## **Editor's summary**

Below is the editor's concise summary of this issue's contents. If you are eager to know more – read the articles.



Photo: SkogForsk

#### Cankers in hybrid aspen

A canker disease that may pose a serious threat to second-generation hybrid aspen stands in Finland is described by **Risto Kasanen** and his colleagues. *Neofabraea populi* damages the bark, and the authors found stands where over 50% of the stems had been killed by the canker.

#### Wood decomposers in stumps

The root-rot fungus *Heterobasidion annosum* has been the focus of many studies, but there are many other wood-decomposing species of which we know very little. Therefore, **Rimvydas Vasiliauskas** and his coworkers have made efforts to describe the wood-decomposing fungal flora of clearcuts in Lithuania, and to determine how it changes in relation to felling season, stump age and other factors.

#### Root competition

Many issues have to been considered in the conversion of a pure spruce stand to a mixed stand, such as how to create favourable conditions for the regeneration of new species planted below the spruce canopy. **Christian Ammer** investigated the effects of root competition from the overstorey spruce on underplanted beech seedlings, and found that it had a considerable impact on growth and biomass allocation.

#### Removal of shelterwood

The final harvest of a spruce shelter-wood may be done without causing the advanced regeneration any serious problems, even when the trees are cut by heavy harvesters. Furthermore, the survival and growth of the seedlings can be well predicted by their vitality and height before harvest. These were two of the main findings of a study from central Sweden presented by **Dan Glöde**.

#### Moose browsing along roads

The effects of roads and fences on browsing damage by moose were investigated by **John P. Ball** and **Jonas Dahlgren**. They found, in a study in northern Sweden, that a fence along a road did not affect moose density, but the road itself did. The road acted as a barrier, which led to increased browsing damage in its proximity.

#### Heavy metals in forest soil

Cadmium, lead and mercury have increased considerably in forest soils as a consequence of emissions from industrial activities. **Jan Eriksson** investigated how these metals were distributed in two Swedish catchments, and found that their concentrations varied greatly amongst different soil types.

#### • Tree heights from aerial photos One application of remote sensing as a means to reduce management planning

costs is presented by **Erik Naesset**. Mean tree height was estimated from digitalized aerial photographs, but the tree heights obtained from the automatic image-matching underestimated the true heights. Thus, they need to be corrected after calibration against field measurements.

#### Planning sawmill production

Production planning at a sawmill requires many interrelated decisions to be made in order to optimise production and maximise profit. Linear programming is therefore often used in the forest industry. Unlike most planning systems, **Thomas Maness** and **Scott Norton** present a system which also takes into account changes in product value or market demand. The model was tested at an export sawmill in British Columbia.

#### Risk perception

Swedish private forest owners are concerned about risks, at least risks related to hazards which they have experienced themselves. Problematic risks and/or risks that are frequently ignored have been identified and discussed in an investigation by **Kristina Blennow** and **Ola Sallnäs**.

## 50 million visits to expanding Danish forests

Forests are important to the Danish public: 90% of all adult Danes visit a forest at least once a year. The annual number of forest visits is estimated at 50 million.

These figures are given given in national forest statistics recently published by the Institute for Forest and Landscape (FSL) and the Danish Forest and Nature Agency.

Many other interesting facts are given in the report, such as:

- Denmark's forest area is increasing. In the year 2000 there were 486,000 hectares of forest, covering 11% of the country's total area.
- During the last 10 years, deciduous

forests have increased at the expense of conifer forests. Oak forests, in particular, are expanding.

- The health of the Danish forests is improving, and there is more room for other species besides the trees.
- The area of natural, unmanaged forests accounts for more than 1% of the total forest area in Denmark.
- During the period 1990–99, 27,500 hectares were afforested in Denmark. Half of this area was aimed at Christmas tree production.
- The harvest declined by 10% during 1990–99, and the standing volumes have increased by 1–2 million m³ per year.

Source: www.fsl.dk



Photo: Areca

## 90 "types" of protected forest

To harmonise the terminology of protected forests in Europe. This is the task for a new EU-project. The objective is to enhance future international comparisons

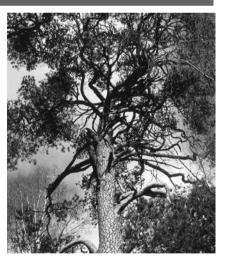
There are currently more than 90 conservation categories used to classify protected forests in the European countries. This makes comparing the status of protected forests in the different countries difficult. Furthermore, there are differences among the countries about how to define the terms forest, histories of forest use, forest management principles, and the stratification and size of forest areas.

As much as 85–90% of the forest area in Europe is used for economic, recreational, and other multiple-use purposes, so forest management plays a major role in the conservation of biodiversity. Conservation of the

biological diversity of forests cannot be ensured solely by providing a network of protected areas.

#### Simplifying comparisons

The new EU-project PROFOR (COST E27: Protected Forest Areas in Europe – Analysis and Harmonisation) aims to simplify the comparison of European forest conservation. The project will collect information on the protection of forests from the participating countries, and analyse the conservation classifications and terminology applied by the various countries. As an output, the project will identify how classifications can be harmonised and improved. For example, comparisons of



forest protection during the European Ministerial Conference on Forests, 2003, will be based on the results obtained by the project.

The project was started in July this year, and is being coordinated by Finland.

Source: www.efi.fi

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### Tree planting on Faroe Islands

Miles and miles of grassland. That may be the common perception of the Faroe Islands. But, in the future the horizon may be enriched by a new element: trees.

The Faroese Government's budget for 2002 incorporates funding, for the first time ever, to promote tree planting. Individuals, firms, townships and other groups may apply.

#### 50% grant

A 50% subsidy for plant purchases will be provided. The 2002 grant totals DKK 500 000. By the May 1<sup>st</sup> deadline, a total of eight applications had been received, seven of which were recommended, accounting for DKK 175 000.

Skógrøkt landsins is providing academic evaluations and is responsible for accepting or rejecting each grant application, while Føroya Jarðarráð (the Land Commission) administers the actual grants.

Features sought in proposed projects include:

- >1.000 m<sup>2</sup> planting area
- protection against grazing animals
- erosion control
- land beautification
- increased bio-diversity
- long-term community improvements.

#### Search for indigenous trees

An especially interesting project being undertaken by Skógrøkt landsins that we would like to highlight is an effort to find and re-plant indigenous shrubs and trees of the Faroes. For some years now, staff at Skógrøkt landsins have been scouring the islands to collect materials from the very scarce remnants of *Salix phylicifolia*, *S. lanata*, *S. arctica* and *Juniperus communis* communities. The intention is to propagate these plants, and to establish an *in situ* gene bank as well as to replant them.

A planting project with these species recently began in an area of 2.2 ha near the village of Kirkjubø. Some of the Faroe Islands' most important historical sites from the middle ages are located in Kirkjubø, making the village one of the islands' most frequently visited tourist attractions. In this context, we believe that plantings illustrating typical vegetation cover in the lowlands during the landnam period would be quite informative.

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#### Faroe Islands joins SNS

In the Fall of 2001, the Faroese Ministry of Trade and Industry decided to use its option to have an observer on the SNS board. *Tróndur Leivsson*, Chief Conservator of Forests, Forestry Service of the Faroe Islands, has been appointed to this post. In this capacity, he participated for the first time in the SNS board's second half-yearly meeting in Stockholm in November 2001.

#### New research projects

Skógrøkt landsins (the Forestry Service of the Faroe Islands) is the Faroese participant in an SNS project entitled "Plant protection by beneficial soil organisms", N-2001-12.

The Faroese Technical College in Tórshavn and Skógrøkt landsins is involved, together with Scotland and Norway, as well as Finnish business interests, in the grant application "Timber Cladding in maritime climates", which will be submitted to the Northern Periphery Programme in September 2002. If accepted, the project will run for the following three years.



#### **Snippets**

## 574 seeking to become doctors of forestry

Scandinavian PhD students in forestry have been mapped in an investigation by SNS. In total there were 574 students: 306 in Sweden, 208 in Finland, 38 in Denmark and 22 in Norway. The most popular field was silviculture, with 139 registered students, followed by forest ecology, with 94 students. Fewer students want to become doctors in tree technology (22) or marketing (13).

## Summer planting in Denmark too?

Summer planting of containerized seedlings has been tried with success in Finland. Now Danish foresters are also examining the prospects of planting trees in their active growth period. Experiments with summer planting of noble fir, oak and *Abies nordmanniana* were therefore started this year. The first results are expected this autumn.

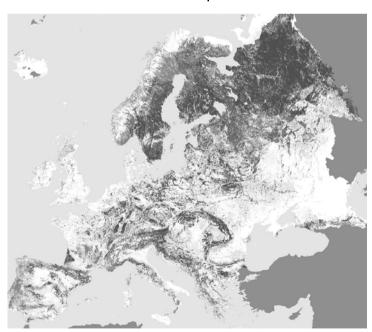
Source: Skoven 6-7, 2002

#### New forest map of Europe

Comprehensive and complete European forest maps, including broad-leaf, coniferous and total forests, at 1 x 1 kilometre resolution, are now available. The maps are produced by combining information from remote sensing and forest inventory statistics, as the output from the project "Forest tree

groupings database of the EU-15 and pan-European area derived from NOAA-AVHRR data". The project has been carried out by the University of Joensuu, VTT Information Technology and the European Forest Institute.

Source: EFI News 1/02



Päivinen, R., Lehikoinen, M., Schuck, A., Häme, T., Väätainen, S., Kennedy, P. and Folving, S. 2001. Combining Earth Observation Data and Forest Statistics. EFI Research Report 14.

More information on methodology, is available on: http://www.efi.fi/projects/euromap/

## Christmas trees clean dirty lakes

Used Christmas trees are a resource, not a problem waste. Besides using the trees for energy production, there is another alternative. Bundles of Christmas trees are now anchored to the bottom of small lakes in Copenhagen. The lakes are suffering from excessive amounts of nutrients, particularly phosphorus, leading to high algal production and muddy water.

The purpose of the tree bundles is to provide shelter for predator fishes, i.e. pike. The pike prey on fishes that consume *Daphnia* and other small animals. These, in turn, consume the algae that make the water muddy.

So, more Christmas trees, more pike, more *Daphnia* and less algae. That, at least, is the hypothesis.

Source: Skoven 6-7, 2002

#### Students return to forestry

The number of applicants for forest education programmes in Sweden has been declining for a long time. But, this year may be a turning point, since there are now many more applicants for the forestry programme at the Swedish University of Agricultural Sciences than there are positions.

Some drastic changes were made in the programme for this year. Last year, students started either in Uppsala or Umeå, but now all students will start in Umeå, after which they may choose to take courses in Uppsala or Alnarp.

However, the prospects are not all rosy, since many shorter forestry programmes continue to suffer from decreased interest amongst the students. For example, the programme for forest engineers in Skinnskatteberg has not attracted applicants for all the positions it is offering.

Source: ATL

## More protected forest needed in Norway?

At least 4.5% of the Norwegian forest should be protected, say researchers. But, forest owners say there is no solid scientific basis for this claim.

Less than 1% of the productive forest in Norway is currently protected in reserves. This is a far lower figure than in Sweden and Finland, where 4–5% of the forest area has been protected. A new report from NINA (the Norwegian Institute for Nature Research) presents arguments for increasing the area of protected forest five-fold.

Present reserves are not truly representative of either the geographical or ecological variation of the forests. Forests in eastern and southern Norway are insufficiently protected, and there is an underrepresentation of broad-leaved deciduous forests, tall and low herb forests and coniferous forests, amongst other types.

To cover these areas, and the needs for species diversity, the researchers

estimate that at least 4.5% of the productive area should be protected.

#### Need for large reserves

Highest priority in the short term should be given to setting out large, intact forest reserves, covering more than 50–100 km², as well as remaining, intact areas of coastal forest and richer forest types. Larger old forest areas with natural dynamics should be specially favoured.

#### Forest owners sceptical

However, forest owner organisations are sceptical about the suggestions. The researchers are praised for clearly stating that there is no scientific basis

for advocating a specific amount of protected forests, and for admitting that they cannot predict the effects on biodiversity of adopting different, more naturalistic mehods in forestry. But, at the same time, the researchers' suggestions are criticised for being built on too weak foundations that are not supported by national statistics.

The forest owner associations also stress the economic effects of a large conservation programme for the forest owners and people depending on forestry for their income.

Source: NINA Fagrapport 54 and SNS protocol

Photo: SkogForsk



## 70 million hectares of certified forests

There are currently two main systems for certification of forests in Europe, the world-wide Forest Stewardship Council (FSC) and the Pan-European Forest Certification (PEFC) systems. The total certified areas in the world amount to 29 million hectares for FSC

and 41 million for PEFC. Sweden has the largest area certified by the FSC system, while Finland has the largest certified by the PEFC system.

Source: www.fscoax.org and www.pefc.org



### Certified area, thousands of hectares, July 2002

	FSC	PEFC
Sweden Finland Denmark Norway	10,130 0.1 0.4 5.1	1,670 21,900 - 9,100
Austria Estonia, Latvia Lithuania	3.4 & 2,036	3,050
France Germany Ireland	15 419 438	5,300 -
Netherlands Poland Russia	103 3,592 216	- - -
Switzerland UK USA Canada	87 1,061 2,776 1,001	- - -

# No more return of the Giant Hogweed?

"Turn and run,

Nothing can stop them,

Around every river and canal their power is growing.

Stamp them out,

We must destroy them.

They infiltrate each city with their thick dark warning odour.

They are invincible,

They seem immune to all our herbicidal battering."

Three decades have now passed since Genesis had their hit with "The return of the Giant Hogweed". In the meantime, the alien, an invasive plant also known as *Heracleum mantegazzianum* has continued to spread, and no successful means of halting its invasion have been found so far.

The plant is harmful to people who come in contact with the stems and leaves, but above all, it constitutes a threat to biodiversity in Europe.

#### Combat strategy

A new European project has now been launched to develop an integrated management strategy to combat species like the Giant Hogweed. The project will search for potential biological control agents as well as investigating currently known

mechanical and chemical control methods.

The project is being coordinated by Hans Peter Ravn from the Danish Forest and Landscape Research Institute (FSL), and has partners from seven European institutions.

Source: www.fsl.dk

Giant Hogweed, Heracleum mantegazzianum (Somm. & Lev.) is indigenous to the Caucasus mountains but, since its introduction to botanical gardens during the 19th century it has become widespread across Europe and in parts of North America. It is now a serious invasive weed. The plant is tall (approx. 3 m in height) and belongs to the plant family Apiaceae (umbelliferae).



Copyright: Naturhistoriska riksmuseet, Photo: Anna-Lena Anderberg

#### **Contact News & Views**

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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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