

Genetics and Genomics of Fagaceae and Nothofagaceae

Report by Charles H. Cannon, Workshop Organizer, IUFRO Working Party 2.08.05

Genetics of *Quercus* and *Nothofagus* (<https://www.iufro.org/science/divisions/division-2/20000/20800/20805/>)

The Workshop on Fagaceae and Nothofagaceae genetics and genomics held in Shanghai, China, on 1-3 November 2017, focused on most recent findings and advances in the phylogenetics, genomics and conservation of the Fagaceae and Nothofagaceae families. The event was hosted by Shanghai Chenshan Botanical Garden and Chenshan Plant Science Research Center, Chinese Academy of Sciences, and supported by The Center for Tree Science at The Morton Arboretum, U.S.A. and the International Union of Forest Research Organizations. It attracted 63 participants from China, the United States, Britain, France, Germany, Austria, Japan, Vietnam and the Philippines.



Meeting website: <http://www.ibiodiversity.net/EnMeeting/IUFROINA2017.html>

For the key issues that were addressed at the workshop, please read the full report at:

<https://www.iufro.org/science/divisions/division-2/20000/20800/20805/activities/>

Here are some of the findings and conclusions from the workshop:

- Genomic structure and order in Fagaceae is highly conserved and a great deal of collinearity exists among species, which will greatly enhance the usefulness of the few completed genomes for the comparative analysis and meaningful insight into other species and groups.
- Gene flow across taxonomic boundaries is common among oak species and observed in many contexts, through both ancient and recent introgression events, and yet, the genomes of individual species remain coherent and distinct. The events are associated with both simple geographic spatial patterns and due to local selective pressures.
- While phenotypic and genotypic evidence are converging to produce powerful insights into evolutionary adaptation and diversification, a considerable amount of work remains to fully integrate the two types of data.
- A final discussion about future directions and priorities led to the call for the adoption of common protocols, genetic markers, study material and phenotypic measures to make comparative analyses across studies, species, and continents more powerful. A white paper outlining and defining best strategies for these efforts was proposed.

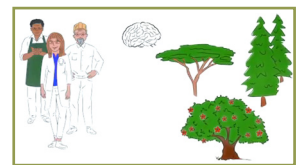
Short courses in MIG-Seq techniques and in the phylogenetic analyses of trait evolution and diversification dynamics using the R software platform were provided to an eager and inspired group of students and colleagues by Yoshihisa Suyama and Andrew Hipp, respectively.

The next meeting of this Working Party is planned for the year 2020. The final location will be announced in early 2018 and will either be Mexico or Chicago, USA.

IUFRO Videos to Watch and Share!

Did you know that IUFRO presented a short **video** in September during the 125th Anniversary Congress offering **the ideal introduction to IUFRO?**

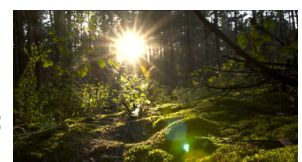
Watch it here: https://www.youtube.com/watch?time_continue=11&v=mBYEyzuJmsQ



The video explains the new slogan of IUFRO **"Interconnecting Forests, Science and People"** which has now also become an inherent part of the IUFRO logo!



You might also want to have a look at a new **video** showcasing the IUFRO Anniversary Congress: <https://youtu.be/xud1GJBXVNo>



Or watch this original introduction to **forest science communication** "Communicating with Einstein": <https://www.youtube.com/watch?v=aDAz7okK3dA>



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Traditional Forest Knowledge and Culture in Asia

Report by Park Chan Ryul, IUFRO member

The "10th International Conference on Traditional Forest Knowledge and Culture in Asia: Traditional Use of Non-wood Forest Products and its Sustainability in Asia" was successfully held in Seoul, Republic of Korea from 31 October to 3 November 2017. 28 participants from over 10 countries shared latest information on TFK; 17 oral presentations and 4 poster presentations were delivered at the symposium. IUFRO Working Parties 9.03.04, 9.03.05 were actively involved in the meeting which was generously hosted by the National Institute of Forest Science (NIFoS, Korea) and sponsored by Asia Pacific Association of Forest Research Institutions (APAFRI), IUFRO, Asian Forest Cooperation Organization (AFoCO).

Since the first international conference on traditional forest knowledge and culture in Asia was held in Kunming, China, in 2007, scholars and researchers from Asian countries have kept discussing various issues and tasks of TFK research during annual meetings. Remarkable research on TFK has been completed in different countries since then.

The 10th conference in the series aimed to explore values of TFK as well as to develop the sustainable use of non-wood forest products related with TFK in Asia. Furthermore, this conference contributed to the development of the Asian Network of Traditional Forest Knowledge (ANTFOK).

Here are some of the key issues addressed:

- Proverbs and old sayings related to ecosystem services, climate change and forest were analyzed.
- A quantitative methodology for proverbs and old sayings was discussed.
- The future value of TFK connected to sustainable development goals (SDGs) was studied.
- Ten years of International Conferences on Traditional Forest Knowledge and Culture in Asia were reviewed by scholars who have made great contributions to TFK research in Asia.



Group photo taken at Hahoe Village during the field trip
Photo by National Institute of Forest Science
(NIFoS, Republic of Korea)

- Future missions and duties of the Asian Network of Traditional Forest Knowledge (ANTFOK) were identified and discussed by participants from Asian countries.

Participants concluded that TFK research in Asia should be improved through constructing a dynamic and collaborative network among participating organizations or individuals. For this sake, participants of this conference had reached a consensus on the contents of an "Agreement on Operation Arrangement for TFK in Asia".

The 11th International Conference on Traditional Forest Knowledge and Culture in Asia will be held in Yangon, Myanmar in October/November 2018.

IUFRO WP 9.03.04 - Traditional forest knowledge in temperate and boreal regions

<https://www.iufro.org/science/divisions/division-9/90000/90300/90304/>

IUFRO WP 9.03.05 - Traditional forest knowledge in tropical and subtropical regions

<https://www.iufro.org/science/divisions/division-9/90000/90300/90305/>

53rd Session of the International Tropical Timber Council (ITTC53)

27 November - 2 December 2017, Lima, Peru

At the annual ITTC meetings IUFRO has an observer status and is invited to report about joint activities with the International Tropical Timber Organization (ITTO).

At ITTC53 Michael Kleine, Deputy Executive Director of IUFRO (photo), highlighted the services that IUFRO as a global science network can provide to tropical timber producing and



Photo Rahmayanti

consuming countries. Such services include the supply of scientific knowledge about the management and conservation of tropical forests, the preparation of scientific syntheses for policy management and the presentation of best practices on the ground.

The latest global study on teak published by IUFRO (<http://bit.ly/2jkRdJn>) in 2017 may provide input to ITTO's Biennial Work Programme on "Enhancement of Teak Management"

Find a summary of ITTC53 here: <http://enb.iisd.org/vol24/enb2488e.html> and a daily coverage here: <http://www.itto.int/itcc-53/day5/>

Global Scientific Assessment on Interactions between Forests and Water Well Underway

Water provision and filtering, conservation of soils and climate regulation are among the many services connected to trees and forests, influenced by the interactions between forests and water. While numerous scientific publications and studies are available on "forests and water" the scientific information has not yet been systematically assessed and synthesized globally. This is exactly what the Global Forest Expert Panel (GFEP) on Forests and Water is currently doing with the main aim of contributing to the 2030 Agenda for Sustainable Development and its SDGs. The outcomes will provide input to the United Nations High-Level Political Forum (HLPF) on Sustainable Development and its session in New York in July 2018 and also be of major relevance to other international forums and bodies.

For information about the Panel, visit:

<https://www.iufro.org/science/gfep/forests-and-water-panel/>

The Panel was established in early 2017 after the Collaborative Partnership on Forests (CPF) had tasked the International Union of Forest Research Organizations (IUFRO) with carrying out a global scientific assessment on the interlinkages between forests and water. It is composed of 23 internationally renowned scientists from prestigious universities and research institutions from all over the world and jointly chaired by Irena Creed, University of Saskatchewan, Canada, and Meine van Noordwijk, World Agroforestry Centre (ICRAF), South-East Asia Regional Office, Indonesia.

Find a full list of Panel members here:

<https://www.iufro.org/science/gfep/forests-and-water-panel/panel-members/>



Second Panel meeting in Leeds, UK.
Photo by Andre Purret (IUFRO-GFEP)

"The Expert Panel aims to address the full hydrological cycle and all types of vegetation with trees and will take stock of both the established concepts as well as emerging ideas", explained co-chair Irena Creed during the second Panel meeting in October 2017 at the University of Leeds, United Kingdom. "The outcome shall be comprehensive, as bold as possible, and forward looking, though it will not advocate specific positions", she confirmed. Panel members are about to finalize their draft chapter texts for the report by the end of 2017 and will get together for a third meeting in Vienna, Austria from 17-19 January 2018. The outcomes of the assessment will include a comprehensive, peer-reviewed full assessment report and a summary for policy makers or 'policy brief' highlighting the main key messages.

The two publications will be launched at the session of the UN High Level Political Forum on Sustainable Development in July 2018 and contribute to the discussions on the implementation of Sustainable Development Goals 6 and 15. On the way towards the completion of the study several international events, such as the 13th Session of the United Nations Forum on Forests from 7-11 May 2018 in New York, USA, will offer opportunities to inform about the progress and expected outcomes of the assessment.

About the GFEP initiative of the CPF:

<https://www.iufro.org/science/gfep/>

IUFRO at the Global Landscapes Forum 2017

Bonn, Germany, 19 and 20 December 2017: <http://events.globallandscapesforum.org/bonn-2017/>

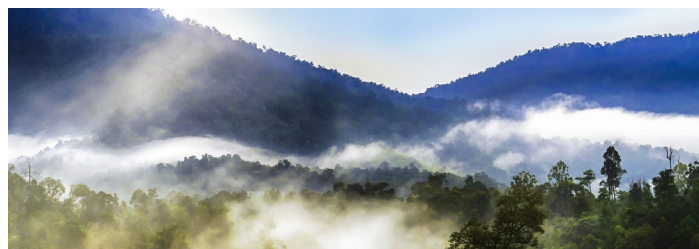
At this year's Global Landscapes Forum IUFRO will co-host two discussion forums and share a booth with partner organizations at the Restoration Pavilion throughout the event: <https://www.iufro.org/events/other-major-events/glf-2017/>

Tuesday, 19 December (14:00-15:30)

'Rainfall Recycling' as a Landscape Function: Connecting SDGs 6, 13 and 15

Discussion Forum organized by CGIAR Research Program on Forests, Trees and Agroforestry (FTA) and IUFRO

New research suggests that vegetation plays a critical role in the frequency and intensity of rainfall. This discussion forum will explore the implications on the many areas affected by these effects - land restoration, water management and climate change adaptation - toward an integrated approach for land/water and climate for the SDGs.



Link to GLF agenda: <http://events.globallandscapesforum.org/agenda/bonn-2017/day-1/discussion-forums-2-parallel-sessions/landscape-lab-griffith-university-climate-change-response-program/>

Wednesday, 20 December (11:00-12:30)

Building capacities for the restoration of tropical forest landscapes and the enhancement of their ecosystem goods and services

Discussion Forum organized by IUFRO, the International Tropical Timber Organization (ITTO) and the Center for International Forestry Research (CIFOR)

Forest landscape restoration (FLR) can deliver long-term, large-scale benefits only when national and sub-national FLR practitioners are equipped with the capacities to plan and facilitate economically viable FLR projects in specific local contexts. This session will focus on indispensable capacities for implementing FLR in complex socio-ecological and socio-political environments and place special emphasis on the productive capacities of tropical landscapes.



Link to session flyer:

https://www.iufro.org/download/file/27829/6589/glf17-flr-discussion-forum-description_pdf/

GPFLR Pavilion Booth 3: FLR Capacity Building

Global Partnership on Forest and Landscape Restoration (GPFLR) <http://www.forestlandscaperestoration.org/about-partnership>

Changing minds, changing landscapes.

Brought together by a common interest in capacity building, training, and education for forest and landscape restoration (FLR), CIFOR, Commonland, IUFRO, RAIN/Aidenvironment, WUR, and the von Thünen Institute are partnering in this booth with the objective of sharing capacity building resources including educational material, experiences and key training modules for the successful implementation of FLR.

Over two days, these partners will present the results of a global survey on extracurricular training on FLR trends (CIFOR), case studies from international participants of the pre-GLF "Think Landscapes" course (WUR), and ENABLE, the European Network for the Advancement of Business and Landscape Education featuring curriculum development, MOOCs, cases, and experiential learning (Commonland).

Additionally, members of the IUFRO Task Force on Forest Adaptation and Restoration under Global Change will present the results of international FLR knowledge-sharing workshops in Rwanda, El Salvador and Puerto Rico, as



well as a new publication "Forest Landscape Restoration: A Practitioner's Guide" (IUFRO/von Thünen). RAIN/Aidenvironment will showcase the capacity building activities within the Water4Darfur project, which especially support water governance organizations in watersheds in rural West and South Darfur.

Visitors to the booth will be invited to participate in a restoration and adaptation survey, capacity building brainstorming, and in creating a great space for discussion and exchange.

About recent forest and landscape restoration activities in IUFRO: <https://www.iufro.org/science/special/spdc/flr/>

IUFRO Task Force on Forest Adaptation and Restoration under Global Change: <https://www.iufro.org/science/task-forces/forest-adaptation-restoration/>

International FLR knowledge-sharing workshops in Rwanda and El Salvador (both in 2016):

<https://www.iufro.org/science/special/spdc/actproj/flr-ws/rwanda/>

<https://www.iufro.org/science/special/spdc/actproj/flr-ws/el-salvador/>

International Conference on Forest Landscape Restoration under Global Change in Puerto Rico (2017):

<https://www.iufro.org/science/special/spdc/flr/flrconf/>

Publications

Scientific Paper on Tropospheric Ozone Impacts

Sicard P., Anav A., De Marco A., Paoletti E., 2017, Projected global tropospheric ozone impacts on vegetation under different emission and climate scenarios. *Atmospheric Chemistry and Physics* 17: 12177–12196.

<https://www.iufro.org/science/divisions/division-7/70000/70100/70109/publications/>

Air pollution removal by urban forests in Canada and its effect on air quality and human health

David J. Nowak, Satoshi Hirabayashi, Marlene Doyle, Mark

McGovern, Jon Pasher. *Urban Forestry & Urban Greening*, Volume 29, January 2018, Pages 40-48. Visit: <https://www.iufro.org/science/divisions/division-6/60000/60700/>

Responsibility for the Forest – Forest Research and Higher Education at Eberswalde since 1892

Keynote speech held by Peter Spathelf, Eberswalde University for Sustainable Development, on the occasion of the IUFRO 125th anniversary commemorative event at Eberswalde on 15 September 2017.

https://www.iufro.org/download/file/27793/6534/iufro2017-eberswalde-keynote-speech-spathelf-170915_pdf/

NFT News

The latest issue of NFT News as well as previous issues are available on the publications webpage of *IUFRO Working Party 2.08.02 Improvement and culture of nitrogen-fixing trees*: <https://www.iufro.org/science/divisions/division-2/20000/20800/20802/publications/#c22661>.

Conference Proceedings

<https://www.iufro.org/publications/proceedings/>

5th International Conference on Conservation of Forest Genetic Resources

2–7 October 2017, Gomel, Russia; proceedings are available in both English and Russian.

<https://www.iufro.org/publications/proceedings/proceedings-meetings-2017/#c26221>

Joint Regional Meeting of IUFRO RG3.03.00 and RG3.06.00 in Asia: Productivity and Safety of Final Cutting on Mountainous Plantation Forest

24–28 July 2017, Matsuyama and Kochi, Japan

<https://www.iufro.org/publications/proceedings/proceedings-meetings-2017/#c26219>

Positions

<https://www.iufro.org/discover/noticeboard/position-announcements/>

PostDoc in Invasion Modelling and Growth Dynamics

The position starts in January 2018.

The Research Groups Forest Protection and Forest Entomology of the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) are offering a PostDoc position in Invasion Modelling and Growth Dynamics.

<https://apply.refline.ch/273855/0759/pub/1/index.html>

Fellowships

<https://www.iufro.org/discover/noticeboard/fellowships-scholarshipsresearch-funding/>

4-Year Doctoral Fellowship in Natural Resource Economics

Submit your application by 2 January 2018

Applications are invited for 4-year doctoral fellowship with the University of British Columbia in Vancouver, Canada, Department of Forest Resources Management, Faculty of Forestry in co-supervision with Natural Resources Canada-Canadian Forest Service.

https://www.iufro.org/download/file/27802/5549/nb-ubc-20171114_PhD_Economics_bioSAFE_pdf/

Summer Schools

<https://www.iufro.org/discover/noticeboard/university-courses-summer-schools-and-webinars/>

2018 Summer Costa Rica Research Experience for Undergraduates (REU)

Submit your application by 20 January 2018

10-week summer program (29 May–3 August 2018) on "Ecohydrology of tropical montane forests – diversity in science, interdisciplinary breadth, and global awareness", in Costa Rica and Texas, USA.

https://tamu.qualtrics.com/jfe/form/SV_dcZlhp3nV-Wp1Tb7

IUFRO Meetings

Search our online calendar for a full list of meetings:

<http://www.iufro.org/events/calendar/current/>

Find non-IUFRO meetings on the IUFRO Noticeboard:

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

Also search for forest-related events in GFIS at:

<http://www.gfis.net>

1–3 Mar 2018

Improving Forest Health on Commercial Plantations

Punta del Este, Uruguay

IUFRO [7.02.13](#)

Contact: Gustavo Balmelli, gbalmelli@tb.inia.org.uy

<http://www.iufro2018puntadeleste.org/>

16–19 Apr 2018

6th Int'l Forest Engineering Conference (FEC2018)

Rotorua, New Zealand

IUFRO [3.00.00](#)

Contact: Rien Visser, rien.visser@canterbury.ac.nz

<http://www.foresteng.canterbury.ac.nz/FEC2018.shtml>

6–8 Jun 2018

Communicating Risks in Decision Support Systems: from Basic Research to Advance Decision Support Tools

Solsona and Barcelona, Spain

IUFRO [4.04.07](#)

Contact: Rasoul Yousefpour,

rasoul.yousefpour@ife.uni-freiburg.de ; <http://suforum.ctfc.cat/june-2018-conference-solsona-and-barcelona-spain/>

10–16 Jun 2018

North American Forest Soils Conference – International Symposium on Forest Soils

Quebec City, Quebec, Canada

IUFRO [8.01.03](#)

Contact: Thomas Fox, trfox@vt.edu

<http://www.cef-cfr.ca/index.php?n=Colloque.NAFSC-ISFS2018>

25–27 Sep 2018

New Frontiers in Forecasting Forests 2018

Stellenbosch, South Africa

IUFRO [4.00.00](#), [4.01.00](#), [4.03.00](#), [5.01.04](#)

Contact: David Drew, drew@sun.ac.za

<http://conferences.sun.ac.za/ff2018/NFFF2018>

Other Meetings

29 Jan – 2 Feb 2018

TERRAenVISION Environmental Issues Today: Scientific Solutions for Societal Issues

Barcelona, Spain

<https://terraenvision2018.eu/>

1–3 Feb 2018

24th Annual Conference: Attending to Socio-ecological Complexity in Tropical Forest Landscapes

New Haven, CT, USA

Yale Chapter of the International Society of Tropical Foresters

(ISTF), <https://www.eventbrite.com/e/2018-istf-conference-tickets-38856056511>

20–22 February 2018

International Conference: Working across Sectors to Halt Deforestation and Increase Forest Area – from Aspiration to Action

FAO, Rome, Italy

International Conference organized by the Collaborative Partnership on Forests (CPF); IUFRO will be actively involved.

Participation by invitation only!

<http://www.cpfweb.org/93859/en/>