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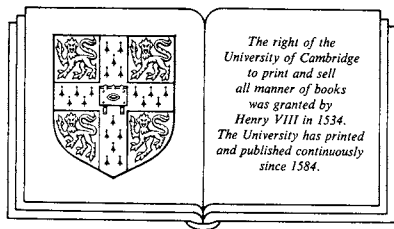
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To Miranda, with love



Fig. 1. Prehistoric farming in Europe: the regional studies. Numbers in brackets refer to chapters.

PREFACE AND ACKNOWLEDGEMENTS

My concern in this book has been to attempt to describe and analyse (if only partially to explain) the development of European farming from its origins until the close of the prehistoric era – a task which has seemed increasingly foolhardy as my publishers' deadlines have remorselessly slipped by. There are two introductory chapters describing the intellectual development of the subject, the kinds of information available for its study, the resources available to prehistoric farmers, and the constraints within which they had to operate. The bulk of the book, Chapters 3–9, consists of a series of regional studies, the geographical boundaries of which are shown in Figure 1. The timescale of the book is some 10,000 years, from the beginning of our modern climate some 12,000 years ago (the Holocene, or Postglacial, or present interglacial) – an early starting date for most studies of prehistoric farming, the justification for which is given in Chapter 1 – to the end of the prehistoric period, a date which varied widely from region to region but which was generally towards the end of the first millennium b.c. (Table 1, pp. xvi–xviii).

The only general study of the subject previously available has been contained in Grahame Clark's *Prehistoric Europe – The Economic Basis*, published over thirty years ago and still a monumental landmark in the development of our subject. As I describe in my first chapter, the justification for attempting a new survey lies in the fundamental revolution in prehistoric archaeology since then – in chronologies, theoretical principles and methodologies – and in the huge expansion in subsistence data that has occurred in its train. However, one major problem that confronted me has been the bias of most agricultural research in the intervening period on the questions of the origins and initial development of farming (Dennell, 1978, 1983; Higgs, 1972, 1975; M. R. Jarman *et al.*, 1982; Murray, 1970), and we still have far less information about later prehistoric agriculture than we would wish. In particular, for the later prehistoric periods it is increasingly clear that the control and manipulation of an agricultural surplus must have been a cornerstone of elite power in most if not all of the complex stratified societies we can recognise; yet in some cases, although the rest of the archaeological record left by these societies may be both prolific and spectacular, virtually nothing can be said of the agricultural system beyond the fact that the people grew crops and herded animals. Therefore, in my selection of material for the regional studies, I have said little of these societies and concentrated instead on those for whom the archaeological record is adequate for profitable analysis. Some familiar and illustrious names have had to be left off the roll call for this reason; and I am also aware that European Russia has rather unfairly received short shrift because of my lack of Russian; but I think that the material I have selected is sufficient to illustrate both the origins and then the further develop-

ment of the major farming systems of prehistoric Europe. Whilst in this sense there ought to be something for everyone, I am also uncomfortably aware that in any survey of this kind there must be something somewhere for everyone to object to as well!

I have not assumed any familiarity with European prehistory, and have therefore tried to place the agricultural data within the context of contemporary ecological and social history, relationships which are in any case essential to any understanding of how and why prehistoric farming developed as it did. The chronological framework for the discussion is the uncalibrated radiocarbon chronology throughout, except in the case of those final prehistoric societies conventionally linked by their trading relationships to the historical chronologies of the classical world. I have also made some use of the terminology of the Three Age system as a convenience even though the main technology for food procurement for most prehistoric people in Europe throughout the Holocene almost certainly consisted of stone tools, and organic materials (wood, leather, basketry and so on) which have hardly ever survived – the Bronze Age and the Iron Age were as relevant to the farmers of those periods as the Space Age is to the modern farmer. Certainly it is impossible to equate stages or sub-stages in the Three Age system with stages in a cultural, social or economic sequence, as the proponents of the model in the last century believed. Of course ‘mesolithic’ and ‘neolithic’ are definitional nightmares, as the following discussion will make clear, but these and the rest of the Three Age terms remain in some circumstances useful (and primarily chronological) labels of a very general kind and a lot less clumsy than some of the alternative terminologies – for example, linking blocks of time with sometimes unfamiliar site names as Burgess (1980) has proposed for British prehistory: the Age of Stonehenge is one thing, but the Bedd Branwen period quite another, and Heaven forbid the Age of Spišský Štvrtok or the Age of Tjikkiträsk.

Whilst I must take full responsibility for what follows, it is a very great pleasure to record the debt I owe to many people in the production of this book: to my teachers at Cambridge – John Alexander, Grahame Clark, Glyn Daniel, and the three who probably influenced me the most: David Clarke, who in eight short lectures in my final undergraduate year gave me perhaps the clearest grasp of the fundamental patterns of European prehistory; John Coles, who convinced me of the excitement of later European prehistory despite the weight of archaeological evidence to the contrary which we had to study; and Eric Higgs, also my Ph.D. supervisor, who set me on course for research into the archaeology of agriculture in general and European economic prehistory in particular that has guided me ever since. Whilst I sometimes think he would have heartily disapproved of the result (and dismissed it in that inimitable ESH style), I hope I have held to the strongest principle he taught which so captivated a generation brought up on Gravettians and Urnfielders, that prehistory must be about real people and real issues or it is about nothing;

to my colleagues at Sheffield, from whose ideas, enthusiasm and researches I have derived so much profit: Keith Branigan, John Collis, Robin Dennell, Andrew Fleming, David Gilbertson, Richard Hodges, Paul Mellars (now at Cambridge), Pat Phillips, Robin Torrence and Marek Zvelebil; and the postgraduates and undergraduates over the past decade who have borne my protracted investigations into prehistoric subsist-

ence with good grace, healthy scepticism, and (Nigel Mills especially) with a fund of new ideas;

to European colleagues for their kindness and often marvellous hospitality when I have visited their excavations, museums or institutes, and who have been so generous with offprints of their work including copies of unpublished material; above all those who were so helpful to me in Holland – Peter Brinkhuizen, Aneka Clason, W. Groenman-van Waateringe, G. F. Izjereef, Sander van der Leeuw, Wietske Prummel, J. van der Waals and Louise Wijngaarden-Bakker;

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to Derrick Webley, ever generous with his fund of wisdom both archaeological and agricultural;

to Cambridge University Press for supporting the project throughout its protracted incubation, particularly Clare Davies-Jones, Robin Derricourt, Kate Owen, and Caroline Murray; to Debbie Hodges for compiling the indices; and to Barry Vincent at Sheffield for preparing the illustrations so attractively, often from some very unprepossessing originals;

and finally and most of all to my wife Miranda, who has had to live with *Prehistoric Farming* as much as with me these past years, often in the mud and muck of the real thing outside my study window. To her I owe everything, and to her I dedicate this book.

*Oaker Farm
January 1984*

Table 1 *Simplified chronological chart with traditional terminologies and (italics) major subsistence stages, according to uncalibrated radiocarbon dates; some major cultural names are given in brackets.*

b. c.	GREECE	ITALY, S. FRANCE, SPAIN	BALKANS AND MIDDLE DANUBE BASIN
0	classical Greece	Rome	iron age (Dacian state etc.) <i>mixed farming ?exchange of agricultural surplus</i>
1000	archaic iron age	Etruscans late bronze age	late bronze age
	middle/late bronze age Minoan–Mycenaean states	early/middle bronze age, (Polada, Apennine, Argaric)	early/middle bronze age (Otomani)
	<i>'palace economies': redistribution of agricultural produce</i>	<i>first systematic polyculture in Italy</i>	<i>mixed farming ?exchange of agricultural surplus</i>
2000	Aegean early bronze age	copper age: (Gaudio, Remedello, Fontbouisse, Los Millares)	initial bronze age (Ezeno, Baden)
	<i>first systematic cultivation of olives and vines, wool production, deep sea fishing</i>	<i>mixed farming augmented with small scale polyculture: water control in Almeria; first ards.</i>	<i>first systematic use of secondary products</i>
3000	final neolithic	middle/late neolithic (Italy), Almerian (Spain), Chassey (France)	copper age/ chalcolithic (Gumelnitsa)
	late neolithic		<i>intensive mixed farming; first use of ards?</i>
4000	middle neolithic	early neolithic (cardinal pottery, red-painted pottery)	middle/late neolithic
	<i>intensification of mixed farming systems established in EN</i>	<i>mobile foraging, mobile foraging/herding, sedentary mixed farming</i>	<i>tell systems continue and expand; first cattle traction?</i>
5000	early neolithic	late mesolithic	early neolithic (Starčevo, Karanovo 1)
	<i>first tell villages, sedentary mixed farming</i>	<i>intensified fishing; rudimentary husbandry?</i>	<i>first tell villages and mixed farming; mixed farming/foraging in M. Danube basin</i>
6000	late mesolithic	late mesolithic	late mesolithic
	<i>intensified fishing; rudimentary husbandry?</i>	<i>intensified fishing; rudimentary husbandry?</i>	<i>increased sedentism, rudimentary husbandry?</i>
7000	early mesolithic	early mesolithic	early mesolithic
	<i>generalised mobile foraging</i>	<i>generalised mobile foraging</i>	<i>mobile foraging, more sedentary foraging/fishing at Iron Gates</i>
8000			

UKRAINE		THE ALPINE REGION		THE CONTINENTAL LOWLANDS		ATLANTIC EUROPE	
Scythian iron age	<i>steppe pastoralism</i>	iron age	<i>dichotomy increases between alpine subsistence and more specialised farming on foreland.</i>	iron age	<i>iron ploughs, scythes. largescale surplus presumed for trade</i>	iron age	<i>oppida economies</i>
bronze age	<i>steppe pastoralism</i>	bronze age	<i>alpine systems unchanged; dairy/wool production for exchange on foreland</i>	(Lausitz) bronze age	<i>arable-based farming on loess, stock-based farming off loess</i>	late bronze age	<i>terp marsh farming climatic deterioration and settlement contraction in Holland</i>
bronze age (Kurgan)	<i>development of mobile steppe pastoralism</i>	copper age	<i>alpine farming continues in Switzerland; starts in northern Italy?</i>	late neolithic/copper age	<i>horse riding, cattle traction (ard, cart)</i>	later neolithic (Michelsberg, Chassey)	<i>expansion of mixed farming to marginal soils; first systematic use of secondary products</i>
copper age (Tripolye)	<i>establishment of sedentary mixed farming</i>	early neolithic (Switzerland), (Cortailod, Pfyn)	<i>mixed farming and foraging; dairying and cattle stalling (Switzerland)</i>	later neolithic (Rössen, Lengyel)	<i>mixed farming established off loess</i>	early neolithic (TRB)	<i>mixed farming on secondary soils; foraging/farming on coasts</i>
early neolithic	<i>mobile foraging, small scale husbandry</i>	?early neolithic (northern Italy)	<i>first farming in northern Italy?</i>	early (LBK) neolithic	<i>LBK mixed farming (cattle/emmer) on loess; LBK foraging and herding off loess</i>	early neolithic (LBK)	<i>LBK mixed farming on primary soils; coastal/inland foraging</i>
late mesolithic	<i>foraging, some mobile, some more sedentary</i>	late mesolithic	<i>mostly foraging, but specialised fishing, and red deer foddering?</i>	late mesolithic	<i>generalised mobile foraging, agglomeration at summer fishing sites?</i>	late mesolithic	<i>increased reliance on coastal resources</i>
early mesolithic	<i>generalised mobile foraging</i>	late mesolithic	<i>settlement expansion in central alps</i>	early mesolithic	<i>generalised mobile foraging</i>	early mesolithic	<i>generalised mobile foraging</i>
early mesolithic	<i>generalised mobile foraging</i>	early mesolithic	<i>generalised mobile foraging</i>	early mesolithic	<i>generalised mobile foraging</i>	early mesolithic	<i>generalised mobile foraging</i>

Table 1 (*cont.*)

BRITAIN AND IRELAND		SOUTH SCANDINAVIA		NORTH SCANDINAVIA		b. c.
iron age	<i>complex redi- tributive systems</i>	iron age	<i>iron scythes, rakes</i>	iron age	<i>final development of sedentary mixed farming</i>	0
late bronze age	<i>climatic deterioration and settlement contraction</i>	late bronze age	<i>climatic deterioration and settlement contraction</i>		<i>abandonment of farming in the far north</i>	1000
early bronze age (Wessex)	<i>development of field systems and land boundaries</i>	early/middle bronze age		neolithic	<i>foraging</i>	
			<i>emmer replaced by barley</i>		<i>settlement expansion to the far north</i>	2000
late neolithic	<i>expansion of mixed farming to marginal soils; first systematic use of secondary products</i>	later neolithic	<i>expansion of mixed farming, first systematic use of secondary products</i>	neolithic	<i>foraging</i>	
						3000
early neolithic	<i>mixed farming on primary soils; mixed foraging/ herding</i>	early neolithic (TRB)	<i>small scale mixed farming, mainly foraging</i>	neolithic	<i>possible farming (swidden) in the far north</i>	
		later mesolithic (Ertebølle)	<i>high populations, some all-year settlements, intensive foraging</i>			4000
late mesolithic	<i>foraging intensification? red deer foddering?</i>			later mesolithic	<i>mobile foraging throughout</i>	
						5000
late mesolithic	<i>increased reliance on coastal resources</i>	later mesolithic	<i>increased sedentism, increased reliance on coastal resources</i>	later mesolithic	<i>sledge and ski technology</i>	6000
early mesolithic	<i>generalised mobile foraging</i>	early mesolithic	<i>generalised mobile foraging</i>		<i>foraging, especially sea mammal and elk hunting</i>	
				early mesolithic (Kunda, Fosna)	<i>first colonisation as ice caps retreat</i>	7000
early mesolithic	<i>generalised mobile foraging</i>	early mesolithic (Maglemosian)	<i>generalised mobile foraging</i>			8000