

## THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

### Urgent Need for Reliable Methods of Virus Detection and Identification in Forest Trees

Report from the research workshop of IUFRO Working Party [7.02.04](#) on "Viruses and Phytoplasma of Forest and Urban Trees" in Berlin, Germany, on 29 May 2013, by Carmen Büttner, Coordinator of IUFRO WP 7.02.04, and Risto Jalkanen, Deputy Coordinator of IUFRO WP 7.02.04

The lack of knowledge about the presence and frequency of occurrence of viral diseases in forest trees leads to the impression that they are rare and therefore not important. However, the opposite is the case. Viruses are responsible for far greater economic losses than generally recognized. Plant viruses play a central role in the plant health status of forest trees and may lead to extensive tissue damage. Virus and phytoplasma diseased plants may increase production costs because of the possibly decreased growth of infected stock plants and undesired subsequent field performance.

To date, viruses from 17 different plant genera have been identified. The latest European mountain ash ringspot associated virus (EMARaV) has recently been classified by the ICTV (International Committee on Taxonomy of Viruses). Interestingly, some plant genera such as *Carpinus* and *Robinia* are susceptible to only one or two virus species while others such as *Betula* and *Fraxinus* are a host for multiple virus species. At least 18 genera of broad-leafed trees and shrubs as well as a variety of herbaceous plants have been recorded to be affected by cherry leaf roll virus (CLRv), for example.

Against this background, a research workshop (<http://dpg.phytomedizin.org/de/virus2013/>) was organized and hosted by the Humboldt University Berlin (HU), the German Phytopathological Society (DPG), the Julius Kühn Institute - the German Federal Research Institute for Cultivated Plants (JKI), and the Austrian Alliance for Life Sciences, Food, Veterinary Expertise and Agriculture (ALVA). It was attended by 42 researchers from Finland, USA, Greece, Columbia and Germany. They mainly discussed the following topics:

**a) Viruses affecting broad leafed urban and forest trees**

Presentations focused on the characterization of the European mountain ash ringspot-associated virus as the type-species of the newly described virus genus Emaravirus, including the description of the genus and members of the genus. Tools to investigate and characterize unknown viruses in diseased *Ulmus* and other woody plants were also discussed.

**b) Nepoviruses**

Papers dealt with the situation of the birch leaf roll disease in Finland, which is associated with an infection of cherry leaf roll nepovirus (CLRv); the genome organization of CLRv and the functional characterization



of virus encoded products; and epidemiological studies and investigation of vector transmission of CLRv. Another topic was the characterization of symptom determinants on the *Arabis* mosaic nepovirus (ArMV) genomic RNA2.

**c) Phytoplasma diseases**

Here, the impact of genome analyses on phytoplasma research and comparative studies regarding the Sec-dependent protein export in phytoplasma and acholeplasma were presented. There are also promising approaches to control apple proliferation disease by cross-protection and plant resistance.

d) Poster presentations focused on the description of symptoms and investigation into the distribution and dissemination of viruses infecting forest trees, on molecular analyses and genetic diversity of viruses affecting woody hosts, and diagnostic tools for viruses of forest trees. Investigation addressing the alteration of allergen potential by the Cherry leaf roll virus (CLRv) in infected birch pollen was also a relevant topic.

Participants agreed that there is an urgent need for reliable methods of virus detection and identification in forest trees, as well as a need for tools for disease management. Knowledge of virus characteristics and their epidemiology are the first steps in developing appropriate phytosanitary strategies to produce virus-free plants and to keep tree seedlings free of plant viruses. The mode of transmission has to be considered as an important factor affecting the spread and impact of a virus infection within a forest.

However, investigation into virus and phytoplasma diseases in the forest ecosystem is extremely rare in comparison with the agricultural environment. Traditional

virus detection methods target specific known pathogens. Thus, it can be difficult to identify novel or unsuspected viruses and phytoplasma that cause infections in forest and urban trees. Therefore, more detailed diagnostic trails for the determination of individual known and unknown viruses and the recognition of visible symptoms have to be established. In this respect, the successful application of viral

and phytoplasma metagenomics should be one of the future concerns.

*Abstracts of the oral and poster presentations are available in the proceedings of the 5<sup>th</sup> International Symposium on Plant Protection and Plant Health in Europe (Section 9: page 295-333; ISBN 978-3-941261-11-2 or for [free download](#).*

## Forest Genetics 2013

By Michael Stoehr, Coordinator of IUFRO Working Party 2.02.05, and Keith Jayawickrama, Deputy Coordinator

The Forest Genetics 2013 conference held from 22 to 27 July 2013 in Whistler, Canada, brought together 170 researchers from 22 countries representing a variety of research fields, including genomics and molecular genetics research. Many presenters outlined the concept of genomic selection as a way to speed up the breeding cycles in conifers. Climate change researchers were also well represented. The natural beauty of Whistler, co-host of the Winter Olympics 2010, certainly added to the appeal of this conference.

Forest Genetics 2013 was jointly organized by the Canadian Forest Genetics Association (CFGGA) and Western Forest Genetics Association (WFGA), and co-sponsored by IUFRO's Population, Ecological and Conservation Genetics Working Party (2.04.01) and IUFRO's Breeding and Genetics Resources of Pacific Northwest Conifers (2.02.05). The latter was also represented by two invited speakers who gave presentations in the plenary session. Steve Lee from the UK Forestry Commission informed about "Sitka spruce breeding in Britain: Dawn of a new era" and John Russell from the BC Ministry of Forests, Lands, and Natural Resource Operations, talked about "Breeding for multiple pest resistance in western red cedar (*Thuja plicata*) under a changing climate".

During the business meeting of Working Party 2.02.05 the need for more co-operative research, especially in consideration of climate change research, and the need



Participants during field trip to Cathedral Grove Park on Vancouver Island. Photo by Bo Karlsson, Skogforsk, Sweden.

for data collection from a wide range of environments, were identified. In view of the dwindling number of tree breeding programs worldwide it was also agreed that the list of Pacific Northwest conifers should include radiata and lodgepole pines and conifers of northern California. The next meeting of this WP will be in Germany in 2017.

Read more at the 2.02.05 activities page and visit: <http://www.forestgenetics2013.ca>

## Silviculture and Ungulates

By Thomas Rooney, Coordinator of IUFRO Working Party 1.01.12 *Silviculture and Ungulates*

This roundtable discussion on the joint management of grazing ungulates and forest ecosystems - advances, insights, and future directions - was part of the official meeting program of the Ecological Society of America's Annual Meeting, Minneapolis, USA and took place August 5, 2013. (Find the [full report](#) at the 1.01.12 webpage.)

The discussion focused on scientifically based principles and solutions for integrated wildlife, forest and landscape management. These principles and solutions would improve sustainability while maintaining traditional forest uses, and improve management by developing novel approaches and methodologies. However, while researchers are identifying technically feasible solutions, the acceptability of any particular solution is strongly influenced by its socio-ecological context.

Here are some of the key issues that were discussed:

a) Approaches to forest or forest landscape management that reduce negative effects of ungulate grazers on tree regeneration or broader forest values.

b) Approaches to wildlife conservation and management that both reduce grazing impacts and have broad support from multiple stakeholders.

c) Examples in which domestic and/or wild grazers have been used to increase biodiversity and sustainability of forests and forest landscapes.



The absence of integrated management of forests and ungulates can lead to regeneration failure, as illustrated in this deer enclosure study. (Photo by Tom Rooney)

## Legal Aspects of European Forest Sustainable Development

Report by Peter Herbst, Coordinator of IUFRO Research Group 9.06.00, on the 15th International Symposium of IUFRO Research Group 9.06.00 Forest Law and Environmental Legislation, held in Tirana, Albania, May 15-17, 2013

IUFRO Research Group 9.06.00 has been operating world-wide over decades to collect, evaluate, document, disseminate and also critically analyze developments in forest law and environmental legislation. Special emphasis has been placed on Central and Eastern European countries in general and countries with economies in transition in particular. The main aim of the group's work is to foster the exchange of information amongst researchers and practitioners who are active in the field of forest law and environmental legislation, and to permanently review the state of the subject, thereby setting priorities for research and practice.

On the occasion of the 15th International Symposium on "Legal Aspects of European Forest Sustainable Development" in Tirana, fifty-four researchers and practitioners from twenty-one different countries used that unique opportunity to get acquainted, involved and familiar with the new legal situation mainly in European forests, also benefiting from the presence of participants from across the world, including Israel, Iran and Japan.

Longstanding group member Dr. Marius Lazdinis (EU Commission) created special interest by presenting and discussing the upcoming EU IPRAD 2 program, where forestry is expected to be supported under EU pre-accession assistance again.

As many of the group members are also involved in LBA negotiations (legally binding agreement on forests in Europe), latest developments, especially in the context of Intergovernmental Negotiating Committee's INC 4



Photo provided by Peter Herbst

negotiations, were broadly discussed. The symposium was kindly hosted by CNVP (SNV's Connecting Natural Values & People Foundation, <http://www.cnvp-eu.org/>) and supported by the host organization, the Ministry of Environment, Forestry and Water Administration and the Academy of Sciences of the Republic of Albania, as well as the Eva Mayr-Stihl Foundation and the Swiss Federal Institute of Technology, Switzerland. The meeting was organized by Haki Kola (CNVP Country Director) and Peter Kampen (CNVP Executive Director) and their respective staff at CNVP Tirana, as well as Peter Herbst (IUFRO 9.06.00).

Interested in IUFRO 9.06.00?

You are welcome to visit <http://www.iufro.org/science/divisions/division-9/90000/90600/> for more information, or directly contact the coordinator Peter Herbst via email: HP(at)net4you.at

## Congratulations !

### Cecil Konijnendijk van den Bosch Honored with L.C. Chadwick Award for Arboricultural Research

Professor Cecil Konijnendijk, an author, researcher, and professor of green space management at the University of Copenhagen, Denmark, as well as head of the Department of Landscape Architecture, Planning, and Management at the Swedish University of Agricultural Sciences, is this year's recipient of the International Society of Arboriculture's (ISA) prestigious L.C. Chadwick Award for Arboricultural Research.

The L.C. Chadwick Award is given to individuals to recognize their research and its valuable contribution to arboriculture. ISA President Terrence Flanagan honored Dr. Konijnendijk van den Bosch at a ceremony on Sunday, August 4, in Toronto, as part of the ISA Annual Conference and Trade Show, August 3-7, 2013.

In IUFRO, Professor Konijnendijk van den Bosch is well-known for his long-standing and successful work in IUFRO Research Group 6.07.00 Urban Forestry. Since the mid-1990s, he's been engaged in establishing and



developing international collaboration in urban forestry research. One of IUFRO's events, the European Forum on Urban Forestry (EFUF), hosts an annual meeting where scientists and practitioners meet to discuss current research, their needs, and innovations.

Professor Konijnendijk van den Bosch will be a keynote speaker at the 2014 IUFRO World Congress in the USA!

For the corresponding ISA press release, please contact: Julie Gaier, [julie\(at\)trg-marketing.com](mailto:julie(at)trg-marketing.com)

Photo by courtesy of Cecil Konijnendijk van den Bosch

## New Tools

### The GeoTreesearch Mapping Tool

The US Forest Service Research and Development (R&D) has recently launched a new interactive, web-based map that gives users a powerful search tool to discover topics and locations of Forest Service research anywhere in the world. GeoTreesearch leverages information in Treesearch, R&D's database of its scientific publications, by mapping references to geographic places found in the documents.

Visit: [www.fs.fed.us/research/products/geotreesearch/](http://www.fs.fed.us/research/products/geotreesearch/) to access the mapping tool on the Forest Service R&D national web site.

### GlobAllomeTree Platform

FAO and partners have launched a web-based platform to help forest and climate change projects, researchers and managers calculate forest volume, biomass and forest carbon. *GlobAllomeTree*, the first international, peer-reviewed platform for tree allometric equations, currently has equations for 57 countries worldwide, from boreal forests to tropical rainforests.

<http://www.fao.org/forestry/fma/83159/en/>

## Publications

### *Sylvicultura oeconomica* in Today's German

*Sylvicultura oeconomica*, first published in 1713 by Hans Carl von Carlowitz (1645-1714) and for the first time mentioning the concept of sustainability (Nachhaltigkeit), has now been newly published in today's German by Harald Thomasius und Bernd Bendix.

Kessel Verlag. ISBN: 978-3-941300-70-5. 368 pages

Read an extract at: <http://www.forstbuch.de/ThomasiusBendixLeseprobe.pdf>

<http://www.iufro.org/discover/noticeboard/#c53>

### Proceedings

13th IUFRO Conference on "Root and Butt Rot of Forest Trees", 4-11 September 2011, Firenze - S. Martino di Castrozza, Trento, Italy

<http://www.iufro.org/publications/proceedings/proceedings-meetings-2011/#c19325>

<http://www.iufro.org/download/file/9863/5065/70201-firenze11.pdf>

### Climate Change: European trees under stress

Paper now available online from "Nature Climate Change"

The carbon sink services provided by European forests were predicted to be functional for decades, however, since 2005 there have been signs of sink saturation. The paper suggests that declining volume of trees, deforestation rates and higher vulnerability to natural disturbances such as fires, storms and insects play a part in this slow-down. The researchers conclude that although managed European forests are closer to capacity than previously thought, changes in management practices can improve volume growth and slow down saturation of the carbon sink.

Contact: Gert-Jan Nabuurs (Wageningen University and Research, Netherlands; [IUFRO\\_officeholder](mailto:IUFRO_officeholder@wur.nl)); gert-jan.nabuurs(at)wur.nl

### Latest CATIE Newsletter

[http://web.catie.ac.cr/Boletin\\_CATIE\\_54/boletin\\_54\\_ing.htm](http://web.catie.ac.cr/Boletin_CATIE_54/boletin_54_ing.htm)

This issue also reports on CATIE's 40<sup>th</sup> anniversary and the activities to celebrate this important occasion.

### Jàmbá: Journal of Disaster Risk Studies

This is a transdisciplinary journal in the field of Disaster Risk Reduction devoted to the publication of internationally refereed research papers, opinion pieces and practitioner papers in English. It covers all areas of disaster risk reduction and climate change adaptation. The journal is open access, uses online submissions and the author retains copyright. The average turn around period for a manuscript is approximately 6 months (from first submission to online publication).

Journal website: <http://www.jamba.org.za>

### Forest Products Annual Market Review 2012-2013

Now available as an advanced copy on the website of the UNECE/FAO Forestry and Timber Section in Geneva: <http://www.unece.org/fpamr2013.html>

The review covers forest products market and policy developments in the UNECE region of Europe, North America and the Commonwealth of Independent States.



It is a key input for the UNECE/FAO Committee on Forests and the Forest Industry and the FAO European Forestry Commission Market Discussions scheduled on 10 December 2013 in Rovaniemi, Finland. This year's theme of the market discussion is "wood for sustainable housing and construction" and it will be only one of many events during the [European Forest Week](#) in [Metsä2013](#).

## Announcements



**Trade Exposition and Sponsorship Booklet**  
for  
**IUFRO 2014 World Congress**  
Salt Lake City, Utah, USA

Visit: <http://iufro2014.com/trade-exhibition/>

The largest forest management expo in the United States is happening from 8-11 October 2014 at the International Union of Forest Research Organizations (IUFRO) World Congress and Society of American Foresters (SAF) National Convention and Canadian Institute of Forestry's Annual General Meeting in Salt Lake City, Utah, USA. This will be an exciting opportunity for vendors of all types - with direct marketing to 4500 forest research and management professionals!

### Forest Europe Photo and Video Contest

The first edition of Forest Europe's 'Show Off Your Forest' invites contributions of photos and videos showing woods and forest regions within Europe, in one of the countries that are signatories to the FOREST EUROPE agreements. Go to: <http://showoffyourforest.com/info>

**UBC Seeks Assistant Professor - Forest Biometrics**

The Department of Forest Resources Management in the Faculty of Forestry at the University of British Columbia (UBC), Vancouver, Canada, is seeking an Assistant Professor in Forest Biometrics  
*Deadline for applications: 15 December 2013*

You can find the advertisement at

<http://www.forestry.ubc.ca/category/job-postings/> or can request a PDF from Professor Valerie LeMay at Valerie.LeMay(at)ubc.ca

Find further UBC position announcements at:

<http://www.forestry.ubc.ca/category/job-postings/>

**UNBC Seeks Associate/Full Professor - Wood Engineering and Design**

The University of Northern British Columbia (UNBC), Prince George, B.C., Canada, invites applications and nominations for a Program Chair in the area of Integrated Wood Engineering and Design. *Deadline for application: 31 October 2013 or until filled. Find details at:*

<http://www.iufro.org/discover/noticeboard/#c14607>

**FAO Seeks Forest Officers**

Forestry Officer (Food Security)

<http://www.fao.org/employment/current-vacancies/professional/en/>

Forestry Officer (Agroforestry and Urban/Peri-urban Forestry)

[http://www.fao.org/fileadmin/user\\_upload/VA/pdf/IRC2365e.pdf](http://www.fao.org/fileadmin/user_upload/VA/pdf/IRC2365e.pdf)

Forestry Officer (Forest Genetic Resources and Biodiversity)

[http://www.fao.org/fileadmin/user\\_upload/VA/pdf/IRC2367e.pdf](http://www.fao.org/fileadmin/user_upload/VA/pdf/IRC2367e.pdf)

Note the deadlines in mid-September 2013!

**Assistantships Available for MS or PhD level Degrees at Mississippi State University**

The Forest Products Department offers openings for 5 or more new graduate students in the disciplines of wood protection and durability, molecular biology, lumber testing and modeling, engineered composites, bioenergy, environmental aspects, furniture production, wood quality, sustainability or related areas.

For more information, please write to Rubin Shmulsky:

rshmulsky(at)cfr.msstate.edu and visit:

<http://www.cfr.msstate.edu/forestp/> or

<http://www.iufro.org/discover/noticeboard/#c14607>

**IUFRO Meetings**

Search our [online calendar](#) for a full list of meetings!

Find non-IUFRO meetings on the IUFRO

**Noticeboard!** Also search for forest-related events in GFIS at: <http://www.gfis.net>

1-6 Sep 2013

**Vegetation Response to Climate Change and Air Pollution – Unifying Evidence and Research from Northern and Southern Hemisphere**

Ilhéus, Bahia, Brazil

IUFRO [7.01.00](#), [7.01.02](#)

**Contact:** Alessandra R. Kozovits,

akozovits(at)gmail.com

<http://www.iufro2013.ufop.br/>

1-2 Oct 2013

**International Conference on the Occasion of the 85<sup>th</sup> Anniversary of the Forest Research Institute, Bulgarian Academy of Sciences**

Sofia, Bulgaria

IUFRO

**Contact:** Alexander H. Alexandrov, forestin(at)bas.bg; forestin(at)bulnet.bg

<http://www.bas.bg/fribas/News.html>

1-4 Oct 2013

**7th Workshop: Measurement Methods and Modelling Approaches for Predicting Desirable Future Wood Properties**

Nancy, France

IUFRO [5.01.04](#)

**Contact:** Jean-Michel Leban, leban(at)nancy.inra.fr

<https://colloque.inra.fr/memowood/>

25-27 Oct 2013

**International Wood Culture Symposium on Taxodiaceae**

Changsha, Hunan Province, China

IUFRO [5.10.01](#)

**Contact:** Howard N. Rosen, hrosen(at)fs.fed.us;

Mike Hou, mikehou(at)iwcs.com

<http://72.11.139.131/customPage/100002/activity/30/index.html>

**Cancellation!**

7-10 Oct 2013

**Ecosystem Services – Science, Policy and Practice**

Smolenice, Slovak Republic

IUFRO [8.00.00](#)

13-15 Nov 2013

**International Conference on Forest Certification and Protection from Illegal Logging – International and Russian Aspects**

St. Petersburg, Russia

IUFRO [9.00.00](#)

**Contact:** Maxim Chubinsky, mchubinsky(at)gmail.com

<http://www.iufro.org/science/divisions/division-9/90000/activities/>

14-16 Nov 2013

**6th International Scientific and Technical Conference on Innovations in Forest Industry and Engineering Design**

Yundola, Bulgaria

IUFRO [5.00.00](#)

IUFRO [5.04.00](#)

**Contact:** Conference Organizers,

inno\_conference(at)abv.bg

<http://inno.ltu.bg/>

10-11 Dec 2013

**International Symposium on “The Biodiversity and People in the Context of Climate Change”**

Antananarivo, Madagascar

IUFRO [9.05.01](#)

**Contact:** Gérard Buttoud,

gerard.buttoud(at)hotmail.fr

<http://symposium2013essaforets.wordpress.com/>

12 Jan 2014

**Annual 2.04.10 Forest Tree Workshop**

San Diego, California, United States

IUFRO [2.04.10](#)

**Contact:** Lawrence Smart, lbs33(at)cornell.edu  
<http://www.iufro.org/science/divisions/division-2/20000/20400/20410/activities/>

3-7 Jun 2014

**17th European Forum on Urban Forestry - EFUF**

Lausanne, Switzerland

IUFRO [6.07.00](#)

**Contact:** Cecil C. Konijnendijk van den Bosch, cck(at)life.ku.dk  
<http://www.efuf2014.org/>

17-19 Jun 2014

**Future Concepts in Uneven-aged Silviculture for a Changing World**

Zurich, Switzerland

IUFRO [1.05.00](#)

**Contact:** Gary Kerr, gary.kerr(at)forestry.gsi.gov.uk  
<http://www.iufro.org/science/divisions/division-1/10000/10500/activities/>

**Other Meetings**

23-25 Sep 2013

**Community Forestry Conference - New Challenges for Community Forestry: Sharing Scientific Knowledge in a South-North Perspective**

Remscheid, Germany

<http://www.community-forestry-remscheid.de/>

23-25 Sep 2013

**Water and Forests – Beyond Traditional Forest Hydrology**

Dehradun, India

Organized by: Forest Research Institute, Dehradun, INDIA.

<http://apw2013.icfre.org/index.php>

23-27 Sep 2013

**"Our Forests in the 21st Century – Ready for Risks and Opportunities?"**

Nancy, France

EFI 20 years science and policy forum

<http://www.efi.int/portal/efi20years>

25-26 Sep 2013

**Lignofuels 2013**

London, UK

<http://www.wplgroup.com/aci/conferences/eu-eef4.asp>

30 Sep-4 Oct 2013

**Climate-smart territories in the tropics**

Turrialba, Costa Rica

CATIE

[http://web.catie.ac.cr/wallace2013/costos\\_ing.htm](http://web.catie.ac.cr/wallace2013/costos_ing.htm)

16-17 Nov 2013

**Global Landscapes Forum**

Warsaw, Poland

On the sidelines of the UNFCCC COP19

<http://www.cifor.org/qlf>

9-13 Dec 2013

**European Forest Week and Metsä 2013**

Rovaniemi, Finland

European Forest Week:

<http://www.fao.org/forestry/efw2013/en/>

Guidelines for parallel sessions and side events:

[http://www.iufro.org/download/file/9794/199/metsae-parallel-events\\_pdf/](http://www.iufro.org/download/file/9794/199/metsae-parallel-events_pdf/)

[http://www.iufro.org/download/file/9795/199/metsae-side-events\\_pdf/](http://www.iufro.org/download/file/9795/199/metsae-side-events_pdf/)

Find updated information on the Metsä preparation:

<http://www.unece.org/forests/metsa2013.html>

14-16 Jan 2014

**Green Infrastructure and Water Management in Growing Metropolitan Areas**

Tampa, Florida, USA

Patel College of Global Sustainability at the University of South Florida

**Contact:** Bessie Skoures, skoures(at)usf.edu

<http://patel.usf.edu/patel-center/2014-green-infrastructure-conference/>

10-14 Feb 2014

**World Congress on Agroforestry 2014 (WCA2014)**

Delhi, India

World Agroforestry Centre and the Indian Council of Agricultural Research, together with the Indian Society of Agroforestry and Global Initiatives

Deadline for submission of abstracts:

30 September 2013!

<https://b-com.mci-group.com/Registration/WCA2014.aspx>

2-3 Apr 2014

**Trees, People and the Built Environment II - 2014 National Conference of the Institute of Chartered Foresters**

Birmingham, UK

<http://www.charteredforesters.org/icf-events/icf-national-conference/>

8-13 May 2014

**The Bark & Ambrosia Beetle Academy**

Gainesville, FL, USA

<http://www.ambrosiasymbiosis.org/academy/>

5-11 October 2014

**XXIV IUFRO**

**World Congress 2014**

Salt Lake City, UT, United States

**Call for abstracts open until 15 October 2013!**

<http://www.iufro2014.com/>

