



05 August 2008 – Global Palaeofire Working Group Newsletter

Dear GPWG Community,

We would like to update you on our progress with the global charcoal database and recent activities within the GPWG.

1. Our first paper 'Changes in fire regimes since the Last Glacial Maximum: an assessment based on a global synthesis and analysis of charcoal data' was published in the June 2008 issue of *Climate Dynamics*. The feedback from the scientific community has been extremely positive.
2. Version 1 of the Global Charcoal Database (GCDv1) is available through the GPWG web page:
http://www.bridge.bris.ac.uk/projects/QUEST_IGBP_Global_Palaeofire_WG/publications.html and through NOAA's International Multiproxy Paleofire Database web page
<http://www.ncdc.noaa.gov/paleo/impd/gcd.html>.
3. An overview of GPWG research activities were presented at the IGBP 4th Congress in Cape Town, South Africa. The IGBP continues to support GPWG as the Palaeofire component of the cross-project activity on FIRE.
4. A capacity building palaeofire workshop is planned for Nairobi, Kenya in the fall of 2009. A presentation of GPWG activities at the 4th IGBP Congress in Cape Town generated great interests and encouragement for this workshop. PAGES have agreed to help fund the workshop and we are currently searching for additional funding sources.
5. There are now 10 research projects planned/underway and listed on our webpage ('Planned Analyses':
http://www.bridge.bris.ac.uk/projects/QUEST_IGBP_Global_Palaeofire_WG/analysis.html). All members of the GPWG are encouraged to develop projects/analyses using the database. If you want to propose a new analysis, please let us know. If you have already proposed an analysis, it would be good if you could update us on progress and update the text on the webpage. To update please send a descriptive paragraph to mitchell.power@geog.utah.edu
6. One of the foci at last year's Dartington Hall workshop was an attempt to characterize variations in global fire regimes during the last 2000 years. Jenn Marlon led the follow-up on this activity. A manuscript titled 'A Climate-Driven Decline in Global Biomass Burning During the Past Two Millennia' was recently accepted for publication.
7. Jenn has also been leading an analysis of high-resolution records from North America across the Younger Dryas interval. As those of you who kindly provided additional data for this analysis will know, a manuscript, 'Wildfire and abrupt climate change in North America', is close to being submitted



8. Since the release of GCDv1, and largely in connection with the two analyses described above, an 36 additional sites have been added to the database. We would like to thank those contributors that provided charcoal data since the release of GCDv1, including; Timme Donders, Colin Long, Frank Neumann, Elin Norström, Boris Vanierre, Natalia Gerasimenko, Hikaru Takahara and Dunia Urrego. We are planning to release a second version of the database (GCDv2) toward the end of this year.

9. The GPWG is planning a third workshop to be held in Exeter in November 2008. One focus of this workshop will be the role of fire in global biogeochemical cycles from the Last Glacial Maximum to present. To facilitate these discussions, we are continuing our data collection efforts and hope to incorporate many new charcoal records spanning the past 21,000 years before the workshop. If you are interested in this analysis, and particularly if you have longer records spanning the deglacial that are not in the database as yet, please contact us as soon as possible.

10. At the first Dartington Hall GPWG workshop we presented preliminary results from model simulations with LPJ-SPITFIRE driven by output from the PMIP suite of simulations for 6ka and LGM. Our plan at this meeting was for the comparisons of these simulations with the charcoal-based reconstructions to form the second paper of the GPWG. Unfortunately, the modelling crew in Bristol found a number of problems with the preliminary simulations and we have been working over the past year to fix these problems. We have now done so, and will have the final simulations completed over this summer/autumn. All GPWG contributors will be involved in the paper that will stem from comparing these simulations with the charcoal data.

11. We are continuously updating the web page: http://www.bridge.bris.ac.uk/projects/QUEST_IGBP_Global_Palaeofire_WG/publications.html and are providing site plots from all records used in the Climate Dynamics paper. Please do visit the website regularly and check out the goodies available there.

12. One element of the analysis in the Climate Dynamics paper was the transformation and standardization of the charcoal data. An R script that performs those manipulations on a single site is available on the GPWG web page (and R is available at <http://www.r-project.org>)

13. As members of GPWG, your feedback and involvement in ongoing activities is important. We want to continue the expansion of the GPWG network, to encourage interdisciplinary research within the GPWG community, and to promote interdisciplinary research by making palaeofire data accessible to a wide range of scientists. We need to know where you would like things to go in the future. Do you have proposals for new research foci? Do you have ideas about how we should continue working together? Do you want further workshops and, if so, what should be the format/themes of these workshops? Please take a few moments to respond to these questions and to tell us how the GPWG may best serve the charcoal community. Please send your suggestions/comments to mitchell.power@geog.utah.edu



Thanks again for your support and encouragement.

The GPWG Steering Group:

Mitchell Power
Patrick Bartlein
Pierre Friedlingstein
Jenn Marlon

Sandy Harrison
Cathy Whitlock
Scott Mooney