

Unit 7.02.00 - Pathology Newsletter



Coordinator: Jolanda Roux Deputy: Tod Ramsfield www.iufro.org September 2013

Message from the Coordinator

Jolanda Roux



Dear Friends and Colleagues,

Collaborations have many advantages and this was made clear again to me during the recent 52nd IUFRO board meeting that I recently had the

privilege to attend. At this meeting it was pointed out that journal articles associated with IUFRO were cited 20% more than non-IUFRO associated articles. In IUFRO we have the opportunity to collaborate with researchers in more than 700 member organizations from more than 110 countries! In 2012 alone, 90 IUFRO associated conferences and other meetings were organized, bringing together thousands of scientists who share a passion for forests and trees.

A challenge for all of us is to also collaborate beyond our own immediate fields of research. This is also something

that the IUFRO board has been trying to encourage through the task forces and other initiatives. Although many of you are already doing this, we need to do more. And this does not only mean pathologists talking to entomologists or climate change scientists. We need to collaborate with researchers in other IUFRO Divisions. I, therefore, encourage all of you to visit the IUFRO website and seek opportunities where you can do this. Also, keep this in mind when registering for the upcoming IUFRO World Congress in 2014. Although more than a year distant, the call for abstracts is now open, and the deadline for submissions will be in October 2013.

The continuing trade (both legal and illegal) in live plants continues to frustrate many of us as we see the dramatic impact that invasive alien pathogens can have. From the impact of *Phytophthora ramorum* in the USA, to *Hymenoscyphus pseudoalbidus* in Europe and *Puccinia psidii* in Australia, the list continues to grow on an annual basis. Opinion on how to deal with this varies, but the bottom line is that if we want to protect trees and thus our forests, we cannot sit back and do nothing.

Communication with those outside our immediate fields is again a key issue in dealing with this threat.

I encourage all of you to let us know news from your part of the world. You can send this to Tod Ramsfield (Tod.Ramsfield@NRCan-RNCan.gc.ca) or myself, and also post this to your working party co-ordinators for distribution on the

working party and IUFRO website (remember you can also post items at the FORPATH list server).

You can contact me by e-mail:

jolanda.roux@fabi.up.ac.za

Yours in tree health,

Jolanda

24th IUFRO World Congress Abstract Submission

The next world congress will be held in Salt Lake City, Utah, USA from October 5–11, 2014. The congress website is now accepting abstracts for oral and poster presentations (<http://www.iufro2014.com>). If you have not already registered on the website, you will have to do so to access the abstract submission portal. The deadline for English abstract submission is October 15, 2013. If the abstract is submitted in another IUFRO language, the submission deadline is September 15 to allow time for translation. During the submission process, you will be asked to select the most appropriate congress theme and technical session. A document with

brief outlines of every technical session can be accessed once the author has registered on the website and initiated the abstract submission process. Abstract submission is via a web form that restricts title length to 20 words and abstract text to a maximum of 200 words. Text may be copied and pasted from a word processor document. Up to 5 keywords are requested and during the submission process, authors can select either “oral presentation preferred (but would accept a poster)” or “poster presentation preferred”. Coauthors are added during the submission process. Presenting authors (i.e. those that are speaking) are restricted to two oral presentations and five poster presentations. Acceptance decisions will be made no later than December 15, 2013.

Myrtle rust pathogen detected in South Africa!

Researchers at the Forestry and Agricultural Biotechnology Institute (FABI), in June 2013, confirmed the presence of the myrtle rust pathogen, *Puccinia psidii*, in South Africa (Roux et al., 2013, The myrtle rust pathogen, *Puccinia psidii*, discovered in Africa. IMA Fungus 14: 155-159.). The possible presence of the pathogen was brought to their attention by an alert forester who spotted a diseased *Myrtus communis* (myrtle) plant on the KZN south coast. He immediately sent photos of the infected plant to researchers at FABI. Based on subsequent infected plant samples sent to FABI, researchers were able to confirm the identity of the pathogen as *P. psidii* through the use of DNA sequence data and morphology.

Puccinia psidii is one of the most important invasive alien plant pathogens and has been described as “the biggest threat to the ecosystem” in Australia. The confirmation of the presence of this globally important quarantine pathogen in South Africa is likely to have substantial negative long term consequences for both forestry and for plant conservation in the country.

Meeting of Unit 7.02.02 Foliage, shoot and stem diseases

Cerna Hora and Brno, Czech Republic, May 20–25, 2013

Vera Tomesova, Leticia Botella Sanchez, Milon Dvorak, Thomas Cech, Libor Jankovsky

IUFRO meeting “Biosecurity in natural forests and plantations, genomics and biotechnology for biosecurity in forestry” was held in Cerna Hora and Brno, Czech Republic, May 20 – 25 (www.IUFRO2013.eu). The meeting was hosted by Mendel University in Brno (<http://www.mendelu.cz/en>). It was dedicated to the chances of prevention and avoidance of fungal pathogens of trees and shrubs spreading into forests. Prerequisite for these chances is an improved knowledge of the pathogens, which is achieved by molecular biology, and here especially by research on the pathogens' genomes to enable a view on the pathogens role in its environment. In addition to this, a second emphasis should be laid on research on biological measures against invasive fungal diseases focusing on antagonistic species as well as on the practicability as well as the risk of their use in forests.

A total of 104 participants from 22 different countries all over the world took part on this meeting.

Keynote Speakers:

Treena Burges (Murdoch University, Australia) presented “Forest pathology at the interface between natural forest ecosystems and plantations; a focus of Eucalyptus.”

Lindsay Bulman (Scion, New Zealand) presented “Long-standing and recent conifer foliage diseases – is time the only contrasting feature?”

Bernard Slippers (FABI Pretoria) presented “Opportunities for tree health research in the era of Genomics.”

Alex Woods (Smithers RSC, British Columbia) presented “Warmer and wetter, shouldn't that be good for trees? Lessons learned from a lodgepole pine provenance trial in British Columbia, Canada.”

More information about meeting could be found on following web page: <http://www.iufro2013.eu/>, complete photogallery: <http://milon.modry.cz/akce/iufro13/index.html#>



Meeting of Unit 7.02.04 Phytoplasma and virus diseases of forest trees

Berlin, Germany, May 29, 2013
Carmen Büttner and Risto Jalkanen

The research workshop of IUFRO Unit 7.02.04 focused on "Viruses and Phytoplasmas of Forest and Urban Trees" and was held in Berlin, Germany, on 29th May 2013. The workshop was organized and hosted by the Humboldt-Universität zu Berlin (HU), the German Phytopathological Society (DPG) and the Julius Kühn-Institut, Federal Research Centre for Cultivated Plants (JKI) with the Austrian Working Group of nutrition, veterinary and agriculture (ALVA). It was conceived to allow participants to exchange information and experiences on the status quo of this topic. It was attended by 42 researchers from Finland, USA, Greece, Columbia and Germany.

Highlights

a) Viruses affecting broad leaved urban and forest trees

Characterisation of European mountain ash ringspot-associated virus as the type-species of the newly described virus genus Emaravirus. Description of the genus and members of the genus. Tools to investigate and characterise unknown viruses in diseased *Ulmus* and other woody plants.

b) Nepoviruses

The situation of the birch leaf roll disease in Finland which is associated with an infection of Cherry leaf roll nepovirus (CLRV). Genome organization of CLRV and functional characterization of virus encoded products. Epidemiological studies and investigation of vector transmission of CLRV. Characterization of symptom determinants on the Arabis mosaic nepovirus (ArMV) genomic RNA2.

c) Phytoplasma diseases

Impact of genome analyses on Phytoplasma research and comparative studies regarding the Sec-dependent protein export in Phytoplasmas and *Acholeplasma*. Promising approaches to control apple proliferation disease by cross-protection and plant resistance.



d) Poster

Description of symptoms and investigations on distribution and dissemination of viruses infecting forest trees. Molecular analyses and genetic diversity of viruses affecting woody hosts. Diagnostic tools for viruses of forest trees. Investigations addressing the alteration of allergen potential by *Cherry leaf roll virus* (CLRV) in infected birch pollen.

Investigations on virus and phytoplasma diseases in the forest ecosystem are extremely rare as compared to those of agricultural environment. The ability to identify pathogens in forest and urban trees may be compromised when novel or unsuspected viruses and phytoplasmas are causing infection since traditional virus detection methods target specific known pathogens. Therefore, more detailed diagnostic trails for the determination of individual known and unknown viruses have to be established referring to the presence of visible symptoms. The successful application of viral and phytoplasma metagenomics should be one of the future concerns.

Abstracts of the oral and poster presentation are available in the proceedings of the 5th International Symposium on Plant Protection and Plant Health in Europe (Section 9: page 295-333; ISBN 978-3-941261-11-2 or free download: http://dpg.phytomedizin.org/fileadmin/daten/04_Verlag/02_SP/11_PPPHE_2013/0294-sp-2013-ppphe-2.pdf).

Third IUFRO Latin America Congress

San José, Costa Rica, June 12–15, 2013

The theme of the third IUFRO Latin America congress was “Forests, Competitiveness and Sustainable Landscapes” and it was attended by over 500 participants, primarily from Latin America and South America, although there was global representation at the congress. The congress was jointly organized by IUFRO and the Agriculture Research and Higher Education Centre (CATIE). It was a very full congress, with a total of 53 technical sessions and 300 speakers, which included two sessions on threats to forest health. The talks in the forest health sessions described the linkages between changing climatic conditions and pest populations, air pollution, international trade, the benefits of surveillance and globalization. For a full description of the forest health sessions visit the IUFRO Blog (<http://theiufroblog.wordpress.com/2013/06/13/iufrolat-iii-session-highlights-threats-to-forest-health/>). Most of the congress sessions had a global focus, with topics such as: traditional forest-related knowledge contributions to sustainable forest landscape management, international forest governance, REDD+, non-timber forest products, water resources, and forest silviculture. Readers are encouraged to visit the IUFRO Blog (<http://theiufroblog.wordpress.com/>) for detailed summaries of the sessions.



Jolanda Roux, Andrzej Bytnerowicz, Ecki Brockerhoff, Mike Wingfield, Tod Ramsfield and Sandy Liebhold all participated in the Threats to Forest Health – Forest Pests and Diseases, Biological Invasions, Air Pollution and Climate Change sessions at the third IUFRO Latin America Congress.

Upcoming Meetings

61st Western International Forest Disease Work Conference, Waterton Lakes, Canada, October 8 to 11, 2013.

<http://www.fs.fed.us/foresthealth/technology/wif/>

7.02.10 and FP 7 EU–Research Project REPHRAME, Pine Wilt Disease Conference, Braunschweig, Germany, October 15 to 18, 2013.

<http://dpg.phytomedizin.org/de/pwdc2013/>

7.03.12 Invasive Species in International Trade will be meeting with the International Congress on Biological Invasions (ICBI) and the International Forestry Quarantine Research Group (IFQRG) In Qindao, China from October 23 to November 1, 2013.

<http://www.icbi2013.org/web/index.aspx>

7.02.05 Rusts of Forest Trees with 2.02.15 Breeding and Genetic Resources of Five–Needle Pines and “Strobosphere” Joint Meeting “Genetics of five–needle pines and rusts in mountain landscapes – Conservation, utilization and evolution in a changing climate”, Ft. Collins, Colorado, USA, June 15 to 20, 2014. Contact: Richard Sniezko (rsniezko@fs.fed.us) or Anna Schoettle (aschoettle@fs.fed.us).

24th IUFRO World Congress, Salt Lake City, Utah, USA, October 5 to 11, 2014.

<http://www.iufro2014.com>

7th meeting of Unit 7.02.09 “Phytophthora in Forests and Natural Ecosystems”, Esquel, Argentina, November 10 to 14, 2014.

<http://www.iufrophytophthora2012.org/>

FORPATH list server

The FORPATH list server was initiated by Dale Berghdal in the early 1990s and is now hosted by IUFRO. FORPATH links the international forest pathology community by announcing meetings, jobs, graduate student positions and discussing forest pathology issues. To subscribe follow this link: <http://www.iufro.org/science/iufro-mailing-lists/list-management/rg-702-forpath>

Newsletter contributions

Newsletter contributions are welcome. If you would like to contribute to the newsletter, please contact Tod Ramsfield or Jolanda Roux at: Tod.Ramsfield@NRCan-RNCan.gc.ca or Jolanda.Roux@fabi.up.ac.za

IUFRO Division 7.02 Forest Pathology Units

Unit	Coordinator	Deputies
7.02.01 – Root and butt rots	Matteo Garbelotto	Gregory Filip
7.02.02 – Foliage, shoot and stem diseases	Antti Uotila	Julio Javier Diez Castro Hatice Tugba Dogmus Lehtijarvi Glen R. Stanoz
7.02.03 – Vascular wilt diseases	Krystyna Przybyl	C. Mohanan
7.02.04 – Phytoplasma and virus diseases of forest trees	Carmen Büttner	Risto Jalkanen
7.02.05 – Rusts of forest trees	Richard Hamelin	Pascal Frey Salvatore Moricca
7.02.06 – Disease/environment interactions in forest decline	Thomas Cech	Dusan Jurc
7.02.07 – Diseases and insects of tropical forest trees	Sri Rahayu	Didier Begoude Paul Bosu
7.02.09 – Phytophthora diseases on forest trees	Everett M. Hansen	Giles Hardy Thomas Jung Andrea Vannini
7.02.10 – Pine wilt disease	Thomas Schröder	Christer Magnusson Sang-Chul Shin
7.02.11 – Parasitic flowering plants in forests	Simon F. Shamoun	Brian W. Geils J. Renata Ochocka Nick Reid Marcelo Luis Wagner