# Skog Alnarp

SLU

## Southern Swedish Forest Research Centre

# Forest & Landscape a great collaboration

## Annual report 2021

Freya Saidin and Filip Barzngi are two of the many students in the Forest & Landscape bachelor's program. Here they measure a birch stand.

This year the Forest & Landscape bachelor's program began as a collaboration between forestry and landscape architecture. It got off to a running start, with many more applicants than available spots.

The number of scientific publications reached a all time high.

A new center specializing in fast-growing broadleaf trees will pave the way for large-scale planting of deciduous trees.

And in June, Professor Magnus Löf became the new Head of department at the Southern Swedish Forest Research Centre.

# Personnel

## *Our work is in tune with our time*

Since I took over the role of Head of department in June 2021, it has become even more obvious to me how many obedient workers we have. It is truly inspiring to work in an environment where everyone takes personal responsibility and comes up with new ideas.

In addition, it seems that we are up to date with new projects and activities that address issues raised in national forest debates. This is why the future looks bright for us.

However, this year has also been marked by the pandemic. I know that many agree that it will be nice to meet in person at the department again. We need to return to having fikas, happy hours and departmental retreats.

2021 has been an eventful year. We have launched the new Forest & Landscape bachelor's program with many international students.

This is positive for our department and for the forest sector in Sweden and beyond. At the same time, it brings new challenges.

The department has increased its educational offerings substantially. We have transitioned from a focus on research and extension to now include much more teaching.

We have many new teachers and in addition, we split responsibility for the Forest & Landscape program with the Landscape Architecture department; two different academic cultures must now work together. Sometimes it has been a bit messy, but our workers have put in the effort to achieve excellent results.

Another factor in our department's smooth functioning is our administrative staff who have carried a heavy load during the covid period.

Our employees' contributions are seen in additional ways. For example, several have received big new future-oriented assignments at SLU. This is good for them and of course benefits our department.

Two happy pieces of news arrived just before Christmas. A big proposal to the Swedish Energy Agency was funded, and the department will lead a new broadleaf center for five years called "Trees for Me."

It will deal with fast-growing deciduous trees like birch, hybrid aspen and poplar. Another large proposal was funded by the Swedish Foundation for Strategic Research – it also deals with fast-growing broadleaves!

We are also on track to develop several research programs. The body of PhD students and researchers continues to expand, as does the department's external funding and extension to the forest sector. In the broadest sense, we keep improving!

Head of department Magnus Löf.

## New assignments

**In 2021, several department members took new positions**

**Giulia Attocchi**, Euroforester director of studies
**Vilis Brukas**, member of the faculty board
**Emma Holmström**, Director of Future Forests
**Magnus Löf**, Head of department
**Jonas Rönnberg**, Director of the Forest Damage Centre
**Gudmund Vollbrecht**, Coordinator of continuous cover forestry


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## Nyhetsbreven

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## Growing strength

Last year, about 55 people worked at the department, some of them part time, equivalent to just over 40 full-time employees.

This is an increase of about 20 percent in three years.

This table shows the annual proportion of external funding at the department and number of examinated PhD students.

| | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| External funding | 52% | 46% | 46% | 49% | 44% |
| PhD | 2 | 1 | 2 | 5 | 3 |


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## Contact people

**Head of department**
Magnus Löf
**Deputy Head of department**
Giulia Attocchi

### Education

**Program leaders**
Jaime Uria Diez: the department
Karin Hjelm: Multiple-use forestry, Forest & landscape
Giulia Attocchi: Euroforester
Annika Felton: PhD education
**Euroforester coordinator**
Andis Zvirgzdins
**Vice Head of department for research** Michelle Cleary

### Research

**Silviculture**
Eric Agestam
Jorge Aldea
Henrik Böhlenius
Per-Magnus Ekö
Martin Goude
Karin Hjelm
Emma Holmström
Sune Linder
Magnus Löf
Urban Nilsson
Friday Nwabueze Ogana
Jens Peter Skovsgaard
Narayanan Subramanian

**Pathology**
Michelle Cleary
Iva Franic
Diana Marciulyniene
Iryna Matsiakh
Donnie Peterson
Carmen Romeralo
Jonas Rönnberg
Patrick Sherwood

**Ecology and conservation**
Jörg Brunet
Igor Drobyshev
Adam Felton
Annika Felton
Per-Ola Hedwall
Matts Lindbladh
Mats Niklasson
Lisa Petersson
Jaime Uria Diez

**Planning and Policy**
Purabi Bose
Vilis Brukas
Ola Eriksson
Luis Andrés Guillén Alm
Carl Salk
Renats Trubins
Gudmund Vollbrecht

**Tropical forestry/seeds**
Per-Christer Odén
Mulualem Tigabu

### Administration

**Finance** Zhanna Möller
**Administration** Violeta Kokos
**IT** Klas Pernebratt
Magnus Mossberg
**Infrastructure** Kent Hansson

### Media/extension

**Extension**
Henrik Böhlenius
**Media** Pär Fornling
Katarina Ekegren

# Great interest in Forest & Landscape

**The new Forest & Landscape program had a very good start.**

Education has become a bigger part of business in Alnarp. Beyond free-standing courses and teaching in the Jägmäster program's Swedish field trip, there are now three programs:

√ Euroforester: A two-year master's program

√ Multiple-use Forestry: A new two-year master's program in collaboration with Linnaeus University.

√ Forest & Landscape: A new three-year bachelor's program in collaboration with the Faculty of Landscape Architecture, Horticulture and Crop Production Science (LTV).

"Of course this requires more resources for education, but it is going well. We have a lot of obedient researchers who are interested in teaching," says Karin Hjelm, director of studies for the two new programs.

In spring of 2022, the first Multiple-use Forestry students will write their theses. "Now we are working to get more students to find out about the program.

"Not least is it a great opportunity for graduates of the Skogsmästare program and the Sustainable Family Forestry program at Linnaeus University to continue to a master's degree.

"Since the education is distance-based, making it possible to study part time, it is a great opportunity to combine studies with employment.

"To build the knowledge required in the labor market, we have a board of advisors with overseers from IKEA, Södra, and Sveaskog, which is a very good forum," says Karin Hjelm.

When Forest & Landscape began in the fall of 2021, there weren't enough available places in the program. The program took in 35 students from 15 different countries. It is a collaboration between landscape architecture (LTV Faculty) and forest science.

"We have a lot to learn from one another, and the collaboration is rewarding on many levels," says Karin Hjelm. The Swedish students are the biggest single group, but instruction is in English. Wageningen University in the Netherlands also participates, where it is possible to take some of the courses.

During the three years, students can choose to specialize in landscape architecture or forest science, which is particularly important when it is time to write their final thesis.

Those who want to learn more about forests can choose a suitable master's program.

The start of the term in Forest & Landscape

## Introductory course

Interest is strong in the new introductory course on forest management and ecology, "Adaption of forestry methods for varying goals."
It is a quarter-time distance course with two meetings in the forest.
"We have 30 spots and a very long waiting list of people who have registered interest.
"Among the participants are many forest owners who want to learn more," says course leader Eric Agestam.

Jägmästar- students learn about southern Swedish forestry on the Swedish field trip. Due to coronavirus, the 2021 field trip was suspended, thus the number of participants is planned to double in 2022.

## At last!

Mårten Carlsson
vice chancellor
SLU 1982 - 1984

Mårten Carlsson, the former vice chancellor of SLU, is happy about the new programs. They are puzzle pieces that finally has been fit into place.
When the Forest Faculty moved to Umeå, this led to demand from the forest industry for research relevant to southern Sweden.

It became a tug-of-war between several different places.

"I drew the line and established the new forest research centre in Alnarp. A strong argument for me was that it could lead to a fruitful collaboration with landscape architects."

A first step was Alnarp's landscape laboratory.

"The result was very successful. More projects followed, but rather slowly. It is great that they have now taken a giant step forward in the collaboration, exactly as we hoped for over 30 years ago when the Forest Faculty came to Alnarp. I think this will be really good," says Mårten Carlsson.

# Euroforester a growing network

**The international Euroforester network continues to grow.**

Just over 30 students from 12 different countries took part in the autumn course.

"We had slightly fewer students from the countries around the Baltic Sea which is traditionally our biggest base for recruitment. On the other hand, we got several students from far away," says director of studies Giulia Attocchi.

"Unfortunately, coronavirus prevented some from coming here. That was also a challenge for instruction, as we usually rely a lot on field trips. We managed it well, but really look forward to returning to normal."

Euroforester is a well-established two-year master's program.
"In the future, Euroforester will become a good option for students wanting deeper studies following the Forest & Landscape bachelor's program. It will be an excellent combination."

It all began via a collaboration with IKEA who financed stipends for students from eastern Europe. Since then, the geographical scope has widened, and new financing has come from Stora Enso, Skogssällskapet and SCA.

"Many former students now hold key positions in the forest sector around Europe."

They form a lively and growing network of well over 700 former students.

Every three years they meet for an alumni conference and this year it will be held for the first time in Sweden. It will be an anniversary conference of the program that began in 2001.

"It will be a lot of fun. We are expecting around 200 alumni to return to Alnarp," says Giulia Attocchi.

Giulia Attocchi

## Working environment praised by PhDs

Martin Goude

After a record number of doctoral defences in 2020, the department only only had one in 2021. It is Martin Goude who defended his dissertation on new models to measure and calculate forest growth.

On average, three PhD per year are examined, and now many more are in the pipeline. At the end of the year there were 17 PhD students and two licentiate students, a new record.

In SLU's annual emploee survey, the department distinguished itself with very high marks for its work environment.

"Of course, it feels good to get positive feedback. On my part, I find that of all possible administrative jobs at the department, working with doctoral students is the most fun," says Annika Felton who is responsible for PhD education. These students are on the pathway toward their defences.:

**Karin Amsten**
Grazing and fire – key processes for tree and flowering plant succession.

**Mikolaj Lula**
Regeneration and management of young Scots pine stands.

**Delphine Lavivière**
Thinning as a tool for biodiversity.

**Mostarin Ara**
Precommercial thinning.

**Khaled Youssef**
*Heterobasidion* root infections on Scots pine – a cryptic threat to sustainable forest management.

**Laura Juvany Canovas**
The puzzle of forestry and ungulate interactions – a missing piece is in the understory.

**Noelia Lopez-Garcia**
Forest *Phytophthora* – ecology, diversity and management.

**Axelina Jonsson**
Forest regeneration models for planted, direct seeded and natural regenerated stands.

**Ida Nordström**
Rapid and portable tools for early detection of invasive alien tree pests and pathogens.

**Amanda Segtowich**
Silviculture of Scots pine and thinning strategies.

**Joan Diaz Calafat**
Deciphering the interactions between trees and climate on forest ecosystem processes.

**Tatiana Klisho**
Climatic controls of forest fire activity in Europe.

**Andis Zvirgzdins**
Establishment and management of planted birch.

**Keeli Curtis**
Instrumentation of the Swedish Forest Policy with a focus on advisory services.

**Nora Pohl**
Managing stand structure to restore mixed oak-dominated forests for conservation of biodiversity.

**Therese Strömvall Nyberg**
Etablering och skötsel av blandbarrskog.

**Emily Delin**
Forest growth models adapted to abiotic and biotic disturbances.

**Luca Moraro**
Poplar plantations on forest land – effect of genotypes and soil treatments.

**Mimmi Blomqvist**
Optimized stump treatment against *Heterobasidion* for sustainable future forests.

# The start of a broadleaf centre

**Just before Christmas a record research project was funded.**

The Swedish Energy Agency supports a centre of competence for fast-growing broadleaves.

It is an investment of 112 million crowns over five years, with a possibility for a further five years' extension. The project is called Trees for Me.

"We see new possibilities for broadleaves. Every year 400 million trees are planted [in Sweden], nearly all spruce or pine. Within ten years, I believe a tenth can be broadleaves. We focus on aspen, hybrid aspen, poplar and not least improved birch.

It has fantastic potential. Within 20-30 years we can have birch with 50% better growth and higher quality.

"Large-scale planting of broadleaves is new for forestry and we need extensive new knowledge," says professor Urban Nilsson.

The research will be a collaboration with Luleå Technical College, Skogforsk, Umeå and Uppsala Universities.

Fifty organizations and companies are co-financing the research project.

"We have never had so broad a commitment to a research project. We feel massive support for possibilities with fast-growing broadleaves," says Urban Nilsson.

One question is how landscape-level planning is realized on private properties

## More research on forest policy

**This year Vilis Brukas began a new professorship in forest planning. This has led to a strengthening in the planning and policy research area.**

Forest planning really includes a lot, everything from how forests are planned with help of modern technologies to how private forest owners are made to comply with overall forest policies. Research in Alnarp focuses on the latter topic.

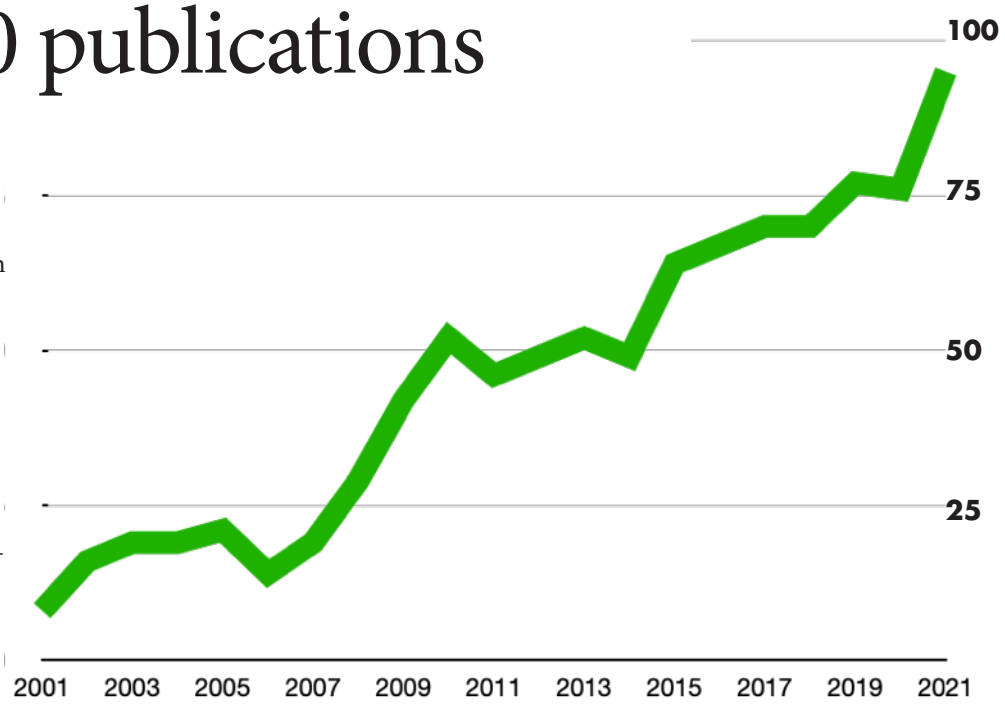
"My research is actually more about forest policy than forest planning in the classic sense," responds Vilis Brukas. Several new people have joined the research group. PhD student Keeli Curtis will study how advice to private forest owners works, postdoc Luis Andrés Guillén Alm will look at forest planning from a landscape perspective and lecturer Purabi Bose will continue her internationally-focused research on land-use conflicts with an interest in indigenous people.

Vilis Brukas, with roots in Lithuania, also continues research and teaching about forest policy in eastern Europe after the dissolution of the Soviet Union.

"Our research extends from policies at the national level to landscape perspectives and individual forest owners," says Brukas.

"We work interdisciplinarily. Just thinking about natural science isn't enough. Knowledge must be implemented in the system. One must also adopt social-science perspectives, see entire social-ecological systems and better understand relevant actors, their power and ways of thinking, as well as political instruments".

# Nearly 100 publications




The positive trend in departmental publications continues with a new record number.

In 2021, the department's researchers contributed 94 peer-reviewed scientific articles in international journals.

Her is a list of publications and book chapters by first author. Researchers from the Southern Swedish Forest Research Centre in Alnarp are in bold type.

If the article has more than six authors, only the first and last authors are listed as well as authors from the department.

At the end is also a list of articles in the popular scientific press.

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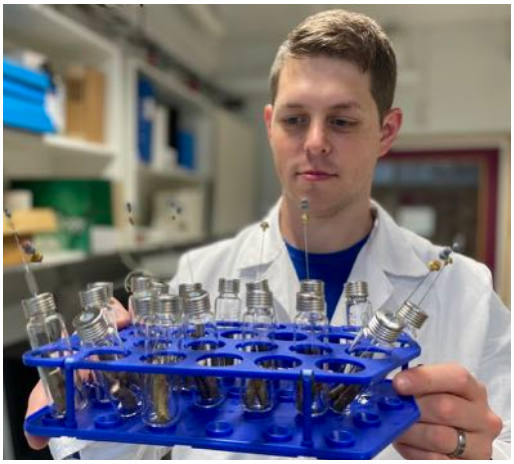

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