Journal of Sedimentary Research An International Journal of SEPM

Colin P. North and Kitty L. Milliken, Editors A.J. (Tom) van Loon, Associate Editor for Book Reviews Review accepted 13 May 2005

Fluvial Sedimentology VII, edited by Michael D. Blum, Susan B. Marriott, and Suzanne F. Leclair, 2005. International Association of Sedimentologists Special Publication 35. Blackwell Publishing, 108 Cowley Road, Oxford OX4 1JF, England. Paperback, 589 pages, 23 figures. Price USD 150.00; GBP 75.00; EUR 75.00. ISBN 1-405-12651-5.

This special publication of the IAS contains 29 papers from the 7th International Conference on Fluvial Sedimentology (ICFS), held in Lincoln, Nebraska (USA), 6-10 August 2001. The conference included four days of technical sessions, with 175 oral presentations and 60 posters, plus various pre-, post and mid-conference field trips. The ICFS series was initiated in Calgary, Alberta in 1977, and has been held every four years. The next meeting will be held in 2005 at Delft, the Netherlands.

As can be expected from a conference volume, the topics and geographical diversity of the conference are reflected in this special publication. There are papers on flow, sediment transport and bedform dynamics, as well as modern fluvial landforms, systems and environments. To mention just a few: Abbado et al. discuss the origin of anastomosis in the Upper Columbia River, Canada; Archer reviews depositional systems in Amazonia; Krapf and others describe the processes, characteristics and importance of fluvio-aeolian interactions for the Koigab Fan in northwest Namibia; and Sambrook Smith and others discuss the spatial scale invariance of bar shapes and scour depths in modern braided rivers.

Best presents a series of laboratory and field observations on dune-related macroturbulence. Fuller and others quantify reach-scale sediment transfers in the River Coquet, England. Kleinhans summarizes results of flume experiments coupled with empirical data from the Rhine to discuss dune-phase bedload transport and the importance of sorting processes. Leclair and Blom present results of flume experiments designed to decipher controls on the probability distribution of bedsurface elevations, and the structure and texture of the associated deposits, under dune-forming conditions. Marti and Bezzola present results of numerical and physical modelling of Alpine streams. Villard and others discuss the measurement of bedload in sand-bed channels using an acoustic Doppler profiler.

A second group of papers focuses on physical analogues and numerical modelling. Ethridge and others provide an overview of a generation of experimental studies at Colorado State University on the morphological and stratigraphical effects of base-level change; Strong and others present a new approach for the quantification of downstream changes in alluvial architecture based on mass-balance considerations.

A third group of papers addresses the responses of Quaternary fluvial systems to climate change, active tectonics, and/or sea-level change. There are papers by Amorosi and Colalongo (alluvial and marine successions of the Po river plain); Benvenuti (depositional processes and the latest Pleistocene to modern evolution of ephemeral streams in the Ethiopean rift zone); Cohen and others (differential subsidence recorded in fluvial-deltaic deposits in the Rhine-Meuse delta, the Netherlands); Fielding and others (response of the ancestral Burdekin River, Australia to sea-level fall); Jain and others (Quaternary stratigraphical development of the Luni River system, India) and by Mancini and Cavinato on the Plio-Pleistocene evolution of the Tiber river system (Italy).

A final group of papers adresses a wide variety of topics based on studies of pre-Quaternary fluvial systems. Friend and Dade present a model for transport modes and grain-size patterns in fluvial basins; Galloway summarizes his conference keynote address; Greb and Martino describe fluvial estuarine transitions in the Lower Pennsylvanian in the eastern USA; Joeckel and others give a summary of the paleogeography of the Cretaceous Dakota Formation from Nebraska, USA; Keough illustrates the use of 3-D models of alluvial architecture; Lumsdon and Plint discuss how changes in the rate of generation of accommodation affected alluvial style in the Upper Cretaceous (British Columbia, Canada); Marriott and others discuss fining-upweard sequences in a mudrock-dominated succession of the Lower Old Red Sandstone of South Wales. Other papers include studies from Australia, Japan, and South America.

Even though the fluvial community is relatively small, the diversity in subjects is overwhelming, and then we have to remember that only a small proportion of the presented papers is included in this volume. The volume is generally well-prepared and edited, and contains some excellent papers. A minor point of criticism is that color plates seem to have been added as an afterthought on unnumbered pages with sometimes a lot of unnecessary blank space. Also, the total production time of the volume (almost 4 years) is rather long, and it would be advisable to look for means to shorten this interval for future conferences.

Henk J.A. Berendsen Department of Physical Geography Utrecht University The Netherlands H.Brendsen@geog.uu.nl



SEPM - The Society for Sedimentary Geology