

Phytophthora in Forests and Natural Ecosystems

By Everett Hansen, Coordinator of IUFRO Working Party 7.02.09

In this age of globalization, exotic, invasive pathogens are increasingly destructive to world forests. Many of the most dangerous diseases are caused by water molds in the genus *Phytophthora*. At the same time, we are beginning to understand the diversity of indigenous species of *Phytophthora*, and their ecological roles in forest ecosystems. These two themes, new epidemics including their prevention and management, and indigenous biodiversity, were elaborated in the most recent meeting of IUFRO Working Party 7.02.09.

Forest pathogens increasingly threaten forest health and productivity. Particularly destructive have been species of *Phytophthora*, the water molds. The IUFRO Working Party "Phytophthora in Forests and Natural Ecosystems" first met in 1999 to bring together forest scientists and managers to share information about these dangerous pathogens. The meetings have moved around the globe, focusing on threats from a particular host-pathogen combination. In Oregon it was *P. lateralis* and *Chamaecyparis*, in Germany it was oak decline and the Alder *Phytophthora*, in Western Australia we were immersed in *P. cinnamomi* and "dieback" of indigenous flora, and in California focus was on Sudden Oak Death.

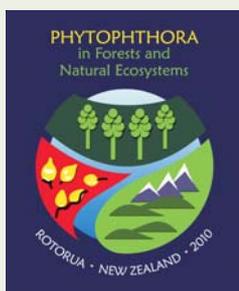
In 2010 the group met in New Zealand for the 5th time with a week-long program of field observations, formal presentations, and most valuable, open discussion. The local attraction was a "new" and lethal disease of the iconic kauri tree. This indigenous member of the Araucareaceae reaches a huge size and great age. It has been central to Mauri cosmology and life since they first discovered the islands. Now a new *Phytophthora* is killing the trees. As with many *Phytophthoras*, humans seem to be important vectors. We heard of the importance of kauri from Mauri elders and their concerns for its future, and observed vigorous efforts to limit the spread of the disease. The public information campaign was most impressive. Discussion focused on practical methods to limit spread, public participation,



Public information signs, created by the Auckland Regional Council, warning of the dangers of Kauri dieback. Photo by Everett Hansen

and funding priorities. The Auckland Regional Authority solicited ideas from the meeting participants.

The scientific program included a "Regional Roundup" summarizing ongoing activity. Australia and Europe have especially active research groups. This offered paper sections focused on Invasion groups and New Diseases. It was sobering, with dramatic reports of new diseases on radiata pine, and new hosts and behavior for *P. ramorum* and *P. lateralis*. A section on Surveying for *Phytophthora* reflected increasing attention to discovering and understanding indigenous *Phytophthora* species. There is much attention to the diversity of species in forest streams. Disease Management was discussed in several sections with special presentations on use of fungicides, and the large scale, integrated program in Australia to combat dieback. Another special presentation summarized work to date on Disease Physiology, suggesting fruitful approaches for future work.



The **Fifth Meeting of IUFRO Working Party 7.02.09 "Phytophthora in Forests & Natural Ecosystems"** was held in **Auckland and Rotorua, New Zealand, March 7-12, 2010**. Local sponsorship was by scientists and staff from SCION and Landcare Research, with additional support from MAF Biosecurity New Zealand and the New Zealand Plant Protection Society. The field trip to the kauri forests in the Waitakere Ranges was arranged by the Auckland Regional Council. There were 97 registered participants from 18 countries in Europe, Asia, Africa, North and South America, Australia and New Zealand.

Abstracts of presentations are available at <http://www.phyto2010.com/index.html>. The **Proceedings** will be published in a future issue of New Zealand Journal of Forestry Science. **The next meeting** is now scheduled for 2012 in Europe.

4th International Casuarina Workshop: Improving Smallholder Livelihoods through Improved Casuarina Productivity

By Antoine Kalingaire, GRP2 co-Leader, Coordinator of IUFRO Working Party [2.08.02](#), Bamako, Mali

The 4th International Casuarina Workshop was held in Haikou City, Hainan Province, People's Republic of China during 22-25 March 2010.

This workshop revealed a substantial change in the way casuarinas are cultivated and utilized. Tens of thousands of small-land holders such as those in India and China cultivate short-rotation casuarina plantations for household income generation. Restoration of degraded and over-exploited shelterbelts has been a focus of provincial governments in southern China. Casuarinas remain important species for windbreaks and fuelwood but are now also used by paper making, plywood and chipboard industries.

Research on genetic improvement, plantation silvicultural management and biotechnology of symbiosis has advanced considerably since the 3rd Casuarina Workshop in Vietnam in 1996. Genetic improvement of *Casuarina equisetifolia* has progressed to the second generation, and seed orchards and selected clones are now being used in both China and India. *C. junghuhniana* has become an important



Cuttings propagation by water culture technique is a normal method for mass production of casuarina planting stock in China. Photos by Zhong Chonglu



plantation species in India, and a breeding program for this species is also underway. Progress in gene isolation, development of genetic transformation and gene silencing procedures for actinorhizal trees of the Casuarinaceae family have opened new avenues for studies of molecular bases. Several plant genes acting in the earliest events of *Casuarina-Frankia* recognition and infection have been isolated and characterised. The research will benefit casuarina growers both large companies and smallholder farmers.

A total of 73 participants from 14 countries attended and presented 40 scientific reports. The workshop was hosted by the Chinese Academy of Forestry's Research Institute of Tropical Forestry (RITF). Travel support for participants was provided by Asia Pacific Association of Forestry Institutions (APAFRI), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, World Agroforestry Centre (ICRAF), Institut de recherche pour le développement (IRD) and Consulate General of France in Guangzhou. Provincial forestry agencies in Fujian, Guangdong, Hainan and Zhejiang supported travel expenses of their respective staff. A proceedings of this workshop will be available by the end of 2010.

For further information please contact:
Dr Zhong Chonglu, Chinese Academy of Forestry
E-mail: zclritf@gmail.com

Publications

Water, Wetlands and Forests: A Review of Ecological, Economic and Policy Linkages

CBD Technical Series 47

The report is available for download at <http://www.cbd.int/ts>

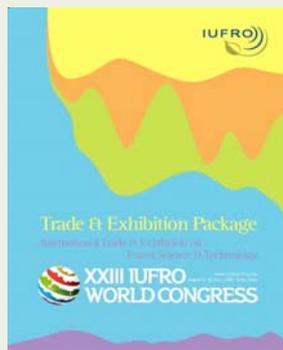
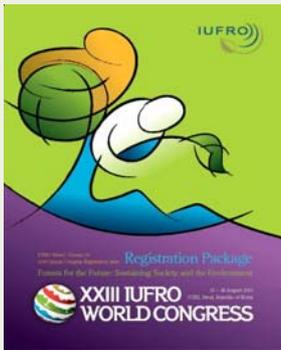
First issue of the Cities and Biodiversity Newsletter of the Convention on Biological Diversity is available at: <http://www.cbd.int/authorities/doc/newsletter/cities-newsletter-01-01-en.pdf>

Awards

Call for Nominations for the 2011 L'OREAL-UNESCO Awards "For Women in Science" dedicated to the Physical Sciences

The 2011 Awards will be given to 5 women who have made a significant contribution in the Physical Sciences. One Award is given per geographic region. Each Award is worth US\$ 100,000.

For details, please send an email to: [lorealunescoawards\(at\)dgc.loreal.com](mailto:lorealunescoawards(at)dgc.loreal.com).
Deadline for nominations is 15 June 2010.



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>

New! Available for download
from the Congress and the IUFRO websites:
["Congress Registration Package"](#)
["Trade and Exhibition Package"](#)

For any further questions, contact the Congress
Organizing Committee: [iufrococ\(at\)forest.go.kr](mailto:iufrococ@forest.go.kr), or
INTERCOM Convention Services, Inc.:
[iufro2010\(at\)intercom.co.kr](mailto:iufro2010@intercom.co.kr)

Showcasing IUFRO Member Organizations

IUFRO's "**featured member**" section on the homepage successfully started in January 2010 with the aim to give our Member Organizations a platform to present themselves to the wide IUFRO readership. We give forest research institutions the opportunity to show what they do and to highlight their scientific achievements on a webpage that is visited by people with an interest in forests and trees from all over the world.

Why not let us showcase your institution next?
Visit <http://www.iufro.org> and contact us at:
[office\(at\)iufro.org](mailto:office@iufro.org)

Do You Know the IUFRO Online Notice Board?

Visit: <http://www.iufro.org/discover/noticeboard/>

The notice board offers a selection of **IUFRO and non-IUFRO announcements** ranging from job openings to course and scholarship proposals, meetings, publications, calls for awards etc., as well as news related to the **International Year of Biodiversity**, for example.

If you would like us to publish your announcement on the notice board, please contact us at:
[office\(at\)iufro.org](mailto:office@iufro.org)

Students' Column

Tarun Bathija talked with **K.C. Arbin** (photo), a student trainee at IUFRO Headquarters from October to December 2010. K.C Arbin, who was born, grew up and studied Forestry in Nepal, is currently pursuing his Master's degree at Joensuu University, in Finland.

T: Why did you want to come to Austria and do an internship at the IUFRO Headquarters?

A: I applied for an internship with IUFRO because it is the leading international organization working in forest science. I was curious to discover more about this international organization and its working mechanism. I especially wanted to learn more about how research on climate change is done at IUFRO.

T: How did working at IUFRO help you work towards your career goals?

A: I got the opportunity to work with IUFRO experts, in particular on the topic of "Climate change impacts on forests and people in South Asia and options for adaptation"; this helped me broaden my knowledge on climate change issues and it will be helpful for my further readings and also for my master thesis. Moreover, during this period I was working in a team, which in itself is an experience and will be helpful in my professional career.



T: Did you enjoy the experience and what is your advice for future students coming to do an internship with IUFRO?

A: I enjoyed my internship a lot, had a nice time and it was a great experience to work with the IUFRO team. During my internship period I really discovered that IUFRO is the leading organization in the field of forestry. As students we can learn more from IUFRO concerning different aspects of forests and trees. So IUFRO is definitely a good place for students to learn and get experience within the field.

IUFRO Meetings

NOTE: This is not a full list of 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>

26-30 May 2010

How to Both Harvest and Preserve Forests More or Better?

Paris, France

IUFRO [4.05.00](#), [4.05.01](#), [4.05.02](#)

Contact: Jean Luc Peyron, [peyron\(at\)gip-ecofor.org](mailto:peyron(at)gip-ecofor.org) ;
Viviane Appora, [ecofor\(at\)gip-ecofor.org](mailto:ecofor(at)gip-ecofor.org)
[http://www.gip-ecofor.org/publi/
page.php?id=1527&rang=0&domain=1&lang=fr_FR](http://www.gip-ecofor.org/publi/page.php?id=1527&rang=0&domain=1&lang=fr_FR)

6-12 Jun 2010

Small Scale Forestry in a Changing World: Opportunities and Challenges and the Role of Extension and Technology Transfer

Bled, Slovenia

IUFRO [3.08.00](#), [6.06.01](#), [6.06.02](#)

Contact: Jurij Beguš, [jurij.begus\(at\)zgs.gov.si](mailto:jurij.begus(at)zgs.gov.si)
<http://www.gozdis.si/ssfett2010/>

7-10 Sep 2010

ForestSat 2010: Operational Tools in Forestry Using Remote Sensing Techniques

Lugo and Santiago De Compostela, Spain

IUFRO [4.02.08](#)

Contact: Mathias Schardt, [mathias.schardt\(at\)joanneum.at](mailto:mathias.schardt(at)joanneum.at)
David Miranda, [david.miranda\(at\)usc.es](mailto:david.miranda(at)usc.es)
<http://forestsat2010.usc.es/en/index.html>

20-24 Sep 2010

Structures and Processes of the Initial Ecosystem Development

Cottbus, Germany

IUFRO [1.06.00](#)

Contact: Reinhard Hüttel, [huettl\(at\)gfz-potsdam.de](mailto:huettl(at)gfz-potsdam.de)
http://www.tu-cottbus.de/sfb_trr/eng/index.htm

20-25 Sep 2010

Meeting of Young Researchers in Earth Sciences - MYRES 2010: "Structures and Processes of Initial Ecosystem Development"

Cottbus, Germany

IUFRO [1.06.00](#)

Contact: Werner Gerwin, [werner.gerwin\(at\)tu-cottbus.de](mailto:werner.gerwin(at)tu-cottbus.de)
[http://lsb-server.umwelt.tu-cottbus.de/MYRES_2010/
myres4/index.html](http://lsb-server.umwelt.tu-cottbus.de/MYRES_2010/myres4/index.html)

27-29 Oct 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, [igork\(at\)sumins.hr](mailto:igork(at)sumins.hr)
<http://www.sumins.hr/fagus2010/index.html>

Other Meetings

Aichi-Nagoya International E-Conference on the Post 2010 Biodiversity Target (ANIEC 2010)

Available on the Internet at
<http://www.cbd.int/aniec2010>

3-7 May 2010

18th European Biomass Conference and Exhibition

Lyon, France

[http://www.conference-biomass.com/
Welcome.404.0.html](http://www.conference-biomass.com/Welcome.404.0.html)

10-21 May 2010

14th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 14) of the Convention on Biological Diversity

Nairobi, Kenya

<http://www.cbd.int/sbstta14/>

26 May 2010

PEFC Stakeholder Dialogue

Geneva, Switzerland

<http://pefc-may2010-forest.eventbrite.com>

28 Jun–2 Jul 2010

18th Commonwealth Forestry Conference: "Restoring the Commonwealth's Forests – Tackling Climate Change"

Edinburgh, UK

Contact: [cfcc\(at\)in-conference.org.uk](mailto:cfcc(at)in-conference.org.uk)

<http://www.cfc2010.org>

News releases at <http://www.cfc2010.org/info.html>

28 Jun–2 Jul 2010

Forest ecosystems in the conditions of climate change: biological productivity, monitoring and adaptation

Yoshkar-Ola, Mari-El Republic, Russian Federation

Mari State Technical University

Contact: Eldar Kurbanov, [kurbanovea\(at\)marstu.net](mailto:kurbanovea(at)marstu.net)

<http://tempus.marstu.net/conference/eng/main.html>

31 Aug-3 Sep 2010

Workshop on forest governance, decentralisation and REDD+ in Latin America and the Caribbean

Oaxaca, Mexico

A country-led initiative in support of the UN Forum on Forests by the Govnmts. of Mexico and Switzerland

[http://www.cifor.cgiar.org/Events/Oaxaca/
decentralisation-redd.htm](http://www.cifor.cgiar.org/Events/Oaxaca/decentralisation-redd.htm)

5-11 Sep 2010

World Water Week

Stockholm, Sweden

<http://www.worldwaterweek.org/>

5-8 Oct 2010

BIOCOMP 2010 - 10th Pacific Rim Bio-Based Composites Symposium

Banff, Alberta, Canada

Contact: [biocomp\(a\)albertainnovates.ca](mailto:biocomp(a)albertainnovates.ca)

<http://www.biocomp2010.com>