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052156820X - Alluvial Geoarchaeology: Floodplain Archaeology and Environmental Change

A. G. Brown

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This comprehensive manual is designed to give archaeologists the necessary background knowledge in environmental science required to excavate and analyse archaeological sites by rivers and on floodplains. Part I covers the techniques for studying alluvial environments, while Part II reviews the literature on the archaeology of alluvial environments. An important theme running through the book is the interaction between climatic and cultural forces and the transformation of riverine environments. Bringing together information on the evolution and exploitation of floodplain and river landscapes, it draws on examples from Britain, Europe, North America and Australasia. *Alluvial geoarchaeology* will also interest physical geographers, geologists and environmental scientists.

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ALLUVIAL GEOARCHAEOLOGY

Floodplain archaeology and environmental change

A. G. Brown

University of Exeter



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To Sara and Gabriel

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PREFACE

The origins of this book may help to explain its existence, structure and content. Having undertaken doctoral research jointly supervised by a geomorphologist and a palaeoecologist which had strong archaeological implications, I was by the mid-1980s firmly situated in a multidisciplinary and interdisciplinary approach to fluvial environments. Whilst at Leicester University my contacts grew with researchers in other departments interested in alluvial environments, most notably Zoology, Botany and Archaeology. Increasing contact with archaeologists both at Leicester University and in Leicestershire and Northamptonshire Archaeological Units stimulated my interest in geoarchaeology and the cross-fertilisation of geomorphology and archaeology. This was given a research foundation when I realised that archaeologists were regularly digging large holes in floodplains and valued stratigraphic assistance. I worked first on the Raunds Area Project, Northamptonshire, and since then have worked on many alluvial sites in the Midlands of England and elsewhere. In 1989 I took a joint appointment between Geography and Archaeology at Leicester and began to teach environmental archaeology, which included geomorphology, to archaeologists. Contact with archaeologists on a daily basis has I hope benefited this book, not least through the undermining of the simplistic and naïve tendencies concerning culture and society that are all too typically held by natural scientists.

This book stems from this history and a desire to bring together work in a variety of disciplines pertinent to the study of alluvial archaeological sites and floodplain geomorphology and palaeoecology. The book was technically conceived on a train journey back to Leicester from the Institute of Archaeology in 1985 but as this is a short journey it took some years before writing began in earnest. Its writing was given further impetus by two factors: first the very limited and generally simplistic treatment of floodplain forms and processes in most textbooks, even advanced books, and secondly a need for students and researchers to have a source of multidisciplinary information on recent and contemporary alluvial environments. There are probably no processes on floodplains which are not in reality influenced by both physics and biochemistry (in the widest sense) and in most floodplains are simultaneously artifacts of human activity. It is extremely difficult for any scientist (an archaeologist in particular given the typical archaeological training) to find an entrance into cognate disciplines which may have great importance for the understanding of

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processes on floodplains. The compartmentalisation of knowledge into rather arbitrary ‘disciplines’ which has been given renewed impetus by recent economic and academic pressures is fundamentally counterproductive in subjects such as this. Whilst the book is primarily designed for archaeologists, geomorphologists and palaeoecologists it is hoped that it will also be of interest to others, in particular engineers and ecologists, involved in current and future attempts to improve our environment by the restoration of ‘natural’ floodplains.

Most of all I hope that this book exemplifies a firm belief of the author’s, which is that, as in science and the arts, new knowledge, at least initially, springs from the association of previously unassociated phenomena.

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