

RAINFOR People

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When did you join RAINFOR?

I began my work with the RAINFOR group in 2001, collecting soil in the project areas in the Amazon.

Is it true you also studied in Leeds?

Yes, in 2004, after carrying out several collections and soil analysis for the project, I was accepted as a PhD student in Leeds, studying the interactions between the various Amazonian soils and the vegetation above them.

Which are your main research interests?

I have a large interest in biogeochemical cycles, ecosystem ecology, carbon stocks and soil science in general.

Are you involved in any projects at the moment?

I am currently a post-doc of the RAINFOR project, implementing a new network of monitoring changes in carbon stocks in soils of Amazonia.

RAINFOR-AMAZONICA News

It has been a few months since our last Newsletter and we have lots of interesting news to share with you!

Our main announcement is, because the topics are complementary, we have decided to extent the RAINFOR newsletter into a combined RAINFOR-AMAZONICA bulletin!

For those may not know about the AMAZONICA project here a short description: **AMAZONICA** is a 5 year (2009-2014) UK-Brazil Consortium funded by NERC (*National Environmental Research Council, UK*). Please go to next page for further details about this project!

- **Forest Plots.net** - If you haven't visited Forest Plots (www.ForestPlots.Net) recently we encourage you to do so. This project is associated with RAINFOR, and provides a web-accessible secure repository for the whole network's forest inventories, of which there are currently 172 plots. Plot owners can safely store, manage, and analyse their data here.

Gabriela López-Gonzalez periodically updates the database; although she is very busy she welcomes suggestions!

Once you have your login/password combination you can explore the website in more detail. All RAINFOR work funded by the Moore project since 2008 is publically viewable (currently more than 70 plots). For these sites, as well as tree diameter and taxon, you can also find lots of additional information, such as:

- Plot geographical information.
- Participants in plot establishment and re-measurement, including principal investigators, field assistants, students.
- Biomass, tree density, and tree diversity of the public data can all be easily calculated using the query functions.

Much greater functionality is granted to the principal investigators of individual plots in the RAINFOR network. Depending on the security level granted, plot owners can:

- View, edit and upload their plot and tree data with their unique password.
- Download standard field sheet files for their plots to facilitate recensusing.
- Run more sophisticated queries, for example to see wood density, growth rates, and mortality rates, for all the plots they have access to.

- **Forest Plots** - The plot data from the Bolivia field campaign, carried out in 2009, are now publically available! *For more information about forest plots and how to request an account, please visit www.forestplots.net*
- Read up on the field campaigns that RAINFOR people have been involved in across Amazonia, on the RAINFOR website. Information available in English, Spanish and Portuguese:
http://www.geog.leeds.ac.uk/projects/rainfor/pages/campaigns_eng.html



RAINFOR-AMAZONICA News

Aircraft Greenhouse Gas Sampling at Rio Branco and Tabatinga (Seneca II) and Alta Floresta (Cesna 206)



Forest near Alta Floresta



AMAZONICA

The overall goal of AMAZONICA is to obtain a basin-wide balance of carbon related greenhouse gases over a period of four years. The approach combines the rate of change of lower to mid troposphere CO₂, CH₄, CO over the basin using *in situ* measurements with modelling approaches of surface fluxes. Atmospheric transport modelling is then used to link the tropospheric greenhouse gas distributions with process based surface flux estimates. Important components of surface flux estimation include improvements of the estimation of fluxes associated with land vegetation and land use change, and in turn improve predictions of the future evolution of the coupled carbon cycle climate system of the basin.

- **Start of Aircraft and on-ground Greenhouse Gas Measurement Program**
Luciana Gatti, Alexandre Martinevski, Manuel Gloor, John Miller

After lengthy but finally successful acquisition of greenhouse gas aircraft sampling equipment we have started the regular Greenhouse Gas sampling of the lower to mid troposphere (up to 14500 feet) above the Amazon basin by the end of last year. Specifically we have started aircraft based measurements at Rio Branco, Tabatinga and Alta Floresta. These measurements complement ongoing measurements at Santarem. We also started sampling at the coastal site Salinópolis (Pará) and we start sampling at Natal soon as well. A recent study by Luciana summarising the implications on CO₂ sources and sinks from land within the region of influence of the Santarem station revealed seasonality in fluxes similar to on-ground Eddy flux based studies and also that the land vegetation in this region is approximately in balance. We are excited that the new upcoming data will permit us to extend this analysis to a much larger area of the basin and to identify and understand controls on large-scale carbon fluxes. Also from this moment onwards it is important that we compile anthropogenic fluxes of CO₂, CO, CH₄ and river out-gassing fluxes from on-ground data to compare with the atmospheric data and obtain a basin-wide synthesis of carbon cycling and its controls.

Latest publications

Chave J., Navarrete D., Almeida S., Álvarez E., Aragão L. E.O.C., Bonal D., Châtelet P., Silva-Espejo J.E., Goret J-Y, von Hildebrand P., Jiménez E., Patiño S., Peñuela M.C., Phillips O.L., Stevenson P., and Malhi Y. 2010. **Regional and seasonal patterns of litterfall in tropical South America.** *Biogeosciences* 7, 43-55.

Contact us for a pdf copy of this article or visit:
<http://www.rainfor.org>

- Other publications can also be downloaded from the RAINFOR website.

Biogeosciences, 7, 43–55, 2010
www.biogeosciences.net/7/43/2010/
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Regional and seasonal patterns of litterfall in tropical South America

J. Chave¹, D. Navarrete^{2,3}, S. Almeida⁴, E. Alvarez⁵, L. E. O. C. Aragão⁶, D. Bonal⁷, P. Châtelet⁷, J. E. Silva-Espejo⁸, J.-Y. Goret⁹, P. von Hildebrand⁹, E. Jiménez⁹, S. Patiño⁹, M. C. Peñuela⁹, O. L. Phillips⁹, P. Stevenson¹⁰, and Y. Malhi¹¹

RAINFOR papers in discussion

Biogeosciences

An Interactive Open Access Journal of the European Geosciences Union

We encourage our partners and collaborators to visit [Biogeosciences](http://www.biogeosciences-discuss.net) to participate in the interactive discussion following this link:

http://www.biogeosciences-discuss.net/special_issue34.html

If you have any feedback, comments or ideas for the next Newsletter, please email
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