

Rusts of Forest Trees - A Threat to Ecology and Economy

By Richard C. Hamelin, Coordinator of IUFRO 7.02.05

Rust fungi (Basidiomycota, Uredinales) are the largest group of fungal plant pathogens, containing more than 7000 species that infect trees and other plants in virtually all important families worldwide. Combined, these rusts cause billions of dollars of lost revenues annually to the agricultural and forestry sectors worldwide. In addition to monetary losses caused to the forest industry, rusts are responsible for ecological destabilization, for example by threatening keystone species such as high elevation pines.

More than 40 tree rust specialists convened in beautiful Florence for the Fourth International Rusts of Forest Trees Conference held by [IUFRO Working Party 7.02.05](#) on May 3-6 2010 to talk about a broad array of topics, including phylogeny, distribution, biology, epidemiology, genomics, genetic resistance, and management. A field trip allowed participants to visit Tuscany and to see pine rusts.

The **keynote address** was presented by Dr. Richard C. Hamelin who gave an overview of the progress in tree rust research in the past 4 years and highlighted some of the great advances, including the genome sequencing of the first tree pathogen, the poplar rust *Melampsora larici-populina*. In the section on Phylogeny, DNA-based approaches were presented to better understand the species concepts in the complex world of *Melampsora* rusts. A phylogeographic framework was also presented to depict potential sources of introduction of White Pine Blister Rust in North America.

In the session on **Distribution**, scientists from India, Italy, South Africa, Indonesia and Brazil presented results on rust diversity, new reports, incidence, and damage.

A broad range of topics was treated in the session on **Biology and Epidemiology**, including historical accounts of epidemics, rust monitoring, host studies, molecular epidemiology and axenic cultures.

Population Genetics and Genomics was quite an exciting session that included a presentation on the progress of *Melampsora larici-populina* genome analysis, an update on a sequencing project of Fusiform rust, a study on population genetics of *C. flaccidum* and *P. pini*, and work to characterize the secretome and to develop tools for functional analysis of poplar rust in its interaction with the host.



Examining tree rusts during the field trip
Photo provided by Richard Hamelin

Presentations on the very efficient and standardized fusiform resistance screening center in the Southern US, genotype selection in Eucalyptus, and impact of terpenes on rusts susceptibility were covered in the session on **Genetic Resistance**. Intriguing and exciting results on adaptation of rust to quantitative resistance and on the impact of mycorrhiza on infection by poplar rusts were also presented.

The meeting closed with a session on **Management and Control** with both resistance and biological control being covered.

During the field trip, participants had a chance to see *Cronartium flaccidum* (with aecial pustules sporulating on the bark of the pine host *Pinus pinaster!*), *Coleosporium senecionis* (with aecia on needles of the same pine) and *Melampsora pinitorqua* (not yet sporulating, but displaying typical "twist shoots" symptoms).

Overall, the meeting was a great success in terms of representation and breadth of topics. There were **significant advances in tree rust research** since the previous meeting in Lake Tahoe and there were great opportunities for scientists from different countries to discuss and exchange their findings.



XXIII IUFRO World Congress

**Forests for the Future:
Sustaining Society and the Environment**
23-28 August 2010, Seoul, Republic of Korea

<http://www.iufro2010.com>

Check the IUFRO Congress website for program details, deadlines, latest announcements, news releases, technical spotlights and e-newsletters, etc.

Best Poster Award (BPA) at IUFRO World Congress 2010

Would you like to win one out of eight IUFRO Best Poster Awards? If you have been accepted as a presenter of a scientific poster at the IUFRO World Congress in Seoul, you only need to **send the text of your poster without the illustrations** to the: Chair of the IUFRO Honours and Awards Committee, leess(at)frim.gov.my, or leesusee08(at)gmail.com **by 15 July 2010**. For details and the BPA registration form: Best Poster Award box at [Congress web site](#)

People, Forests and the Environment: Coexisting in Harmony

By Mohammed Ellatifi, IUFRO Board Member, and President of Sylva-World for Development and the Protection of Forests and the Environment

The SWC2010 International Conference "People, Forests and the Environment: Coexisting in Harmony" that took place from 25 to 27 May 2010 in Casablanca, Morocco, offered an excellent platform for international debate on the various facets of the interrelations between People, Forest Ecosystems and the Environment, with a focus on the necessity of a sustainable coexistence, in harmony, of all related stakeholders.

Well-being, prosperity, health, drinking water supply, food security, provision of clean energy, social cohesion etc. are all characterized by the interaction of social and environmental dimensions. People, in their numbers, distribution and practices, can have both positive and irreversible negative impacts on the environment and other biodiversity species. Human gains have often been at the cost of environmental degradation (soil erosion, deforestation, loss of biodiversity, loss of fisheries, degradation of ecosystem services, climate change, etc.). Furthermore, all these problems are long-term issues that require decades rather than months or years to be tackled. Therefore, they pose particular challenges to decision-making processes in the political and economic realm.

The SWC2010 Conference focused on the current state of knowledge of people's socioeconomic basic needs, forest goods and environmental services, towards a sustainable existence in harmony, of all concerned stakeholders. The following topics were on the conference agenda:

- (1) **Forests for People;**
- (2) **Forests for Local Development;**
- (3) **Biodiversity Functions and Use;**
- (4) **Valuation of Forest Goods and Services;**
- (5) **Forests and Climate Change;**
- (6) **Man-made Plantations;**
- (7) **Governance;**
- (8) **Education and Knowledge Systems for Sustainability;**
- (9) **Forecasting of Needs and Resources;**
- (10) **People and Forests in Harmony.**



Photo: Conference Opening Session
From left to right: The Representative of the Wali of the Big Casablanca: Pr. Mohamed Barkaoui, President of Hassan II University - Ain Shock, Casablanca; Mr. Mostafa Mosleh, representative of the Moroccan Forest Department; Pr. Mohammed Ellatifi, Member, IUFRO Board, President of Sylva-World, and Conference Chair. Photo (Fettah)

For further details, contact:
Mohammed Ellatifi, mellatifi@yahoo.fr or sylva.world@yahoo.fr

The event was organized by the Non-Governmental Organization "Sylva-World for Development and the Protection of Forests and the Environment", in Casablanca (Morocco), in close collaboration with IUFRO. It counted on the organizational support of the University Hassan II – Ain Shock, Casablanca; the Urban Community Council of Casablanca city, and the Regional Council of Tourism in Casablanca.

The SWC2010 Conference Programme with details of the speakers and the titles of oral and poster presentations can be found at the conference website <http://www.sylvamonde.110mb.com/welcome.htm>. Selected papers will be published in specialized reviews.

The Conference was promoted, among others, by: IUFRO 4.02.01, 8.00.00, 7.01.00, 1.00.00 and IUFRO Task Force on Forests and Human Health

Recognition, Identification and Management of Pests and Diseases of Tropical Plantation and Forest Trees

By Jolanda Roux, Coordinator of IUFRO Working Party 7.02.07

The IUFRO Working Party on Diseases of Tropical Trees (WP 7.02.07) organized a workshop for foresters, forestry researchers and other stakeholders on diseases of trees on 3-7 May 2010. The workshop was organized in collaboration with the Sawlog Production Grant Scheme (SPGS) in Kampala, Uganda, and the Makerere University. A total of 37 participants from Uganda, Kenya, Tanzania, Ethiopia, South Africa and Australia were present at the workshop.



Participants looking at termite damage to the roots of a eucalypt tree (Photo by Jolanda Roux)

The week-long program comprised formal presentations, a field visit, laboratory exercise and open discussion on lessons learnt and the way forward. The field trip to The Green Resources' Busoga Forestry Company, a

commercial tree grower (supported by the SPGS since 2006) in Bukaleba Central Forest Reserve in Mayuge district allowed participants to observe the current tree pests and diseases issues in the region addressed during the workshop. Participants were shown what symptoms to look for to identify trees with disease and pest problems, as well as how to evaluate the severity of the problem. Discussion also focused on practical methods to limit pest and disease spread and the close interaction between good forestry practices and tree health.

The Workshop offered a valuable platform for international debate on the tree pests and disease problems across the region, their impacts, and how to develop sustainable control strategies. The meeting was especially valuable since it included private timber growers, foresters from commercial companies, extension agents, forestry researchers, university researchers and government representatives. This diversity of people allowed for the development of a better understanding between the different sectors of forestry in the challenges faced by all. It was noted that the threats of tree pests and diseases faced in the different countries across the African region were very similar and that these pests and disease pathogens have no respect for borders.

Finally, it was clear from the feedback that participants greatly appreciated the idea of talking about tree pests and diseases within the region, with many proposing to make it an annual event in order to exchange ideas, especially on new case studies and new happenings with pests and diseases around the globe.

Publications

IUFRO 6.13.00 Proceedings and 25th Anniversary

Mersudin Avdibegović, Peter Herbst, Franz Schmithüsen [eds.] 2009. Legal Aspects of European Forest Sustainable Development. Proceedings of the 10th International Symposium on Legal Aspects of European Forest Sustainable Development. Sarajevo, Bosnia and Herzegovina; 7-9 May 2008. 220 pp. ISBN 978-9958-616-11-2.

<http://www.iufro.org/science/divisions/division-6/60000/61300/publications/>

The meeting in Sarajevo also marked the 25th anniversary of the IUFRO Research Group "Forest Law and Environmental Legislation". During these 25 years, the group has developed and consolidated its matchless position and broadly acknowledged work in the rapidly developing field of forest law and environmental legislation around the world.

Proceedings: 9th International Christmas Tree Research and Extension Conference: <http://www.iufro.org/download/file/5640/4502/20209-ctre-proceedings-09.pdf/>

Reader: Jöbstl, H. (2009) [Contributions to Accounting in Forestry](#). – Reader, Universität für Bodenkultur, Vienna, 124 pp. ISBN 978-3-900962-83-8.

Historical Forestry Books

A new series of "Forstliche Klassiker" in German, edited by Bernd Bendix, are available from Kessel Verlag, <http://www.verlagkessel.de>

IUFRO's Proceedings Archive

IUFRO maintains a proceedings archive on its website at: <http://www.iufro.org/publications/proceedings/> There you will find IUFRO conference proceedings that were submitted electronically. For most of the proceedings, we are able to provide online PDF versions, freely available for download. We would be happy to receive the proceedings from your IUFRO meetings!

Announcements & News

New Dean at UBC's Faculty of Forestry



John Innes, professor and FRBC Chair of Forest Management, has been appointed the University of British Columbia's new dean in the Faculty of Forestry, beginning July 1, 2010. Innes' six-year appointment marks a transition for the Faculty, reflecting the changing role of forestry around the world. Forests are increasingly recog-

nized for their social and environmental value. (from UBC media release dated 1 June 2010)

IUFRO would like to congratulate its Vice-President Policy and longstanding officeholder on this prestigious appointment.

Career Opportunity: Science Officer at ICSU

The International Council for Science (ICSU) is seeking a Science Officer to assist with the planning and implementation of ICSU's initiatives. The closing date for applications is 16 August 2010.

Visit: http://www.icsu.org/9_latestnews/latest_47.html

Call for Research Proposals

The *fonaso Erasmus Mundus Joint Doctoral Programme* invites applications on questions relating to national consequences and effects of international forest policy and the international forest regime. Under the theme "The international forest regime as driver for sustainable national forest policies" applicants are invited to submit relevant research proposals until 1 October 2010 (fonaso call 2.6 at <http://www.fonaso.eu/Research%20Topics/Category%202.aspx#6>).

For questions on this topic please contact Lukas Giessen, [lgiesse\(at\)uni-goettingen.de](mailto:lgiesse(at)uni-goettingen.de).

Call for Applications for the ICSU Grants Programme 2011

The Programme Statement and Schedule, as well as the Application Form, are available in the Member Zone of the ICSU web site. The deadline for receipt of applications is 1 December 2010. The ICSU Grants Programme is reserved for ICSU Members. Lead Applicants must be ICSU Scientific Unions, Interdisciplinary Bodies, or Joint Initiatives, and can be lead on no more than one application.

For questions, contact Vivien Lee at the ICSU, [vivien.lee\(at\)icsu.org](mailto:vivien.lee(at)icsu.org)

Europe's Forests Are Expanding, but has the Public Noticed?

(From a press release issued by the FCN in Geneva, Switzerland, on 7 June 2010:

http://www.unece.org/press/pr2010/10tim_p09e.htm)

There are a number of public misperceptions about forests in the pan-European region. According to national and regional surveys, it is common belief that forests are disappearing and using wood is a threat to forest health. But the opposite is in fact the case.

The UNECE/FAO Forest Communicators Network is mobilizing its participants to become proactive and dispel widespread public misconceptions about forests in Europe. The Network consists of a group of experts from member States in the UNECE region. It met recently in Gothenburg, Sweden, to develop a pan-European strategy for forest communication, and share plans and experiences concerning national public-awareness campaigns. IUFRO participates in the FCN.

For more information on the FCN, please visit:

<http://timber.unece.org/index.php?id=95>

FOREST EUROPE: Working for Healthy Forests in Europe

(from a press release issued in Oslo, Norway, on 14 June 2010)

In one year, ministers and high level representatives responsible for the forests of all 46 European countries and the EU are invited to Oslo for the 6th FOREST EUROPE Ministerial Conference to take decisions that affect the well-being of people and the environment both within and beyond their borders. The conference will be held in the Norwegian capital from 14-16 June 2011. More at: <http://www.foresteuropa.org>

Restoration of Afforested Peat Bogs

This new Research Note by the UK Forestry Commission presents the results of recent Forest Research experiments with different methods for restoring peat bogs that have been converted to forest.

For download, please visit:

<http://www.forestry.gov.uk/publications>

Eucalyptus Genome Database News

The preliminary 8X draft assembly of the *E. grandis* genome, which is being sequenced by the US Department of Energy (DOE) Joint Genome Institute (JGI), is available in the public Eucalyptus Genome Database (<http://eucalyptusdb.bi.up.ac.za/>).

For more information, contact: Zander Myburg, EUCAGEN Coordinator ([Zander.Myburg\(at\)up.ac.za](mailto:Zander.Myburg(at)up.ac.za))

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 at:
<http://www.gfis.net>

5-7 October 2010

Emerging Economic Mechanisms: Implications for Forest-Related Policies and Sectoral Governance
FAO Headquarters, Rome, Italy
IUFRO [6.12.00](#)
Contact: Gerard Buttoud, gerard.buttoud(at)unitus.it
<http://forest-conf-fao.unitus.it/>

7-15 October 2010

Travelling Workshop: Canopy Processes in a Changing Climate
South East Australia
IUFRO [2.01.12](#)
Contact: Anthony O'Grady, anthony.ograde(at)csiro.au
<http://www.cdesign.com.au/iufro2010/>

11-15 October 2010

Society of Wood Science and Technology: 53rd International Convention
Geneva, Switzerland
IUFRO [5.00.00](#)
Contact: Victoria L. Herian, vicki(at)swst.org
<http://www.swst.org/meetings/AM10/>

17-19 October 2010

8th Biennial Short Rotation Woody Crops Operations Working Group: Short Rotation Woody Crops in a Renewable Energy Future: Challenges and Opportunities
Syracuse, Ny, United States
IUFRO [1.03.01](#)
Contact: Lawrence P. Abrahamson, labrahamson(at)esf.edu
<http://www.esf.edu/outreach/pd/2010/srwc/>

27-29 October 2010

Fagus 2010: Is There Future for Beech - Changes, Impacts and Answers
Varazdin, Croatia and Zala County, Hungary
IUFRO [1.00.00](#)
Contact: Igor Kolar, Email: igork(at)sumins.hr
<http://www.sumins.hr/fagus2010/index.html>

5-8 December 2010

2do Congreso Iberoamericano de Protección de la Madera
Ciudad De Mar Del Plata, Argentina
IUFRO [5.00.00](#)
Contact: Osvaldo Encinas, osenbla(at)gmail.com
<http://www.ripma.org/>

8-10 February 2011

Short Rotation Forestry: Synergies for Wood Production and Environmental Amelioration
Ludhiana, India
IUFRO [1.03.03](#)
Contact: Sanjeev Chauhan, chauhanpau(at)rediffmail.com
<http://www.iufro.org/science/divisions/division-1/10000/10300/10303/activities/>

23-28 May 2011

Workshop of Working Party 7.02.02
Cantabria, Spain
IUFRO [7.02.02](#)
Contact: Julio Javier Diez Casero, jdcasero(at)pvs.uva.es

7-11 June 2011

20th International Wood Machining Seminar
Skelleftea, Sweden
IUFRO [5.04.08](#)
Contact: Anders Gronlund, info(at)iwms20.se
<http://www.ltu.se/ske/IWMS-20/IWMS-20>

26 June – 2 July 2011

Tree Biotechnology 2011: From Genomes to Integration and Delivery
Arraial D'ajuda, Porto Seguro, Bahia, Brazil
IUFRO [2.04.06](#)
Contact: Dario Grattapaglia, dario(at)cenargen.embrapa.br
<http://www.treebiotech2011.com/>

7-9 September 2011

Novel Risks with Bark and Wood Boring Insects in Broadleaved and Conifer Forests
Sopron, Hungary
IUFRO [7.03.05](#)
Contact: Barbara J. Bentz, bbentz(at)fs.fed.us ; Ferenc Lakatos, flakatos(at)emk.nyme.hu ; Rudolf Wegensteiner, rudoif.wegensteiner(at)boku.ac.at
<http://www.iufro.org/science/divisions/division-7/70000/70300/70305/activities/>

Other Meetings

12-23 July 2010

International Course on Community Managed Disaster Risk Reduction
IIRR Yen Center in Silang, Cavite, Philippines
International Institute of Rural Reconstruction
Contact: Dulce Dominguez, Dulce.Dominguez(at)iirr.org
<http://www.iirr.org>

5-11 September 2010

World Water Week
Stockholm, Sweden
Stockholm International Water Institute
<http://www.worldwaterweek.org/>

27-29 October 2010

5th Chilean Congress of Forest Sciences
Temuco, Chile
Temuco Catholic University (TCU), Chilean Society of Forest Sciences (CSFS)
Contact: Elizabeth Margaret Gutiérrez, congresoforestal(at)uct.cl

8-10 November 2010

Climate Adaptation in the Nordic Countries: Science, Practice, Policy
Stockholm, Sweden
NORDic Climate change Adaptation research Network, (NORDCLAD-Net)
<http://www.nordicadaptation2010.net>

11-13 November 2010

First Serbia Forestry Congress
Belgrade, Serbia
Forestry Faculty of Belgrade University on the occasion of its 90th anniversary