Mesolithic Europe

This book focuses on the archaeology of the hunter-gatherer societies that inhabited Europe in the millennia between the Last Ice Age and the spread of agriculture, between ten thousand and five thousand years ago. Traditionally viewed as a period of cultural stagnation, new data now demonstrates that this was a period of radical change and innovation. This was the period that witnessed the colonisation of extensive new territory at high latitudes and high altitudes following postglacial climatic change, the development of seafaring, and the synthesis of the technological, economic, and social capabilities that underpinned the later development of agricultural and urban societies. Providing a pan-European overview, *Mesolithic Europe* includes up-to-date regional syntheses written by experts in each region as well as a diversity of theoretical perspectives.

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Preface and Acknowledgments

In this volume, we bring together a series of regional syntheses of the Mesolithic in different parts of Europe, intended to be of interest and benefit both to specialists and to those with a more general interest in archaeology. Mesolithic archaeology has witnessed an acceleration of activity in recent years, with many new projects, more communication across old geographical and political barriers, and calls for archaeologists to examine the Mesolithic on its own terms, rather than as an inconvenient rung in some ladder of human progress. Accounts of the Mesolithic are typically absorbed into general syntheses of prehistory, submerged in works unified by wider-ranging theoretical or methodological themes, fragmented in publications of individual site-based or regional field projects, or combined in the proceedings of specialist conferences. Here, our aim is to provide an up-to-date overview of the current state of knowledge about the Mesolithic period, a demonstration of the richness and diversity of the material now available and the various approaches to its study, and a source for those who wish to delve more deeply into the literature.

Our brief to our contributors was to provide an interpretive synthesis of their region, varying the emphasis according to the available material and drawing on broad categories of information: the history of research and the definition of the Mesolithic, environment and geography, chronology, technology and subsistence, settlement and social organisation, and art and ritual. We also encouraged them to range both backwards and forwards in time to consider the nature of the boundaries that traditionally mark the beginning and the end of the Mesolithic, including the transition to agriculture.

We are, of course, acutely aware of the arbitrary nature of our selections and the boundaries they imply, and the inevitable unevenness of coverage. In a continent notable for a history of political fragmentation reinforced by barriers of geography, language, nationality, and cultural tradition, total coverage, let alone uniformity of approach, was hardly to be expected. Archaeologically, the field of enquiry has been further complicated, and indeed enriched, by different intellectual traditions, by the historical dominance of the French and the Danes, by Anglophone traditions of method and theory, and most recently by regional synthesis and diversification.

We could have devoted a single chapter to every nation-state within the geographical boundaries of Europe. But that would have produced far too large and uneven a volume, and it is questionable how far modern political boundaries are helpful or relevant in assessing the prehistoric record, although we acknowledge the influence of modern political history on intellectual traditions of investigation and interpretation. Our selection of chapters is necessarily a compromise between what we would have liked to include and what was realistically possible. Some chapters range widely across geographical and political boundaries, others focus more sharply on areas delimited by modern political borders. Some areas achieve disproportionate attention because of the long histories of study, the abundance of material, or the impact of distinctive types of new evidence or new ideas.

Others may seem underrepresented or referred to only tangentially in relation to adjacent areas. If nothing else, the volume of material presented here should leave little doubt about the substantial nature of the Mesolithic record, its potential to illuminate new dimensions of human variability, and the prospect of a truly comparative picture ranging from the Atlantic coast of Ireland to the Urals, and from the sub-Arctic to the Aegean.

The regional chapters are organised in broadly geographical order. Chapter 2 provides a wide-ranging geographical and thematic overview, focussed on the Baltic, followed in Chapter 3 by a review of Norway, where new investigations have produced a substantial and distinctive body of new material, and in Chapter 4 by a discussion of the classic material of southern Scandinavia. Subsequent chapters move from west to east across the middle zone of Europe, from the British Isles, via the Low Countries, France, and the Rhine and Danube drainages, to the vast territory comprising Belarus, Russia, and the Ukraine, and thence to the south, to the Iberian Peninsula and the Mediterranean coast.

In our editorial contributions, our opening chapter provides an introduction to the field of study, to the issues raised in subsequent chapters, and to some of the ideas that are beginning to influence a new generation of interpretation. Our final chapter provides an overview of the Mesolithic period as a whole and an indication of new directions for future research. The editorial chapters are single-authored, reflecting both the dominant input of each editor and the differences of perspective and approach among the editors and contributors. They are, nevertheless, also the result of joint effort and discussion and in their totality reflect a body of ideas to which we both subscribe, and a jointly held belief that the Mesolithic record offers an unparalleled opportunity to explore the relationship between the very large scale and the very small, between millennial and pan-continental trends and the actions of social groups and individuals.

Not the least of the problems of dealing with a period often regarded as transitional is that it also marks a zone of overlap between different conventions for expressing dates as either 'before the present' or 'before Christ'. The position has become more confused in recent years by the refinement and widespread adoption of calibration curves and by a host of different abbreviations – BP, BC, BCE, bp, bc, cal BP, cal BC, kyr, ka, rcybp. Tree-ring counting provides the most accurate conversion of radiocarbon years to annual solar years and then only back to 8329 cal BC, or to 9908 cal BC with a degree of uncertainty. The calibration curve can be extended further back in time, in principle across the full five-thousand-year time range of radiocarbon, using uranium series dating of coral terraces and annual growth increments in varved lake-sediments and speleothems (Van der Plicht 2004). In general, calibration suggests a broadly progressive divergence of radiocarbon and solar chronologies, the former providing underestimates amounting to as much as two thousand years or more, a degree of divergence that affects the time ranges dealt with in this volume. One might argue that such divergence is of no consequence unless one is comparing radiocarbon dates with dates derived from historical records, but the intervals of time measured by radiocarbon dates may differ from their calendar equivalent by a significant amount. Within the Mesolithic period, 500 radiocarbon years may refer to as little as 280 calendar years or as much as 580 calendar years, depending on the particular part of the calibration curve, differences that are potentially significant for archaeological interpretation.

It would be a mistake to suppose that calibration has introduced more accurate radiocarbon dates. The convention for expressing calibrated dates as range within two standard deviations is a healthy reminder that a single radiocarbon date actually represents a probability distribution covering quite a long span of time. Moreover, different calibration schemes are currently in use and under continuous revision, producing somewhat different albeit minor calibrations. The problem of plateaux in the production of radioactive carbon in the upper atmosphere is an irreducible

problem, resulting in periods within which the same radiocarbon date may refer to a wide range of calendar dates, and several of these plateaux occur in the Mesolithic period. To these uncertainties, one should add the problems of correcting for the marine reservoir effect, other potential sources of contamination from a variety of sources, inter-laboratory variations, large standard deviations especially for radiocarbon assays undertaken at an earlier stage in the development of the method, uncertainties of stratigraphic association, and the fact that a great deal of archaeological material has not been radiocarbon dated and that much will probably remain undateable.

In Europe, specialists who study Neolithic and later periods have long used the 'BC' convention, whereas those studying Palaeolithic and Mesolithic periods have preferred the 'BP' convention. That difference tends to reinforce a boundary between Mesolithic and Neolithic that is obstructive rather than helpful to interpretation. Hence, the current convention is to express the original radiocarbon date in radiocarbon years BP (before the present, that is, before AD 1950) with a margin of error at one standard deviation, and to express the calibrated version in years BC (cal BC) as a range that encompasses the 95.4 percent probability range of two standard deviations. This convention may be confusing for those used to BP chronologies and of doubtful relevance in other parts of the world beyond Europe and the Near East. It is, nevertheless, the currently preferred convention in European prehistory, and we use that convention here. Appendix 1 provides a correspondence table for uncalibrated radiocarbon years and calibrated years BC, at one-hundred-year intervals between 2,500 and 13,000 BP.

All of this suggests that although we now have very many more radiocarbon dates than before, there are some respects in which we actually know less about chronology, or at any rate rather more about the extent of our ignorance. When we first planned this volume, we intended to ask all our contributors to provide a list of radiocarbon dates for their region. That directive has proved more difficult to implement than we had supposed. Many authors pointed out the uncertainties associated with the dates in their region and the need for critical use of the resulting material. In consequence some authors have produced quite selective lists, and one or two others more generalised dating schemes. It is significant that some of the longest lists are in those regions where Accelerator Mass Spectrometry dating has been widely applied, typically in collaboration with the Oxford Radiocarbon Accelerator Unit, producing dates on individual artefacts or other items, which circumvent some of the uncertainties of radiocarbon dating.

The idea for this book originated in 1999 following a suggestion from Graeme Barker for a volume that would be part of a series on European prehistory to be published by Leicester University Press, and a first group of chapters were drafted in 2001 and 2002. With changes in the publishing world, Cambridge University Press took over the project in 2003 and encouraged us to expand the regional coverage and our editorial input with additional chapters. Some chapters have thus been in gestation for considerably longer than others, but all authors have had the opportunity to update their reviews in the light of more recent findings.

We thank our contributors for their patience; Jessica Kemp for assistance in preparing the illustrations; Robert Hedges of the Oxford Radiocarbon Accelerator Unit for advice on radiocarbon dating; Jeremy Boulton, Head of the School of Historical Studies, University of Newcastle upon Tyne, for funding assistance with the preparation of the book; and Simon Whitmore of Cambridge University Press for encouraging the project through to completion. We also acknowledge financial support from the AHRC through grant B/RG/AN1717/APN14658 and from the Leverhulme Trust through its Major Research Fellowship scheme.

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