

Europe's First Farmers

Plants and animals originally domesticated in the Near East arrived in Europe between 7000 and 4000 BC. Was the new technology introduced by migrants, or was it an "inside job"? How were the new species adapted to European conditions? What were the immediate and long-term consequences of the transition from hunting and gathering to farming? These central questions in the prehistory of Europe are discussed here by leading specialists, drawing on the latest scholarship in fields as diverse as genetics and Indo-European linguistics. Detailed studies document the differences between European regions, and fresh generalisations are also proposed and debated.

T. DOUGLAS PRICE is Weinstein Professor of European Archaeology and Director of the Laboratory for Archaeological Chemistry at the University of Wisconsin, Madison. He is the author of more than ten books on the subjects of prehistoric hunter-gatherers, the transition to agriculture and the application of chemistry to the study of the past.



Europe's First Farmers

edited by

T. DOUGLAS PRICE

University of Wisconsin, Madison





CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9780521662031

© Cambridge University Press 2000

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2000

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data

Europe's first farmers / edited by T. Douglas Price.
p. cm.
ISBN 0 521 66203 6. 0 521 66572 8 (pbk)
1. Neolithic period – Europe. 2. Agriculture – Origin. 3. Europe – Antiquities. I. Price, T. Douglas (Theron Douglas)
GN776.2.A1E87 2000

ISBN 978-0-521-66203-1 hardback

306.3'49-dc21 99-15477 CIP

ISBN 978-0-521-66572-8 paperback Transferred to digital printing 2007



Contents

	List of illustrations List of tables Preface List of contributors	page vii xi xiii xv
1	Europe's first farmers: an introduction T. DOUGLAS PRICE	1
2	Southeastern Europe in the transition to agriculture in Europe: bridge, buffer, or mosaic RUTH TRINGHAM	19
3	Transition to agriculture in eastern Europe MAREK ZVELEBIL and MALCOLM LILLIE	57
4	Cardial pottery and the agricultural transition in Mediterranean Europe WILLIAM K. BARNETT	93
5	Mesolithic and Neolithic interaction in southern France and northern Italy: new data and current hypotheses DIDIER BINDER	117
6	From the Mesolithic to the Neolithic in the Iberian peninsula JOÃO ZILHÃO	144
7	The origins of agriculture in south-central Europe MICHAEL JOCHIM	183
8	How agriculture came to north-central Europe PETER BOGUCKI	197
9	Getting back to basics: transitions to farming in Ireland and Britain PETER WOODMAN	219

ν



⁄i		Contents	
1	0	The introduction of farming in northern Europe	260
		T. DOUGLAS PRICE	
1	1	Lessons in the transition to agriculture	301
		T. DOUGLAS PRICE	
		Bibliography	319
		Index	377



Illustrations

2.1	Europe and the Near East showing the dominant concept of the "agricultural colonization" of Europe from the Near East.	. 20
2.2	Southeast Europe: Early Neolithic cultures and sites.	24
2.3	Southeast Europe: Mesolithic sites and claimed Aceramic	27
2.0	Neolithic sites against a background of Early Neolithic sites.	28
2.4	The Danube Gorges and important archaeological sites.	34
2.5	Chronological interpretations of the Danube Gorges sites	74
2.5	and the Lepenski Vir stratigraphy.	36
2.6	Southeast Europe: two models for Mesolithic–Neolithic	50
2.0	interaction, 6500–5500 bc (7500–6500 BC).	38-9
2.7	The Middle Danube basin: two models for Mesolithic-	50 5
2.,	Neolithic interaction, 5500–4800 bc (6500–5700 BC).	40-1
2.8	The Middle Danube basin: two models for Mesolithic-	10 1
2.0	Neolithic interaction, 4800–4400 bc (5700–5300 BC).	42-3
2.9	Southeast Europe: later Neolithic settlements, 4400–4000 bc	12 0
2.5	(5300-4800 BC).	52
3.1	Major frontier zones, earliest Neolithic cultures, and the	02
0.1	spread of farming in Europe.	63
3.2	Forager–farmer contacts expected during the earlier	
	("cooperative") part of the availability phase.	66
3.3	Competitive relations between foragers and farmers,	
	expected to increase toward the end of the availability	
	phase.	67
3.4	Frontier zones, concentrations of Mesolithic settlement	
	and the earliest Neolithic cultures in southeastern Europe.	71
3.5	The earliest Neolithic cultures in Moldavia and the Pontic	
	region.	73
3.6	Radiocarbon calibrations obtained from Nikolskoye,	
	Yasinovatka, Derievka I and Osipovka.	78
	•	
		vii

© Cambridge University Press



viii List of illustrations

3.7	Chronological positioning of the radiocarbon-dated	
	cemeteries of Nikolskoye, Yasinovatka, Derievka I and II, and	
	Osipovka, and the settlement site of Derievka in relation to	
	Telegin's 1987 proposed chronological scheme for the	
	Mariupol cemeteries.	80
3.8	Cultural chronology and the duration of agricultural	
	transition in different regions of eastern Europe when	
	viewed in terms of the availability model.	82
3.9	The transition to farming along the southern rim of the	
	Baltic in terms of the three-stage availability model.	84
3.10	Forager-farmer interactions in the east Baltic.	86
4.1	The western Mediterranean showing sites discussed in the	
	text.	95
4.2	Early Neolithic ceramic sequence from Grotte Gazel in	
	southern France.	97
4.3	Maps of the Aude valley showing the transport vectors for	
	Early Neolithic pottery originating from the Montagne Noir,	
	the Têt valley and the Hérault valley.	108-9
4.4	An Early Neolithic vessel from Furninha, central Portugal,	
	showing slightly uneven form and surface.	113
4.5	An Early Neolithic vessel from Grotte Gazel showing post-	
	production drilled holes.	114
5.1	The location of the study area in the Mediterranean basin.	118
5.2	Location of Blade and Trapeze late Mesolithic sites and	
	earliest Neolithic sites showing their distinct distributions.	121
5.3	Castelnovian blades, core, geometric microliths, and	
	microburins from La Font-des-Pigeons rockshelter,	
	Châteauneuf-les-Martigues, Bouches-du-Rhône, France.	124
5.4	Principal pottery styles from the Early Impressed Ware	
	Neolithic in southern France.	132
5.5	Cardial blades and geometric microliths from Le Baratin,	
	Courthézon, Vaucluse, France.	138
6.1	Location of sites mentioned in the text.	146
6.2	Calibrated radiocarbon chronology of early Neolithic and	
	late Mesolithic sites known along the western façade of	
	Atlantic Iberia.	154
6.3	Geographic and cultural distribution of archaeological sites	
	in southern Portugal.	156
6.4	Cardial vessels from Valencia and from cave sites in the	
	limestone massifs of Portuguese Estremadura with stylistical	ly
	similar decorative patterns.	- 158
6.5	"Late Cardial" ceramic vessels from Buraca Grande,	
	Caldeirão, and Almonda.	159



	List of illustrations	ix
6.6	Isotopic composition of human bone collagen from	
	Portuguese Mesolithic, Neolithic and Copper Age sites.	162
6.7	The genetic history of the Iberian peninsula.	168
6.8	Results of the cluster analysis of seven Portuguese prehistori	C
	skeletal collections.	175
6.9	Dental evidence for the Mesolithic-Neolithic transition in	
	Portugal.	176-7
6.10	Lower limb morphological evidence for the Mesolithic-	
	Neolithic transition in Portugal.	178-9
7.1	Traditional south German chronology.	184
7.2	Distribution of Late Mesolithic and Early Neolithic sites.	185
7.3	Distribution of earliest Linearbandkeramik in central	405
- 4	Europe.	187
7.4	Sources of exotic shell in the Late Mesolithic of southern	100
	Germany.	190
7.5	Distribution of La Hoguette ceramics.	192
7.6	Revised south German chronology.	194
8.1	Central Europe showing extent of early agricultural settlement.	198
0.0		198
8.2	Chronological chart showing major cultural units involved in the establishment of agricultural communities in	
	north-central Europe and their distribution in major	
	drainage systems.	199
8.3	Examples of Linear Pottery fine-ware ceramics with typical	199
0.5	decoration.	201
8.4	Schematic representation of a Linear Pottery settlement	201
0.1	showing the progressive occupation and rebuilding of three	
	house locations.	204
9.1	Location of sites referred to in text.	226
9.2	Irish later Mesolithic and early Neolithic artifacts.	231
9.3	Range of ¹⁴ C dates from the latest phases of the Mesolithic	
	and the early Neolithic in Ireland.	241
9.4	Number of later Mesolithic and early Neolithic ¹⁴ C dates per	
	century after calibration and, where appropriate, adjusted	
	for a 200-year-old wood factor.	242
9.5	Distribution of Mesolithic core axes and Neolithic polished	
	flint axes from northeast Ireland.	244-5
9.6	Distribution of microliths in southwest and southeast	
	England.	248
9.7	Schematic representation of resources and artifacts used	
	in the later Mesolithic and early Neolithic of Ireland and	
	Britain.	254
10 1	Location of sites and research areas mentioned in the text	262



x	List of illustrations	
10.2	The chronology of the Late Mesolithic and Early Neolithic in	
	Scandinavia.	265
10.3	The distribution of flint and quartzite groups in the	
	Mesolithic of Sweden.	267
10.4	Radiocarbon dates by region for a select group of the	
	earliest TRB sites in Scandinavia.	272
10.5	The Early Neolithic house at Mossby.	275
10.6	The ground plan of the Early Neolithic earthen long barrow	
	at Storgård IV.	278
10.7	A small, complete type O Funnel Beaker, unornamented,	
	with several seed impressions, at least one of cereal.	279
10.8	Ground plan of the site of Bjørnsholm, showing the	
	relationship between the Mesolithic and Neolithic middens,	
	the Early Neolithic settlements, and the earthen long	
	barrow.	281
10.9	The distribution of Early Neolithic sites in east-central	
	Jutland, showing the location of megalithic tombs,	
	settlements, exploitation sites, and causewayed camps.	283
10.10	Spheres of interaction in Early Neolithic Scandinavia.	289
10.11	Axe types in the Danish Late Mesolithic and Early Neolithic.	291



Tables

3.1	Uncalibrated radiocarbon dates, calibrated ranges, context	
	and sample numbers from the Mariupol-type cemeteries of	
	Nikolskoye, Yasinovatka, Derievka I and Osipovka.	76
4.1	Numbers and types of transported ceramic vessels at Aude	
	valley Early Neolithic sites in southern France.	107
6.1	Chronology of the late Mesolithic in Portugal.	151
6.2	Chronology of the early Neolithic in Portugal.	153

χi



Preface

This book is ultimately the product of both enthusiasm and frustration. The enthusiasm comes from the enormous amount of new information about the prehistoric transition to agriculture around the globe and particularly in Europe. There has been a remarkable increase in our knowledge of the Mesolithic and the Neolithic there in the last twenty years and dramatic changes in previous views. The frustration comes from the tenacity of more traditional perspectives among archaeologists who continue to see a continent gradually covered from southeast to northwest by waves of immigrants originating in the Near East. This outdated view continues in vogue; several popular and important theories are firmly based on it. The implications of this concept of continuous colonization for the spread of culture, language, and genes are obvious and strong: newcomers bring new things; change comes from outside. This perspective has significant implications for our perspectives on transformation and interaction. New information that has accumulated in recent years, however, has raised serious questions about how the transition to agriculture took place and, in a larger frame, about the very origins of agriculture and why human society changes at all.

The overture for this publication was a scholarly symposium, held in Minneapolis, Minnesota, in 1995, at the annual meeting of the Society for American Archaeology. This symposium provided an opportunity for the authors of this volume to convene to discuss the ideas and information presented by their colleagues and to collate those facts and views with their own. The participants in the symposium, and the authors of the chapters in this volume, were selected as individuals who were active in field research dealing with the Mesolithic and Neolithic in Europe, and who at the same time were involved in developing revised perspectives for understanding the transition. This combination of hard-won data and new ideas is essential, in my view, for developing a realistic and viable understanding of our human past.

xiii



xiv Preface

The symposium provided a means for integrating the individual papers in the volume and linking the major themes that we address. The symposium went well, large numbers of people attended, excellent papers were read, voices and tempers were raised in debate, and interest peaked. It also seems that the enthusiasm from the symposium traveled home with the contributors, who then spent a great deal of effort enhancing and elaborating their papers to deal with questions, comments, and concerns that were raised during the symposium. As a result, the chapters are lengthy and deliberate in treating the themes that define the substance of this volume.

Other aspects of the volume should also be noted. We have tried to be consistent throughout in the use of calibrated radiocarbon dates in order to have a coherent discussion of the spread of agriculture in actual calendar years. We have also provided both chronological charts and maps of site locations and the distribution of archaeological cultures as summaries of information and reference for the reader.

The human past is a thoroughly fascinating subject. I am convinced that archaeology has both a great deal to offer, and a great deal to learn, in the development of our understanding of the evolution of ourselves and our society. The transition to agriculture is without question one of the major events in that evolution, shifting human focus from the wild to the tame, from nature to the constructed, from the landscape to the community, from the horizontal to the hierarchical. In addition, as I believe the information in this volume will convince you, our ancestors played a decisive role in bringing about that transition as demands from social, economic, and ideological realms of ourselves and our societies grew.

These have been many pleasures in organizing and putting together this book. One of the primary pleasures has been the assocation with the various contributors whose intellect, alacrity, knowledge, and good nature have made this a relatively easy task. Please accept my sincere thanks and admiration for a job well done. Another pleasure has been the connection and correspondence with other scholars concerned with the transition to agriculture who have generously supplied information, offprints, and other materials to enhance the information presented in the various chapters of this book. A third pleasure has been the association with the publisher, and particularly with the Senior Commissioning Editor for the Social Sciences, Jessica Kuper, who made an effort to put this book in fine form. Thanks also to Frances Brown whose care in copy-editing has made this a cleaner and more accurate book. My appreciation also goes to the two anonymous reviewers who, while perhaps overly opinionated, helped to make this a better book. A final thank you must go to another great pleasure, my colleague, critic, partner, friend, and love, Anne Birgitte Gebauer.

T. DOUGLAS PRICE



Contributors

William K. Barnett, American Museum of Natural History
Didier Binder, CNRS and University of Provence
Peter Bogucki, Princeton University
Michael Jochim, University of California, Santa Barbara
Malcolm Lillie, University of Hull
T. Douglas Price, University of Wisconsin
Ruth Tringham, University of California, Berkeley
Peter Woodman, University College, Cork
João Zilhão, Instituto Portugues de Arqueologia
Marek Zvelebil, University of Sheffield