



EXPLORING ANCIENT NATIVE AMERICA

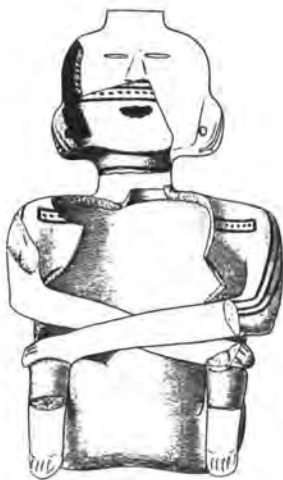
AN ARCHAEOLOGICAL GUIDE

DAVID HURST THOMAS



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*This book is dedicated to David Hurst Thomas III,
my son and fellow time-traveler.
He froze his nose at L'Anse aux Meadows.*



ACKNOWLEDGMENTS

THIS book evolved as the natural consequence of traveling to and from dozens of archaeological field expeditions, each sponsored by the American Museum of Natural History. I am grateful to generations of Trustees and Administrative staff of this Museum for their foresight and support in overseeing one of the world's great research institutions.

Special thanks are also due to my stellar staff here at the American Museum. Niurka Tyler cheerfully took on the task of corresponding with the archaeological facilities and museums discussed here; she also helped organize the intimidating volume of research and travel background necessary to make this volume current and correct. My research assistant and accomplice, Lorann Pendleton, has visited many of these sites with me, and she deserves thanks for doggedly tracking down numerous addresses, research leads, and details. And as always, Margot Dembo, helped by seeking out difficult-to-find references, streamlining the manuscript, and creating the index with the help of Miranda Pinkert.

As a practicing field archaeologist, I am qualified to tell you about ancient Native America from a scientific perspective. But it is vitally important that you, the reader, likewise understand that American Indian people cannot, and should not, be viewed strictly in either scientific or historical terms. Fortunately for us all, Native American people are still with us, and they are today very active in telling the story of their own past.

Throughout these pages, you will find several sidebars labeled "A Native American Perspective," each designed to augment and amplify the archaeological specifics. I am particularly grateful to several Native American friends and colleagues who agreed to prepare these moving first-hand accounts: Mr. Edward Castillo (Chair, Native American Studies, Sonoma State University), Mr. Roger Echo-Hawk (Graduate student, University of Colorado), Ms. Suzan Shown Harjo (Director, Morningstar Foundation), and Mr. William Tallbull (Elder and Historian, Northern Cheyenne Tribe).

Recognizing the importance of cooperation between the archaeological and Native American communities, partial royalties from this book are being donated to the Native American Scholarship Fund of the Society for American Archaeology. It is imperative that we have more practicing archaeologists who also happen to be American Indians.

This presentation has benefitted greatly from the abundant photographic, archival, and artifactual holdings of the American Museum of Natural History. I have, for instance, used numerous historical photographs to illustrate this manuscript, including several shots taken during nineteenth-century reconnaissance trips to the American Southwest and numerous photographs prepared during the joint Colorado Museum of Natural History–American Museum of Natural History excavations in 1927 at the Folsom site. Several of the site and rock art photographs were taken by archaeologist Nels Nelson during his 1912 traverse of the American Southwest; these early photographs document the condition of these sites before extensive stabilization took place. We have used field excavation photographs taken by Earl Morris during his work in the 1920s at the Aztec ruin and my photographs documenting our own excavations at Hidden Cave, Nevada. I am grateful to the American Museum for permission to reproduce these images and thank the gang in the Special Collections division of the Library—particularly Carmen Collazo, Barbara Mathe, and Joel Sweimler—for their help in rounding up many of the images that appear here, some of which are published for the first time. I also thank Peter Goldberg for preparing numerous black-and-white prints on short notice.

I have also drawn upon dozens of scientific illustrations, prepared over the past century by a host of talented artists in the employ of the American Museum of Natural History: Ms. Ruth B. Howe (who illustrated the Blackfeet artifacts), Mr. Charles R. Knight (for his justly famous historical reconstructions, originally prepared to grace the paleontology halls of the American Museum), Marilyn Weber (who drew the artifacts from Poverty Point), and Nicholas Amorosi, a superb artist with whom I was privileged to work. I also thank the now-unknown artists who left us marvelous illustrations of artifacts from Pueblo Bonito and Aztec Ruin; although your names have disappeared over the ages, we still appreciate the skill and accuracy with which these scientific illustrations were prepared. Finally, I have also drawn upon one-of-a-kind field sketches prepared by ethnologists Herbert Spinden, Clark Wissler, and Gilbert Wilson during their important early twentieth-century fieldwork on the Northern Plains. I thank Belinda

Kaye, Archivist of the Department of Anthropology at the American Museum for making these priceless historical materials available to me.

These historical images have been augmented by numerous illustrations prepared specifically for this book. I thank Ms. Diana M. Salles for her many line drawings of archaeological artifacts and Mr. Dennis O'Brien who prepared most of the maps and other graphics that appear here. I also am grateful to Mr. Anibal Rodriguez, who helped select many of the artifacts for illustration; he also prepared some of the black-and-white photographs that appear here.

Several archaeological colleagues helped out by taking us on guided tours of their sites, suggesting additional sites suitable for visitation, providing background information, maps, photographs, and, in some cases, providing unpublished summaries of their own research.

I am particularly grateful to Dr. Bradley T. Lepper (Curator, Newark Earthworks State Memorials), who supplied original research materials and read part of the rough manuscript. Dr. Robson Bonnichson (Director, Center for the Study of the First Americans, Oregon State University) was particularly generous with his time, providing numerous clues on visitable Paleoindian sites.

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Paul Fisher (Marketing and Public Relations, Plimoth Plantation); Deah Folk (Executive Director, Aztec Museum Pioneer Village and Oil Field Museum); Andrea French (Indian Village Curator, Lower Thames Valley Conservation Authority); Dr. George Frison (Department of Anthropology, University of Wyoming); Annette B. Fromm (Project Director, Creek Council House Museum); Peggie L. Gaul (Activities Coordinator, Colonial National Historical Park); Patricia Gladstone (Assistant to the Director, Hartwick College Museums); Dr. Lynn Goldstein (Department of Anthropology, University of Wisconsin), Jim Gormally (Information Assistant, Sandia Ranger District Station); Richard Gould (Curator, Pawnee Indian Village Museum); Dr. Russell Graham (Curator, Illinois State Museum); Michael Gramly (Great Lakes Repository); Dr. Donald K. Grayson (Burke Museum of Anthropology); Gail D. Gregory (Director of Institutional Advancement, Virginia Museum of Natural History); Dawn M. Hagen (Research Assistant, Pipestone County Historical Society); Brian Hatoff (Woodward-Clyde Associates); Elizabeth Haanstad (Membership Coordinator, Utah Museum of Natural History); Dr. Margaret Hanna (Curator of Anthropology, Saskatchewan Museum of Natural History); Emma Hansen (Curator, Buffalo Bill Historical Center); Dr. Donald P. Heldman (Director of Archaeology, Mackinac State Historic Parks); Louise Heric (Administrative Officer, The Friends of Head-Smashed-In Buffalo Jump Society); Inez R. Herrig (The Heritage Museum); Elizabeth Holmes (Associate Registrar, Buffalo Bill Historical Center); David E. Hostler (Curator, Hoopa Tribal Museum); Jerry Howland (Alaska State Museum); James H. Hudnall (Goliad State Park Superintendent); Ken Howell (President, The Smoki Museum); James Hunter (Director/Curator, Huronia Museum); A. B. Isaac (Assistant Director, Peabody Museum of Archaeology and Ethnology, Harvard University); William R. Iseminger (Public Relations, Cahokia Mounds State Historic Site); Dr. Christiana B. Johannsen (Director, The Iroquois Indian Museum).

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—DAVID HURST THOMAS
American Museum of Natural History

CONTENTS

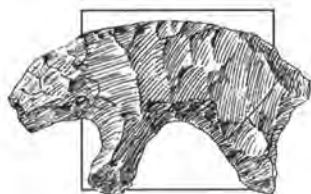


Foreword	xvii
The Global Prologue	1
Genesis	
<i>Sidebar: Where We Came From: Some Native American Perspectives</i>	
The First Americans	9
Evidence at Folsom	
<i>Sidebar: Who Are the Paleoindians?</i>	
Clovis: The Original Americans?	
<i>Sidebar: What's In a Name: A Native American Perspective</i>	
by Suzan Shown Harjo	
<i>Sidebar: Other Traces of the First Americans?</i>	
<i>Sidebar: What Is Radiocarbon Dating?</i>	
Hunting Mammoth	
The Paleoindian Butcher Shop at Lubbock Lake	
<i>Sidebar: Can You Make a Folsom Point?</i>	
The Rancholabrean Extinction: Trouble in Paradise	
Pre-Clovis Possibilities	
<i>Sidebar: Oral Traditions and Indian Origins: A Native American Perspective</i> by Roger C. Echo-Hawk	
The Curious Case of Calico Hills	
<i>Feature: Where Else to See Paleoindian Archaeology</i>	

Spreading Out Across America	49
Defining the American Archaic	
Desert Archaic Adaptations	
Life in the Californian Archaic	
<i>Sidebar: When Did the Bow and Arrow Arrive in America?</i>	
The Northwest Coast Archaic	
<i>Sidebar: How to Read Ancient Rock Art</i>	
Bison Hunters of the Northern Plains	
The Southeastern Archaic	
Poverty Point: An Archaic Omen of Things to Come	
Lessons from America's Archaic People	
<i>Sidebar: Where Can I Dig?</i>	
<i>Feature: Where Else to See Archaic Archaeology</i>	
Agricultural Imperatives in the American Southwest	89
<i>Sidebar: Early Maize Agriculture in the Southwest</i>	
Anasazi Advancements	
<i>Sidebar: Tree-Ring Dating</i>	
The Anasazi of Mesa Verde	
The Chaco Phenomenon	
<i>Sidebar: The Anasazi Kiva</i>	
The Hohokam of the Sonora Desert	
Farmers of the Mogollon Highlands	
<i>Feature: Where Else to See Southwestern Archaeology</i>	
Harvesting the Eastern Woodlands	124
<i>Sidebar: The Woodland Tradition: What Is It?</i>	
The Adena Culture (1000–100 B.C.)	
The Hopewell Complex (200 B.C.–A.D. 500)	
<i>Sidebar: Ohio's Venerable Serpent</i>	
The Hopewell Interaction Sphere	
Regionalized Interactions: The Great Hopewell Road?	
The Enigmatic Effigy Mounds (A.D. 350–1300)	
The Plains Village Indians	
<i>Feature: Where Else to See Woodland-Style Archaeology</i>	
Mississippian Transformations	151
Cahokia: Mississippian City of the Sun	
The Elite and Commoners of Moundville	
<i>Sidebar: Life and Death in Mississippian Society</i>	
<i>Sidebar: The Southern Cult</i>	

Spiritual Symbolism at Spiro	
<i>Sidebar: Vandalizing Spiro's Ancient Past</i>	
The Outsized Eagle of Ocmulgee	
Angel: Mississippian Hamlet in the Outback	
SunWatch: Archaeology in Action	
Mississippian Demise and Survival	
<i>Sidebar: Understanding the Mississippian Mound at Nunih</i>	
<i>Waya: A Native American Perspective</i>	
<i>Feature: Where Else to See Mississippian Archaeology</i>	
Colliding Worlds: Old and New?	183
Mercantile Encounters	
<i>Sidebar: Infectious Encounters: An American Holocaust</i>	
Spiritual Encounters	
<i>Sidebar: Kateri Tekakwitha: The First Native American Saint?</i>	
<i>Sidebar: Indians and the California Missions: A Native American Perspective, by Edward D. Castillo</i>	
<i>Sidebar: California's Simulated Mission Reality</i>	
Military Encounters	
<i>Feature: Where Else to See the Archaeology of the Encounter</i>	
Epilogue: An Enduring Encounter	231
<i>Sidebar: What's Appropriate When You're Visiting Indian Country</i>	
Encountering Native America: The Museum at Warm Springs	
The Medicine Wheel: Archaeological Enigma or Consecrated Ground	
<i>Sidebar: Archaeological Sites or Sacred Places? A Native American Perspective by William Tallbull</i>	
<i>Sidebar: Sacred Ground by Suzan Shown Harjo</i>	
Appendix	245
Notes	295
For Further Reading	299
Index	307

FOREWORD



After five centuries of contact and interrelated history, it can honestly be said that to most non-Indian Americans, Indians are familiar strangers—the first Americans, indeed, but ironically the least known of all members of the American population. Eurocentrism did its job: behind the legends and beyond the myths, few non-Indians yet know the reality.

—ALVIN M. JOSEPHY, JR.
*THE NATIVE AMERICANS:
AN ILLUSTRATED HISTORY*

All too often, early American history is misperceived as little more than a procession of compelling individuals at strategic places during pivotal times: from Christopher Columbus's splashy entrance at San Salvador in 1492 to Jacques Cartier's 1534 penetration of the St. Lawrence River. From Francisco Vásquez de Coronado's futile quest for riches at Quivira in 1540 to the transcontinental trek of Meriwether Lewis and William Clark in 1804–1806, this is how we have been conditioned to think of our own history—the key person, the fateful place, and the turning point in time.

According to Harvard historian, Frederick Jackson Turner, “the fateful place” was the American frontier, where the most distinctive features of American civilization and character were forged. Circumstances peculiar to the frontier—free land, opportunity, and common

danger from Indians—molded Americans in specific ways, Turner argued a century ago. They were required to cast off their European legacy and in its place, develop a new set of home-grown, independent beliefs: creativity, curiosity, restlessness, optimism, and individualism. Generations of young New Englanders were able to head out, using the frontier as an “escape valve” for overpopulation and cultural complacency. Escaping to the frontier, Turner suggested, was the means for Americans to break away from their suffocating Puritan roots.

In effect, Turner encouraged white America to rethink its history from the inside out—not as a pale reflection of European events, but as something uniquely American. Good enough.

But in suggesting the frontier comprised the line between “savagery and civilization,” Frederick Jackson Turner created a selective history that almost universally ignored America’s racial and ethnic minorities. American Indians in particular were written off as irrelevant to mainstream American history.

This tradition unfortunately endures even today. A survey of recent textbooks of American history demonstrates that inaccurate and unjust views of the Indian persist, on a somewhat reduced scale, in even the latest American history textbooks. Textbook Indians are commonly dismissed as either an unprincipled hindrance to Anglo settlement or pathetic chumps and pushovers. When it comes to Indians, the modern American history textbook almost uniformly sets out carping pronouncements about their lack of private property, the illogical nature of Native American governments, and especially the rudimentary or immoral condition of their religion. Today’s textbooks are still littered with quaint pejoratives like “war-whooping,” “feathered foes,” “painted allies,” and “tawny-skinned pagan aborigines.”

Echoing Hollywood’s stereotypes, today’s textbook historian misreads Native American culture through a curious blend of racism, sexual imagery, and Victorian sentimentality. Texts still wax poetic about that “vast and lonely North American continent,” a “virgin” land that “like all virgins, inspired conflicting feelings in men’s hearts.” One historian writes that this “vast and virgin continent . . . was so sparsely peopled by Indians that they could be eliminated or shouldered aside. Such a magnificent opportunity for a great democratic experiment may never come again.” Against this background, it is hardly a surprise that American Indians have been recently characterized as a “people without history.”

Implicit in this Eurocentric conceit is the notion that Americans of European descent brought with them a heritage more progressive and

of a higher order than that of Indian people. In matters of background, ethics, faith, lifeways, expertise, and accomplishments, the Euro-American defined a higher plane. It followed that the uncivilized culture of the Indian was irrelevant to mainstream American history.

The truth is rather different. By the time Columbus landed in the "New" World, this was already an ancient world, the scene of countless cultural rises and falls. Five hundred years ago, the Americas were already home to 75 million people. They spoke 2,000 languages. There were incalculable numbers of rich and distinct Native American cultures. Thankfully, many remain with us today.

The handful of Europeans who landed in 1492 brought with them a Judeo-Christian ethical and religious patrimony directly traceable to the classic and well-known civilizations of Dynastic Egypt, Classical Greece, and Rome. But this legacy was unknown and irrelevant to the Indian people who discovered Columbus. Native Americans were totally immersed in their own networks of equally prolonged entitlements, wholly unfamiliar to the European newcomers. We need not burden the fifteenth-century *conquistador* with our own postmodern sense of culpability and penitence. But let us likewise avoid the antiquated brand of cultural and racial narcissism still fostered in the too-common Eurocentric view of American history.

In these pages, I wish to provide something of the flavor of America's abundant and ancient Indian heritage. While this small book will hardly provide a comprehensive history of Native American people, it will sketch both the diversity and the texture of American Indian lifeways. We will see for ourselves what life has been like in America for a thousand generations. The story is told in terms of real places—archaeological sites and museums that can be visited by all. This is an eclectic, personalized journey covering 9 million square miles and 25,000 years. But before we cast off, I'd like you to know who I am and where I want to take you.

The first part is easy. I am a professional archaeologist specializing in Native American studies. For a quarter century, I've directed dozens of archaeological digs, mostly in the western deserts and the Deep South. One year, our archaeological tent city was the third largest "town" in Esmeralda County, Nevada.

Since 1972, I've been employed as a curator at the American Museum of Natural History, located on the west side of New York's Central Park. The American Museum is the largest natural history museum in the world, housing more than 36 million artifacts and scientific specimens. No institution anywhere has more dinosaurs, birds, spiders, fossil

mammals, or whale skeletons. Nearly 3 million people visit the forty massive exhibition halls to see things like dinosaur eggs, meteorites, an eight-foot slide made of jade, the breathtaking Star of India.

I curate the North American archaeological collection, more than a million artifacts. When first hired, I was nearly overwhelmed by this vast and important collection. To be an effective museum curator, I would need to learn much beyond my immediate, hands-on archaeological experience. While working with this monumental collection, I've read thousands of books and professional articles on American archaeology (I've also written a hundred or so of my own). But you can only learn so much from books and scientific journals. To do this collection justice, I needed to get out on the landscape, to see and sense for myself what American archaeology was all about.

As things turned out, it was easy for me to see America. With an office and labs in New York City and ongoing field projects in the western American desert and the Deep South, I found myself living and working on three corners of the North American continent. This posed some logistic problems. Although we were excavating artifacts in Nevada and Georgia, our archaeological lab was in New York City. But because we were reluctant to ship such scientifically important artifacts and field notes, we ended up driving to and from each field expedition: from New York City to Austin (Nevada) in June, then back to New York in August; from New York to St. Catherines Island (Georgia) in October, returning to New York three weeks later. During my first fifteen years at the American Museum, I was "on the road" an average of seven months a year. We've now logged a shade more than 250,000 cross-country miles, hauling archaeological artifacts and scientific equipment to and from our various digs.

In one sense, we were emulating some of the prehistoric foraging people that I study, following a seasonal, seminomadic, semisedentary lifestyle. But unlike ancient Native Americans, I didn't use a travois and burden basket. I got around mostly in a 4 by 4 Ford pickup. Once, it was as simple as packing up my long-suffering dog, Sasha, and heading out. The pilgrimages continue, but today, they are more family oriented. My wife, Lori—also an archaeologist here at the American Museum of Natural History—and I are usually accompanied by our son who, by the age of six, had logged five cross-country trips, visiting forty-four states and seven Canadian provinces.

There is no better way of breaking up such long-haul trucking than by stopping to visit exhibits of local history and archaeology. Over the years, I've visited hundreds of roadside displays: museums, on-site

exhibits, active mission churches, rock art localities, and assorted "points of historical interest."

In these pages, I want to share with you a bit of what we have seen—the real, hands-on archaeology and history of native North America. America's diverse history is out there for all to see, but you must be willing to look beyond the Monticellos and the Valley Forges to find it. The true American past is also found in places like Mesa Verde National Park, Medicine Wheel National Historical Monument, and Moundville Archaeological Park. But be forewarned: this is not an encyclopedic listing of archaeological sites and museums. Rather, it is a personally guided tour through the first thousand generations of American history.

PRESERVING AMERICA'S ANCIENT PAST

So here's the deal: I agree to guide you through ancient native America. I promise to tell this story strictly in terms of places and artifacts you can see for yourself. The book will only direct you to sites and museums that are available to the traveling public, places that encourage visitation, provide interpretation, and can ensure adequate protection for both the visitor and for the surviving archaeological record. The idea here is both to protect the sites from the public, and the public from the sites. In return, I must ask a favor of you, the reader and traveler. America is, in effect, an immense outdoor museum that chronicles the history of humanity on the continent. But this historical legacy is disappearing at a record clip. Sometimes these losses cannot be avoided, as pieces of the past erode, decay, or wash away.

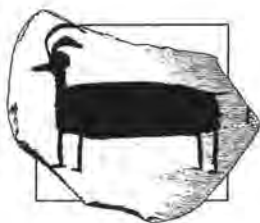
But far more menacing than these natural agencies is the wanton destruction of the past by thoughtless scavengers and casual collectors. The worst offenders are the so-called pothunters, people who illegally mine archaeological sites for ancient artifacts, which are then sold to the highest bidder. Others simply pick up ancient artifacts from public areas, not realizing the importance of even isolated artifacts to our understanding of America's past. Native American sacred sites are being desecrated at a frightening rate. As we build more roads and bridges, clear more forest land, and take recreational vehicles into desert areas, the ultrafragile archaeological past is being disturbed. Thoughtless looting and inadvertent destruction of America's past is a profound and growing problem.

Throughout these pages, you will hear several horror stories of the inconsiderate and the greedy who have ruined parts of the past that

belong to us all. My hope here is to show the larger picture of America's ancient past, and to ask for your help and cooperation in protecting that past for others to enjoy as well. The Bureau of Land Management, one of America's leading protectors of public lands, has a fitting slogan: *The past belongs to the future, but only the present can preserve it.*

As we tour America's remote past, I ask your help in preserving that past for others to follow.

THE GLOBAL PROLOGUE



NATIVE American roots run deep. The very first human, whenever and wherever, carried the American Indian spirit deep inside. To understand the Native American, we must first appreciate how we all came to be.

At a point remote in time, when the Pacific Ocean washed half the globe, the continents were still fused, and dry land was at a premium. Today, this primordial superglob is called Pangaea.

More than 200 million years ago, Pangaea fractured in two, the Laurasian landmass gliding northward, Gondwanaland heading to the south. As more time passed, new oceans splashed between these still-splitting terrestrial fragments—the earth's *plates*—dislocating at constant, yet unrelenting, rates. They still do this today. Sometimes they collide with one another. Sometimes they spread apart. But they keep moving.

Even then, some plates looked like parts of today's continents. Those defining America's western rim, for instance, look basically like today's Pacific shoreline. Elsewhere—from the Alps through the Himalayas, in the Rockies, and throughout America's basin and range province—the plate boundaries created mountain chains that straddle continents.

So it went for millions of years. Life on the separating continental masses diverged and differentiated. Each land raft was evolving its own crew. Dinosaurs roamed freely across the planet's shifting surface until one day, 65 million years ago, they were gone.

Things were changing.

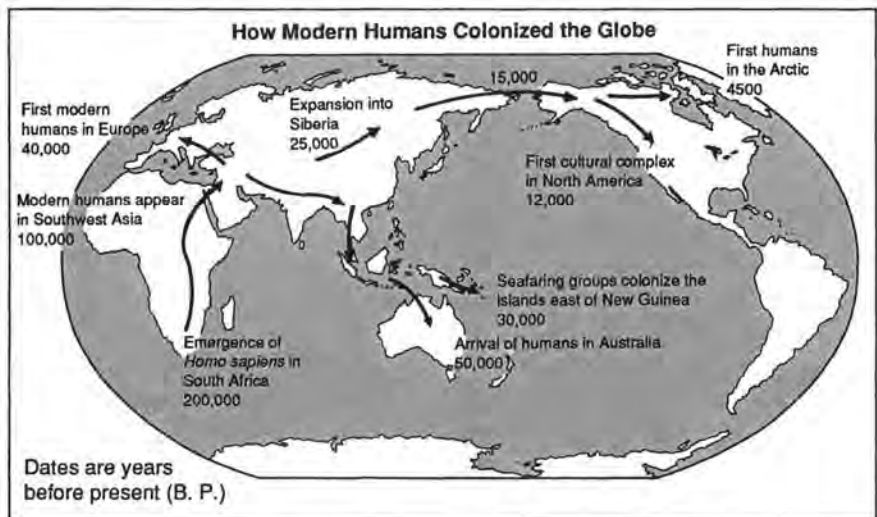
GENESIS

The Southern Ape (*Australopithecus*) emerged on the African plain 4 million years ago, unnoticed. Today's best-known fossil remains of *Australopithecus* come from northern Ethiopia. Named Lucy by her Beatle-loving excavators, she stood nearly four feet tall, walked fully upright, and looked a lot like us—remarkably human.

Through the interplay of extinction and survival, adaptation and evolution, Lucy's descendents would develop into an implement-using, large-brained hominid we now call *Homo habilis* ("handy man"—literally a tool-maker). Handy perhaps, but they still weren't human.

It wasn't until 1.5 million years ago that the first incontestably human form appeared. These so-called *Homo erectus* populations grew throughout the middle Pleistocene (the middle Ice Age) until Africa could no longer contain them. Two million years ago, give or take some, *Homo erectus* took off northward, slowly crossing the connecting lands of the Middle East, then fanning out across Europe and across

Modern humans evolved over a very long time, perhaps 200,000 years ago. These modern human beings may not have migrated out of Africa until much later, until maybe 100,000 years ago. But once expansion began, modern humans populated the globe at a fairly rapid clip, as this map indicates. The occupation of the Americas and the remote islands of the Pacific were among the latest of these major population movements.



Asia. Flaunting their unrivaled adaptability, people scuttled out—into the tropical rain forests, across the temperate regions, up to the near-arctic. For the first time, humanity asserted itself.

These *Homo erectus* populations remained fairly stable until perhaps 150,000 to 200,000 years ago, when a more evolved human form appeared. The short but tough Neanderthals (*Homo sapiens neanderthalensis*) stood a little over five feet tall, sporting massive brow ridges, burly muscles, and squat bodies.

But they were not like today's cartoon cavemen. Real Neanderthals walked upright and, suitably trained, could compete at tennis or golf. They might even win, but they wouldn't blend in at Wimbledon or the Masters. We stand taller, our foreheads are higher, and our brow ridges are smaller. Although our forearms are longer, our muscles are less well developed.

What happened next is uncertain. Maybe the Neanderthals melded directly into modern humans. Or maybe modern humans evolved only in Africa, where the tropical savannah environment provided an ample food supply. Either way, before too long, the migrating branches of humanity found themselves at opposite ends of the earth.

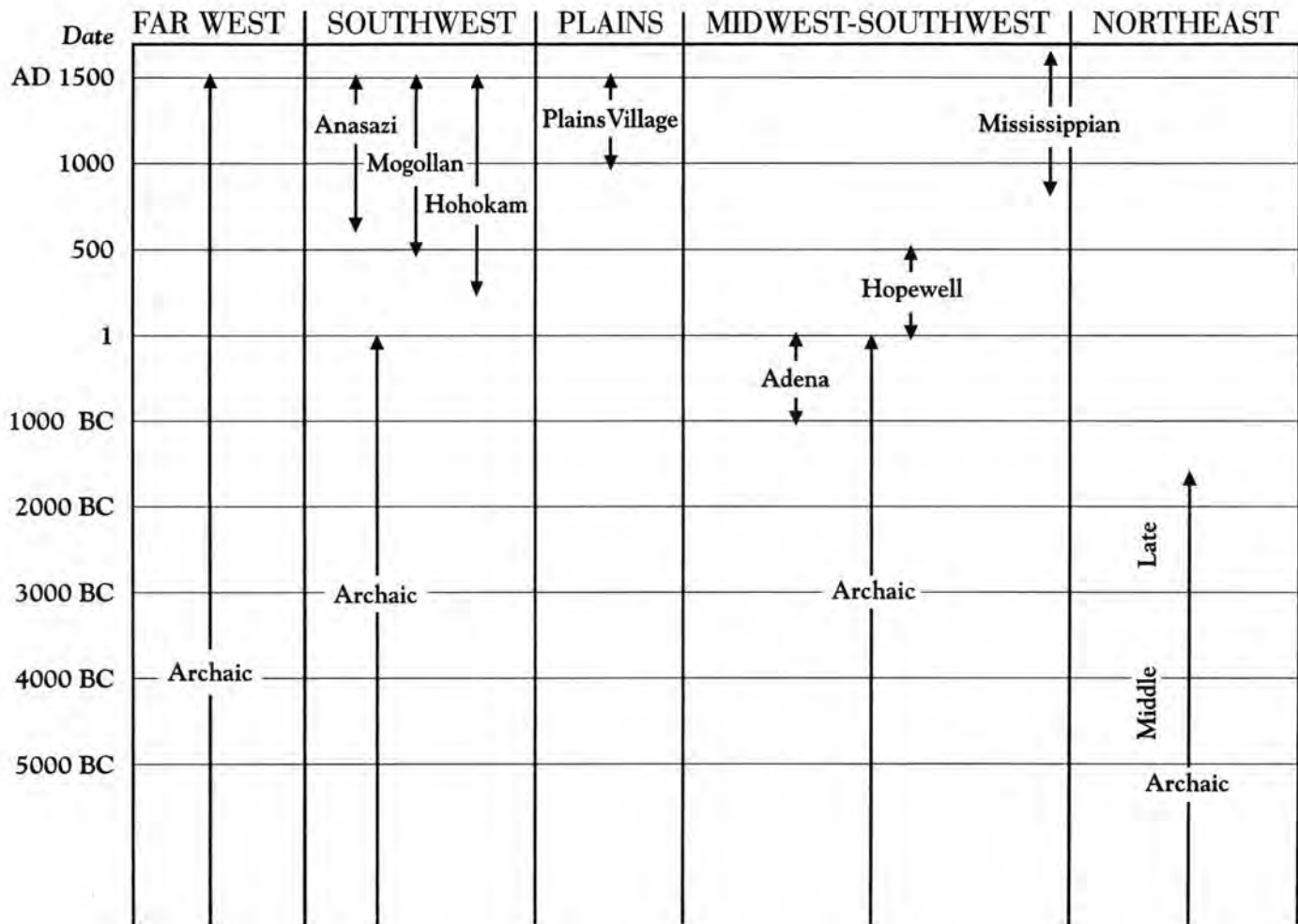
Recent genetic research suggests a controversial "out of Africa" theory by tracing all living human beings to a single first mother (Eve), who lived about 200,000 years ago in South Africa. Whatever the exact time scale, this Eve theory is supported by some archaeological evidence suggesting that modern humans did not spread out from Africa until rather late in time.

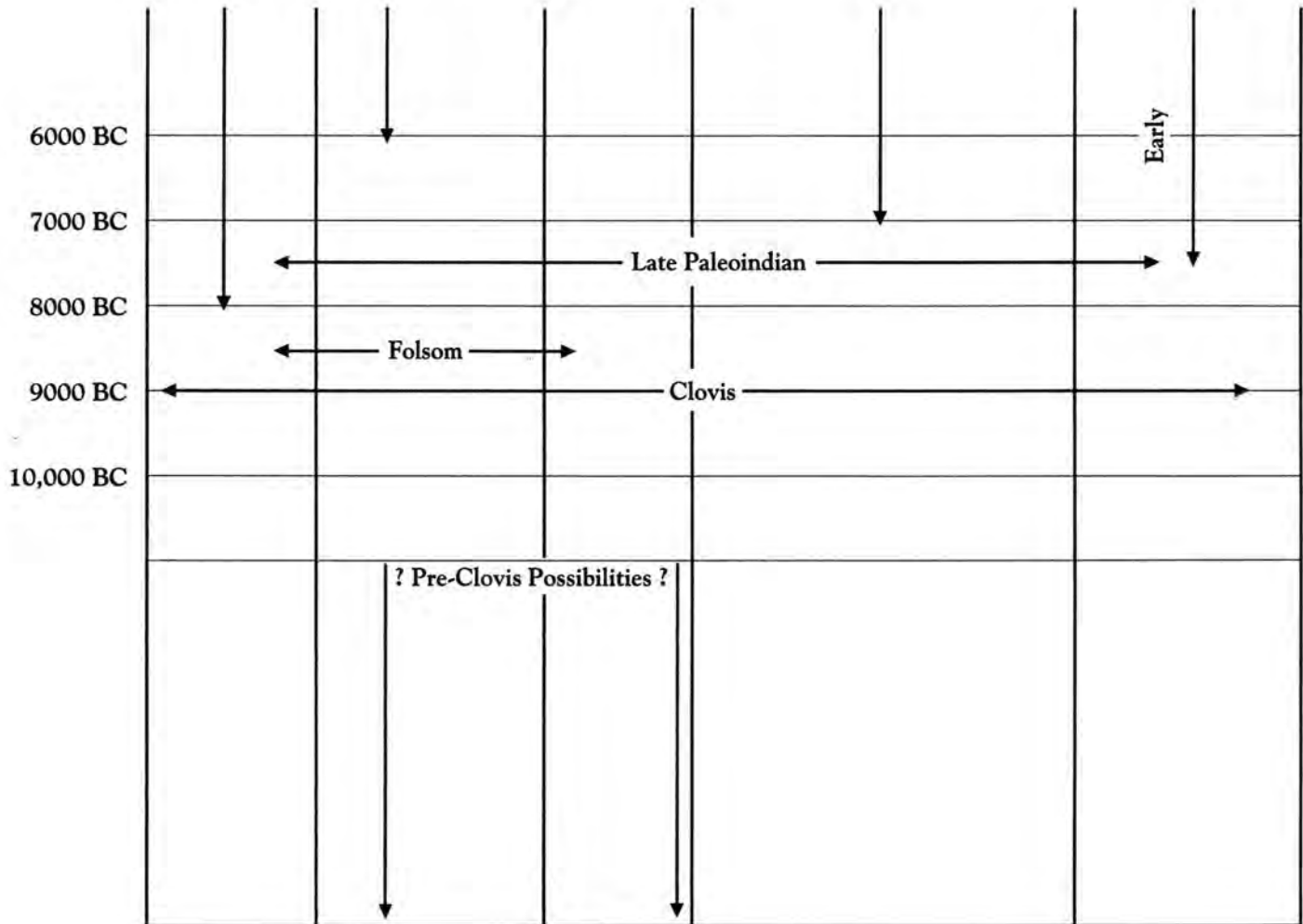
But when they did, our forebears rocked the world. They fit in. They could adapt. They settled new environments. But did they do it deliberately? I doubt it.

The massive Ice Age journeys were probably not planned, deliberate migrations. More likely, our Pleistocene ancestors extended their hunting territories only a few miles each generation. But even as small and scattered clusters, they would still populate the entire globe in tens of thousands of years.

Eventually, these travelers became completely modern people (*Homo sapiens sapiens*). Often called Cro-Magnon—after an important archaeological site in France—they first appeared in Europe roughly 40,000 years ago. They flourished, creating marvelous new devices of stone, bone, and antler—more effective, more artistic than anything the world had ever seen.

Little by little, their skin lightened up, probably to absorb more vitamin D from the limited sunlight in these northerly European





latitudes. These *Homo sapiens* became the ancestors of the Vikings, the Spanish and Portuguese explorers, and the millions of other Europeans who eventually cruised westward, to explore America.

Much before them, equally intelligent and resourceful people set out eastward across Eurasia. Remarkably, some navigated their way to Australia 50,000 years ago. Sure, their environment helped. The sea levels were considerably lower than today, hooking up many modern islands (including Australia and New Guinea). But still, vast stretches



WHERE WE CAME FROM: SOME NATIVE AMERICAN PERSPECTIVES

We archaeologists weave a compelling story about how humanity evolved in Africa, nearly 5 million years ago. Then, slowly, our human ancestors spread to the farthest corners of the planet. In the global, scientific sense, this is where and how American Indians came to be.

History may well show that science is correct about the origins and distribution of humankind. But science has yet to find the remains of our first human mother (Eve), or the frozen superhighway that delivered the first Americans across the Bering Straits from Asia. As that Standing Rock Sioux philosopher, Vine Deloria, has cogently pointed out "excavating ancient fireplaces and campsites may be exciting, but there are no well-worn paths which clearly show migratory patterns from Asia to North America, and if there were such paths, there would be no indication anywhere which way the footprints were heading."

Some American Indians believe in the Bering Straits theory; many others do not. Here is a smattering of Native American creation stories:

A Diegueno Case History (California): In the beginning, when Tutchai-pai, the Maker, made the world, the Earth was the woman and the sky was the man, and the world was a pure lake covered with tules. Sky came down upon the Earth. The Maker and his brother, Yo-ko-mat-is, blew and the heavens rose higher and higher above their heads until it formed a concave arch. The Maker made hills, valleys, little hollows of water, forests, and dug in the ground for mud to make the first people the Indians.



of open sea separated Australia/New Guinea from the Southeast Asian mainland. The first Australians set out on their incredible voyage in homemade craft, piloting their way across open, uncharted water—far beyond the comforting sight of land. And some made it. Their descendants are still there.

Far to the north, other mammoth-hunting pioneers pressed on across the Siberian tundra. Their specialized tools of bone and antler equipped them to survive in the most elemental way. Our high latitude



A Pawnee Case History (Oklahoma and Nebraska): In the beginning, the Power needed help, so stars, sun, moon, clouds, winds, lightning, and thunder were created. The Power told the Evening Star to order her priests to sing and shake their rattles. A great storm came up and rolled across the formless world and passed the Power, who dropped a pebble into the clouds. After the storm, the world was water. The Power sent out Black, Yellow, White, and Red stars each carrying a cedar war club. Each struck the water with the club and the waters parted and Earth appeared. Again, Power told the Evening Star to order her priests to rattle and sing. Again a storm ensued. The thunders shook Earth, and hills and valleys, mountains and plains were formed. Then Power created life on Earth.

A Tohono O'odham Case History (Arizona): In the beginning, Earthmaker made the whole Earth out of a little ball of dirt. He danced on the ball and pushed it until it expanded. There was a great noise and I'toi jumped out of the Earth to help Earthmaker give the world its shape. Coyote, who was with Earthmaker from the beginning, followed Earthmaker and I'toi everywhere while they made and shaped people of the Earth.

In the next chapter, Roger Echo Hawk (Pawnee) offers his own case history, pointing up some of the commonalities between archaeological and Native American creation stories, suggesting that perhaps the chasm separating science and theology may be narrower than most think.



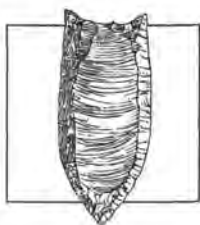
ancestors used everything at their disposal to survive—even discarded mammoth bones, which were burnt as fuel and propped up to support the roofs of their impressive pit houses.

Not everybody left Africa, of course. Those who remained on the steppes hunted elephants, buffaloes, rhinoceroses, and antelopes. Twenty thousand years ago, these African people introduced the bow and arrow to the world. Through time, their skin would slowly darken as a genetic sunscreen against potentially lethal doses of ultraviolet radiation. Some of those remaining in Africa would, beginning in the sixteenth century, reluctantly immigrate to America in chains.

The earth matured. People and continents drifted apart. Only in the Americas would these diverse strains of humanity reunite. The European colonist and the African hostage would eventually arrive in the same ships. They would be greeted by other descendents of Eve. But the indigenous, Native Americans had taken a very different journey to their New World homeland.

This is the story of how American Indians got there. And the remarkable things they did once they arrived.

THE FIRST AMERICANS



A CENTURY ago, the American archaeological scene was dominated by a single key question: *When did Indians first arrive in America?*

During the nineteenth century, certain well-publicized finds suggested that Ice Age people may have arrived in America sometime during the Pleistocene, a geological epoch that began 2 million years ago, during which giant mammals moved across a landscape characterized by massive ice sheets. But the evidence for Pleistocene people in America was not entirely convincing, and two distinct schools of thought emerged. One group accepted the evidence at face value, arguing boisterously that Ice Age Americans must have hunted the giant game animals that once lived here. With few exceptions, the “early man” advocates were amateur relic hunters or fossil collectors—impassioned and committed, but poorly versed in the scientific methods and theories of the day.

These crusaders for the Ice Age were countered at every turn by the big guns of American archaeology, establishment men brandishing advanced degrees, mostly curators and professors at places like the Smithsonian Institution, the Universities of Chicago and California, and, yes, the American Museum of Natural History in New York. These learneds contended that American Indians were relative newcomers in America—probably arriving no earlier than the Moundbuilders, Pueblo Indians, and the Classic Maya—all of whom left easy-to-recognize archaeological traces dating from the last couple thousands of years.

These battle lines were firmly drawn in the early twentieth century. It was obvious to all that—if the truth were to be known—better sites must be found: the bones of late Pleistocene animals had to be scien-

tically investigated by trained observers. If any solid evidence could be found—that is, undisturbed associations of artifacts with extinct animal bones, still in place in sediments of the Pleistocene age—these associations must be presented to a range of scientific witnesses for verification.

EVIDENCE AT FOLSOM

This is exactly what happened at Wild Horse Gulch, about eight miles west of Folsom, New Mexico. In 1926, paleontologists from the Colorado Museum of Natural History in Denver were excavating ancient



WHO ARE THE PALEOINDIANS

The Paleoindians are the oldest-known cultural tradition in native North America. Paleoindians lived here between about 11,000 B.C. and 6,000 B.C., and their archeological remains have been found from the Pacific to Atlantic shores, from Alaska to the southern margin of south America.

Archeologists recognize three major cultures within the overall Paleoindian tradition:

Clovis culture	9500–8500 B.C.
Folsom culture	9000–8200 B.C.
Late Paleoindian (or Plano) culture	8000–6000 B.C.

Paleoindians survived, at least in part, by hunting large, now extinct mammals: the Columbian mammoth (during Clovis times only), extinct forms of bison, American horse, and camel. They probably also ate a wide variety of other foods, but evidence for broader diets is difficult to find. As archeologist Donald Grayson has put it, if Paleoindians “spent most of their time hunting mice and gathering mice, we probably would not know it.”

Although the Paleoindian tradition ceased about 6,000 years ago, the Paleoindian people are without question the biological ancestors of many modern Native Americans.



bison bones buried beneath a layer of clay and gravel several feet thick. Because this kind of bison was known to have been extinct for thousands of years, these paleontologists were shocked to find two pieces of chipped flint, clearly artifacts of human manufacture, lying loose in their spoil dirt. Once alerted, they soon found another artifact, this one still in its original position, imbedded in the clay surrounding a bison rib. They carefully removed the entire block of matrix, containing both bone and flint.

Excited by the evidence of human artifacts associated with extinct Pleistocene animals, J. D. Figgins, the museum's director, couldn't wait



Some of the major Paleoindian sites in North America that can be visited or for which artifact collections can be viewed in a museum. The dotted line represents the Pleistocene shoreline during the peak of Ice Age glaciation. Note that during this period Alaska was directly connected via dry land to northeastern Asia.

to share his news with colleagues: people had been in the New World far longer than responsible scientists believed possible. But Figgins was soon confronted by a solid wall of doubt and disbelief. Most of his colleagues dismissed his evidence. Maybe the strata were jumbled in the geological past. Maybe the excavators inadvertently mixed ancient strata themselves. Maybe the flaked stones dated from much later than the bones, having fallen into the excavation, undetected, from above. Maybe, maybe, maybe.

Still believing in his Folsom finds, Figgins vowed to find better evidence the following year. The 1927 expedition to Folsom was jointly sponsored by the Colorado Museum of Natural History and the American Museum of Natural History. Before long, the excavators came across additional ancient artifacts—wonderfully crafted spear points still embedded against the ribs of extinct bison. Having learned from

The original excavations at the "Folsom Bison Quarry" (as it was then called in 1927). Mr. Carl Schwachheim (left) is pointing to the fifth spear point found in position between two bison ribs; on the right is paleontologist Barnum Brown. (Courtesy of the American Museum of Natural History.)



previous disappointments, Figgins and the others left everything in the ground, exactly as found.

Telegrams went out, announcing the discoveries to the leaders of American archaeology. In a matter of days, scientists began flocking to Folsom, to see firsthand the revolutionary finds. This time, the scientific evidence was conclusive.

So it was that virtually overnight, a bitter forty-year-old controversy evaporated. Those sparsely trained, obstreperous amateurs were right after all. The elite of American archaeology, the former critics, had changed their minds. Only a month after his visit to Folsom, one highly influential archaeologist could confidently crow to the world: the first American must have arrived "at least fifteen or twenty thousand years ago."

CLOVIS: THE ORIGINAL AMERICANS?

With the Folsom discovery, science suddenly had unimpeachable evidence that humans had been in the New World since the late Pleistocene. In effect, the Folsom discovery changed the rules of American archaeology. Now that archaeologists knew what to look for, evidence of ancient Americans proliferated. In 1932, just down the road 150 miles or so south of Folsom, came another startling disclosure. Not far from Clovis, New Mexico, a road construction company, digging a gravel pit into an isolated place called **Blackwater Draw**, plowed up a large, extremely thin stone tool and a huge animal tooth.

Fortunately, scientists were quickly notified. Recognizing the importance of the initial find, archaeologists from the Academy of Natural Sciences of Philadelphia and the University of Pennsylvania Museum began serious work at Blackwater Draw. The next year, they found stone tools, quite like those from Folsom, also associated with extinct bison bones.

Then came the breakthrough. In 1936–1937, archaeologists excavating *below* the Folsom strata found unquestionable associations between even more ancient human artifacts and the remains of mammoths—the American elephant. Today, archaeologists around the world know this earlier complex as *Clovis*—the oldest clearly defined Native American culture.

Without established cultural antecedents, Clovis sites consistently date between about 9500 B.C. to 8500 B.C. Isolated Clovis points, thought to be approximately this age or slightly later, are widespread across North America. In all, such sites contain thousands of artifacts