CONTENTS

ANNOUNCEMENTS

- 2 News
- **3** PAGES restructured

EDITORIAL

4 Maximizing the information yield from annually resolving natural archives Bernd Zolitschka and Jennifer Pike

SCIENCE HIGHLIGHTS: ANNUAL RECORDERS OF THE PAST

- 6 Layers within layers: quantifying seasonal versus event processes in varved sediments Scott F. Lamoureux and Pierre Francus
- 8 Understanding varve formation from sediment trapping and limnological monitoring Antti E.K. Ojala, C. Bigler and J. Weckström
- **10** Hyperspectral imaging: investigating sediment structures and composition Martin Grosjean, B. Amann, C. Butz, B. Rein and W. Tylmann
- 12 High-precision sampling of laminated sediments: Strategies from Lake Suigetsu Takeshi Nakagawa and Suigetsu 2006 Project Members
- 14 Seasonal laminae in marine sediments: applications and potential Alan E.S. Kemp
- 16 The global network of tree-ring widths and its applications to paleoclimatology Scott St. George
- 18 The potential of tree rings in Terra Australis Chris Turney, J. Palmer, K. Allen, P. Baker and P. Grierson
- 20 Bivalve shells: ultra high-resolution paleoclimate archives Bernd R. Schöne and Donna Surge
- 22 Annually laminated speleothems in paleoclimate studies Liangcheng Tan, I.J. Orland and H. Cheng
- 24 Seasonality in speleothems Ian J. Fairchild, M. Bar-Matthews, P. M. Wynn and I. J. Orland
- 26 State of the art of ice core annual layer dating Sune O. Rasmussen, A. Svensson and M. Winstrup
- 28 Annually resolved climate signals in high-alpine ice cores Margit Schwikowski, A. Eichler, T.M. Jenk and I. Mariani

MINI SECTION: HUMAN IMPACT ON SOILS AND SEDIMENTS IN ASIA

- 30 PAGES' Focus 4 Theme on Soils and Sediments: an Asian perspective Thomas Hoffmann, R. Wasson and A. Ziegler
- 32 Social upheaval in Angkor from fluvial response to land use and climate variability Dan Penny
- 34 Sediment load and carbon burial in the Yellow River during the Holocene Lishan Ran and Xixi Lu
- 36 Tectonic and volcanic forcing on fluvial systems: two case studies from Japan Thomas Parkner and Mio Kasai

WORKSHOP REPORTS

- 38 Hydroclimatic reconstructions over Europe and the Mediterranean
- 39 12th International Workshop on Subfossil Chironomids
- 40 Multi-Scale Analyses of Fire-Climate-Vegetation Interactions on Millennial Scales
- 41 Holocene circum-Arctic peatland carbon dynamics
- 42 Estimating rates and sources of sea level change during past warm periods
- 43 COMPARE 2013: Constraining tropical ocean cooling during the last glacial
- 44 Integrated analyses of reconstructions and multi-model simulations for the past 2k
- 45 PMIP Ocean Understanding changes since the Last Glacial Maximum
- 46 Quaternary paleoecology: Reconstructing past environments
- 47 Long-term perspectives on ocean and climate dynamics Three decades of ICP
- 48 4th Polar Marine Diatom Taxonomy and Ecology Workshop
- 49 Isotopes of carbon, water and geotracers in paleoclimate research
- 50 Reconstructing past sea ice
- 51 1st Summer School on Speleothem Science
- 52 1st Workshop on Paleoecological Databases in South America
- 53 Eastern African Quaternary Climate change and variability
- 54 African climate-vegetation interaction since the last glacial period
- 55 SynTraCE-21 Workshop



PAGES International Project Office

Zähringerstrasse 25 CH-3012 Bern Switzerland

 Telephone
 +41 31 631 56 11

 Fax
 +41 31 631 56 06

 Email
 pages@pages.unibe.ch

 Website
 www.pages-igbp.org

 Twitter
 @PAGES_IPO

Subscribe to PAGES magazine at www.pages-igbp.org/products/pages-magazine

Series Editors Lucien von Gunten and Thorsten Kiefer

Guest Editors Bernd Zolitschka and Jennifer Pike

Text Editing Leonie Goodwin

Layout Lucien von Gunten

Parent programmes PAGES is a core project of the International Geosphere-Biosphere Programme.

Sponsors

The PAGES International Project Office and its publications are supported by the Swiss and US National Science Foundations and NOAA.

Printed on recycled paper by Läderach AG Bern, Switzerland

Hardcopy circulation 2500



© 2014 PAGES