

Forest Ecology Bulletin



British Ecological Society
Forest Ecology Group

Introduction

by MARKUS EICHHORN

Welcome to the latest issue of the Bulletin, now in a new format, which is largely responsible for the late delivery. Other new developments are a [Facebook page](#) for the group, and the official website can be reached by the link at the bottom of the page. Looking beyond the group, this will be the last issue in the UN International Year of Forests. Make sure that you take a look at the [main website](#), the [FAO website](#) or [IUCN's review](#) of its achievements. This Bulletin will continue though, so please keep sending in your contributions to reach forest ecologists worldwide.

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Forest ecology is a broad field, and the contents of this newsletter are determined by what you submit, so if there's anything you think should be included then please pass suggestions on to either me (markus.eichhorn@nottingham.ac.uk) or Jake Snaddon (jlsnaddon@gmail.com). If you have received this bulletin indirectly then you can sign for more on our mailing list by going [here](#) and clicking 'Subscribe'.

Forest of the Month



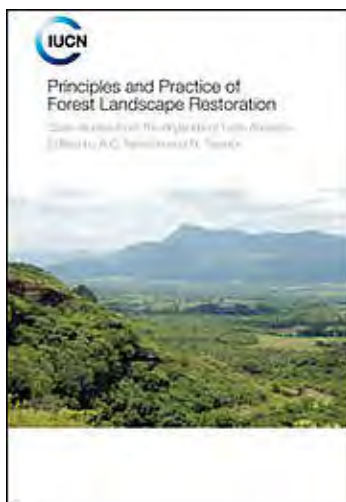
by PERCIVAL CHO P.CHO@LANCASTER.AC.UK

Above is a photo of a *Ceiba pentandra* tree, one of few massive survivor trees reminiscent of the majestic old growth rainforest in southern Belize prior to the devastation of a 2001 hurricane. The canopy height of the post-hurricane forest can be inferred from tree canopies in the foreground. My studies on long-term permanent plots hope to fill a major gap in our understanding of forest diversity, dynamics and carbon budget changes after catastrophic disturbance.

The long-term effects of catastrophic disturbances such as hurricanes on tropical forest assemblages are not well understood despite frequent hurricanes. Besides causing massive economic loss to settlements and crops, hurricane force winds instantaneously decimate forest biomass which can potentially commit a large pool of carbon to global CO² emissions. Beyond the immediate impacts, the long-term consequences are little understood. Hurricanes are hypothesized to increase the susceptibility of affected forests to other disturbance agents such as fire. On-going permanent plot studies affected by catastrophic hurricanes represent a unique opportunity to gain valuable insight into the immediate and long-term consequences of hurricanes on tropical forests. This study aims to determine the effects of catastrophic disturbance on tree diversity and above-ground carbon stocks utilizing long-term permanent plot data (1992 to present) from northern Central America, within an area of Belize devastated by a category 4 hurricane in 2001. The study also aims to investigate the usefulness of remote-sensing platforms such as MODIS and Landsat to detect and model biomass loss and accumulation in tropical forests after major disturbances. The hypothesized hurricane-fire interaction will be investigated for two hurricanes using MODIS rapid response hotspots and long-term climate data.

Data from 14 hectares of forest have thus far revealed an estimated 70 - 90% instantaneous reduction in AGB and a 40-50% recovery of pre-hurricane AGB stocks (350-450 Mg/ha) after 10 years. Taxonomic data is still being verified but indications are that drastic compositional changes have occurred resulting in dominance of species with lower wood density. Across the landscape the net effect is of lowered AGB despite prolific growth and recovery of forest volume expected after disturbance. Remote sensing analysis of landscape scale biomass changes is underway. MODIS rapid response hotspot analysis suggests that tropical forests affected by hurricanes are indeed more prone to devastating fire than unaffected forests but only when enabling climatic conditions exist during the dry season. Without the interaction of climate, hurricane affected forests appear to be no more susceptible to fires than unaffected forests. The results of the hurricane-fire interaction study will be submitted for publication in the near future.

New Publications



Principles and Practice of Forest Landscape Restoration: Case Studies from the Drylands of Latin America

The English version has been published; a Spanish version is in press. See [website](#) for further details.

Upcoming Meetings

Strategies for Landscape-Scale Restoration in the Tropics

by DANIELLE RAPPAPORT

International Society of Tropical Foresters, Yale Chapter, 18th Annual Conference, January 26-28, 2012

Call for Abstracts

The design and implementation of successful landscape-scale restoration and reforestation initiatives in the tropics is essential to preserving biodiversity, fostering sustainable development and achieving domestic and international climate change mitigation goals. Knowledge-sharing across disciplines is critical for the holistic design of locally-appropriate reforestation and restoration strategies that scale-up project level successes to the larger landscape, while promoting sustainable livelihoods for smallholders.

On January 26-28, 2012, the Yale Chapter of the International Society of Tropical Foresters will gather

practitioners and researchers from government, academia, and environmental and development institutions to take stock of existing restoration strategies, and discuss how efforts can be scaled-up, building on lessons learned without adversely impacting local stakeholders. Presenters are sought to share research and program implementation experiences, as well as to engage in dialogue.

Submissions of abstracts based on primary research, as well as personal or institutional experience are solicited from academics and practitioners. Selected participants will present either orally or in a poster session at the conference, which will be held at the Yale School of Forestry and Environmental Studies in New Haven, CT. Invited speakers will have the option of submitting conference proceedings for publication.

Please submit abstracts by November 7, 2011 to istf@yale.edu. For further information, please visit our [website](#).

Climate Change, Deforestation and the Future of African Rainforests

by CLARA JONES

January 4-6 2012, Oxford, UK

The African wet tropics (West Africa and the Congo Basin) contain the second largest area of tropical rainforest in the world, accounting for roughly 30% of global rainforest cover. The forests have global significance and value as reservoirs of biodiversity, and stores and sinks of atmospheric carbon, as sources of moisture in the heart of an arid continent, and as a key component of the Earth system and global atmospheric circulation, and as providers of resources to local communities and the region's nations. They also seem sensitive to changes in climate and human pressure, and have apparently contracted and expanded throughout prehistory. However, the region has seen relatively little systematic scientific study. Over the 21st century, the region has the potential to witness substantial

change, both through an expansion of extraction, hunting and deforestation, and through the effects of global climate change.

The Oxford Centre for Tropical Forests is hosting a conference that provides a multidisciplinary examination of the fate of African tropical forests in the 21st century. At a time of increased global interest in the future of tropical forests, we intend this to be a key international event that synthesises existing knowledge and fosters creative thinking and collaboration on the future of this important region.

For more information see the conference [website](#).

IUFRO 2012 Cork

Fraser Mitchell is running a symposium at IUFRO 2012 Cork, the Second International Conference on Biodiversity in Forest Ecosystems and Landscapes at University College Cork, Ireland, 28-31 August 2012.

Symposium Title: *Using long-term data to investigate forest biodiversity*

Forest ecosystems are dynamic but the dominant tree cover can have turnover times from many decades to centuries. This provides a challenge for research into the biodiversity of forest ecosystems which is typically run over relatively short time frames. This symposium will explore the contribution to forest biodiversity research made by long-term monitoring and palaeoecology. This research delivers long-term datasets that can be used to explore successional trends in biodiversity but issues over temporal, spatial and taxonomic resolution still need to be addressed. These datasets also provide an essential means of testing the validity of the chronosequence approach (substituting space for time) which is the most widely used technique in forest succession investigations.

Please contact Fraser Mitchell, Trinity College Dublin, fraser.mitchell@tcd.ie if you are interested in contributing. More details available [online](#).

Grants & Funding

Garden Club of America Requests Applications for Urban Forestry Fellowships

Zone VI of the Garden Club of America (GCA) is pleased to announce the call for applications for its 2012 Urban Forestry Fellowships. The GCA strives to stimulate the knowledge and love of gardening, to share the advantages of association by means of educational meetings, conferences, correspondence and publications, and to restore, improve, and protect the quality of the environment through educational programs and action in the fields of conservation and civic improvement.

In 2012, multiple fellowships in the amount of \$4,000 each will be awarded to graduate or advanced undergraduate students studying urban forestry, environmental studies, horticulture, forestry, and related courses of study with a special interest in the urban forest. With these fellowships, the GCA seeks to fulfill their goal of advancing our knowledge of urban forests and increasing the number of scientists in the field of urban forestry. GCA has a history of interest in the health of the urban forest and would like to support young scientists in their undergraduate and graduate studies in this field. The study areas of interest are far reaching, including urban forest management and planning as well as tree biology issues that will move urban forest science forward.

Details on fellowship eligibility and the application process are available at our [website](#). Applications will be reviewed by a selection committee at Virginia Tech composed of urban forestry educators, scientists, and professionals. The committee identifies meritorious applicants and nominates them for the fellowships, which are then awarded by the GCA. The application deadline is January 31, 2012. If you have any questions please contact gcaurbanforestry@vt.edu.

Employment

Physiological Plant Ecologist

The Department of Environmental and Plant Biology at Ohio University seeks an individual for a full-time, 9-month tenure track position as an assistant professor beginning August 27, 2012. The successful candidate will be expected to develop and maintain an active and externally funded research program in physiological plant ecology that can range from the organismal to landscape scale. Applicants with experience and interest in climate change ecology, biofuels, and/or plant stress are desired. The ideal candidate should be broadly trained in terrestrial plant ecology and have considerable experience in physiological plant ecology. Primary teaching responsibilities will include introductory undergraduate-level courses in plant biology and one or more upper-level/graduate courses in their area of specialty. The successful candidate should be committed to teaching undergraduates and developing a research program that involves undergraduates as well as graduate students. The Department of Environmental and Plant Biology ([website](#)) currently consists of 11 full-time faculty, 30 graduate students, and 60 undergraduate majors. Further information about Ohio University can be found at the University's [website](#).

Minimum Qualifications: PhD in physiological plant ecology, plant ecology, or related field. Preferred: 1-2 years post-doctoral work and evidence of research and teaching effectiveness.

We seek a candidate with a commitment to working effectively with students, faculty, and staff from diverse backgrounds. Women and other minorities are encouraged to apply. Ohio University is an EEO/AA Employer.

To apply, complete and submit online quick [application](#) and attach required documents (CV, cover letter, statements of teaching philosophy and research interests/goals, contact

information for 3 references, 2-3 publications representative of your research, and unofficial transcripts for the PhD).

Please direct questions to Dr. Allan M. Showalter, Department Chair, showalte@ohio.edu. Deadline to apply: December 23, 2011. Interviews tentatively scheduled for January/February, 2012.

Forest Ecologist Position

Smithsonian Institution Global Earth Observatory (SIGEO)

The Smithsonian Institution Global Earth Observatories (SIGEO)-Center for Tropical Forest Science (CTFS) is a voluntary consortium of research institutions, forestry agencies, universities and NGOs responsible for managing and overseeing the long-term censuses of woody species on large plots in temperate and tropical forests across the world. SIGEO-CTFS represents a major research initiative in the science portfolio of the Smithsonian Institution. This network of large-scale forest plots is uniquely positioned to enable scientists to measure long-term fluctuations in primary productivity of forests around the globe, to measure changes in the abundance and distribution of biological diversity, and to assess the impact of changing environmental conditions on forests of the world. SIGEO-CTFS consists of 42 standardized, large-scale demographic tree plots established in 21 countries, which is monitoring more than 4.5 million trees of about 8,500 species.

The Smithsonian Institution seeks a Forest Ecologist to be located at the Smithsonian Conservation Biology Institute (SCBI), National Zoological Park, VA, USA. The position is responsible for conducting independent research in the areas of: ecosystem-climate interactions, global change science, energy-water-carbon exchanges, ecohydroecology, ecosystem ecology, and/or dynamic vegetation modeling. The position oversees novel research that utilizes SCBI's 25-ha SIGEO forest dynam-

ics plot with the pending and co-located NEON Fundamental Instrument Unit (including eddy covariance tower, soil arrays, aquatic arrays, etc.), and oversees the climatological data collection program that is being implemented across the full SIGEO-CTFS network.

Candidates should hold a PhD in ecology or related discipline, have an exceptional record of research and scholarly publication, and be able to work in a highly collaborative environment.

This is a full-time, permanent federal position and is open to all U.S. Citizens or U.S. Nationals. Apply [online](#). Announcement number: 12A-MR-297166-DEU-NZP or 12A-MR-297166-MPA-NZP. Closing date for applications is 25 November 2011.

The Smithsonian Institution is an equal opportunity employer.

To learn more about CTFS and SIGEO, visit the websites of [CTFS](#), [SIGEO](#) and our [newsblog](#).

Climate Change Post-doc

We are looking for 1-2 Postdoctoral Research Associates in the area of forest landscape modeling and global change ecology. The candidate will work on a multi-faceted project predicting forest landscape response to climate change and potential management alternatives in central and eastern U.S. These positions will be part of a team consisting of scientists from US Forest Service Northern Research Station and Region 9, University of Missouri, and USGS. The goal of the project is to (1) determine the range and rate of change of prominent tree species in response to climate change using a landscape modeling approach, (2) quantify the effects of forest landscape processes (e.g., dispersal, fire, harvest, and prescribed fire) in climate change effect predictions, (3) compare landscape modeling approaches and results with those of bioclimatic envelope, ecosystem process, and DGVM models, and (4) provide guidance to land managers on how to meet long term management objectives in the

study region.

Our study area encompasses a wide geographic region spanning continuously from Missouri and Arkansas in the west to West Virginia in the east. We will use forest landscape modeling approaches in this study coupled with individual tree-based ecosystem process modeling (LINKAGES II). We will use a newly designed forest landscape model, LANDIS PRO (7.0), which records vegetation information compatible to forest inventory data (FIA) and is capable of simulating very large landscapes (e.g., 20 million hectares) at 90 meter resolution in one run. New quantitative stand attributes (e.g., density and tree count by species age cohort) are added at each pixel and a new ecological design of growing space based succession module is implemented. LANDIS PRO also improves forest harvest simulation by using a new volume- and density-based harvest method.

Qualified applicants will have a PhD in forestry, ecology, geography, or a closely related discipline, knowledge and skills in at least some of the following areas: GIS, statistics (i.e., R, SAS), computer programming skills (i.e. Python); forest landscape and ecosystem process models; landscape, forest, and wildlife ecology in central and/or eastern U.S. The candidates are required to work with a team of scientists from multiple institutions and spatial data (FIA, SURRGO, and climate) of multi-states. Strong communication and data processing skills are essential. Strong analysis and writing capability is required.

Positions are available January 2012 and will be at the University of Missouri. Funding is available for three years. Review of applications begins immediately and continues until the positions are filled. Salary is competitive and commensurate with experience.

Please submit applications by email including a cover letter describing your interest and experience in these areas, a resume, and names and contact information of three refer-

ences. All applications should be sent to both PIs of the project:

Frank R. Thompson US Forest Service Northern Research Station 202 Natural Resources Building Columbia, MO 65211 E-mail: frthompson@fs.fed.us

and

Hong S. He Department of Forestry University of Missouri 203 Natural Resources Building Columbia, MO 65211 E-mail: Heh@missouri.edu

Graduate Openings

PhD Opportunity

Understory Light Variability in Temperate and Tropical Forests

University of Florida, Gainesville, Department of Biology

Advisor: Jeremy Lichstein ([website](#))

Growth and mortality rates of juvenile trees are primary determinants of forest successional dynamics, and these rates depend strongly on understory light availability. Extensive networks of forest inventory plots exist in many regions of the world that could be used to study numerous aspects of forest community and ecosystem ecology, including geographic variation in tree life-history tradeoffs (e.g., the trade-off between high-light growth rate and low-light survivorship) and the impacts of disturbance on carbon storage and species diversity. These networks include permanent sample plots monitored by the U.S. Forest Service <http://www.fia.fs.fed.us> and the Center for Tropical Forest Science <http://www.ctfs.si.edu>. Despite the vast quantity of data, interpreting growth and mortality rates from inventory plots is problematic without information on understory light and other environmental factors, information which is typically lacking. Lichstein et al. (2010, Ecological Applications, vol. 20, pp. 684-699) de-

veloped field and statistical methods to estimate understory light levels in forest inventory plots, thereby "unlocking" these vast stores of data. There are exciting opportunities to apply these data and methods to address a range of questions in community and ecosystem ecology. The methods and data used by Lichstein et al. have limitations, however, and part of this project involves collecting additional field data and developing new modeling approaches. In summer 2012, permanent sample plots in Oregon and Wisconsin, USA will be remeasured to better quantify the relationship between forest productivity and understory light and to quantify temporal autocorrelation in sapling light environments. More information on this project is available [here](#).

Through collaborations with colleagues at the Smithsonian Tropical Research Institute in Panama, there are also opportunities to extend this research program to tropical forests. Applications are being accepted for candidates wishing to pursue a PhD at the University of Florida. Prospective students who are interested in combining intensive field work with quantitative modeling are especially encouraged to apply. A strong background in mathematics and/or computer programming is desired, but is not required. If you are bright, creative, persistent, self-motivated, interested in forest dynamics, and don't mind being attacked by biting arthropods, you are encouraged to apply.

Qualifications: Undergraduate degree in biology, environmental science, applied mathematics, computer science, or related field.

Funding: Research Assistantship (including living expenses, tuition, fees, and benefits) is available for three semesters (fall 2012, spring 2013, and fall 2013). Five years of summer support and funds for independent field work are available. Additional funding is available on a competitive basis through UF Department of Biology Teaching Assistantships (including living expenses, tuition, etc.) and external funding

sources.

Start date: Fall semester (August) 2012.

Application instructions: Submit an application to the UF Department of Biology graduate program (deadline December 15, 2011, [website](#)). In addition, you should submit a five-part project application as follows: Email a single pdf file to Jeremy Lichstein (jluchstein@ufl.edu) with subject GRAD-LIGHT with the following contents (1) one to two page statement of research interests and goals; (2) one-half to one full page explanation of your academic preparation to undertake a PhD project that involves field work and modeling; (3) GRE scores; (4) resume or CV; and (5) contact information for three references familiar with your academic work or research potential. Your research statement should describe one or more projects that you would be interested to develop independently as a PhD student. The project(s) you describe could be related to the research described in this ad, but should demonstrate your individual interests and capacity for independent research. It is recommended that you submit your five-part project application at least three weeks in advance of submitting your formal application to the UF Biology graduate program.

Minorities, women and members of other underrepresented groups are encouraged to apply. The University of Florida is an equal opportunity institution.

Ph.D. Assistantship

Impacts of climate change on boreal forest soil organic matter biogeochemistry

A Ph.D. graduate assistantship is available for a keen and motivated student interested in research and training centered around understanding the impact of climate change on boreal forest soil carbon reservoirs. This assistantship is available as part of an NSERC Strategic Project research team made up of foreign collaborators (Drs. Ronald Ben-

ner at the University of South Carolina, Sharon Billings at the University of Kansas, and Martin Moroni at Forestry Tasmania in Australia), provincial and Canadian Forest Service partners (Dr Kate Edwards at Atlantic Forestry Center). The project is focused on exploiting the established Newfoundland and Labrador Boreal Ecosystem Latitudinal Transect (NLBELT) with four sites located in western Newfoundland and southern Labrador. The project is currently focused on the potential alterations in microbial transformations of soil organic matter (SOM) and losses of relatively slow turnover pools of SOM that may occur with warming along this boreal forest transect. To isolate the potential impact of warming while maintaining an ability to apply the results to intact boreal forests, our group has been conducting investigations of soils along the NL-BELT and combining these with manipulative warming experiments to develop biogeochemical indicators of soil responses to increasing temperature. It is anticipated that this Ph.D. student will focus on the alteration of chemical and isotopic composition of plant and microbial biomarkers in order to assess the microbial mechanisms associated with variation in SOM pools with warming and across this boreal forest latitudinal gradient. Experience with soil microbial ecology, biogeochemistry and/or organic geochemistry particularly at the M.Sc. level will be important. Consideration of students seeking a M.Sc. degree will only be considered in cases where a strong background of experience in microbial ecology and/or organic geochemistry is demonstrated (e.g. successful B.Sc. honors thesis). Applicants should be willing and able to conduct field research at remote study sites for weeks at a time. This assistantship will be available as early as January 2012 through the Department of Earth Sciences or the Ph.D. program in Environmental Sciences at Memorial University ([website](#)). Memorial is the largest university in Atlantic Canada. As the province's only university, Memorial

plays an integral role in the educational life of Newfoundland and Labrador ([website](#)). Offering a diverse set of undergraduate and graduate programs for almost 18,000 students, Memorial provides a distinctive and stimulating environment for learning in St. John's ([website](#)), a very safe, friendly city with great historical charm, a vibrant cultural life, and easy access to a wide range of outdoor activities. Please direct inquiries or send applications, including letter of interest and detailed curriculum vitae (including contact information for 3 references), to Dr. Susan Ziegler (sziegler@mun.ca).

Applications will be considered until November 28, 2011.

Graduate Fellowship

Forest Restoration Ecology & Management

Graduate fellowships are available for students to pursue a Master of Science or Ph.D. degree in the area of forest restoration ecology and management through the Department of Biology at the University of Mississippi. Participating students would have several unique and exciting opportunities, including a summer internship with a successful forest restoration project in British Columbia, Canada; participation in collaborative research on forest restoration and fire ecology in northern Mississippi; coursework in forest restoration ecology, research methods, and professional development; and supported travel to meetings. Each student will choose to work with one or more faculty advisors (Drs. Steve Brewer, Jason Hoeksema, Colin Jackson, and Brice Noonan) specializing in particular forest ecological processes and organisms. We especially encourage applications from students interested in plant community responses to restoration (Brewer), belowground processes and soil microorganisms (Jackson & Hoeksema), and forest amphibians (Noonan), although all areas of interest will be considered. Collaborative research across more

than one research topic is encouraged. Students will receive stipend support of \$18,000 (Master's) or \$24,000 (Ph.D.) per year and a waiver of graduate tuition through a United States Department of Agriculture graduate training fellowship. Fellowships are only available to U.S. citizens and nationals.

The University of Mississippi is located in Oxford, Mississippi, a small college town in the forested uplands of northern Mississippi known for its outstanding educational and cultural opportunities. Starting date for the fellowships is August 2012. For more information and instructions on how to apply, please see the [website](#) or contact Dr. Steve Brewer (jbrewer@olemiss.edu). Applications will be accepted until February 1, 2012, or until all positions are filled. Members of under-represented groups are especially encouraged to apply. The University of Mississippi is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA employer.

Graduate Positions, Ohio

Two graduate student positions (PhD or MS) are available to study the structure and function of temperate forest ecosystems as part of a NSF-funded research project. The long-term project is investigating the effects of elevated phosphorus and/or soil pH on microbial and plant nutrient limitations. Possible research areas include, but are not limited to; decomposition, coupling biogeochemical cycles, or plant-microbial interactions. The ideal candidate will be broadly trained in terrestrial ecology, but should have a background in plant ecology, soil ecology, biogeochemistry, or a related field. The position will remain open until filled and starting times are negotiable. If interested, then please contact Dr. Jared L. DeForest (deforest@ohio.edu) in the Department of Environmental and Plant Biology at Ohio University.

MSc Positions, Canada

3 MSc positions in forest reclamation, University of Alberta

We are looking for outstanding students to fill 3 MSc positions. All 3 students will work on a large-scale reclamation project that investigates the role of early successional tree species as reclamation species in mining areas of the boreal mixedwood forest and parkland regions of Alberta, Canada. The overall aim of the research is to understand underlying forest ecosystem processes, to develop reclamation techniques, and to determine stand trajectories to successfully regenerate surface mined lands to self-sustaining forests by restoring ecosystem functions and processes that are essential for the development of resilient forests. Of particular interest are (1) growth, biomass and resource allocation (rooting behaviour) in trees, and (2) determining characteristics of trees that differentiate communities of ectomycorrhizal fungi. This project will combine field and greenhouse experiments, and molecular methods to characterize mycorrhizal communities.

Graduate students in this project will be under the supervision of Simon Landhäusser, Industrial Research Chair in Forest Land Reclamation, Alberta School of Forest Science and Management, and Justine Karst, Postdoctoral Research Associate in the Department of Renewable Resources. Depending on the interest and quality of the applicants, the project offers considerable flexibility in designing a research program that investigates areas of personal interest within the overall framework of the project.

Background in plant biology, forest ecology, mycorrhizal ecology or related field is essential, as is an interest in the linkages between forests and disturbance. Experience with any of the following will be an asset, but is not required: soil science, ecophysiology, molecular tools, fungal biology and silviculture. Proficiency in spoken and written English is a necessity. Selection of a student will be based on academic achievements,

reference letters and if applicable previous research experience. Strong verbal, written, and analytical skills are essential.

Application deadline: March 1, 2012 or until the positions are filled. Salary ranges between CAN\$ 19,500 – 23,500 per year plus benefits for a period of 2 years. It is preferable that successful candidates start their laboratory and fieldwork in May 2012 while applying to the graduate program at the University of Alberta for the fall or winter of 2012. The applicants must meet the entrance requirement for the University of Alberta, Department of Renewable Resources, which can be viewed [here](#).

Interested candidates should email their transcripts, curriculum vitae, a letter describing their research experience and interests (2 page limit), recent TOEFL scores (if appropriate), and the names and contact information of three references to Justine Karst (justine@karst.ca)

MS Opportunity, Penn State

I am seeking a MS student to begin June 2012 at Penn State. This project is examining the effects of different management actions, including thinning and burning, on a range of forest attributes in a mixed-conifer forest in the Sierra Nevada. The student will have the opportunity to work with an extensive data set, including on-going 10-year post-treatment measurements to develop their research questions. The student must be available for field work during summer 2012 at the research site.

Qualifications include a BS in ecology, environmental science, forestry, or natural resources. Other fields that include a substantial quantitative component will be considered. Additional qualifications include the ability to work with a diverse group of people in a remote field setting. Students have the opportunity to choose between the graduate programs in forestry ([website](#)) and ecology ([website](#)).

If interested, please email a CV, unofficial transcripts, 1-page

statement of research interests, and contact information for three references to Matthew Hurteau (matthew.hurteau@psu.edu).

MS Opportunity, Illinois

Funding is available for a M.S. Research Assistantship in Forest Management/Ecology in the Department of Forestry at Southern Illinois University. Current research focuses on the response of forest communities to management and natural disturbance (see [website](#)). The assistantship carries a competitive stipend, tuition waiver, and health insurance for 2 years. Anticipated start date for assistantship is January 2012. Minimum qualifications include a B.S. degree in forestry, ecology, biology, or related field, 3.0 GPA and 1000 GRE (V+Q) score. Experience with GIS is preferred. For more information please contact: Dr. Eric Holzmueller, Assistant Professor of Forest Management & Ecology, at eholzmue@siu.edu or (618) 453-3708.

Southern Illinois University is an ideal sized university with approximately 20,000 students ([website](#)). The Department of Forestry ([website](#)) is one the top ranked accredited forestry programs in the United States and graduates of the program work throughout the United States. SIU is located in Carbondale, IL, a college town with a population of 25,000, and is a two hour drive from St. Louis, MO. It is surrounded by the Shawnee National Forest, Crab Orchard Wildlife Refuge, and several state parks and offers many other cultural and social activities.

Field Stations

Paradise Wood by JO CLARK



Do you need a research field trial site?

Paradise Wood is a National Research Woodland, located in southern Oxfordshire and managed by the Earth Trust. It houses the largest collection of hardwood tree improvement trials of UK timber species (oak, ash, beech, cherry and walnut). Within Paradise Wood are a number of progeny and provenance trials as well as some research looking at silvicultural techniques. Progeny trials aim to increase the amount of recoverable volume within a rotation. The provenance trials in particular are useful for climate change research. All trials are replicated several times around the country, and in some cases in other European countries. This is a unique resource, and we would welcome other researchers making use of it.

Some current research projects include:

- The adaptation of ash to climate change using reciprocal transplant experiments
- The effect of leaf miners and galls on different families of oak in a breeding seedling orchard (with Brighton University)
- Seasonal growth variation in an ash provenance trial (with Earthwatch)
- Hybridization status of oak using molecular markers (with Oxford University)
- Invertebrate biodiversity in planted woodlands

- Long term human impacts on the genetic structure of walnut inferred by molecular markers (with IBAF, Italy)

Please contact [Jo Clark](#) for more information.



Courses

No items this issue: please send details of courses you would like to advertise.

Articles

Conference Abstract

by GUY LEMPERIERE

8th IALE World Congress, Beijing (China), 2011 August 18-23

Guy Lemperiere, Yves Petit-Berghem, Jenna Piriou

The status of reforested wetlands in forest mosaic landscapes of Western Europe (wetland diversity vs forest diversity)

We know that man has had a major impact in the build up of landscapes for centuries and still plays a central role in changing landscapes and ecosystem services. We have used reforested wetlands as a case study because they are interesting areas for conservation purposes, but also because their management has been well covered and information is available for at least two centuries. Their status is also well documented for the past two centuries and the ecological and biogeographical processes can be approached using landscape and conservation ecology and historical biogeography concepts and tools. Wetlands have been considered as bad lands in past centuries and it is only until recently that the major human impacts have taken place. In Western Europe, they have been drained, aforested and exploited for fuel.

Our case study of reforested wetlands takes into account the landscape pattern, the biogeographical processes (timescale, space) and the human and environmental impacts (management status, history, major disturbances).

We currently study several sites in France (Brittany and Normandy) and in Northern Ireland (Glens of Antrim). On each "large site" we assess usual environmental factors: geology, topography, soils, vegetation, etc. Each "large site" is composed of an unmanaged wetland, a reforested wetland, managed by a regional Park, a Natura 2000 contract (ecocentric management) and a reforested wetland, managed by the private sector (anthropocentric management).

We use local archives in order to

reconstruct the old trajectories, aerial photographs to study the evolution of landscape, sampling in "sub-site" using CPQM (80 sampling points per plot) or PBI (Potential Biodiversity Index) and a landscape study in each "large site". Our assessment on "large site" covers land uses, management and ecosystem services.

The reforested wetlands we have started studying show a low and almost unchanged diversity index (Shannon index) at the landscape level over two centuries on the Normandy site. The major change is in the nature of the forest matrix where Sitka spruce has replaced silver birch coppice. In the mean time, plant and animal communities have established within 60 to 100 years bringing more complexity into the forest landscape.

As far as our first results are concerned, our study sites do not match the objectives of the Ramsar convention: maintaining the structure of ecosystems which are continuously changing at different levels over time. It has been recently revisited through landscape ecology concepts but the study of potential evolutionary processes at the landscape level and at an appropriate time scale still has to be included.

Nowadays the question is: what could we suggest and study?

We should study complexity rather than diversity indexes (which could cover disturbance, heterogeneity, trophic levels, services) and wonder what we could expect for the future: wetland management could change drastically regarding global change, ecosystem services, public health and invasive species.

Dates for the Diary

2011

- **14-17 November** *Exploring the Mega-fire Reality 2011* Florida State University, USA ([website](#))
- **23-24 November** *Conservation and Management of Forests for Sustainable Development: Where Science Meets Policy* Leuven, Belgium ([website](#))

2012

- **4-6 January** *Climate Change, Deforestation and the Future of African Rainforests* Oxford, UK ([website](#))
- **28-28 January** *Strategies for Landscape-Scale Restoration in the Tropics* Yale, USA ([website](#))
- **22-25 February** *gtö: Islands in Land and Seascape: The Challenges of Fragmentation* Erlangen, Germany ([website](#))
- **24-27 March** ATBC Asia-Pacific Chapter: *Understanding and mitigating the impacts of global change in tropical Asia* XTBG, Yunnan, China ([website](#))
- **19-22 June** ATBC: *Ecology, Evolution and Sustainable Use of Tropical Biodiversity* Bonito, Brazil ([website](#))
- **5-10 August** ESA Annual Meeting *Life on Earth: Preserving, Utilizing, and Sustaining Our Ecosystems* Portland, Oregon, USA ([website](#))
- **28-31 August** IUFRO: *Biodiversity in Forest Ecosystems and Landscapes* Cork, Eire ([website](#))
- **18-20 December** BES Annual Meeting, Birmingham, UK

2013

- **18-23 August** INTECOL 11: *Ecology: Into the Next 100 Years* London, UK ([website](#))
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