WORLD PREHISTORY AND ARCHAEOLOGY
PATHWAYS THROUGH TIME
WORLD PREHISTORY AND ARCHAEOLOGY
PATHWAYS THROUGH TIME
THIRD CANADIAN EDITION

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Toronto
FOR MICHELLE
BRIEF CONTENTS

PART ONE
THE PAST IS A FOREIGN COUNTRY: GETTING FROM HERE TO THERE  2
CHAPTER 1  GETTING STARTED IN ARCHAEOLOGY  6
CHAPTER 2  PUTTING THE PICTURE TOGETHER  32

PART TWO
HUMAN EVOLUTION  56
CHAPTER 3  EARLY HOMININS  64
CHAPTER 4  FROM Homo erectus TO NEANDERTHALS  90
CHAPTER 5  THE ORIGIN OF MODERN HUMANS  118
CHAPTER 6  THE PEOPLING OF AUSTRALIA AND THE NEW WORLD  148

PART THREE
PERSPECTIVES ON AGRICULTURE  180
CHAPTER 7  TOWERS, VILLAGES, AND LONGHOUSES  190
CHAPTER 8  MOUNDS AND MAIZE  216
CHAPTER 9  A FEAST OF DIVERSITY  240

PART FOUR
THE DEVELOPMENT OF SOCIAL COMPLEXITY  262
CHAPTER 10  COMPLEXITY WITHOUT THE STATE  270
CHAPTER 11  CITIES, PYRAMIDS, AND PALACES: Early States of Mesopotamia, Egypt, and the Aegean  302
CHAPTER 12  LOCATING THE SOURCE OF AUTHORITY: Early States in Asia  338
CHAPTER 13  FROM CITY TO EMPIRE: Social Complexity in Mesoamerica  362
CHAPTER 14  BRINGING THE FOUR PARTS TOGETHER: States and Empire in the Andes  394
EPILOGUE  BRINGING IT BACK HOME  418
APPENDICES  427
GLOSSARY  434
REFERENCES  442
NAME INDEX  464
SUBJECT INDEX  469
PART ONE
THE PAST IS A FOREIGN COUNTRY:
GETTING FROM HERE TO THERE  2
Introduction: Questions of Time and Ethics  3

1
GETTING STARTED
IN ARCHAEOLOGY  6

1.1 Reading the Landscape  8
Survey Design  8
Geological Factors  9
Recovery Methods and GIS  9

1.2 Excavation  10
Horizontal Excavation  11
Vertical Excavation  12
Controlling Horizontal and Vertical Space  14
Recovery Methods  16
Recording Methods  17

1.3 Artifacts and Ecofacts  17
▼ FROM THE FIELD: The Author on His Fieldwork at Wonderwerk Cave, South Africa  18

1.4 Biases in Preservation  19
▼ CANADIAN RESEARCH: Arctic Explorers of the Nineteenth Century  20

1.5 Quantification and Sampling  20
Counting Bones  21
Counting Artifacts  22

1.6 Creating a Chronology  23
▼ TOOLBOX: Ethnoarchaeology  24

1.7 Comparison  26
▼ TOOLBOX: Radiocarbon Dating  27

1.8 Conservation and Display  28

1.9 Cultural Resource Management  28
▼ ARCHAEOLOGY IN THE WORLD: Community Archaeology  29
Summary  30  Key Terms  30
Review Questions  30
Canadian Archaeologists  30

2
PUTTING THE PICTURE
TOGETHER  32

2.1 Origins of Archaeology  34
▼ ARCHAEOLOGY IN THE WORLD: A Brief History of Canadian Archaeology  36

2.2 The Emergence of Archaeology  37
Organizing Time  37
The Establishment of Human Antiquity  37
Imperial Archaeology  38

2.3 Developing Method and Theory  39
Stratigraphic Method and Culture History  39
V. Gordon Childe  40
▼ CANADIAN RESEARCH: Ste. Marie Among the Hurons  41

2.4 Archaeology as Science  42
Developing Scientific Methods  42
The New Archaeology  42
Systems Theory  44
Cultural Resource Management  44
▼ TOOLBOX: Faunal Analysis and Taphonomy  46

2.5 Alternative Perspectives  46
Postprocessual Archaeology  47
Gender and Agency  49
▼ TOOLBOX: Archaeoacoustics  50
▼ FROM THE FIELD: Why Do I “Do” Archaeology?, by Joe Watkins  51
Evolutionary Archaeology  52

2.6 Archaeology at the Trowel’s Edge  52
Summary  54  Key Terms  54
Review Questions  54
Canadian Archaeologists  55

PART TWO

HUMAN EVOLUTION  56

Introduction:  Our Place in Nature  57

3 EARLY HOMININS  64

3.1 The Fossil Record  66
The Early Hominin Radiation  67

3.2 Setting the Scene  69
The East African Rift Valley  69
ARCHAEOLOGY IN THE WORLD:  Fraud—Piltdown and Kama-takamori  70
Lower Paleolithic  71

FROM THE FIELD: Early Hominins in the Nihewan Basin, by Chen Shen  72

TOOLBOX: Stone Tools  74

3.3 The Origin of Tool Use  75
Tool Use by Animals  75

ARCHAEOLOGY IN THE WORLD: Primatc Tool Use  77
The Archaeological Evidence  77

Canadian Research:  Primate Tool Use  77

3.4 Hunting and Sharing Food  78
Were They Hunters?  79

FROM THE FIELD: Early Hominins in the Nihewan Basin, by Chen Shen  72

TOOLBOX: Dating Early Hominin Sites  80
Living Floors and Base Camps  83
The Use of Fire  85

3.5 The Expansion of the Hominin World  86
Ubeidiya and Dmanisi  86
East Asia  87
Summing Up the Evidence  88
Summary  88  Key Terms  89
Review Questions  89
Canadian Archaeologists  89

4 FROM Homo erectus TO NEANDERTHALS  90

4.1 Defining the Ice Age  92

4.2 Before the Neanderthals  94
The Initial Occupation of Western Europe  94
The Acheulean in Europe and Asia  94
Beyond Stone Tools  97

ARCHAEOLOGY IN THE WORLD: Religion and Evolution  103

Canadian Research:  Davidson Black and Zhoukoudian  97

4.3 Neanderthals  99
Neanderthal Genetics  101
Chronology and Ecology  102

ARCHAEOLOGY IN THE WORLD: Religion and Evolution  103

4.4 Aspects of Neanderthal Culture and Adaptation  104
Stone Tools  104
Hunting  108

TOOLBOX: Chaîne Opératoire and the Levallois Method  109
Site Organization and the Use of Fire  111
Treatment of the Dead  111

TOOLBOX: Geoarchaeology and Micromorphology  112
Artwork  113

FROM THE FIELD: Understanding the Neanderthal Way of Life, by Ariane Burke  114
Neanderthal Society  114
Summary  116  Key Terms  117
Review Questions  117
Canadian Archaeologists  117
5 THE ORIGIN OF MODERN HUMANS 118

5.1 What Is a Modern Human? 120
5.2 Early Modern Humans in Africa 121
The African Middle Stone Age 121
Comparing the Middle Stone Age and the Middle Paleolithic 125
5.3 Early Modern Humans in the Middle East 125
The Archaeological Record 126
Chronology 126
Assessing the Middle Eastern Pattern 126
● TOOLBOX: Luminescence Dating 127
5.4 The Arrival of Modern Humans in Europe and the Fate of the Neanderthals 128
The Fossil Record 129
Genetic Evidence 129
ARCHAEOLOGY IN THE WORLD: Modern Human Origins and Questions of Race 130
Archaeological Evidence 131
The Last Neanderthals 132
Summing Up the Evidence 132
5.5 The Upper Paleolithic 133
Chronology 133
Stone and Bone Tools 134
Human Burials 134
Artwork 135
● TOOLBOX: Use–Wear Analysis 136
▲ FROM THE FIELD: The Strange Case of the Grimaldi Figurines, by Michael S. Bisson 138
Site Structure 143
Subsistence 143
5.6 Explaining the Upper Paleolithic 144
▲ CANADIAN RESEARCH: Rock Art in Canada 145
Summary 146 Key Terms 146
Review Questions 146 Canadian Archaeologists 147

6 THE PEOPLING OF AUSTRALIA AND THE NEW WORLD 148

6.1 Modern Humans in East Asia 150
6.2 Australia 151
Dating the Earliest Human Occupation 153
Megafauna Extinction 154
Rock Art 156
Voyaging On 156
● TOOLBOX: Experimental Archaeology 158
6.3 The New World 159
Clovis First 159
● TOOLBOX: Radiocarbon Calibration 162
Pre-Clovis 163
ARCHAEOLOGY IN THE WORLD: Repatriation of Indigenous Burial Remains 166
Early Arrival Model 166
The Solutrean Hypothesis 168
▲ FROM THE FIELD: Mawlukhotepun—Working Together, by Susan Blair 169
The Skeletal Evidence 170
Clovis Adaptations and Megafauna Extinction 170
▲ CANADIAN RESEARCH: Early Adaptations in the Northeast 172
Beyond Clovis 172
The Arctic 175
Summary 177 Key Terms 178
Review Questions 178
Canadian Archaeologists 178

CONTENTS ix
PART THREE

PERSPECTIVES ON AGRICULTURE  180

Introduction: Definitions of Agriculture  181

7

TOWERS, VILLAGES, AND LONGHOUSES  190

7.1 Setting the Scene  192

ARCHAEOLOGY IN THE WORLD: Political Borders and Archaeology  193

7.2 Stage 1: Kebaran and Geometric Kebaran  194

Technology  194
Settlements  194

FROM THE FIELD: The Author on His Fieldwork at Wadi Mataha  195
Domestication  196

7.3 Stage 2: The Natufian  196

Technology  196
Settlements  197
Domestication  197

7.4 Stage 3: The Early Neolithic  198

Technology  198
Settlements  199

TOOLBOX: Harris Matrix  201
Ritual  202

7.5 Stage 4: Late Neolithic  205

TOOLBOX: Paleoethnobotany  206
Technology  207
Settlement and Ritual  207

CANADIAN RESEARCH: Settlement Archaeology in the Wadi Ziqlab, Jordan Place  208
Domestication  209

7.6 Assessing the Neolithic Revolution  209

7.7 The Spread of Agriculture to Europe  210

Summing Up the Evidence  213
Summary  213  Key Terms  214
Review Questions  214  Canadian Archaeologists  214

8

MOUNDS AND MAIZE  216

8.1 Plant Domestication in Mesoamerica  219

8.2 Maize Agriculture in the American Southwest  221

TOOLBOX: AMS Radiocarbon Dating  222
The Formative Period  224
Summing Up the Evidence  225

8.3 Eastern North America  225

TOOLBOX: Hand-Built Pottery  226
The Indigenous Domestication of Plants  226
The Adena and Hopewell  230
Intensification of Maize Agriculture  232

CANADIAN RESEARCH: The Princess Point Complex  232
The People Behind the Transition  233

ARCHAEOLOGY IN THE WORLD: Who Owns the Past?  234

FROM THE FIELD: “Towns They Have None”: In Search of New England’s Mobile Farmers, by Elizabeth S. Chilton  236
Summing Up the Evidence  237
Summary  237  Key Terms  238
Review Questions  238

Canadian Archaeologists  238
9 A FEAST OF DIVERSITY 240

9.1 Africa 242
Villages of Hunter–Gatherers 243
Pastoralists 244
The First Farmers 244
FROM THE FIELD: Ethiopian Farmers Yesterday and Today, by Catherine D’Andrea 245
Summing Up the Evidence 246

9.2 New Guinea 246
FROM THE FIELD: Ethnoarchaeology of Baking in Highland Ethiopia 247
Clearing Forests and Draining Swamps 248
TOOLBOX: Pollen, Phytoliths, and Starch Grains 249

9.3 The Andes 250
Domestication in the Andean Highlands 251
Coastal Villages 253
The Cotton Preceramic 253
The Role of El Niño 254
Summing Up the Evidence 255

9.4 East Asia 255
Early Pottery 255
The First Farmers 256
TOOLBOX: Residue Analysis 257
The Development of Farming Societies 257
Summing Up the Evidence 258
ARCHAEOLOGY IN THE WORLD: Archaeology and the Environment 259

9.5 Questioning the Neolithic 259
Summary 260  Key Terms 260
Review Questions 261
Canadian Archaeologists 261
PART FOUR
THE DEVELOPMENT OF SOCIAL COMPLEXITY  262

Introduction: Defining Social Complexity  263

10
COMPLEXITY WITHOUT
THE STATE  270

10.1 Northwest Coast  272
The Ethnographic Record  273
The Archaeological Record  273
Surplus  274
Displaying Status  275
Household Archaeology  277
▲ CANADIAN RESEARCH: The World's Longest-Lived Corporate
Group  278
Summing Up the Evidence  279

10.2 Stonehenge  279
The Development of Stonehenge  280
A Constructed Landscape  282
The Context of Stonehenge  282
What Did Stonehenge Mean?  283
Summing Up the Evidence  285

10.3 Pueblo Bonito, Chaco Canyon  285
The Development of Pueblo Bonito  285
▲ FROM THE FIELD: Cultural Resource Management
Archaeology in the Southwest, by Dr. Sarah Herr  286
The Function of Pueblo Bonito  288
Evidence for Elites  289
The Chacoan Network  289
★ TOOLBOX: Remote Sensing  290
The Rise and Fall of Chaco Canyon  291
Summing Up the Evidence  291
★ TOOLBOX: Dendrochronology  292

10.4 Cahokia  293
The Layout of the Site  293
Evidence of Inequality  294
Feasting  295
Summing Up the Evidence  296

10.5 Great Zimbabwe  296
The Layout of the Site  296
The Organization of Great Zimbabwe Society  297
Summing Up the Evidence  298

10.6 Comparative Perspectives  298
★ ARCHAEOLOGY IN THE WORLD: The Trade in African
Antiquities  299
Summary  300  Key Terms  301
Review Questions  301
Canadian Archaeologists  301

11
CITIES, PYRAMIDS, AND PALACES:
EARLY STATES OF MESOPOTAMIA,
EGYPT, AND THE AEGEAN  302

11.1 Mesopotamia  304
The Physical Setting  304
★ ARCHAEOLOGY IN THE WORLD: The Fate of
Iraq's Antiquities  306
Chronology  307
Uruk  307
▲ CANADIAN RESEARCH: 3D Modelling of
Tell 'Acharneh, Syria  308
Government  308
Surplus and Specialization  309
Inequality  309
The Development of Writing  311
Warfare and Expansion  313
Summing Up the Evidence  314

11.2 Egypt  314
The Setting  314
Chronology  315
Government and Writing  317
★ TOOLBOX: Tracking Trade Routes  318
The Pyramids  320
▲ FROM THE FIELD: The Author on His Fieldwork
Excavating at Giza  324
The City  324
Summing Up the Evidence  325
★ TOOLBOX: Archaeology and Genetics  326
11.3 Africa Beyond the Nile Valley 327
11.4 The Aegean 328
Setting and Chronology 328
Comparing Palaces 329
Violence and Warfare 332
The Eruption of Santorini and Its Impact 333
Summing Up the Evidence 334
Summary 335  Key Terms 335
Review Questions 336
Canadian Archaeologists 336

12  LOCATING THE SOURCE OF AUTHORITY: EARLY STATES IN ASIA 338
12.1 The Indus Valley 341
The Setting and Chronology 341
The City 342
TOOLBOX: Space Syntax 343
Writing 345
Government 345
CANADIAN RESEARCH: Material Signs of Status in the Harappan 346
Summing Up the Evidence 346
12.2 China 347
The Three Dynasties 347
The Basis of Authority in Early China 349
FROM THE FIELD: Doing Regional Archaeological Settlement Patterns Survey in Northeast China, by Christian E. Peterson 350
Conflict and Consolidation 352
Summing Up the Evidence 353
12.3 Beyond the Chinese Boundary: Japan, Central Asia, and Cambodia 353
Mirrors and Keyhole-Shaped Tombs: The Origins of the State in Japan 353
ARCHAEOLOGY IN THE WORLD: Archaeology and Development 354
Mummies of the Tarim Basin 355
The Archaeology of Angkor 357
TOOLBOX: Underwater Archaeology 358
Summing Up the Evidence 360
Summary 360  Key Terms 361
Review Questions 361
Canadian Archaeologists 361

13  FROM CITY TO EMPIRE: SOCIAL COMPLEXITY IN MESOAMERICA 362
13.1 The Origins of Urbanism and Social Complexity 365
CANADIAN RESEARCH: The Gender of Tomb 7 at Monte Albán 366
13.2 Teotihuacán 366
TOOLBOX: Human Osteoarchaeology 371
Summing Up the Evidence 372
13.3 The Maya 372
The Setting and Chronology 372
The City 373
Government 375
TOOLBOX: Geophysical Methods 376
Inequality 376
Maya Hieroglyphics 378
### LIST OF BOXED FEATURES

## TOOLBOX

- Ethnoarchaeology 24
- Faunal Analysis and Taphonomy 46
- Stone Tools 74
- *Chaîne Opératoire* and the Levallois Method 109
- Luminescence Dating 127
- Experimental Archaeology 158
- Harris Matrix 201
- AMS Radiocarbon Dating 222
- Pollen, Phytoliths, and Starch Grains 249
- Remote Sensing 290
- Tracking Trade Routes 318
- Space Syntax 343
- Human Osteoarchaeology 371
- Metallurgy 408
- Radiocarbon Dating 27
- Archaeoacoustics 50
- Dating Early Hominin Sites 80
- Geoarchaeology and Micromorphology 112
- Use–Wear Analysis 136
- Radiocarbon Calibration 136
- Paleoethnobotany 206
- Hand-Built Pottery 226
- Residue Analysis 257
- Dendrochronology 292
- Archaeology and Genetics 326
- Underwater Archaeology 358
- Geophysical Methods 376
- Tracking Ancient Diseases 415

## FROM THE field

- The Author on His Fieldwork at Wonderwerk Cave, South Africa 18
- Why Do I “Do” Archaeology?, by Joe Watkins 51
- Early Hominins in the Nihewan Basin, by Chen Shen 72
- Understanding the Neanderthal Way of Life, by Ariane Burke 114
- The Strange Case of the Grimaldi Figurines, by Michael S. Bisson 138
- Mawluhotepun—Working Together, by Susan Blair 169
- The Author on His Fieldwork at Wadi Mataha 195
- “Towns They Have None”: In Search of New England’s Mobile Farmers, by Elizabeth S. Chilton 236
- Ethiopian Farmers Yesterday and Today, by Catherine D’Andrea 245
- Cultural Resource Management Archaeology in the Southwest, by Dr. Sarah Herr 286
- The Author on His Fieldwork Excavating at Giza 324
- Doing Regional Archaeological Settlement Patterns Survey in Northeast China, by Christian E. Peterson 350
- The Field School Experience, by Joëlle Chartrand 380
- Discovering a Ceremonial Site of the Ancient Moche People, by Katrina Joosten 404
ARCHAEOLOGY in the world

- Community Archaeology  29
- A Brief History of Canadian Archaeology  36
- Fraud—Piltdown and Kama-takamori  70
- Religion and Evolution  103
- Modern Human Origins and Questions of Race  130
- Repatriation of Indigenous Burial Remains  166
- Political Borders and Archaeology  193
- Who Owns the Past?  234
- Archaeology and the Environment  259
- The Trade in African Antiquities  299
- The Fate of Iraq’s Antiquities  306
- Archaeology and Development  354
- Archaeology and Tourism  384
- Ancient Agriculture and Modern Development  410

CANADIAN research

- Arctic Explorers of the Nineteenth Century  20
- Ste. Marie Among the Hurons  41
- Primate Tool Use  77
- Davidson Black and Zhoukoudian  97
- Rock Art in Canada  145
- Early Adaptations in the Northeast  172
- Settlement Archaeology in the Wadi Ziqlab, Jordan Place  208
- The Princess Point Complex  232
- Ethnoarchaeology of Baking in Highland Ethiopia  247
- The World’s Longest-Lived Corporate Group  278
- 3D Modelling of Tell ‘Acharneh, Syria  308
- Material Signs of Status in the Harappan  346
- The Gender of Tomb 7 at Monte Albán  366
- Excavating in the Peruvian Desert  412
PREFACE

Archaeology is the study of how humans have created the world we live in—a voyage of exploration into the human past. The goal of this voyage is to gain new perspectives and insights into who we are and how our world came into being. As is true of all sciences, archaeology is not a search for absolute and final answers. Archaeologists develop knowledge of the past that can be continuously questioned and improved upon. The goal of this book is to involve students in the current state of archaeological research—to reveal how archaeologists work and what they know. The fascination of archaeology is found in the continual process of human self-discovery. This book will help connect students to that process and show them not only the discoveries that have been made, but also the challenges that remain.

New to This Edition

The third Canadian edition includes expansions of existing chapters and updated information throughout.

- Recent discoveries are examined, including the genetics of Neanderthals and related populations, early symbolic artifacts from South Africa, the Iceman and its implications for Neolithic Europe, and the Harappan city of Dholavira.
- Expanded coverage of both the practice and the legislation of cultural resource management (CRM) archaeology is included in Chapter 1, “Getting Started in Archaeology,” and Chapter 2, “Putting the Picture Together.”
- The archaeology of complex societies in East Asia has been expanded and grouped in Chapter 12, “Locating the Source of Authority: Early States in Asia.” This chapter now includes material on the expansion of the Chinese state, the Silk Route, the development of state societies in Japan, and the development of Angkor.
- The Epilogue now focus on the recent past including the archaeology of the slave trade, with examples from Gorée, Senegal and Annapolis, Maryland, and the archaeology of industrialization, with examples from Lowell, Massachusetts and Ludlow, Colorado.
- Expanded coverage of the Maya civilization includes the discoveries from the Preclassic period at the site of San Bartolo, the use of LiDAR at Caracol, and the painted murals at Calakmul.
- Enhanced electronic resources include enhanced maps, podcasts custom-recorded for this text in the eText, access to selected articles from the journal Antiquity and Proceedings of the National Academy of Sciences chosen for each chapter by the author, and a gallery of 3D objects and animations.

In archaeology, it is not enough to raise questions; one must also think of methods for providing the answers. People often think of archaeology as a random accumulation of artifacts or a series of chance discoveries. In practice, archaeology is a far more active and creative undertaking. Certainly, the excitement of discovery...
plays an essential role. Even in the most carefully planned project, the possibility always exists that the next shovel of soil will lead to an unexpected revelation. In this third Canadian edition, you will read about the surprising genetic evidence of a new species contemporary with Neanderthals, early ages for the origin of millet domestication in China, and the impressive murals at the early Maya site of San Bartolo—as well as the earliest evidence for fire on an archaeological site from my own research in South Africa.

Much of the excitement of archaeology comes from asking questions and finding answers. In this edition, you will also read about the application of new perspectives and methods, such as the use of surveying to understand the development of social complexity in China and the role metallurgical analyses play in elucidating the ancient technologies of the Andes.

In working on this book, I have been struck by three characteristics of archaeology today. The first is that archaeology is a truly global discipline. One can no longer remain up-to-date simply by relying on the information emerging from a small number of centres of research. The challenge today is to keep abreast of a torrent of information coming from archaeologists all over the world. In writing this book, I am painfully aware that there is likely to be information I have missed and vital insights I have failed to incorporate. However, thanks to a wealth of resources available through university library websites, research that in the past would have taken weeks to conduct can now be completed in minutes with a few clicks of the mouse.

The second characteristic of archaeology today is that it often involves deploying methods from the study of natural sciences. In many cases, research requires collaboration between natural scientists and archaeologists. One of the most important skills for an archaeologist today is to be able to collaborate with specialists in other fields. Collaboration is a tricky business that requires trusting our partners and stretching our perspectives, but the result is a significant increase in scientific capacity.

The third characteristic of contemporary archaeology is that there is increased engagement with the modern world. Archaeologists around the globe today find themselves enmeshed in complex issues ranging from community identity to the tourist industry. The recognition of the fragility and importance of the archaeological record is central to contemporary archaeology.

Preparing the third Canadian edition has involved some reorganization and expansion of coverage. However, the main outcome of the revision is a book with a stronger conceptual core: Archaeology is presented as a dynamic, scientifically rigorous, and socially engaged inquiry into the remains of the human past that survive in the world today.

**Organization**

Part One of this book, “The Past Is a Foreign Country: Getting from Here to There,” presents an introduction to archaeological method and theory. The first chapter, “Getting Started in Archaeology,” begins in the field and discusses how archaeologists locate and excavate sites. From the field, we move into the laboratory to look at how the remains recovered in an excavation are analyzed. Archaeology involves not only conducting field and laboratory work, but also developing a framework for thinking about the past. In Chapter 2, “Putting the Picture Together,” we consider how well we know the past and how much we can learn about it. This chapter presents a brief history of the ways archaeologists have thought about the past.

From here, we turn to what we currently know about prehistory. The next three parts of the text examine human evolution, agricultural beginnings, and the
development of political complexity, respectively. Part Two, “Human Evolution,” covers the period from the first evidence of tool manufacture to the spread of modern humans (*Homo sapiens*) throughout the globe. Human evolution involves the interaction between changes in human anatomy and changes in the way humans lived and in the tools they used. The four chapters in this part follow the process of biological evolution, while tracking the geographical spread of human populations and developments in the way they lived.

Part Three, “Perspectives on Agriculture,” examines the shift to an agricultural way of life. The development of agricultural societies demanded a profound reorientation of the way humans related to plants and animals, along with equally significant changes in society and technology. Because the transition to agriculture took place independently in several distinct regions, it is possible to take a comparative approach to the origins of this new way of life to gain a broad understanding of the process. Chapter 7, “Towers, Villages, and Longhouses,” presents the archaeological record pointing to the beginnings of agriculture in the Middle East and the spread of agriculture into Europe. Chapter 8, “Mounds and Maize,” focuses on the origin of maize (corn) agriculture in Mesoamerica and its spread into North America. The adoption of maize agriculture in Eastern North America is particularly interesting and complex, as maize was integrated into an existing indigenous agricultural system. Chapter 9, “A Feast of Diversity,” broadens the comparative perspective by briefly considering a number of other civilizations in Africa, China, New Guinea, and Peru. It becomes clear that the development of agriculture often spanned a period of several thousands of years and that the process differed significantly among regions.

Following the adoption of agriculture, societies in many parts of the world expanded in scale and increased in population, which in turn led to increased social inequality. Power and access to resources came to be controlled by a smaller segment of people, resulting in the emergence of state societies. Finally, Part Four, “The Development of Social Complexity,” covers many of the world’s most spectacular and enigmatic archaeological sites, including Stonehenge, the pyramids at Giza, and the cities of the Maya. As with agriculture, social complexity developed independently in a number of regions. Thus, it is again possible to use a comparative approach to gain a broad understanding of this process.

The first chapter of Part Four—Chapter 10, “Complexity without the State”—considers the monumental sites of Stonehenge, Pueblo Bonito, Cahokia, and Great Zimbabwe, constructed by societies that were characterized by emerging social inequality. The remaining chapters present case studies of early states and empires and are organized geographically. Coverage has been expanded to include Japan and Angkor. Coverage of early states in China, Mesoamerica, and the Andes has also been expanded. The text concludes with an epilogue entitled “Bringing It Back Home,” in which we look at the traces of the past in our familiar world.

**Pedagogy**

Every chapter contains a number of pedagogical elements to guide students through the text. Each chapter opener includes satellite location maps and timelines to orient students in time and place to the sites discussed. Learning objectives help students focus their reading of each chapter. Key terms, concepts, and place names are defined or described when they first appear within the text; they are also defined in the margin of the page.
Subsequently, they are all listed together in a section at the end of each chapter called Key Terms, along with a Chapter Summary and a list of Review Questions. Each chapter contains dozens of stunning illustrations and photographs to engage students in the subject matter, demonstrate key concepts, and visually convey the spectacular nature of our stops along the pathways through time.

**Distinctive Features**

The main purpose of this book is to present an integrated picture of prehistory as an active process of discovery. From this perspective, we cannot relegate methodological issues to the opening chapters alone. After students are introduced to archaeological method in the first two chapters, the question of how we know the past comes up on numerous occasions throughout the remaining text. A number of features have been developed to draw together an integrated presentation of prehistory.

- **Toolbox**

  Toolboxes introduce aspects of archaeological methods that are particularly relevant to the material covered. There are two Toolboxes per chapter. Toolboxes are critical for achieving the aim of this book: to integrate prehistory with an introduction to archaeological methods. Examples of Toolboxes in this third Canadian edition include “Archaeoacoustics” (Chapter 2), “Faunal Analysis and Taphonomy” (Chapter 2), “Chaine Opératoire and the Levallois Method” (Chapter 4), “Experimental Archaeology” (Chapter 6), “Archaeology and Genetics” (Chapter 11), “Underwater Archaeology” (Chapter 12), “Space Syntax” (Chapter 12), and “Human Osteoarchaeology” (Chapter 13).

- **Archaeology in the World**

  Despite the stereotype of the archaeologist as a cloistered academic, archaeology is very much a discipline that takes place in the real world. Issues such as control over human burial remains, the antiquities trade, and the preservation of threatened cultural resources are every bit as important to the field as trowels and levels. Archaeology is not only the study of what happened in the past, but also the examination of the role of the past in today’s world.

  To emphasize the significance of the role of the past in the present, every chapter includes a boxed feature called Archaeology in the World. These boxes pinpoint ethical issues relevant to the archaeology of the periods discussed in the chapter. Through reading these features, students will see that archaeology plays a role in the present. Archaeology in the World topics include “Religion and Evolution” (Chapter 4), “Repatration of Indigenous Burial Remains” (Chapter 6), “The Trade in African Antiquities” (Chapter 10), and “The Fate of Iraq’s Antiquities” (Chapter 11). This third Canadian edition includes new features on “Community Archaeology” (Chapter 1), “Political Borders and Archaeology” (Chapter 7), “Who Owns the Past?” (Chapter 8), “Archaeology and the Environment” (Chapter 9), “Archaeology and Development” (Chapter 12), “Archaeology and Tourism” (Chapter 13), and “Ancient Agriculture and Modern Development” (Chapter 14).

- **From the Field**

  A primary goal of this text is to draw students into the process of archaeological research. Rather than sitting on the sidelines observing the game, students should be on the playing field. This does not mean that this book is suitable only for future
archaeologists; rather, it is meant to provide the tools to give any student a lifelong engagement with archaeology, whether through travelling, visiting museums, reading, or joining in a research project. Toward that end, we have also included in each chapter a feature called From the Field, in which people—including students—who are actively involved in archaeological research write an informal report about a project relevant to the chapter subject.

Two new From the Field segments in this third Canadian edition are “Why Do I “Do” Archaeology,” by Joe Watkins (Chapter 2) and “Cultural Resource Management Archaeology in the Southwest,” by Sara H. Herr (Chapter 10). Other From the Field segments include “Early Hominins in the Nihewan Basin,” by Chen Shen (Chapter 3); “Understanding the Neanderthal Way of Life,” by Ariane Burke (Chapter 4); “The Strange Case of the Grimaldi Figurines,” by Michael S. BISON (Chapter 5); “Mawulkhotepun—Working Together,” by Sue Blair (Chapter 6); “Towns They Have None”: In Search of New England’s Mobile Farmers,” by Dr. Elizabeth S. Chilton (Chapter 8); “Ethiopian Farmers Yesterday and Today,” by Catherine D’Andrea (Chapter 9); “Doing Regional Archaeological Settlement Patterns Survey in Northeast China,” by Christian E. Peterson (Chapter 12); “The Field School Experience,” by Joëlle ter 4 (Chapter 13); and “Discovering a Ceremonial Site of the Ancient Moche People,” by Katrina Joosten (Chapter 14). I have also contributed features on my own fieldwork experiences in South Africa, Jordan, and Egypt. I hope that these sections will inspire some readers to consider volunteering on an excavation or enrolling in a field school. No words can replace the experience of uncovering the buried remains of the human past.

**Canadian Research and Canadian Archaeologists**

Canadian content is integrated throughout the book. In some cases, particularly the coverage of the Arctic in Chapter 6 and the Northwest Coast in Chapter 10, sections not found in the U.S. edition cover aspects of the archaeology of Canada. The research of Canadian researchers working around the world is also included in every chapter, augmented by a brief history of Canadian archaeology in Chapter 2. Furthermore, two special features are dedicated to the unique contributions of Canadian archaeology: Canadian Research boxes, which contain a brief essay that covers a research project by a Canadian archaeologist, and Canadian Archaeologists, which includes a listing of some Canadian archaeologists and a link to their websites, are found in each chapter. I hasten to add that this is not a comprehensive listing of Canadian archaeologists. My focus has been on providing information about Canadian archaeologists whose research is particularly relevant to the chapter.

**The Cover Image**

This bone comb was found at the Garden Island site in Prince Rupert Harbour, British Columbia, in a level dated to 800 AD. The animal on the bridge of the comb is either a wolf or a bear. The tongue, ears, and eye are carved with particular care. George MacDonald points out that these are organs involved in communication and that the emphasis on these aspects of the animal might reflect beliefs in the abilities of animals to communicate (MacDonald 1983). Whereas animals, particularly bears, can understand everything people say, people have only limited understanding of the language of animals.
A Final Note

Australian aboriginal societies speak of the *dreamtime* as the time when their ancestors walked the land. The actions of ancestors are inscribed in the land and experienced in the landscape. Archaeology explores the “scientific dreamtime”—the time of our ancestors that we discover through archaeological research. This book is an introduction to the current state of archaeology. It is not a simple catalogue of finds, but rather an attempt to give coherence to the vast expanses of human experience studied by archaeologists. Our hope is that readers will keep in mind the uncertainty that characterizes the study of prehistory. What is meant by “uncertainty”? Archaeology is a constant process of questioning and improving our understanding of the past. As in any science, all claims can and should be questioned. Archaeology is a report on the current state of the human endeavour to understand our own past. We invite you to join this endeavour, in which we reveal the present state of archaeological knowledge and introduce you to the methods used to gain that knowledge. We hope that these tools will enable you to actively engage in thinking about humanity from the perspective of archaeology, to think about processes that stretch over millennia and are global in scale, and to walk the pathways of our own “scientific dreamtime.”

Support for Instructors and Students

The following teaching and learning resources are available to enhance the experience of both instructors and students.

- **MySearchLab with eText**
  A website that provides engaging experiences that personalize learning. MySearchLab contains an eText that is just like the printed text. Students can highlight and add notes to the eText online or download it to an iPad or Android tablet. MySearchLab also offers self-grading practice quizzes; discipline-specific media and readings; access to a variety of academic journals, and Associated Press news feeds; along with a wide range of writing, grammar, and research tools to help hone writing and research skills.

- **Instructor’s Resource Manual**
  For each chapter in the text, this valuable resource provides a chapter outline, preview questions, lecture topics, research topics, and questions for classroom discussion.

- **Test Item File**
  The test bank includes between 75 and 100 questions per chapter in four formats: multiple choice, true/false, fill-in-the-blank, and essay questions. The Test Item File is also available online through Pearson Canada’s MyTest platform.

- **MyTest**
  This is an online tool that allows instructors to create their own personalized exams, edit any or all of the existing test questions, and add new ones. Other special features of this program include random generation of test questions, creation of alternate versions of the same test, scrambling question sequences, and test previews before printing.

- **PowerPoint® Presentations**
  These PowerPoint slides combine text and graphics for each chapter to help instructors convey archaeological principles in a clear and engaging way.
Most of these instructor supplements are also available for download from a password-protected section of Pearson Canada’s online catalogue (vig.pearsoned.ca). Navigate to your book’s catalogue page to view a list of supplements that are available. See your local Pearson representative for details and access.

- **CourseSmart for Instructors**
  CourseSmart goes beyond traditional expectations, providing instant, online access to the textbooks and course materials you need at a lower cost for students. And even as students save money, you can save time and hassle with a digital eTextbook that allows you to search for the most relevant content at the very moment you need it. Whether it’s evaluating textbooks or creating lecture notes to help students with difficult concepts, CourseSmart can make life a little easier. See how when you visit www.coursesmart.com/instructors.

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- **Technology Specialists**
  Pearson’s Technology Specialists work with faculty and campus course designers to ensure that Pearson technology products, assessment tools, and online course materials are tailored to meet your specific needs. This highly qualified team is dedicated to helping schools take full advantage of a wide range of educational resources, by assisting in the integration of a variety of instructional materials and media formats. Your local Pearson Canada sales representative can provide you with more details on this service program.

- **Pearson Custom Library**
  For enrollments of at least 25 students, you can create your own textbook by choosing the chapters that best suit your own course needs. To begin building your custom text, visit www.pearsoncustomlibrary.com. You may also work with a dedicated Pearson Custom editor to create your ideal text—publishing your own original content or mixing and matching Pearson content. Contact your local Pearson representative to get started.

- **peerScholar**
  Firmly grounded in published research, peerScholar is a powerful online pedagogical tool that helps develop your students’ critical and creative thinking skills. peerScholar facilitates this through the process of creation, evaluation, and reflection. Working in stages, students begin by submitting a written assignment. peerScholar then circulates their work for others to review, a process that can be anonymous or not depending on your preference. Students receive peer feedback and evaluations immediately, reinforcing their learning and driving the development of higher-order thinking skills. Students can then re-submit revised work, again depending on your preference. Contact your Pearson representative to learn more about peerScholar and the research behind it.
Acknowledgments

In writing this book, I have drawn on practically every experience I have had as an archaeologist. First, I would like to thank some of my teachers. The late James Sauer taught me much of what I know about pottery and showed me that archaeology has the potential to build bridges across the chasms produced by conflict. Andrew Moore and Frank Hole supported me as I stepped out of the classroom and into research and provided me with the freedom that I now try to give my own students. Learning to be an archaeologist takes place in the field as much as in the classroom. I have had the opportunity to work with project directors who somehow had the patience to put up with a novice. I am very grateful to Avi Gopher, Nigel Goring-Morris, and François Valla for teaching me how to excavate a Neolithic site; to Ofer Bar-Yosef, Liliane Meignen, and Bernard Vandermeersch for showing me why the Paleolithic is fascinating; and to Mark Lehner for the incredible experience of working at the Giza pyramids. I would also like to thank my friend Zahi Hawass for making it possible for me to work in Egypt.

My views of archaeology have been greatly enriched by my association with research groups in France and Israel. Catherine Pèrles warmly welcomed me into the Prehistory and Technology Research Group of the Centre Nationale de la Recherche Scientifique in Meudon, outside of Paris. During my year at Meudon, I learned from researchers Eric Boëda, Anne Delagnes, Jacques Pelegrin, and Valentine Roux, among others, how to look at technology as an aspect of human behaviour. In Jerusalem, I have long enjoyed a connection with faculty at the Hebrew University, where I have been welcomed by Na'ama Goren-Inbar, Anna Belfer-Cohen, Erella Hovers, and Nigel Goring-Morris. Most recently, I have developed a number of collaborative projects with colleagues, including Francesco Berna, James Brink, Joel Janetski, Paul Goldberg, Liora Kolska-Horwitz, Ari Matmon, Hervé Monchot, David Morris, and Naomi Porat, among others. I thank them for their patience, as I sometimes have had to balance my responsibilities to these projects with the excitement of writing this book.

I have been lucky to find an ideal home in the city of Toronto and wonderful colleagues and students at the University of Toronto. Much of this book stems from the courses that I teach at the university, as well as from courses I taught at Tufts and Brandeis before coming to this city. The dynamism of the University of Toronto is built on an appreciation of diversity that I hope is reflected in the book. I am particularly grateful to the graduate students who have worked with me including Carla Parslow, Alexandra Sumner, Sarah Stewart, Emma Humphrey, Jayne Wilkins, and Danielle Macdonald.

The actual process of developing the first U.S. edition was facilitated by the people at Allyn & Bacon, who believed that we could pull off the project. I never imagined the amount of effort that goes into such a book. I want to thank Jennifer Jacobson, who shepherded me through that first edition with a skill that combined patience and enthusiasm.

I would like to thank the team at Pearson Canada for making the third Canadian edition of this book happen: Joel Gladstone, Sponsoring Editor; Paul Donnelly, Senior Developmental Editor; Marissa Lok, Project Manager; Lila Campbell, Copy Editor; and Daniela Glass, Permissions Project Manager.

Carla Parslow, Peter Pope, and Ron Williamson provided assistance with the new Canadian material. I would also like to thank the Canadian reviewers who provided excellent overall input as well as specific insight on portions of the text during development. This edition and future editions of this text are improved by your feedback.

Michael S. Bisson, McGill University
A. Catherine D’Andrea, Simon Fraser University
Lis Mack, University of Saskatchewan
Hugh McKenzie, Grant MacEwan University
Peter Timmins, University of Western Ontario
Pamela R. Willoughby, University of Alberta

Since *World Prehistory and Archaeology: Pathways Through Time* is used as a course text, I hope that instructors and students may wish to contact me. I would appreciate receiving questions, comments, and criticisms at mchazan@chass.utoronto.ca.

I would like to take the opportunity to thank my parents, who have been a constant source of inspiration and support. I am delighted to have shared this project with my wife, Michelle Fost, and our children, Gabriel and Nathan. This has been, in every sense, a team effort.

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