

February 1993

## PAGES - Past Global Changes Magazine formerly PAGES news

International Geosphere-Biosphere Programme

Follow this and additional works at: <https://digitalcommons.usf.edu/pages>

---

### Recommended Citation

International Geosphere-Biosphere Programme, "PAGES - Past Global Changes Magazine formerly PAGES news" (1993). *PAGES*. 2.

<https://digitalcommons.usf.edu/pages/2>

This Book is brought to you for free and open access by the Newsletters and Periodicals at Digital Commons @ University of South Florida. It has been accepted for inclusion in PAGES by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact [digitalcommons@usf.edu](mailto:digitalcommons@usf.edu).

# PAGES

PAST GLOBAL CHANGES

## A CORE PROJECT OF THE INTERNATIONAL GEOSPHERE-BIOSPHERE PROGRAMME IGBP

---

### News of the International Paleoscience Community Volume 1, Number 2- Summer 1993

---

#### CONGRATULATIONS TO GISP2 AND GRIP

PAGES is pleased to note the completion of the ice coring phase of the Greenland Ice Sheet Project (GISP2) and the previous completion of the Greenland Icecore Project (GRIP). This work has already provided new perspectives on the history of paleoatmospheres and we look forward to further analyses and results. At the successful completion of the field phase, the entire PAGES community joins us in extending our congratulations to the science and operational teams of both projects for a job well done.

The following is excerpted from the text of a recent U.S. National Science Foundation (NSF) press release and from a report of the GISP2/GRIP workshop by Dr. Debra Meese:

After five years of drilling through the Greenland Ice Sheet, the GISP2 project has extracted the world's deepest ice-core. At 3052 m in length, this core barely edges out the former record holder, a 3027 m core extracted by the GRIP team drilling at Summit, Greenland. Together, these cores provide an extraordinarily detailed record of climatic and atmospheric conditions in the Northern Hemisphere over the last 250,000 years.

The most startling discovery to date has been the compelling evidence that climate in the Northern Hemisphere has changed much more rapidly and frequently than previously thought. The ice cores contain a record of substantial climate change occurring every few thousand years during the latter part of the Wisconsin. The record of climate change associated with the Younger Dryas has attracted the most scientific attention, because of its abrupt onset and conclusion. Various climate proxies from the cores suggest that the transition between the Younger Dryas and the Holocene is marked by a warming of 7°C occurring within as little as three years. The ice cores also contain detailed records of more recent climate and environmental change such as the Medieval Warm Period and the Little Ice Age, while human impact on the atmosphere is clearly recorded in the most recently deposited portions of the cores.

A key element in the further exploitation of the climate record housed in the Greenland cores will be the cooperation between both ice core teams and their

communication with the rest of the global change science community. With this cooperative spirit in mind, the two Greenland core teams met at a joint GISP2/GRIP Workshop held at Lake Annecy, France on the March 23-25, 1993. Sixty researchers took part in the meeting to evaluate the status of current studies, discuss recent results, compare methods and techniques, and explore areas of cooperative research.

Much of the meeting focused on age-dating of the cores. Precise age-dating of the two cores is critical to obtaining a clearer view of climatic and atmospheric change in the Northern Hemisphere and its relationship to global environmental change. Down to an age of about 15000 yrs BP, events recorded in both Greenland cores agree very closely, although there are age discrepancies in older portions of cores. These older dates are, however, provisional. More complete analyses should tighten the correlation between both cores.

During the workshop, participants made plans for joint presentations at the December 1993 AGU All-Union Session entitled "Central Greenland Ice Core Records and Related Topics" and for the production of a hard cover text covering drilling details and results of core analyses.

Cooperative efforts such as these are central to the PAGES mission. PAGES is supporting a broad range of international meetings and initiatives aimed at bringing together the paleoscience community to further our understanding of the earth's climatic history. For more information about PAGES activities contact our Core Project Office.

**PAGES Core Project Office**  
**Bärenplatz 2**  
**CH-3011 Bern, Switzerland**  
**Tel: +41-31/21 31 33**  
**Fax: +41-31/21 31 68**  
**E-mail: [pages@ubclu.unibe.ch](mailto:pages@ubclu.unibe.ch)**

**After Sept. 24, 1993:**  
**Tel: +41-31/312-31-33**  
**Fax: +41-31/312-31-68**

Newsletter Editor: Thomas A. Stemann



## PAGES ACTIVITIES

### PAGES and the IAEA

The International Atomic Energy Agency (IAEA) and PAGES recently sponsored a joint workshop on monitoring climate change by isotopic measurements in the hydrologic cycle. Held in Vienna on April 18, 1993, the meeting included PAGES and IAEA personnel as well as invited scientists from Europe and Israel. The workshop assessed the potential contributions of isotopic studies of the modern water cycle to global change science. Participants met to plan and coordinate future monitoring efforts, focusing on how to best exploit data collected by the IAEA Isotopes in Precipitation Network (IPN). The joint workshop stressed the importance of broadening the geographic coverage of IAEA's isotopic measurement activities and specifically recommended the establishment of a river-soil-groundwater monitoring network. The PAGES/IAEA team also noted the great potential for cooperative efforts with the WMO's Global Climate Observing System (GCOS). A PAGES-IAEA-GCOS meeting has been proposed to assess the technical aspects of a joint monitoring network.

For more information about PAGES/IAEA cooperative efforts, contact the PAGES Core Project Office.

### PAGES and IDEAL

The International Decade for the East African Lakes (IDEAL) forms an integral part of the PAGES effort on the African continent. The IDEAL Project developed through two international workshops, the first held in Bern, Switzerland (March 1990) and the second convened in Jinja, Uganda in February, 1993. The project was originally conceived as an international cooperative effort to retrieve long high-resolution records of climate change in tropical East Africa. A parallel goal has been the establishment of a research partnership between Northern Hemisphere researchers and African students and scientists. Participants in the Jinja meeting broadened the project's focus to include an investigation of the modern biogeochemistry and physical dynamics of the lakes. This detailed limnological work will be crucial to the interpretation of the paleoclimate record and to the understanding of the lakes as a unique regional resource.

The scientific disciplines of IDEAL are climatology, physical limnology, geochemistry, biological sciences and paleoclimatology. To help coordinate this broad range of scientific activity, IDEAL researchers are developing a protocol for consistent data collection and data storage. The project will also work with local African scientists and governmental agencies to establish a logistical and technical support network for future studies of East African lakes.

IDEAL carries a major commitment to training for African scientists, students and technicians. The program includes plans for technical instruction as well as graduate level training in oceanography and limnology. A central goal of IDEAL is to use the expertise of a multi-disciplinary group of established Northern Hemisphere researchers to develop an infrastructure that can support a sustained and

comprehensive study of the large African lakes over the span of a decade.

To assure a strong cooperative effort, IDEAL will focus on one lake at a time. Lake Victoria, the largest of the East African lakes, will be the first to be investigated. The project's main goal will be to obtain a record of past climate from the lake and to analyze the linkage between this record and global climate. The project will focus on an examination of climatic change since the Last Glacial Maximum as well as a more detailed study of climate through the last millennium. Given the potential for the retrieval of long, continuous climate records from Lake Victoria, this first IDEAL project also hopes to be able to piece together the history of tropical climate through multiple Glacial/Inter-Glacial cycles.

For more information on the IDEAL project contact either Prof. Thomas Johnson or Dr. Eric Odada:

Prof. Thomas Johnson  
Duke University Marine Laboratory  
Beaufort, NC 28516 USA  
Tel.: +919/728-2111  
Fax: +919/728-2514

Prof. Eric Odada  
Department of Geology  
University of Nairobi  
P.O. Box 30197  
Nairobi, Kenya  
Tel.: +254/2-243720  
Fax: +254/2-336885

## PAST PAGES WORKSHOPS

### Global Younger Dryas?

On April 29-30, 1993 at Lamont-Doherty Earth Observatory, an international workshop brought together researchers examining the Younger Dryas (YD) paleoclimatic oscillation. Co-sponsored by PAGES and the Lamont-GISS Climate Center, the workshop focused on the current state of knowledge concerning the YD, covering the ice core and marine record, as well as terrestrial evidence such as the montane glacial record from Northern Europe and the palynological record from Canada and the U.S. The workshop also met to identify important areas in which future research could greatly expand our understanding of the changes associated with the YD.

The Greenland ice core record of the YD is so well resolved that it can be used as a reference standard to which other records from around the world can be compared. However, workshop participants noted the need for more information from the southern hemisphere and specifically stressed the importance of retrieving a GISP2/GRIP type core from the Antarctic ice sheet. Similarly, reconstructing the global geographic extent of the YD climate oscillation requires many more Pacific and Indian Ocean marine records and more terrestrial records from regions distant from the North Atlantic. The workshop also pointed out the importance of improving the general correlation between the Greenland cores and marine and terrestrial cores.



The recent findings from GISP2 and GRIP cores have shown that the YD could represent a new mode of climate oscillation. It is likely that the atmosphere rather than oceanic circulation could be the source of the high frequency climatic variation associated with the end of the YD. Thus, workshop participants noted the need for a good deal more basic data about modern climate variability, particularly in high latitudes. This greater understanding of modern climates, coupled with a clearer global picture of the YD event, will be an important step in understanding the mechanisms of change that govern the earth's climate.

Summarized from a report edited by Dr. D. Peteet.

#### Monsoon Asia

An international group of scientists met in Taipei, Taiwan April 21-23 to discuss opportunities for research on high resolution records of past climate from Monsoon Asia. Forty researchers from throughout the region as well as the United States and Europe participated in the meeting sponsored by the PAGES, the U. S. National Science Foundation and the National Science Council, Taiwan.

Workshop discussions focused on the current status and availability of high resolution, annual to decadal scale climate records from the Monsoon Asia region. Climate data presented at the meeting included early instrumental and historical records in addition to various proxy records. Participants in the workshop developed a set of recommendations to promote the collection and analysis of more high resolution records from the area. The researchers also identified the financial and technical resources needed to make significant progress in paleoclimatology in the Asian region.

Papers dealing with the scientific topics of the workshop will be published in a special issue of Terrestrial, Atmospheric and Oceanic Sciences (TAO), while recommendations for future decadal scale PAGES Stream I research will be presented as an IGBP PAGES Report.

Plans are also being made to hold a similar workshop focusing on the climate record of the last glacial-interglacial cycles (PAGES Stream II) and including a regional emphasis on Africa and surrounding seas.

For more information about PAGES and paleomonsoon research (Stream II) contact:

Dr. Stefan Kröpelin  
INQUA-PAGES Paleomonsoons Project  
Freie Universität - GeoLab  
Altensteinstrasse 19  
D-14195 Berlin, Germany  
Tel.: +49-30-838-4887  
Fax: +49-30-838-4842

Abstracted from reports submitted by R. Bradley and S. Kröpelin.

#### Ice Drilling Workshop

The Fourth International Workshop on Ice Drilling Technology, April 20-23, 1993 in Tokyo, Japan provided an opportunity for ice core researchers from around the world to share information on their experience and on emerging technologies. Workshop participants discussed the techniques and performance of the GISP2 and GRIP drilling teams and were given progress reports on the development of a Chinese super light electromechanical drill and on the Japanese Antarctic Research Expedition (JARE) planned for 1994-95. In addition to sessions emphasizing recent drilling breakthroughs, the workshop also focused on ice core processing methods, field camp design and logistical support.

A report consisting of reviewed papers presented at the conference will be published in the Memoir series of the Japanese National Institute of Polar Research (NIPR). For more information about this report or about future ice drilling technology conventions contact:

Dr. John J. Kelly  
Polar Ice Coring Office  
University of Alaska, Fairbanks  
205 O'Neil Building  
Fairbanks, Alaska 99775-1710 USA  
Tel.: +(907) 474-5585  
Fax: +(907) 474-5582

Taken from a report submitted by Dr. John J. Kelly.

#### **UPCOMING WORKSHOPS**

##### Colloquium on Subpolar Oceans

An international colloquium entitled "Subpolar Oceans, World Ocean and Climate" will be held in Loire-Atlantique in Nantes, La Baule and Saint-Nazaire on June 1-3, 1994. Specialists from a wide range of oceanographic and earth science subdisciplines are invited to participate in this meeting focused on the role of polar and subpolar oceans in the earth's climate system.

The colloquium will be composed of a symposium, workshops and "roundtable" discussions dealing with modern and predicted variation in oceanic circulation and chemistry as well as with past aspects of the subpolar ocean - climate relationship. Of particular interest to the paleoscience community are the series of workshops highlighting such topics as variability in thermohaline paleocirculation, the quantification of paleohydrologic tracers, and sea level paleovariation.

For more information concerning this colloquium contact:

Dr. Laurent Labeyrie  
Laboratoire Mixte CNRS-CE.  
Centre de Faibles Radioactivités  
Parc du CNRS  
Gif-sur-Yvette, 91198 France  
Tel.: +331-6982-3536  
Fax: +331-6982-3568



## NEW ASSOCIATE DIRECTOR FOR PAGES

PAGES is pleased to announce the appointment of Dr. Suzanne Leroy to the post of Associate Director of the PAGES Core Project Office (PAGES/CPO). Dr. Leroy is currently Chargé de Recherche, and received her doctorate, at the Department of Paleontologie et Paleogeographie, Université Catholique de Louvain. She specialized in palynology and has extensive experience in the paleosciences, having worked in Europe and North Africa on multi-disciplinary projects ranging from the Pliocene to the present. Dr. Leroy's recent professional interests are focused on the non-astronomical forcing of abrupt climate change and the human dimensions of our changing environment; she has worked on both terrestrial (lacustrine) and marine sediments.

In view of Dr. Leroy's broad international experience and capabilities, we feel fortunate that she is willing to undertake this task at the PAGES/CPO. We extend to her a sincere welcome to the PAGES family.

## PAGES SCIENTIFIC STEERING COMMITTEE

Hans Oeschger, Chair, SWITZERLAND  
Robert Wasson, Vice Chair, AUSTRALIA  
Björn Berglund, SWEDEN  
Raymond Bradley, USA  
Jeane-Claude Duplessy, FRANCE  
John Eddy, USA  
Burkhard Frenzel, GERMANY  
Jean Jouzel, FRANCE  
Liu Tungsheng, CHINA  
Claude Lorius, FRANCE  
Willem Mook, NETHERLANDS  
Eric Odada, KENYA  
W. Richard Peltier, CANADA  
Jonathan Pilcher, UNITED KINGDOM  
Raymond Price, CANADA  
Jorge Rabassa, ARGENTINA  
Nat Rutter, CANADA  
Andre Velitchko, RUSSIA

## FUTURE MEETINGS

- 30 Sept-2 Oct 1993- **PAGES/Project Meeting:** Late Quaternary Paleoclimates in the Americas, PEP (Pole-Equator-Pole): Panama City, PANAMA. Contact: Dr. V. Markgraf, USA (TEL: +303/492-5117; FAX: +303/492-6388).
- 1-6 October 1993- **European Research Conference:** The Ecological Setting of Europe - From the Past to the Future: Regional Patterns of Climate in Europe Since the Last Glaciation; Bitche, France. Contact: EURESCO, European Science Foundation, Strasbourg, FRANCE (FAX: +33/88-36-69-87)
- 13-15 October 1993- **PAGES/SSC Core Project Meeting;** Washington, DC, USA. Contact: Dr. H. Zimmerman, USA (TEL: +202/357-9892; FAX: +202/357-3945).
- 22-26 October 1993- **NATO Advanced Research Workshop:** Strategies for the use of Paleoclimate Data Sets in Climate Model Intercomparison and Evaluation: Aussois, France. Contact: Dr. J. Guiot, Marseille, FRANCE.
- 1-9 November 1993- **International Workshop:** The Quaternary of Chile - Project IGCP-281, Quaternary Climates of South America; Santiago, Chile. Contact: Dr. Juan Carlos Aravena, CHILE (TEL: + 56/271-2865 ext. 459; FAX: +56/2-271-2983).
- 30 Nov-1 Dec 1993- **PAGES Workshop:** The Impact of Climate on Lake and Peatland Environments During the Holocene; Espoo, Finland. In association with the Finnish Program on Climate Change (SILMU). Contact: Dr. V. Salonen, FINLAND (TEL: +358/21-633-5490; FAX: +358/21-633-6580).
- 1-3 December 1993- **PAGES Workshop:** Extracting Climatic and Other Environmental Signals from Millennial-Aged Tree Ring Chronologies; Tucson, Arizona, USA. Contact: Dr. D. Graybill, USA (TEL: +602/621-6469; FAX: +602/621-8229).
- 20-22 December 1993 - **INQUA-PAGES Workshop:** Paleomonsoon II; Mombasa, KENYA. Contact: Dr. Stefan Kropelin, GERMANY (TEL: +49-30/838-4887; FAX: +49-30/838-4842).
- 4-5 February 1994- **PAGES/PALE Principal Investigators Meeting;** Boulder, CO, USA. Contact: Dr. John Andrews, USA (TEL: +303/492-8347; FAX: +303/492-6388).
- 15 March 1994- **INQUA Workshop:** The Termination of the Pleistocene in South America; Tierra del Fuego, Argentina. Contact: Dr. Jorge Rabassa, ARGENTINA (TEL: +54/901-22310; FAX: +54/901-22318).
- 1-3 June 1994- **International Colloquium:** Subpolar Oceans, World Ocean and Climate- in association with Futuroceans94 - Les Rencontres Mondiales de la Mer: Loire, Atlantique, France. Contact: Dr. Laurent Labeyrie, FRANCE (TEL: + 331/6982-3536; FAX: +331/6982-3568).
- 14 August 1994- **Workshop on PAGES Chronologies-** Dating Techniques and Comparability of Chronologies: Glasgow, United Kingdom. In connection with the 15th International Radiocarbon Conference. Contact: Dr. W. Mook, NETHERLANDS (TEL: +31-2220/69366; FAX: +31-2220/19674)