News and Views
from SNS – Nordic Forest Research Co-operation Committee
1 2006

Spruce project supported by SNS

The SNS board decided to fund only one new research project at its meeting in November 2005. This project "A permanent mapping population for genomics of *Picea abies*" is being coordinated by Martin Lascoux, based at Uppsala University in Sweden. Its aim is to ensure the long-term continuity of a Norway spruce population created during the course of the EU-funded TREESNIPS project that can be used for a range of genomic studies. This population encompasses 14 subpopulations, each consisting of 30 half-sib families, all of which are represented by 25 seedlings.
All of the individuals within these subpopulations have been assessed with respect to height growth and the phenology of budset and budflush. The project will elucidate the genetic basis for such traits, initially focusing on budset.

A combination of approaches including functional genomics, quantitative genetics and population genetics have already, and will be continue to be used to identify so-called Single Nucleotide Polymorphisms (SNPs) that are associated with budset timing.

Participating organisations and the contact persons for the project are:

- Uppsala University, Sweden (Martin Lascoux)
- Finnish Forest Research Institute, Metla (Katri Kärkkäinen)
- Norwegian Forest Research Institute (Öystein Johnsen)
- Skogforsk, Sweden (Gunnar Jansson)

Contact: martin.lascoux@ebc.uu.se

Professor Martin Lascoux coordinates the SNS-supported project on genetic mapping of spruce.

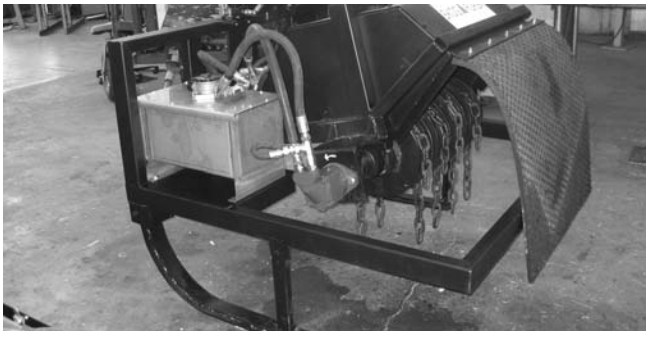
Shortcuts

Norway: New equipment for mild site preparation

Scarification is usually a prerequisite for successful regeneration, especially at fertile sites. Most scarification machines, such as harrowers and mounders, have been developed for large-scale forestry and may leave tracks with adverse effects on the ground. Skogforsk in Norway has now developed a prototype machine for much milder site preparation, which uses rotating chains to mix vegetation and humus on the surface. Cultural relics and features that are important for biodiversity can be spared, and the machine is well adapted for small-scale private forestry.

Contact: Per Holm Nygaard, phn@skogforsk.no

The chains rotate and mixe humus and vegetation.
Photo: Skogforsk, Norway



Sweden: Biomimetics – a new strategic research field

The Swedish Foundation for Strategic Research has recently established a new strategic research centre in the field of biomimetics. 45 million SEK has been granted for a 5-year period to Professor Tuula Teeri and her research team at the Royal Institute of Technology in Stockholm.

The team has a leading position in the development of new materials based on wood fibres. Nature is a far superior engineer to man in the design and manufacture of high performance structures and materials.

Biomimetics is an emerging field in which the features and functions of artificial systems and materials are designed to mimic those of biological systems. By learning from nature we can improve biocompatibility and engineer materials to diversify their properties and thus increase their range of potential uses.

The Centre for Biomimetic Fibre Engineering will use the wood cell wall as a biomimetic model for designing advanced materials.

Contact: Professor Tuula Teeri Tuula@biotech.kth.se

Tuula Teeri learns from nature

Networking – the main focus of SNS cooperation

The SNS board has allocated new grants for 2006. Most of the funds will be devoted to the network groups and CARS*.

– There has been a continuous trend away from directly supporting research projects towards supporting networking, says Olav Gislerud, the outgoing SNS secretary. There is an ambition to use SNS funding as "seed money" for projects that can be funded by appropriate national or EU sources.

Out of a total funding of 1.8 million NOK for the year 2006, 1 million was allocated to networks and 400,000 to a new CAR (see article on the following page). The following network activities were granted funds:

Soil zoology course

A Nordic PhD course is to be held in Iceland in July 2006. In total, 60 persons from all of the Nordic and Baltic countries and Russia have registered interest in attending.

Contact: Sigmund Hågvar, the Norwegian University of Life Sciences. Sigmund.hagvar@umb.no

Excursion with field geneticists

The third excursion of the Field Geneticists' Network will take place over three days in Finland in September 2006.

The network arranges excursions to improve the exchange of information, practical know-how and experience amongst technical staff involved in forest tree breeding and forest seed production.

Contact: Marja-Leena Annala, Metla, Finland. marja-leena.annala@metla.fi

AFFORDNORD to report

The project AFFORDNORD – The effects of afforestation on ecosystems, landscape and rural development in the Nordic region – is continuing. During 2006, personnel involved in the project will write a Tema Nord report book summarising the effects of afforestation. The book will give information derived from both the various components of the project and a literature study.

Contact: Gudmundur Halldorsson, Icelandic Forest Research. gudmundur@skogur.is

Forest economists seminar

Every other year the Scandinavian Society of Forest Economists arranges a seminar. The next meeting will take place in May 2006 in Sweden. The seminar will be divided into four sessions:

1) Business economics of forestry and forest management planning,
2) Forest policy,
3) Forest industry and forest product markets, and
4) International forestry.

Contact: Lars Lönnstedt, SLU, Sweden. lars.lonnstedt@spm.slu.se

Conference on forest inventory, planning and statistics

Two network groups – the Baltic-Nordic Forest Statistics Group and "Nordiska samarbetsgruppen för skogsinventeringsfrågor" - will arrange a joint conference to be held in August/September 2006 in Denmark.

Contact: Vivian Kvist Johannsen, Skov & Landskab, Denmark. vkj@kvl.dk

Workshop in wood science and engineering

The recently established "Nordic-Baltic Network for Wood Science and Engineering" will arrange a workshop in November 2006 in Stockholm.

Papers presented at the workshop will be published, after peer-review, in the new journal Wood Material Science and Engineering (see last page of News and Views).

Contact: Magnus Wålinder, SP Trätek. magnus.walinder@sp.se

Network on natural disturbances

The "Natural disturbance dynamics analysis for forest ecosystem management" network will continue its successful cooperative activities. In 2005, a Supplement to the Scandinavian Journal of Forest Research was published with articles from the network´s first workshop. In 2006, a new workshop on forest disturbances will be held. Members of the network will also prepare an EU-proposal.

Contact: Kalev Jögiste, Estonian Agricultural University. jogiste@eau.ee

Seminar for communicators

Latvia will host a 3-day seminar for the network of Communicators at Nordic and Baltic Forest Research Institutes. The seminar will be held in September in conjunction with the annual meeting of the IUFRO Extension Working Party.

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* **A CAR**. According to SNS, a Car (Virtual Centre of Advanced Research) is a joint Nordic forest research program within a specified scope (field/area). It has a fixed duration (4–5 years) after which it will be evaluated. If successful SNS may approve of and fund continuation for another period.

PATHCAR – a new virtual centre of advanced research

SNS´s fleet of CARs has expanded following the launch of a new vehicle – "The virtual Centre of Advanced Research in forest pathology" (PATHCAR).

PATHCAR is the fifth virtual centre to be established by SNS. It will promote collaboration among Nordic and Baltic forest pathologists to make Nordic/Baltic forest pathology more efficient and competitive. Dissemination of results to different end-users and stakeholders in the Nordic and Baltic countries will also be given high priority.

Nordic forests are healthy – but there are threats

Wood-decaying fungi are the most economically serious pathogens in the Nordic forests, especially root rot in the southern part of the region. Other important pathogens include *Gremeniella abietina*, *Cronartium* and *Peridermium* rusts, *Melampsora pinitorqua* on Scots pine and *Melampsoridium betulinum* on birch.

There are also many pathogens which are not native, but have invaded from other regions. The most important of these is Dutch elm disease, while recent invaders include *Melampsoridium hiratsukanum* on alder and *Phytophtora ramorum*, which is suspected to be involved in the decline of oaks in USA.

In addition to diseases in true forests, a number of pathogens can severely affect nurseries, including *Scleroderris* canker, uninucleate *Rhizoctonia* on conifer roots and *Phytophthora cactorum* on birch seedlings.

Despite these diseases, the overall health of the Nordic forests must be regarded as good. However, there are emerging threats which must be professionally addressed. The first is the increasing risk of pathogens spreading from other regions to Nordic countries due to globalisation of the world economy and the accompanying rise in transportation of plant material. The second is the possibility that predicted climate changes will allow new pathogens to thrive in Nordic conditions. These new threats must be addressed by cooperative efforts of research groups based in all of the Nordic countries.

The Coordination committee prioritises projects

The network will be led by a coordination committee, with representatives from all of the participating organisations, which will meet at least annually.

PATHCAR will be coordinated by Jarkko Hantula from the Finnish Forest Research Institute (Metla). The other participating institutes are the:

- Norwegian Forest Research Institute (Skogforsk),
- Royal Veterinary and Agricultural University in Denmark (KVL),
- Swedish University of Agricultural Sciences (SLU),
- Icelandic Forest Research Station,
- Estonian Agricultural University,
- Latvian State Forestry Research Institute (SILAVA)
- Lithuanian University of Agriculture.

The coordinating committee will discuss relevant projects at the Nordic institutes and decide which projects should be given the highest priority for Nordic co-operation. Proposals have been made to include the following projects in PATHCAR:

- Molecular tools in the ecology and population biology of forest pathogens (led by Jarkko Hantula at Metla)
- Biology of *Heterobasidion annosum* (led by Jan Stenlid, SLU)
- Host-pathogen interactions (led by Halvor Solheim, Skogforsk, Norway)
- Decline of common ash (*Fraxinus excelsior*) (led by Albertas Vasiliauskas, Lithuanian University of Agriculture).

Contact: Jarkko.hantula@metla.fi

***Root rot** is the most economically serious pathogen in the region. In the most vulnerable sites, as many as 50% of the mature trees can be infected. However, there are many other pathogens – native and introduced – that warrant researchers' attention.* *Photo: Skogforsk*

SNS secretariat moves to Finland

The responsibility to host the SNS secretariat, which rotates every four years, is shifting to Finland. News and Views asked Olav Gislerud (the retiring secretary) and Pauline Stenberg (the new secretary) about their views on the job, and the challenges facing SNS.

Outgoing: Olav Gislerud

What are you going to do now?

– I will continue my work as senior adviser and coordinator of the forest and wood research programmes, which are currently separate, supervised by the Research Council of Norway. I may also have some more time to look after my small forest farm with 8 ha of Christmas trees.

What did you do in a typical day as secretary?

– In principle SNS secretarial work accounted for about 50% of my annual office workload; some periods and days were mostly devoted to SNS while at other times I focused more on other work.

How would you briefly describe your four years?

– I very much enjoyed the SNS work and found it interesting, the cooperation with the Nordic Council of Minister's secretariat in Copenhagen was very productive and SNS has a board with active and devoted members.

Do you have any advice for your successor?

– SNS has been a successful coordinator of Nordic-Baltic forest research. Among the challenges ahead are to increase cooperation with northwest Russia and to improve the dissemination of information.

Contact: og@forskningsradet.no

Incoming: Pauline Stenberg

Pauline Stenberg (formerly Oker-Blom) is a research leader and docent (Associate Professor) at the Department of Forest Ecology at the University of Helsinki, which she has been affiliated to since 1981.

She has a background in mathematics and was awarded a PhD in forestry in 1987 (at which time she was the first female with a forestry-related doctorate in Finland!)

Her present research is concerned with the remote sensing of vegetation.

Pauline also worked as a secretary for the Finnish Society of Forest Science (2002–2005) and has been editor or a member of editorial boards of several international scientific journals, besides producing some 85 scientific papers.

How will the new secretariat be organized?

– I will continue to work halftime as a researcher at Helsinki University and spend the rest of my time as a secretary, based in Metla's office in Helsinki.

What do you expect for the coming four years?

– I still haven't fully appraised my duties, so it is a bit too early to answer that question, says Pauline. However, I will be very glad to help foster cooperation in Nordic research, and to renew my contacts with Nordic research colleagues. If I could increase awareness of the importance of Nordic cooperation in Finland, I would be very happy.

Contact: Pauline.stenberg@helsinki.fi

New journal takes form

The first issue of the new journal *"Wood Material Science and Engineering"* will leave the printers in March 2006.

Since the journal was first mentioned in News and Views (no. 4, 2005), its name, aims and scope have been decided and an editor has been appointed.

The editor, Dr. Magnus Wålinder, will gladly accept articles concerning research and development relevant to wood material science and utilisation.

The peer-reviewed journal will be oriented towards topics such as wood modification, wood durability, water-wood relations, wood mechanics, wood composites, engineered wood products, and eco-efficient wood-based products.

Wood Material Science and Engineering is published by Taylor & Francis in cooperation with SNS.

Correspondence concerning subscriptions should be addressed to:

T & F Informa UK Ltd, Sheepen Place, Colchester, Essex. CO3 3LP, UK

e-mail:
Tf.processing@tfinforma.com

Manuscripts should be submitted to magnus.walinder@sp.se.

The editor

Magnus Wålinder

Dr. Magnus Wålinder heads SP Trätek's research efforts related to wood material science and product development.

He has a split position between SP Trätek and KTH's Building Materials division, with links to KTH´s Biofibre Material Centre.

His research interests include diverse areas of wood and wood composites material science, especially pure and applied aspects of wood adhesion and the interactions of liquids (wetting) and gases (adsorption and sorption) with wood/lignocellulosics and polymers.

One of his major research goals is to elucidate the molecular interactions between wood and other materials, especially in moist environments. Such information is valuable for developing ways to improve the bonding between wood and adhesives or coatings, and between the constituents in wood-based composites. In the preceding year he has also been involved in the establishment of a Nordic-Baltic network in the field of wood material science and technology (**www.wse.no**), sponsored by the Nordic Forest Research Cooperation Committee (SNS). One of the issues considered by the network was the need for a new journal focusing on wood science and technology, which would be complementary to the Scandinavian Journal of Forestry Research. "Wood Material Science and Engineering" is the fruit of these deliberations.

About SP Trätek

In 2004 the Swedish Institute for Wood Technology Research (Trätek) was merged with SP, the Swedish National Research and Testing Institute. The resulting organization has approximately 25 senior scientists with PhD or Licentiate degrees related to wood technology, making it one of Europe's largest groups of scientists working in this field.

SP has a particularly strong international position in evaluating the performance of solid wood and wood-based materials in the field, and in developing methods to improve the durability of wood products (wood modification, preservation, adhesive bonding, composites, surface treatment, and protection by constructional design).

More information on **www.sp.se**

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- relevant to the Journal
- interesting for the readers.

Examples: comments on papers published in the Journal, views on ongoing research, trends in research policy, opinions about forestry practice etc.

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