Entomological Research in Mediterranean Forest Ecosystems

By François Lieutier, Coordinator of IUFRO 7.03.14; University of Orleans, France, and Mustafa Avci, Chair of the Local Organizing Committee, Suleyman Demirel University, Isparta, Turkey

IUFRO Working Party 7.03.14 MEDINSECT (Entomological Research in Mediterranean Forest Ecosystems) gathers scientists from different countries concerned with entomological problems in Mediterranean forest ecosystems. It meets periodically and held its forth symposium on 9 to 14 April 2014 in Antalya, Turkey, together with IUFRO Working Parties 7.03.01 (Cone and Seed Insects), and 7.03.06 (Integrated Management in Forest Defoliating Insects), which mainly focus on long-term trends in forest insect populations. (Meeting website: [http://iufro.sdu.edu.tr/](http://iufro.sdu.edu.tr/))

The meeting followed the 2nd Symposium of Forest Entomology and Pathology in Turkey, organized by Bartin University on April 7-9, 2014 with the support of General Directorate of Forestry: [http://enfito.bartin.edu.tr/en/index.html](http://enfito.bartin.edu.tr/en/index.html)

The conference had a strong focus on Turkish research topics reflecting the fact that the particular geographic position and the geological history of Turkey has led to a high diversity of forest insects and a high diversity of tree-insect relationships at various scales. This diversity of species and relationships means numerous possibilities for forest entomological research, which should be exploited in the future through increased cooperation between Turkey and other Mediterranean countries.

A total of 105 presentations were given, 21 of which resulted from 15 bilateral cooperative initiatives involving at least one Mediterranean country. This very positive result can largely be ascribed to the efforts of MEDINSECT and represents a promising way to improve the scientific quality of research in the area, including the education of young researchers.

The five main sessions dealt with the following themes:

**Population genetics and insect biodiversity**
Population genetics can be a powerful tool, as was clearly demonstrated through several presentations on the pine processionary moth (PPM) complex species and its parasitoids, as well as on *Platypus cylindrus* and the Turkish oak gall wasps. The power of this tool can be significantly increased at the landscape level. Several presentations looked at insect biodiversity in various ecosystems, especially oak and cedar forests. The possibility of using this faunal diversity as an indicator of ecosystem richness was discussed.

**Emerging and exotic pests**
Two main aspects were dealt with in this context. On the one hand, the focus was on the natural history, tree-insect relationships, and biocontrol of pests of the exotic host Eucalyptus. In addition, tree defense mechanisms and the possibility for the aggressors to modify host physiology were explored. On the other hand, presentations dealt with alien pests that have adapted to indigenous trees.

**Insect biology and relation with host trees and other organisms**
Tree/insect relationships were presented at different scales and under various modalities. The scale of the evolution was considered through complex interactions involving interspecific competition between insects, and association with bacteria conditioning the type of insect reproduction (Megastigmus). The effect of tree morphological parameters on insect infestation was also considered (Megastigmus on Douglas fir, longhorn beetles on Acacias), as was the role of tree defense mechanisms (spruce budworm).

**Population dynamics and invasion processes**
The introductory presentation offered novel insight into the causes of spatial synchrony of population cycles in relation to climate. This spatial approach was completed by a temporal approach aiming at understanding the strategies developed by seed insects, in relation to interspecific competition, to adapt to their highly variable resource. Prediction aspects related to insect spatial
dynamics were also considered through modelling of PPM extension in Turkey under scenarios of climate change, and through analyses of the distribution of the vector of the PWN in Tunisia.

**Forest decline, insect survey and control, and forestry practices**

Silvicultural aspects related to oak decline in Turkey. Surveys concerned the search of new Cedar pests in Turkey and Morocco, and the analysis of PPM egg masses in Algeria. Regarding insect control, the effectiveness of pheromone traps against *Coroebus undatus* was assayed in Portugal. Also, the possibility of using insecticides against *L. dispar* in Algeria was investigated.

The joining of the three IUFRO groups was appreciated by all participants and it was decided to repeat such a joint meeting in two years at a place still to be decided. The proceedings of the meeting will be published in a special issue of the Journal of the Suleyman Demirel University, Isparta. The book of abstracts is available for download from the meeting website.

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**Forest Change 2014**

*Report by Marco Marchetti, University of Molise, Italy, Coordinator of IUFRO Research Group 4.02.00 – Forest resources inventory and monitoring*

The international Forest Change 2014 conference was held on 2-4 April 2014 in Freising, Germany, and drew 140 participants from 40 countries. It was hosted by the Center of Life and Food Sciences Weihenstephan, Munich Technical University, and co-sponsored by IUFRO 4.02.00.

*The key issues that were addressed comprise:*

- **a) Terrestrial survey methods**
- **b) Remote sensing based survey techniques to detect forest change**
- **c) Biophysical + natural drivers of forest change**
- **d) Anthropogenic drivers of forest change**
- **e) Resource management systems & concepts**

Forests form an important land-cover type on our planet. With about 4 billion (109) hectares they account for almost all of the world’s land based carbon uptake. Between 1990 and 2007, the world’s forests stored about 2.4 Giga tonnes of carbon per year [Pan et al. (2011) Science 333: 988-993]. However, the world loses also around 13 Million hectares mainly natural forests every year [http://www.fao.org/forestry/fra/fra2010/en/]. Together with the degradation of the remaining forests, this land-use change accounts for 12 to 20% of the world’s annual CO2 emissions.

Given a predicted population increase by 2 billion people until 2050 and a significant change in nutrition behaviour, the world expects an increase in food demand by 50-70%. Scientists thus predict that particularly the poor countries will continue to clear their forests, which are their natural assets, to obtain more land for agricultural production [Tilman et al. (2011) PNAS 108: 20260-20264]. This means that multiple ecosystem services and much of the world’s biodiversity are still at risk. Solutions to this burning world problem may only be found if scientists form international and interdisciplinary networks and collaborate to come up with comprehensive land use approaches.

However, clearly defined technical terms and a unified language would be essential to improve a better understanding of the diversity of groups of scientists working on forest change. Analyzing and finally controlling forest change still requires cost-effective inventory methods. Only a comprehensive view on various spatial scales, which integrates forestry and agricultural land-use options, may enable successful strategies in conserving the regulating ecosystem services of forest ecosystems and delivering important provisioning services (food and timber) at the same time. Uncertainty is an overarching issue to be addressed in monitoring concepts and models.

**16th IBFRA Conference**

*Edmonton, Alberta, Canada, October 7 to 12, 2013*

The International Boreal Forest Research Association (IBFRA) was founded in 1991 to foster pan-boreal research and exchange research results on changes occurring within this immense forest biome. The 16th international conference held under the theme "Boreal Forests at Risk: From Boreal Science to Public Policy" was hosted by Natural Resources Canada and the University of Alberta with sponsorship from Natural Resources Canada, Alberta Environment and Sustainable Development, Alberta Innovations – Bio Solutions, and IUFRO. The Conference Chairs were Susan Conard, president of IBFRA, Werner Kurz of the Canadian Forest Service and Phil Comeau of the University of Alberta. On behalf of IUFRO, Executive Director Alexander Buck provided opening remarks.

Linking Biological and Cultural Diversity in Europe

http://landscapeunifi.it/en/unesco-cbd-eng

By Mauro Agnoletti, University of Florence, Italy, Coordinator of IUFRO Research Group 9.03.00 – Forest history and traditional knowledge

The 1st European Conference for the Implementation of the UNESCO-SCBD Joint Programme on Biological and Cultural Diversity was held on 8-11 April 2014 in Florence, Italy. It was a joint initiative of the Secretariat of the Convention on Biological Diversity, UNESCO, the Research Unit for the Management of Landscape and Rural Heritage and the IUFRO Research Group on Forest History and Traditional Knowledge. The main sponsors of the event were the regional government of Tuscany (Department of Agriculture and Forestry) and the Italian Ministry of Agriculture, Food and Forestry Policies.

The relationship between biological and cultural diversity or biocultural diversity and the rural territory is considered as one of the most important perspectives for the implementation of the Joint Program of Work. The scientific and policy dimensions of JP-BiCuD are of utmost importance in the European context where cultural, environmental and rural policies are devoted to the conservation of biodiversity and cultural heritage, but rarely focused on the features and the effects of the interactions between nature and culture. Yet, throughout European history, the outcomes of such interactions, including through traditional farming and forestry practices, have been critical for creating resilient landscape patterns, diversifying biological and cultural resources and shaping the cultural identity of different European subregions.

The conference aimed to define the interactions between cultural and biological diversity and to identify links between cultural and biological diversity, in the European context. Against this background, it explored the historical development of biodiversity patterns associated with "natural" and "cultural" landscapes, including interactions between actors, factors and processes. Furthermore, it addressed traditional agricultural and forest management practices related to bio-cultural diversity, among other things.

The full report, abstracts, and the "Florence Declaration on the Links between Biological and Cultural Diversity“ can be found at: http://www.iufro.org/science/divisions/division-9/90000/90300/activities/

A Visit to the IUFRO 2014 World Congress Venue

On 14 April the members of the IUFRO Management Committee (MC) visited the Salt Palace Convention Center in Salt Lake City in the course of their MC meeting.

Walking through the convention center, they obtained an overview of the impressive capacity of the meeting rooms for plenary, sub-plenary and technical sessions for the 2014 World Congress. The ballroom, where the opening and closing events will take place in October, was being prepared for another huge event at the time of the visit. However, one could easily envision IUFRO researchers meeting and greeting each other anticipating a great scientific gathering.

The MC members also paced the exhibit halls and again were impressed by the spacious area and the friendly and accommodating atmosphere of the whole place. The Salt Palace Convention Center is well prepared for welcoming a large number of participants!

Photo: Rich Guldin (center), chair of the Congress Organizing Committee, showing the floor plan to IUFRO Vice-presidents Su See Lee (right) and Mike Wingfield (left) (by Renate Prüller, IUFRO)
**IUFRO Signs Memorandum of Cooperation with European Geosciences Union (EGU)**

On 28 April 2014, IUFRO signed a Memorandum of Cooperation with the EGU ([http://www.egu.eu/](http://www.egu.eu/)), a non-profit international union of scientists with over 12,500 members from all over the world, dedicated to the pursuit of excellence in the geosciences and the planetary and space sciences.

The cooperation shall primarily take place at Division level and will involve IUFRO Divisions 1 (Silviculture), 7 (Forest Health) and 8 (Forest Environment) and EGU Divisions: Atmospheric Sciences (AS), Biogeosciences (BG), Climate: Past, Present & Future (CL), Energy, Resources and the Environment (ERE), Hydrological Sciences (HS), Natural Hazards (NH) and Soil System Sciences (SSS).

Members of both organizations will benefit from this cooperation thanks to the increased exchange of information on key programs, initiatives, education opportunities and professional services and the joint organization of topical meetings of mutual interest, for example.

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**IFSA Takes Center Stage at the Forests Asia Summit**

*By Sarah Dickson-Hoyle, University of Melbourne, Australia, Liaison Officer between IFSA and CIFOR*

"I am particularly pleased to learn that more than 100 youth are participating in this auspicious occasion. Your participation shows... dedication to preserve our natural environment. This is a testament of your readiness to shoulder the noble goal of safeguarding our tropical forests."

With these words, Indonesian President Susilo Bambang Yudhoyono opened his keynote speech at the CIFOR Forests Asia Summit ([http://www.cifor.org/forestsasia](http://www.cifor.org/forestsasia)), held in Jakarta on May 5-6 this year.

This major summit brought together ministers, top scientists, development experts, and civil society organizations from across Southeast Asia, to share knowledge and develop commitments for managing the region’s forests and landscapes for green growth. While international events and policy processes such as these often take place without engaging with young people, Forests Asia was different; the voice of youth was definitely alive and strong!

Twenty-two IFSA students attended the summit, and an additional seven joined the team of official volunteers. These students attended a wide range of sessions over the two days, and came together to witness the signing of the first IFSA-CIFOR Memorandum of Understanding (MoU) with CIFOR Director General Peter Holmgren. A number of students also took part in intensive social media training, learning skills such as blogging and tweeting which they then applied to report live from the summit.

However, IFSA’s involvement extended far beyond this! In the months leading up to the summit, IFSA joined forces with CIFOR and YPARD ([http://www.ypard.net](http://www.ypard.net)) to organize the special session ‘Youth in Southeast Asia’ ([http://www.cifor.org/_forestsasia/agenda-item/monday-may-5th/special-session-youth-southeast-asia/](http://www.cifor.org/_forestsasia/agenda-item/monday-may-5th/special-session-youth-southeast-asia/)). We wanted to come up with a way to harness the energy and creativity of youth, and to develop an exciting and innovative new session format.

**The result?**

On May 5, over 100 people - a mix of students, young professionals, and more senior participants - took part in the youth session. After an inspiring opening speech...
by a young Indonesian speaker, participants were split into five roundtables to discuss ways to tackle specific challenges facing Southeast Asia’s forests and people. Each roundtable was aligned with one of the summit’s key themes (http://www.cifor.org/forestsasia/about/summit-themes/), and was moderated by a specially chosen ‘youth moderator’. This truly was a session driven by youth for youth!

The session was lively and participatory, and best of all it generated clear, actionable recommendations (hyperlink to http://www.cifor.org/forestsasia/key-recommendations-youth-southeast-asias-forests/) for youth empowerment and involvement in the forestry and landscape sector. These recommendations were brought forward into the closing plenary, where I took center stage to advocate on behalf of forestry youth.

IFSA believes that young people are key stakeholders in forestry debates and decision making processes, and that youth should have a strong presence at major forestry events, beyond purely attending. We hope that the success of IFSA’s involvement in the Forests Asia Summit could serve as a model for better integrating the voice of youth into future events and policy processes.

Unlocking the True Potential of Forests?

The Economist’s 2nd World Forests Summit took place in Stockholm, Sweden, 20 March 2014. Recognizing the substantial role that forests play in global and national economies, it aimed to discuss the major themes impacting the world’s forests and brought together key stakeholders from national, international and non-governmental organizations and the economy. IUFRO supported the promotion of this high-level event via its media.

http://www.economistinsights.com/sustainability-resources/event/world-forests-summit-2014

In a recent blog article, Toby Gardner, Research Fellow at the Stockholm Environment Institute (SEI) since January 2014, reflects on the event and its motto of "Unlocking the true potential of forests" and identifies some major trends in thinking on the future of forests:

In this article, he concludes that “if there is one overarching message, it might be that the greatest opportunities for safeguarding the future of the world’s forests, and the countless benefits they provide for mankind, lie in holistic approaches that combine insights from science, policy, development and investment. Neither forests themselves, nor the legal or financial mechanisms that seek to support them, exist in isolation – whether physical, economic or political.” Read the full article at: http://www.sei-international.org/news-and-media/2846

In IUFRO, Toby Gardner was one of the lead authors of the publication on “Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives”, the third assessment report prepared in the framework of the IUFRO-led Global Forest Expert Panel (GFEP) initiative of the Collaborative Partnership on Forests (CPF) published in 2012 (http://www.iufro.org/science/gfep/biodiv-forman-redd-panel/report/).

Forest Communicators Met in Berlin to Share Practices on How to Best Communicate in a Digital Age

The UN Economic Commission for Europe (UNECE) and the Food and Agriculture Organization of the UN (FAO) Team of Specialists on Forest Communication (also known as the Forest Communicators’ Network or FCN), in which IUFRO has been represented for several years, convened from 23-25 April 2014 in Berlin, Germany. Participants discussed opportunities and challenges for communicating on forest-related issues.

Read the full article at:
Also read: http://www.unece.org/index.php?id=35464

Photo Competition - “Forest - Agriculture Interface through a Gender Lens“

The CGIAR Research Program on Forests, Trees and Agroforestry integrating Gender (CRP-FTA Gender) at the International Centre for Tropical Agriculture (CIAT) is taking a different look at science by publishing a photo book. Send your pictures by 15 June! The best 100 photos and accompanying storylines will be selected for the photo book. The photo book will be launched at the IUFRO World Congress 2014!

Contact: Purabi Bose, p.bose(at)cgiar.org
http://iufro2014.com/wp-content/uploads/2014/03/Photo%20Competition_Announcement_EN_PBose%202014.pdf
Awards

Distinguished Contribution Award
We would like to announce Professor Le Dinh Kha as the recipient of the inaugural Distinguished Contribution Award of IUFRO WP 2.08.07 Genetics and Silviculture of Acacias.

The award is presented to senior scientists in recognition of their sustained and significant contribution to the development of acacia plantation forestry and is presented at each periodic WP meeting.

Professor Kha was recognized for his distinguished achievements as a scholar and research team leader in the fields of forest genetics and tree breeding, and for his outstanding service in developing an institutional framework and culture to support the ongoing advance of forest science in Vietnam.

Prof Kha received his award during the IUFRO Acacia 2014 Conference "Sustaining the Future of Acacia Plantation Forestry" in Hue, Vietnam.

Photo: Stephen Midgely (left) of Salwood Asia Pacific Pty. Ltd, and Mike Wingfield (right), IUFRO Vice-President, presenting the award to Professor Kha (center). (Photo provided by Professional Congress Organizer)

Congratulations to Rob Kozak, winner of the 2014 Killam Teaching Prize
Dr Robert Kozak, head of the Department of Wood Science at UBC, Canada, received the Killam Teaching Prize in Forestry for the 2013-14 academic year. Rob Kozak is IUFRO Deputy Coordinator 5.10.00 – Forest products marketing and business management.

The Elinor Ostrom Award on Collective Governance of the Commons http://elonorostromaward.org/
The Award, created to honor and develop the legacy of Elinor Ostrom, a renowned political economist from the USA, aims to acknowledge and promote the work of practitioners, young and senior scholars involved in the field of the commons. According with Ostrom's large legacy the scope of the Award aims to be broad, including academic and applied work on traditional commons (forests, water bodies, pasture lands, fisheries, etc.), local commons, interlinked commons (forests and watersheds, fisheries and coastlines, etc), global commons, knowledge, cultural and virtual commons. At the IUFRO World Congress 2010 In Seoul, Republic of Korea, Elinor Ostrom gave a keynote address entitled: "The potential role of communities in sustainable forest resources."

Publications

Proceedings from IUFRO Meetings
Recently added to our proceedings archive at:
http://www.iufro.org/publications/proceedings/

IUFRO Acacia 2014 Conference "Sustaining the Future of Acacia Plantation Forestry";
Legal Aspects of European Forest Sustainable Development;
Forest Change 2014 (FChange), Presentations of the 2nd FOREBIOM Workshop;
Seed Orchards and Breeding Theory;
Seed orchards and the link to long-term tree breeding in response to climate change

Green Public Health - Benefits of Woodlands on Human Health and Well-being
New study in German language aimed at collecting scientific literature on the benefits of woodlands on health, well-being, and quality of life. The publication highlights the advantages of woods as places for leisure activities, restoration, recovery from stress and further, social and therapeutic interventions.

"Bois et Forêts des Tropiques’ Moves Towards Open Access
This quarterly magazine published by CIRAD focuses on research and development, and is entirely devoted to the various forest and forestry sciences and technologies in the world’s hot regions. Each issue deals with topical subjects in a wide range of scientific and technical disciplines. Articles are published in French, English and Spanish. Starting with issue 319, the Journal is moving towards open access, i.e. free online access (without fee for readers and authors); only the printed version will be under annual subscription fee.
The next issue will be devoted to "Family Farming Facing Forest":

Financing Strategies for Integrated Landscape Investment : Synthesis Report
By Seth Shames, Gabrielle Kissinger, Margot Hill Clarvis http://landscapes.ecoagriculture.org/documents/financing_strategies_for_integrated_landscape_investment

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.gifis.net

IUFRO World Congress 5-11 Oct 2014 Salt Lake City, USA
20-28 Jul 2014
Sixth International Poplar Symposium (IPS VI)
Vancouver, BC, Canada
IUFRO 2.08.04
Contact: Cees van Oosten, silviconsult(at)telus.net
http://www.2014ipsvi.com/

18-20 Sep 2014
Implementation of DSS into the Forestry Practice
Zvolen, Slovakia
IUFRO 4.04.04, 4.03.03
Contact: José G. Borges, joseborges(at)isa.ulisboa.pt; Harald Vacik, harald.vacik(at)boku.ac.at
http://gis.tuzvo.sk/dssfm2014/

22-26 Sep 2014
5th International Conference on Mediterranean Pines (MEDPINE_5)
Solsona, Spain
IUFRO 4.04.04
Forest Sciences Center of Catalonia (CTFC), INIA
Forest Research Centre, Centre for Ecological Research and Forestry Applications (CREAF), and the University of Lleida (UdL)
Contact: Lluís Coll, lluis.coll(at)ctfc.cat
http://medpine5.ctfc.es/

5-11 Oct 2014
XXIV IUFRO World Congress 2014
Salt Lake City, UT, United States
"Sustaining Forests, Sustaining People: The Role of Research"
Congress homepage: http://www.iufro2014.com/
Twitter: https://twitter.com/iufro2014
Facebook: http://www.facebook.com/iufro2014

At the IUFRO 2014 World Congress:
http://iufro2014.com/

6 Oct 2014
Directors’ Forum “Crossing Science Boundaries for the Benefit of Forests and People”
13:00-15:00 hours
Salt Lake City, USA
A panel of distinguished speakers will engage in a dialogue with participants about the most important research priorities in the coming decade.
Contact: Konstantin von Teuffel, Konstantin.Teuffel(at)forst.bwl.de

13-15 Nov 2014
7th International Scientific and Technical Conference on Innovations in Forest Industry and Engineering Design
Yundola, Bulgaria
IUFRO 5.00.00, 5.04.00
Contact: inno_conference(at)abv.bg

3-6 Dec 2014
Fifth International Conference on Plants & Environmental Pollution (ICPEP-5)
Lucknow, India
IUFRO 7.01.04
Contact: Elina Oksanen, elina.oksanen(at)uef.fi

16-19 Mar 2015
Silviculture and Management of Dryland Forests
Stellenbosch/Western Cape, South Africa
IUFRO 1.02.05
Contact: Ben du Toit, Email: ben(at)sun.ac.za
http://www.sun.ac.za/english/faculty/agri/forestry/dryland-forestry-symposium

9-11 Apr 2015
Coppice Forests: Past, Present and Future
Brno, Czech Republic
IUFRO 8.02.00
Contact: Alex Mosseler, amosseler(at)nrcan.gc.ca
Tomas Vrska, tomas.vrska(at)vukoz.cz

11-13 Aug 2015
Ecology, Silviculture and Management of Spruce Species in Mixed Forests
Edmonton, Alberta, Canada
IUFRO 1.01.08, 8.00.00
Contact: Phil Comeau, phil.comeau(at)ualberta.ca

Other Meetings
23-27 Jun 2014
Forests and People: the socio-economic impacts of sustainable forest management
4th World Forest Week and 22nd Session of the Committee on Forestry (COFO)
FAO Headquarters, Rome, Italy
Contact: Peter Csoka, peter.csoka(at)fao.org

20-27 Jul 2014
Summer School ‘NEWFOR’: New technologies for a better mountain forest timber mobilization
Altopiano di Asiago, Italy
Deadline: 5 June 2014
http://www.newfor.net/newfor-summer-school-2014-application-is-open/

11-15 Aug 2014
EcoHealth 2014
Montréal, Canada

4-6 Dec 2014
2nd International Conference on Evaluating Climate Change and Development “Tackling a Key 21st Century Evaluation Challenge”
Washington, D.C., USA
Contact: David Akana: dakana(at)thegef.org
http://www.climate-eval.org/events/2014-conference/

5-7 Nov 2014
EFIMED Week Annual Meeting & Scientific Seminar
Kavala, Northern Greece
Mediterranean Regional Office of the European Forest Institute (EFIMED)
http://www.efimed.efi.int/portal/events/annual_meeting/efimed_week_2014/