Archaeology Prehistory

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To Mike, Tom, and Robby, with love.

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Although Dr. Campana is a federal archaeologist, the positions and conclusions expressed in this text are his own and do not reflect any official position of the National Park Service, the Department of the Interior, or the government of the United States. Dr. Campana is not involved in the administration of NAGPRA or the decisions involving the Kennewick remains.



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Pam J. Crabtree Douglas V. Campana Because archaeology is rarely taught in high schools, many students first encounter archaeology during their first or second year in college. By that time, however, many students already have some preconceived ideas about what archaeologists do for a living.

We might envision archaeologists exploring ancient Egyptian tombs, searching for traces of early human activity in East Africa, or studying Mayan ruins in the jungles of Guatemala. The romance of discovery is unmistakable. But, what are archaeologists really looking for? How do they know where to dig? How do they interpret what they find? We have designed this text to answer these questions by providing a concise, yet comprehensive, introduction to both archaeology and prehistory.

What Are Prehistory and Archaeology?

Prehistory is the chronicle of all that human beings accomplished before the advent of written records. While humans and their direct ancestors have lived on earth for about five million years, it was just over 5,000 years ago that writing was developed. During the many millennia before the invention of writing, prehistoric humans spread to every continent except Antarctica. They developed farming and permanent villages; they even built cities that housed complex, class-stratified societies. In this text, we will trace human history in many different parts of the world, from its earliest beginnings up to the appearance of writing.

Archaeology is the collection of methods, techniques, and analytical procedures that scholars use in their attempts to understand the events that took place in the past. These events are evidenced today by material remains buried in the earth, from simple frag-

ments of pottery and stone tools to elaborate burial sites and temples. To study these remains, archaeologists make use of ideas, methods, and techniques derived from geology, biology, chemistry, physics, the social sciences, and other fields, as well techniques developed by archaeologists themselves. We will explore the techniques that archaeologists use to understand and interpret the past in the absence of written records.

Approach

Most traditional textbooks on world prehistory include a few brief introductory chapters on archaeological methods and then go on to recount a detailed world prehistory, paying very little attention to how archaeologists actually study the past. Textbooks on archaeological methods tend to be cookbooks, with very few examples of how these methods are applied in the real world.

Our approach is very different. We wrote Archaeology and Prehistory because we wanted to integrate archaeology and prehistory into a single introductory text so students could really begin to understand how archaeologists do their work. We believe that students need to understand that archaeological methods are not simply a bag of scientific tricks. The methods used by archaeologists are designed to answer specific questions about how real people lived in the past. In Archaeology and Prehistory, we integrate relevant aspects of archaeological method into almost every chapter on prehistory. We do this in boxes entitled "Archaeology in Practice." For example, our chapter on the earliest human ancestors (Chapter 3) includes an "Archaeology in Practice" on the methods used to date these very early sites. Our chapter on the earliest farmers in the Old World (Chapter 18) includes "Archaeology in Practice"

boxes describing how archaeologists try to distinguish early domesticated or farm animals and plants from their wild relatives. The chapter on cities, states, and empires in the Andes (Chapter 26) includes an "Archaeology in Practice" on the preservation of organic materials such as the beautiful textiles that have been recovered from many prehistoric sites in Peru.

Complementing the "Archaeology in Practice" boxes, many chapters include a Case Study focusing on a major archaeological issue or site discussed in the chapter. These case studies are set in a broad archaeological context to allow students to understand why the sites are important. In Chapter 3, for example, a case study examines the evidence and controversy concerning the question of whether the australopithecines were hunters, or were themselves the hunted. Chapter 12 includes a case study of the site of Lake Mungo in Australia, which first revealed that the Australian continent had been settled by hunter-gatherers more than 25,000 years ago. Another case study (Chapter 21) describes the spectacular discoveries of Sir Leonard Woolley in the Royal Cemetery of Ur, while another (Chapter 27) describes the achievements of Native Americans in the great Mississippian site of Cahokia. A final case study (Chapter 28) discusses the discovery of the Kennewick skeleton and the controversy over whether these remains should be returned to the Native American tribes that have claimed them under the provisions of the Native American Graves Protection and Repatriation Act.

Organization

Archaeology is a rapidly growing field, and no simple textbook can provide a comprehensive survey of all of world prehistory. In *Archaeology and Prehistory*, we have chosen to focus on the major issues, questions, and controversies that archaeologists and prehistorians have tackled in the past and that continue to occupy their attention today. We will introduce students to such "big picture" questions as:

• What can archaeology tell us about the lives of human ancestors?

- When did modern humans first appear, and how did they spread throughout the world?
- How did human hunter-gatherers respond to the climatic changes that took place at the end of the ice age, and why did certain peoples begin to practice agriculture at about that time?
- How and why did cities and states develop in both the Old World and the Americas?

Our organization is essentially chronological. Part I provides background and context to present-day viewpoints. Chapter 1 offers a brief history of earlier thoughts about human antiquity and about the ways in which archaeology developed in both the Old World and the Americas. In Chapter 2, we provide a basic introduction to archaeological data and examine the kinds of questions that archaeologists ask about the past.

Part II focuses on the early evolution of humans. We begin with an overview of the fossil evidence for human evolution and then examine the beginnings of the archaeological record and the earliest archaeological sites in Africa. We look at the ways in which archaeology can be used to study the behavior of early human ancestors, creatures who were very different in terms of biology and behavior, from ourselves.

Part III centers on the movement of ancient humans out of Africa and into the subtropical and temperate areas of the Near East, East Asia, and Europe. We focus on the ways in which simple stone tools were made and used, and on the questions raised by evidence of hunting and scavenging in the archaeological record and by the evidence of the first controlled uses of fire. The final chapter in Part III is devoted to the archaeology of the Neanderthals, one of the most intriguing issues in all of world prehistory.

Part IV begins with the critical question of where, when, and how modern humans first appeared. In an attempt to answer this important question, we draw on evidence from archaeology, molecular biology, and human skeletal remains. An "Archaeology in Practice" is devoted to the molecular evidence for human evolution. We discuss the latest archaeological evidence for the replacement of the archaic Neanderthals by anatomically modern humans. The remainder of Part IV is devoted to the archaeological study of early modern humans, including the appearance of art and the initial human settlement of Australia and the Americas.

Part V examines the changes that human societies experienced at the end of the ice age, just over 10,000 years ago. We focus on the techniques—for example, pollen analysis—that archaeologists use to study past environments and the ways in which human societies in North America and Europe responded to these changes.

Until just over 10,000 years ago, all humans everywhere in the world made their living by some combination of hunting, fishing, and plant collecting. Farming was unknown. Beginning about 10,000 years ago, humans began to experiment with planting crops and keeping animals. Farming developed independently in several areas of the world, including the Near East, Southeast Asia, West Africa, Mesoamerica, highland South America, and eastern North America.

Part VI examines the origins and spread of farming in both the Old and New Worlds. In the final chapter in Part VI, we explore some of the consequences of agriculture, including population growth, the development of new technologies, and increasing incidences of certain diseases such as anemia.

One of the most interesting consequences of the advent of farming is the development of complex, urban societies. Extensive archaeological research in both the Old World and the Americas has shown that agriculture provided the economic basis for the development of urban societies such as the Maya of Central America and the Egyptians of North Africa. We will examine how and why these large-scale, class-stratified societies developed.

Part VII examines the origins and growth of urban societies in the Old World, focusing on Egypt, Mesopotamia, the Indus Valley, and Europe before the Romans, while Part VIII explores the rise of complex societies in the Americas, and includes chapters on

Mesoamerica, highland South America, and eastern North America.

The final chapter explores the future of archaeology. We consider such questions as the looting and destruction of archaeological sites, the issues of archaeology and nationalism, and the ways in which archaeological data have been used for political purposes. We also discuss the relationship between archaeologists and Native Americans in North America, including the return of excavated human remains to Native American tribes. These are some of the critical ethical questions that surround archaeology today.

Special Features

In addition to the Case Studies and "Archaeology in Practice" boxes, this text includes a number of other pedagogical elements to enhance learning and make the presentation more engaging.

- Maps: Maps help students locate the major sites discussed in the chapter and provide a sense of the prehistoric landscape and landforms.
- **Key Terms:** Key terms are boldfaced within the text.
- Glossaries: End-of-chapter glossaries provide capsule definitions of important terms and sites, and also serve as chapter reviews.
- Further Reading and Other Bibliography sections: Each chapter includes a short, annotated list of references that students and instructors should find helpful in searching for additional material on the respective chapter contents. Selected readings include easy-to-read, accessible articles and books. In addition, each chapter includes a more comprehensive bibliography.

Experience Archaeology Firsthand

We hope that this text will spark your interest in archaeology, and we encourage you

to become a volunteer on an archaeological excavation. The best way to learn about archaeology is to experience it firsthand. Both of us decided to become archaeologists after working as volunteers on archaeological excavations while we were undergraduates. Doug Campana's first archaeological experience was working as a volunteer on the early Paleolithic site of 'Ubeidiya in Israel (see Chapter 5),

while Pam Crabtree first worked as a volunteer at the excavation of the medieval city of Winchester in England.

The Archaeological Institute of America publishes an annual *Archaeological Fieldwork Opportunities Bulletin*, which should prove a valuable reference for students searching for archaeological excavations that accept volunteers. The Internet is also a valuable resource.

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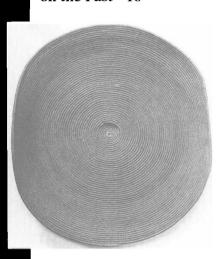
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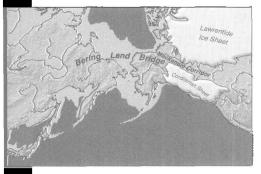
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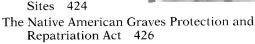
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