabetes, the test will be repeated to confirm the diagnosis. A glucose tolerance test can also be performed on other occasions if there is a suspicion of diabetes.



The glucose tolerance test will as well be performed at the 10-year study visit to identify or exclude asymptomatic diabetes. Accordingly the 10-year test is essential for testing the main hypothesis of the TRIGR Study, i.e. that weaning to a highly hydrolyzed infant formula decreases the risk of progression to clinical type 1 diabetes in children with increased genetic disease susceptibility.



We wish to be as flexible as we can in terms of the annual TRIGR study visits. If the time planned is inconvenient for you, please do not hesitate to contact your Study Center. The personnel will arrange a more appropriate visit time for you. If you have difficulties to visit your own Study Center, you may discuss with your own Study Nurse about other

possible locations where the study visit could be arranged. Home visits are also possible as we do in the Netherlands. If you have missed some previous study visit, we will be more than happy to see you again. The 6-year and 10-year visits are the most important ones for the study.

We have also decided to give you more information and feedback in the future. After the 6-year visit, we will inform you annually about the autoantibody results.



Mila Hyytinen
European Study Monitor

Dietary Ancillary Study

The TRIGR Ancillary Study focuses on the role of dietary exposure after the intervention period (the use of study formula) on the risk of type 1 diabetes. The aim has been to get all the children in the TRIGR Study to join the Ancillary Study as well.

The children started in the Ancillary Study at the age of 18 months and the study continues until the child is 10-year-old. However, it is possible to join the Ancillary Study also later.

The families are interviewed every 6 months with questions on milk and cereal intake by the study nurses who then complete a short food frequency questionnaire form.



There is some evidence that later milk consumption might modify the putative effects of early infant feeding on the development of diabetes. One objective of the Ancillary Study is to assess the frequency of milk and cereal consumption in childhood (after the intervention). Another important aim is to define whether milk exposure later in childhood modifies the possible effects of early introduction of supplementary milk on the development

of type 1 diabetes. The Ancillary Study focuses also on the effect of consumption of cereals. There is some data indicating that early age at the introduction of cereal products would be associated with increased risk for type 1 diabetes.

At the moment 1311 children (61 % of all TRIGR children) are taking part in the study. Altogether 55 Study Centers in 12 countries are involved in the Ancillary Study. The first Study Centers started to recruit TRIGR children for this study in 2004.

At the moment there are almost 400 Finnish children involved in the Ancillary Study and we have received more than 2000 food frequency questionnaire forms from these children. The proportion of children consuming milk as such daily in the Finnish study population is very high, 88 % of 3-year-old children and 89 % of 5-year-old children.



The information on the frequency of use of milk and cereal products in the children in the Ancillary Study can in the best case shed light on the etiology of type 1 diabetes. Filling out the questionnaire forms every 6 months requires quite a lot of effort from the families taking part in the Ancillary Study, but the information we get is very valuable for TRIGR. By participating in this study families can facilitate research aimed at prevention of childhood diabetes.



Eveliina Lehtonen
Nutrition Fellow

ARCTICA

The Arctica means the migration of aquatic birds to the North Arctic area and the North Pole area. The typical water birds are geese, waders, ducks, divers, cranes and swans. In late May millions of

birds migrate to the North nesting territories, year by year. The migration rolls through the same pipelines. The majorities of the migrants fly over the eastern Gulf of Finland and continues their long journey to the North Tundra on both sides of the border of Finland and Russia. The smaller other pipeline of the migrants is more westwards, where the birds go along the Gulf of Bothnia to the coast of the Arctic Ocean.



Bean goose



Dotterel



Long-tailed duck



Red-throated diver



Crane



Swan

The spring migration is a very impressive natural phenomenon which is nowadays very popular among the ornithologists. The imposing migration lasts only for a few days if the weather is favorable. About 240 different bird species nest on the north side of the timber line; the total amount of birds is something like hundreds of millions. In the Arctic area you can find at least 10 million geese and about 15 million different waders such as dunlins. The rock ptarmigan, red grouse and raven are round-the-year birds.



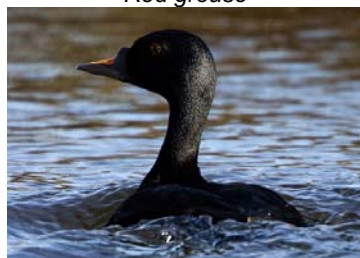
Ruff



Red grouse



Brent goose



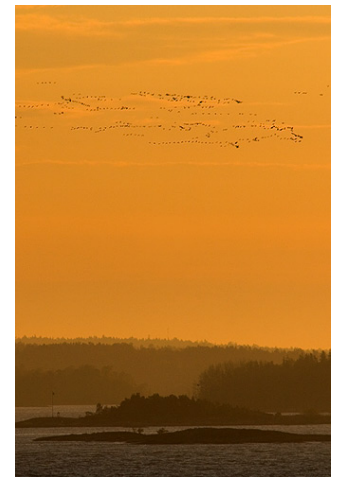
Black scoter



The most important Observation places

Bird-watch places:

1. Hanko (Halias)
2. Kirkkonummi(Rönnskär)
3. Helsinki (Santahamina)
4. Porvoo (Söderskär)
5. Porvoo (Kummelskär)
6. Porvoo (Tunnholmen)
7. Pernaja (Aspskär)
8. Pyhtää (Ristisaari)
9. Virolahti (Vähähervaja)
10. Virolahti (Harvajanniemi)
11. Virolahti (Hurppu)
12. Viipuri



The evening Arctica in Rönnskär
Picture © Petri Koivisto

The main activator of the spring Arctica migration is warming of the weather. The cold northerly air flow holds back the migration desires but the south-western thermal is the moving spirit of massive coveys of birds.

A mass migration similar to that occurring in the North of Europe takes also place in the northern parts of North America.

Future perspectives

The global warming has already advanced the Arctic migration and also the nesting. On the other hand the warm conditions are favorable for the nesting. The decrease of the North Tundra area might cause some problems to the nesting birds but the behavior of the arctic bird species has not been examined thoroughly enough to assess the consequences exhaustively. The global warming affects also the migration in a contrasting way. Many species might hibernate much closer to their nesting environment than they used to do.

The master of the migration is Arctic tern

This courtesy title is informal but well justified. Why?



The Arctic tern nests in the cold regions of the Northern Arctic in Europe, Asia and North America. It hibernates however in the Antarctic region around the South Pole. The one way migration journey is even more than 30 000 km (18 641 miles). About 55 000 pairs nest in Finland, 400 000 -700 000 nest in Europe and the worldwide total population is around one million.

The oldest ringed Arctic tern in Finland lived for almost 27 years and the oldest in Europe ringed in Denmark lived for even more than 30 years.



Matti Koski
The Editor