



# NEWSLETTER

NO 2. February 2002

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*The dramatic landscape of the Faroe Islands, the venue of the SCANNET First Annual Meeting. Photo M. Johansson.*



## Editorial

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Since the last SCANNET Newsletter, we have held two successful meetings and there have been important new developments at some of the SCANNET sites. We also have a new member of the SCANNET team. It is a pleasure to welcome on board Toke Thomas Høye who will work on the work package dealing with “Reviewing Species Performance and Phenology” in collaboration with the Danish Polar Centre. We look forward to meeting Toke and to working with him. Toke will need support from all the sites and I am sure that the SCANNET sites will offer their help to him. Please read Toke’s comments in the “Forum” section.

One of SCANNET’s important assets is the diversity of environment, science and culture among its sites. SCANNET explicitly seeks to represent this diversity in its activities and to experience the particular features of individual sites by holding meetings at different SCANNET sites. Since the issue of the last Newsletter SCANNET has held two meetings at very different locations. We attended one meeting organised by the Norwegian Polar Institute at Ny Ålesund, Svalbard and experienced the high Arctic polar semi-desert environment. We held another meeting in the green Faroe Islands, where we learned about Faroese environmental research and experienced a long cultural history and landscape. Both meetings were a great success because of the hard work of the local organisers, and the friendly and positive contributions of the SCANNET participants: I thank both the local organisers, and all SCANNET participants for making these meetings fruitful and enjoyable. Please read the “Activities” section for more details of the meetings.

One tangible outcome of the meeting in the Faroe Islands was the establishment of a SCANNET co-ordinated action on remote recording of snow conditions and hopefully phenology also. Our Danish friends and colleagues kindly shared their expertise on the use of digital cameras in the field and thanks to their initiative, cameras have been ordered by several SCANNET sites and will be deployed in a co-ordinated way (see the article by Morten Rasch in the “Activities” section). I thank Morten and others involved and ask that we all seek to identify similar visions that will enable SCANNET sites to invest in the future for environmental recording.

It is a pleasure to congratulate our friends at Kilpisjärvi and Kevo Stations on important developments that are taking place there. The Kilpisjärvi Station is being extended, which gives extra security for long term research, while both stations belong to a consortium of Finnish research facilities that have been awarded funding by the EU – well done and good luck!

I would like to thank those of you who have contributed to this newsletter. Please do all that you can to keep us up-to-date with your SCANNET activities and findings and science news from your stations. It is also important that SCANNET is represented whenever possible in the wider community. We have an on-going most helpful dialogue with ENVINET, and we are grateful to Dr Jon Børre Ørbæk of ENVINET for joining our last meeting, and to Margareta for representing SCANNET at the latest ENVINET meeting. In particular, however, I would like to thank Hanne Hvidtfeldt Christensen for setting a great example to all of us by writing an article on SCANNET for “Frozen Ground” (2002, issue 25 pages 39-40)

Our challenge for the future must be to keep the SCANNET collaboration active in the long term and beyond the period of initial EU funding. I am already trying to identify possibilities for our continued – and perhaps extended – activities but I need the support of all SCANNET partners in achieving the ambitious deliverables we perceived at the outset of SCANNET!

*Terry Callaghan*  
Co-ordinator

## Welcome to new staff

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### ***Work Package 7 gets Research Administrator***

According to the SCANNET time schedule, WP 7 (Reviewing Species Performance and Phenology) is planned to take off from 2002, and I am pleased to announce that M Sc Toke Høye has been employed from 1 January at the Dept of Population Ecology, Zoological Inst, University of Copenhagen to serve as a “Research Administrator” of WP 7. Toke will, in collaboration with Research Professor Mads C. Forchhammer take care of collating the metadata on species performance and phenology, and subsequently perform analyses of relevant data sets. Toke’s position in SCANNET will be combined with teaching obligations at the Department of Population Ecology.

Toke has a BSc degree in wildlife ecology on behavioural ecology in Norwegian lynx from Aarhus University, and a MSc degree in population ecology on cohort effects in Danish roe deer from the University of Copenhagen. His interest in global change biology emerges from an interest in how long-lived species respond to climatic variability, but also how extrinsic factors affect interactions between trophic levels. This provides an excellent background to work with WP 7, and makes the best use of the multidisciplinary SCANNET-collaboration.

*Knud Falk  
Danish Polar Center*

## Activities

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### ***Station Managers meeting in Ny Ålesund, Svalbard, Norway***

A Station Managers Meeting was held in Ny Ålesund, Svalbard, Norway in September 2001. There were several goals for the meeting:

- To review the progress within the network
- To Cement the key interface between WP leaders and the data base manager
- To discuss what we want to achieve with our first annual meeting
- To consider wider relationships including stakeholders and potential associated sites.

This Station Managers Forum gave all the Stations a possibility to present their progress within their work with their work packages and also to get the others advice when necessary. Most time was though put on Work package no 2 “Field Site Baseline Information”. A preliminary format for the metadata-base was decided on this meeting.

After a couple of days of hard work inside we got outside to visit a newly established permafrost site and also a 10 year-old environmental manipulation experiment. This experiment run by the University of Sheffield with Terry Callaghan as one of the Principal Investigators, seeks to determine how a high arctic ecosystem will respond to climate change. We saw clear effects of warming and adding nutrients to simulate faster decomposition in warmer soils.

We would like to thank our local organiser, Jack Kohler, for the excellent arrangements for the meeting.



*Jack Kohler gave us instructions how to use the rifle in case we would meet a polar bear.*

### ***First Annual Meeting, Torshavn, the Faroe Islands***

Our first annual meeting was held in November in Torshavn, the Faroe Islands. This meeting was the third meeting organised by SCANNET and was intended to be wider than previous meetings. It consisted of three sub-meetings:

- 1) A first annual meeting to interface user needs with SCANNET capabilities
- 2) An “in-house” meeting to discuss SCANNET WP and co-ordination
- 3) A final workshop led by WP 4 (Reviewing Land Use and Society Interaction) to quantify perceived environmental and sociological issues in the Faroe Islands. For further info about the workshop please contact Neil Bayfield, [nb@ceh.ac.uk](mailto:nb@ceh.ac.uk)

The meeting was mainly concentrating on the “Users” – SCANNET interaction. Decisions were made how to precede the interaction with the users and suggestions on the way that SCANNET should try to help their potential “Users” where presented. Local scientists presented information about ongoing environmental research in the Faroe Islands. Internal issues within the network for example discussions about establishing a network of digital cameras to record standard parameters in a coordinated way took also place during the meeting.

Having our meeting in the Faroe Islands allowed us to gain a first hand understanding of the local environment, research infrastructure and activities as well as the cultural aspects. Our local organisers, Lis Mortensen, Hanne Hvidtfeldt Christiansen and Ole Humlum, had made excellent arrangements for the venue and excursion. We were delighted that so many Faroese researchers shared their research with us and showed interest in the SCANNET process.



*A group picture taken in Gjøgv, of the participants at the meeting in Torshavn. (Standing from the left: Imogen Pearce, Antero Järvinen, Lis Cooper, Seppo Neuvonen, Jørgen Hinkler, Hanne Hvidtfeldt Christiansen, Margareta Johansson, Annika Pettersson-Björström, Terry Callaghan, Sven Bråkenhielm, Borgthor Magnusson. Sitting in front from the left: Neil Bayfield, Rob Brooker, Lis Mortensen and Bill Heal). Photo: O. Humlum*

### ***Next meeting***

Our next meeting is scheduled for the 16-20<sup>th</sup> of October 2002 in Reykjavik, Iceland. This meeting will also be a wider meeting, where the “user community” will be invited. For further info please contact SCANNET Secretariat: [scantran@ans.kiruna.se](mailto:scantran@ans.kiruna.se)

### ***Related Activities***

ENVINET (European Network for Arctic-Alpine Multidisciplinary Research) held their third General Meeting at Dunstaffnage, Scotland last month. At this meeting several technical tasks, which will be supported by ENVINET, were presented. Project registration and site-specific information were two other tasks that were discussed during the meeting. ENVINET’s 4<sup>th</sup> General Meeting is scheduled to take place at Abisko 11-15 of September 2002. For further information see <http://envinet.npolar.no>

### ***Network of Automatic Digital Cameras***

At the SCANNET sites we are about to initiate a network of Automatic Digital Cameras. By using a standardised equipment and technique we will initiate snow monitoring and hopefully phenology at the different sites in a coordinated way. The digital camera is placed in a box with a timer, a battery, a handheld digital camera, a mechanical trigger and on top there are solar panels that charge the battery. The methodology has been developed at the Institute of Geography, University of Copenhagen. Today the system is used at two of SCANNET sites, which are Zackenberg in Greenland and Sornfelli in the Faroe Islands. Within the SCANNET network, cameras have been ordered and we will hopefully deploy them in the summer. We also hope that the IASC Tundra Taiga project will adopt the same methodology.

*Morten Rasch  
Zackenberg Station*

### ***SCANNET' s Web site***

Annika has been working hard on the web site and it is now up and running on our ordinary web address: <http://www.scannet.nu> Please visit the web site and let Annika know what you think about it (annika.pettersson-bjorstrom@lm.se)

*Margareta Johansson*  
*SCANNET Secretariat*

## **Forum**

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### ***The importance of adjacent field sites***

The SCANNET-network relies on information within the Scandinavian-North European region. Naturally, the field stations participating in the network are the central providers of information, but in order to increase the benefit of SCANNET, it is of great value to obtain information from other data managers. I would like to emphasize this point, as research administrator of Work Package no. 7: "species performance and phenology". Our understanding of the extent to which species performance and phenology is affected by climate change will be greatly dependent on the information made available to SCANNET.

Clearly, different countries have slightly different organisation of field stations and research facilities in general and therefore it is of great help to WP 7 to let the central SCANNET field stations in each country serve as gateways to other field sites within each country.

Concerning Greenland, contact has been taken to the Greenland Institute of Natural Resources and the National Environmental Research Institute, Department of Arctic Environment. These traditional institutions are obvious data managers. However, I would like to give an example of how valuable data information can be obtained from non-traditional sources. You may recognize the following as a citation from a recent article in Science (Issue of 26. Oct. 2001, vol. 294) by R. Sagarin & F. Micheli. It reports of an unusual 84-year data set on timing of river ice break-up that shows temporal patterns consistent with previously reported trends toward earlier spring.

"The Nenana Ice Classic is a betting contest held in Nenana, Alaska (64°34'N, 149°05'W), in which participants attempt to guess the exact minute in spring that a wooden tripod positioned on the frozen Tanana River will fall through the breaking ice. Started as a diversion for railroad engineers in 1917 with a pot of \$800, the contest has grown into a popular event in which hundreds of thousands of entrants compete for jackpots exceeding \$300,000. Contest records of the exact minute of ice breakup date back to 1917 and can be considered quite accurate as the high stakes lead to constant vigilance at the time of breakup."

Although this example does not relate to data on species performance or phenology specifically it illustrates how climate change data can emerge unexpectedly from other sources than the SCANNET stations. Hence, in Work Package no. 7 we are also dependent on data overviews from agencies other than the field stations directly involved. Ornithological, botanical or entomological organisations may possess relevant information, but also local networks of naturalists should be considered.

I hope this example could inspire you to contact data managers in your region, as this is important for the ongoing work in SCANNET.

I am looking forward to meeting you all.

*Toke Thomas Høye*  
*Research Administrator, WP 7*

### ***Reply to Toke***

Toke makes an extremely important point. One of the missions of SCANNET is to identify long time series of data and information on environmental change and its impacts. SCANNET was seen as a mechanism for station managers to “dig” into their own records in order to bring potentially useful data sets to current awareness. Toke helpfully point out that we should look beyond our own stations and beyond our traditional data sets.

Thank you for your comments Toke

*Terry Callaghan*  
*Co-ordinator*

### ***Stratospheric ozone recovery is likely to be delayed in the North***

Terry Callaghan has just returned from a meeting in New Zealand of the United Nations Environment Programme Expert Panel on Ozone Depletion Effects. The Panel meets every year to review new information on ozone depletion effects. Every four years, a major report is written and presented to the signatories of the Montreal Protocol and its Amendments. This year is one in which a report will be written and a draft already exists and will be reviewed shortly. It is clear that ozone depletion in the North is still an important issue. This is because of an interaction between climate warming and stratospheric cooling, which promotes the production of polar stratospheric clouds and ozone depletion. Those sites that have, or are developing, UV-B impact studies and monitoring can feed into the UNEP process by giving information to Terry Callaghan while they can get information from Terry on the UNEP report.

*Terry Callaghan*  
*Co-ordinator*

## **News from the sites**

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### ***Kilpisjärvi Biological Station***

The university of Helsinki has decided to enlarge Kilpisjärvi Biological Station. The budget of the construction work, starting in summer 2002, is about 2 million euros. The enlargement will considerably improve research and teaching facilities. It means, for instance, that the long-term ecological research projects of the station, which are essential for SCANNET, will have a safe future.



*Antero Järvinen*  
*Kilpisjärvi Biological Station*

### ***LAPBIAT (Lapland Atmosphere-Biosphere Facility)***

LAPBIAT (Lapland Atmosphere-Biosphere Facility) to which *Kevo* and *Kilpisjärvi* field stations belong, has been launched in November 2001. The research Infrastructure Lapland Atmosphere-Biosphere Facility is situated in Northern Finland north of 66 degrees latitude. It is run by a consortium of seven Finnish Research Stations. The LAPBIAT facility has started its 28 months contract period under the IHP Access to Research Infrastructures of the European Union in November 2001.

The main objective of the facility is to enhance the international scientific co-operation at the seven Finnish Research Stations and to offer a very attractive and unique place for multidisciplinary environmental and atmospheric research in the most arctic region of the European Union. Factors such as, arctic-subarctic and alpine-subalpine environment, northern populations, arctic winters with snow, changes in the Earth's electromagnetic environment due to external disturbances and exceptionally long series of observations of many ecological and atmospheric variables should interest new users.

Please, find more details on:

<http://www.sgo.fi/lapbiat/>

NEXT DEADLINE FOR PROPOSALS IS: April 15th, 2002

*Seppo Nuwonen*

*Kevo Subarctic Research Institute*

### ***Abisko Scientific Research Station***

An EU sponsored advanced PhD study course (IRISEN - Integrated Regional Impact Studies in the European North) for the University of the Arctic will be held in July 2002, at the Abisko Station. The course repeats one held at Abisko two years ago. Funding is available for approximately 20 students and it is intended that there will be approximately the same number of teachers. During the last course, eminent teachers from around the world covered a large range of subjects including human, marine, terrestrial, and aquatic sciences. We hope to have video conferencing equipment to make it widely available. Details can be obtained from Manfred Lange, email: [langema@uni-muenster.de](mailto:langema@uni-muenster.de)

Winter Climate Variations and Plant Death in the North - a Workshop to share understanding of managed and natural systems (WINCLIM) will be held at Uppsala University and Abisko Scientific Research Station 23-29 of May 2002. The call for applications to participate and further information can be obtained from <http://www.natgeog.geo.uu.se/winclim.html>

*Terry Callaghan*

*Abisko Scientific Research Station*

## **Production of the Newsletter**

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This newsletter is produced by Margareta Johansson at the SCANNET Secretariat, Abisko, Sweden. Our next Newsletter will be produced in August 2002. Please send contributions and comments to Margareta, [scantran@ans.kiruna.se](mailto:scantran@ans.kiruna.se)