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# DEMOGRAPHY IN ARCHAEOLOGY

*Demography in Archaeology* is a review of current theory and method in the reconstruction of populations from archaeological data. Starting with a summary of demographic concepts and methods, the book examines historical and ethnographic sources of demographic evidence before addressing the methods by which reliable demographic estimates can be made from skeletal remains, settlement evidence and modern and ancient biomolecules. Recent debates in palaeodemography are evaluated, new statistical methods for palaeodemographic reconstruction are explained, and the notion that past demographic structures and processes were substantially different from those pertaining today is critiqued. The book covers a wide span of evidence, from the evolutionary background of human demography to the influence of natural and human-induced catastrophes on population growth and survival. This is essential reading for any archaeologist or anthropologist with an interest in relating the results of field and laboratory studies to broader questions of population structure and dynamics.

ANDREW T. CHAMBERLAIN is Reader in Biological Anthropology at the University of Sheffield.

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To Clive and Stephen, who pointed the way.

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# PREFACE

The original impetus to write this volume emerged nearly a decade ago. It stemmed from a dissatisfaction, in fact a cognitive dissonance, between on the one hand the need to instruct graduate students in the available procedures for the reconstruction of past populations from skeletal remains, and on the other hand a profound unease at the results generated by such exercises. Fortunately it turned out that several researchers were simultaneously trying to square the same circle, and although the gestation of this book has been inordinately long, it has benefited from the insights provided by the combined endeavours of a new generation of anthropologists, archaeologists, population geneticists and biostatisticians whose research has reinvigorated the science of palaeodemography. In this book I have attempted to summarise and evaluate some of these exciting new developments, as well as to revisit some of the older and more established procedures for inferring population parameters from archaeological evidence.

Many individuals and organisations have knowingly or unwittingly contributed to the production of this book. Thanks are due first of all to the stimulating intellectual environment provided by colleagues and students at the University of Sheffield, and to the long-standing policy of the Department of Archaeology to resource periods of study leave for some of its academic staff. Some of the ideas expressed in this book have been trialled on successive cohorts of students enrolled on the Human Osteology masters

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training programme at the University of Sheffield. A few of those students have helped me substantially by contributing to the research reported here through their graduate and postdoctoral studies, in particular Dr Rebecca Gowland of the University of Cambridge and Dr Jo Buckberry of the University of Bradford. Other colleagues have been generous with their data, ideas and opinions – too many to name them all individually, but a particular debt of thanks is owed to Professor Charlotte Roberts of the University of Durham who sensibly reminded me of the inverse correlation between health and mortality! And quietly watching from the sidelines have been my editors at Cambridge University Press, whose enduring patience and support, flavoured with occasional gentle cajoling, have been invaluable.

Funding for some of my research has been provided by the Arts and Humanities Research Council, and several individuals and organisations have facilitated the study of unpublished skeletal remains. Louise Humphrey (Natural History Museum) and Eugenia Cunha (Coimbra) permitted access to their collections of known-age skeletons, and James Vaupel (Director of the Max Planck Institute of Demographic Research) kindly invited me to participate in some of the research projects sponsored by his Institute.

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