

1

New World Beginnings

33,000 B.C. – A.D. 1769

I HAVE COME TO BELIEVE THAT THIS IS A MIGHTY
CONTINENT WHICH WAS HITHERTO UNKNOWN. . . .
YOUR HIGHNESSES HAVE AN OTHER WORLD HERE.

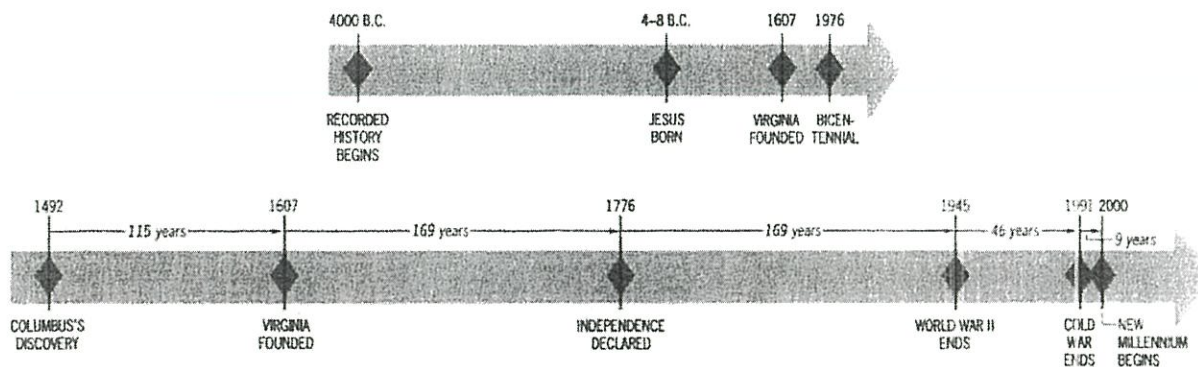
CHRISTOPHER COLUMBUS, 1498

Several billion years ago, that whirling speck of dust known as the earth, fifth in size among the planets, came into being.

About six thousand years ago—only a minute in geological time—recorded history of the Western

world began. Certain peoples of the Middle East, developing a written culture, gradually emerged from the haze of the past.

Five hundred years ago—only a few seconds figuratively speaking—European explorers stumbled



on the Americas. This dramatic accident forever altered the future of both the Old World and the New, and of Africa and Asia as well.



The Shaping of North America

Planet earth took on its present form slowly. Some 225 million years ago, a single supercontinent contained all the world's dry land. Then enormous chunks of terrain began to drift away from this colossal continent, opening the Atlantic and Indian Oceans, narrowing the Pacific Ocean, and forming the great landmasses of Eurasia, Africa, Australia, Antarctica, and the Americas. The existence of a single original continent has been proved in part by the discovery of nearly identical species of fish that swim today in the long-separated freshwater lakes of the various continents.

Continued shifting and folding of the earth's crust thrust up mountain ranges. The Appalachians were probably formed even before continental separation, perhaps 350 million years ago. The majestic ranges of western North America—the Rockies, the Sierra Nevada, the Cascades, and the Coast Ranges—arose much more recently, geologically speaking, some 135 million to 25 million years ago. They are truly "American" mountains, born after the continent took on its own separate geological identity.

By about 10 million years ago, nature had sculpted the basic geological shape of North America. The continent was anchored in its northeastern corner by the massive Canadian Shield—a zone undergirded by ancient rock, probably the first part of what became the North American landmass to have emerged above sea level. A narrow eastern coastal plain, or "tidewater" region, creased by many river valleys, sloped gently upward to the timeworn ridges of the Appalachians. Those ancient mountains slanted away on their western side into the huge midcontinental basin that rolled downward to the Mississippi Valley bottom and then rose relentlessly to the towering peaks of the Rockies. From the Rocky Mountain crest—the "roof of America"—the land fell off jaggedly into the intermountain Great Basin, bounded by the Rockies on the east and the Sierra and Cascade ranges on the west. The valleys of the Sacramento and San Joaquin Rivers and the Willamette-Puget Sound trough seamed the interiors of present-day California, Oregon, and Washington. The land at last met the foaming Pacific, where the Coast Ranges rose steeply from the sea.

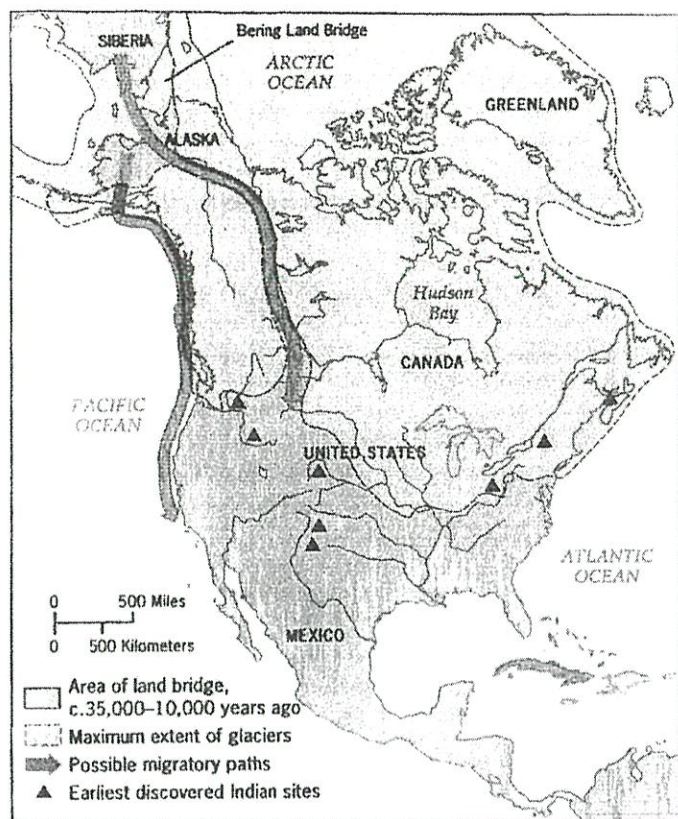
Nature laid a chill hand over much of this terrain in the Great Ice Age, beginning about 2 million years ago. Two-mile-thick ice sheets crept from the polar regions to blanket parts of Europe, Asia, and the Americas. In North America the great glaciers carpeted most of present-day Canada and the United States as far southward as a line stretching from Pennsylvania through the Ohio Country and the Dakotas to the Pacific Northwest.

When the glaciers finally retreated about 10,000 years ago, they left the North American landscape transformed, and much as we know it today. The weight of the gargantuan ice mantle had depressed the level of the Canadian Shield. The grinding and flushing action of the moving and melting ice had scoured away the shield's topsoil, pitting its rocky surface with thousands of shallow depressions into which the melting glaciers flowed to form lakes. The same glacial action scooped out and filled the Great Lakes. They originally drained southward through the Mississippi River system to the Gulf of Mexico. When the melting ice unblocked the Gulf of St. Lawrence, the lake water sought the St. Lawrence River outlet to the Atlantic Ocean, lowering the Great Lakes' level and leaving the Missouri-Mississippi-Ohio system to drain the enormous midcontinental basin between the Appalachians and the Rockies. Similarly, in the West, water from the melting glaciers filled sprawling Lake Bonneville, covering much of present-day Utah, Nevada, and Idaho. It drained to the Pacific Ocean through the Snake and Columbia River systems until diminishing rainfall from the ebbing ice cap lowered the water level, cutting off access to the Snake River outlet. Deprived of both inflow and drainage, the giant lake became a gradually shrinking inland sea. It grew increasingly saline, slowly evaporated, and left an arid, mineral-rich desert. Only Great Salt Lake remained as a relic of Bonneville's former vastness. Today Lake Bonneville's ancient beaches are visible on mountainsides up to 1,000 feet above the dry floor of the Great Basin.



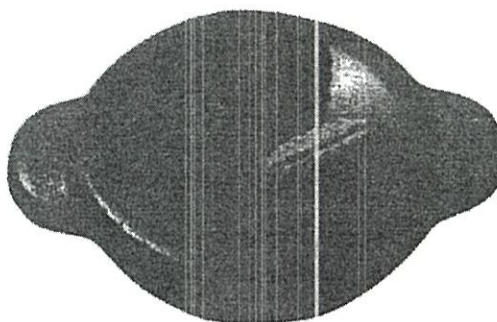
Peopling the Americas

The Great Ice Age shaped more than the geological history of North America. It also contributed to the origins of the continent's human history. Though recent (and still highly controversial) evidence suggests that some early peoples may have reached the Americas in crude boats, most probably came by land. Some 35,000 years ago, the Ice Age congealed much of the world oceans



The First Discoverers of America

The origins of the first Americans remain something of a mystery. According to the most plausible theory of how the Americas were populated, for some 25,000 years, people crossed the Bering land bridge from Eurasia to North America. Gradually they dispersed southward down ice-free valleys, populating both the American continents.



Incan Culture This mortar and corn-cob-shaped pestle from the Incan stronghold in present-day Peru vividly illustrate the importance of corn in Incan life.

into massive ice-pack glaciers, lowering the level of the sea. As the sea level dropped, it exposed a land bridge connecting Eurasia with North America in the area of the present-day Bering Sea between Siberia and Alaska. Across that bridge, probably following migratory herds of game, ventured small bands of nomadic Asian hunters—the “immigrant” ancestors of the Native Americans. They continued to trek across the Bering isthmus for some 250 centuries, slowly peopling the American continents.

As the Ice Age ended and the glaciers melted, the sea level rose again, inundating the land bridge about 10,000 years ago. Nature thus barred the door to further immigration for many thousands of years, leaving this part of the human family marooned for millennia on the now-isolated American continents.

Time did not stand still for these original Americans. The same climatic warming that melted the ice and drowned the bridge to Eurasia gradually opened ice-free

valleys through which vanguard bands groped their way southward and eastward across the Americas. Roaming slowly through this awesome wilderness, they eventually reached the far tip of South America, some 15,000 miles from Siberia. By the time Europeans arrived in America in 1492, perhaps 54 million people inhabited the two American continents.* Over the centuries they split into countless tribes, evolved more than 2,000 separate languages, and developed many diverse religions, cultures, and ways of life.

Incas in Peru, Mayans in Central America, and Aztecs in Mexico shaped stunningly sophisticated civilizations. Their advanced agricultural practices, based

*Much controversy surrounds estimates of the pre-Columbian Native American population. The figures here are from William M. Denevan, ed., *The Native Population of the Americas in 1492*, rev. ed. (Madison: University of Wisconsin Press, 1992).

primarily on the cultivation of maize, which is Indian corn, fed large populations, perhaps as many as 20 million in Mexico alone. Although without large draft animals such as horses and oxen, and lacking even the simple technology of the wheel, these peoples built elaborate cities and carried on far-flung commerce. Talented mathematicians, they made strikingly accurate astronomical observations. The Aztecs also routinely sought the favor of their gods by offering human sacrifices, cutting the hearts out of the chests of living victims, who were often captives conquered in battle. By some accounts more than 5,000 people were ritually slaughtered to celebrate the crowning of one Aztec chieftain.

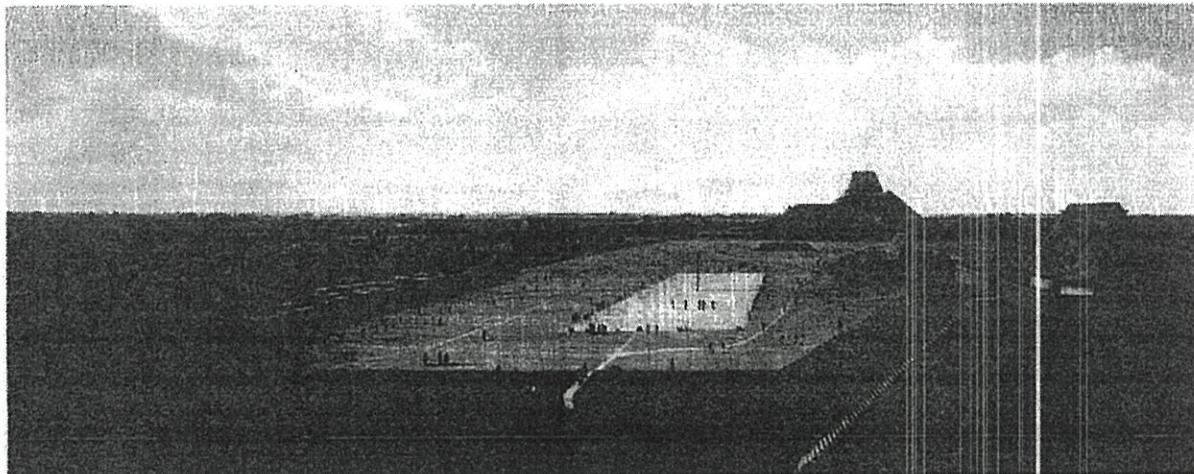
The Earliest Americans

Agriculture, especially corn growing, accounted for the size and sophistication of the Native American civilizations in Mexico and South America. About 5000 B.C. hunter-gatherers in highland Mexico developed a wild grass into the staple crop of corn, which became their staff of life and the foundation of the complex, large-scale, centralized Aztec and Incan nation-states that eventually emerged. Cultivation of corn spread across the Americas from the Mexican heartland. Everywhere it was planted, corn began to transform nomadic hunting bands into settled agricultural villagers, but this process went forward slowly and unevenly.

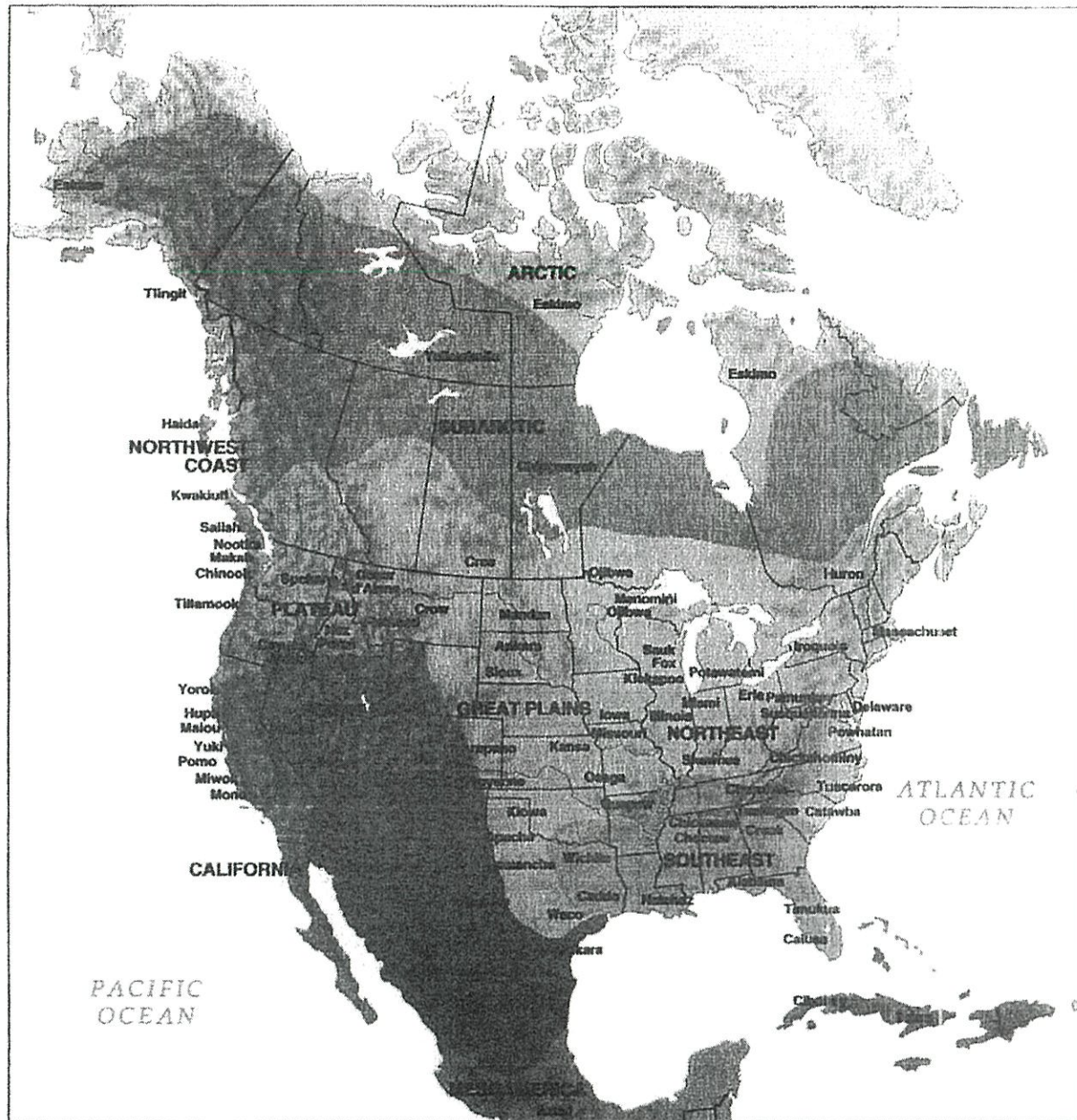
Corn planting reached the present-day American Southwest by about 1200 B.C. and powerfully molded Pueblo culture. The Pueblo peoples in the Rio Grande valley constructed intricate irrigation systems to water their cornfields. They were dwelling in villages of multi-storied, terraced buildings when Spanish explorers made contact with them in the sixteenth century. (*Pueblo* means "village" in Spanish.)

Corn cultivation reached other parts of North America considerably later. The timing of its arrival in different localities explains much about the relative rates of development of different Native American peoples. Throughout the continent to the north and east of the land of the Pueblos, social life was less elaborately developed—indeed "societies" in the modern sense of the word scarcely existed. No dense concentrations of population or complex nation-states comparable to the Aztec empire existed in North America outside of Mexico at the time of the Europeans' arrival—one of the reasons for the relative ease with which the European colonizers subdued the native North Americans.

The Mound Builders of the Ohio River valley, the Mississippian culture of the lower Midwest, and the desert-dwelling Anasazi peoples of the Southwest did sustain some large settlements after the incorporation of corn planting into their ways of life during the first millennium A.D. The Mississippian settlement at Cahokia, near present-day East St. Louis, was at one time home to as many as twenty-five thousand people. The Anasazis built an elaborate pueblo of more than



Cahokia This artist's rendering of Cahokia, based on archaeological excavations, shows the huge central square and the imposing Monk's Mound, which rivaled in size the pyramids of Egypt.



North American Indian Peoples at the Time of First Contact with Europeans Because this map depicts the location of various Indian peoples at the time of their first contact with Europeans, and because initial contacts ranged from the sixteenth to the nineteenth centuries, it is necessarily subject to considerable chronological skewing and is only a crude approximation of the "original" territory of any given group. The map also cannot capture the fluidity and dynamism of Native American life even before Columbus's "discovery." For example, the Navajo and Apache peoples had migrated from present-day northern Canada only shortly before the Spanish first encountered them in the present-day American Southwest in the 1500s. The map also places the Sioux on the Great Plains, where Europeans met up with them in the early nineteenth century—but the Sioux had spilled onto the Plains not long before then from the forests surrounding the Great Lakes. The indigenous populations of the southeastern and mid-Atlantic regions are especially difficult to represent accurately in a map like this because pre-Columbian intertribal conflicts had so scrambled the native inhabitants that it is virtually impossible to determine which groups were originally where.

six hundred interconnected rooms at Chaco Canyon in modern-day New Mexico. But mysteriously, perhaps due to prolonged drought, all those ancient cultures fell into decline by about A.D. 1300.

The cultivation of maize, as well as of high-yielding strains of beans and squash, reached the southeastern Atlantic seaboard region of North America about A.D. 1000. These plants made possible “three-sister” farming, with beans growing on the trellis of the cornstalks and squash covering the planting mounds to retain moisture in the soil. The rich diet provided by this environmentally clever farming technique produced some of the highest population densities on the continent, among them the Creek, Choctaw, and Cherokee peoples.

The Iroquois in the northeastern woodlands, inspired by a legendary leader named Hiawatha, in the sixteenth century created perhaps the closest North American approximation to the great nation-states of Mexico and Peru. The Iroquois Confederacy developed the political and organizational skills to sustain a robust military alliance that menaced its neighbors, Native American and European alike, for well over a century (see “Makers of America: The Iroquois,” pp. 40–41).

But for the most part, the native peoples of North America were living in small, scattered, and impermanent settlements on the eve of the Europeans’ arrival. In more settled agricultural groups, women tended the crops while men hunted, fished, gathered fuel, and cleared fields for planting. This pattern of life frequently conferred substantial authority on women, and many North American native peoples, including the Iroquois, developed matrilinear cultures, in which power and possessions passed down the female side of the family line.

Unlike the Europeans, who would soon arrive with the presumption that humans had dominion over the earth and with the technologies to alter the very face of the land, the Native Americans had neither the desire nor the means to manipulate nature aggressively. They revered the physical world and endowed nature with spiritual properties. Yet they did sometimes ignite massive forest fires, deliberately torching thousands of acres of trees to create better hunting habitats, especially for deer. This practice accounted for the open, parklike appearance of the eastern woodlands that so amazed early European explorers.

But in a broad sense, the land did not feel the hand of the Native Americans heavy upon it, partly because they were so few in number. They were so thinly spread across the continent that vast areas were virtually untouched by a human presence. In the fateful year 1492, probably no more than 4 million Native Americans

paddled through the whispering, primeval forests and paddled across the sparkling, virgin waters of North America. They were blissfully unaware that the historic isolation of the Americas was about to end forever, as the land and the native peoples alike felt the full shock of the European “discovery.”



Indirect Discoverers of the New World

Europeans, for their part, were equally unaware of the existence of the Americas. Blond-bearded Norse seafarers from Scandinavia had chanced upon the northeastern shoulder of North America about A.D. 1000. They landed at a place near L'Anse aux Meadows in present-day Newfoundland that abounded in wild grapes, which led them to name the spot Vinland. But no strong nation-state, yearning to expand, supported these venturesome voyagers. Their flimsy settlements consequently were soon abandoned, and their discovery was forgotten, except in Scandinavian saga and song.

For several centuries thereafter, other restless Europeans, with the growing power of ambitious governments behind them, sought contact with a wider world, whether for conquest or trade. They thus set in motion the chain of events that led to a drive toward Asia, the penetration of Africa, and the completely accidental discovery of the New World.

Christian crusaders must rank high among America's indirect discoverers. Clad in shining armor, tens of thousands of these European warriors tried from the eleventh to the fourteenth century to wrest the Holy Land from Muslim control. Foiled in their military assaults, the crusaders nevertheless acquired a taste for the exotic delights of Asia. Goods that had been virtually unknown in Europe now were craved—silk for clothing, drugs for aching flesh, perfumes for unbathed bodies, colorful draperies for gloomy castles, and spices—especially sugar, a rare luxury in Europe before the crusades—for preserving and flavoring food. Europe's developing sweet tooth would have momentous implications for world history.

The luxuries of the East were prohibitively expensive in Europe. They had to be transported enormous distances from the Spice Islands (Indonesia), China, and India, in creaking ships and on swaying camelback. The journey led across the Indian Ocean, the Persian Gulf, and the Red Sea or along the tortuous caravan routes of Asia or the Arabian Peninsula, ending at the ports of the eastern Mediterranean. Muslim middlemen exacted a heavy toll en route. By the time the strange-smelling



**The New World as Paradise,
by Theodore de Bry**

This sixteenth-century engraving by the Flemish artist illustrates the Indian method of hunting by setting fires to drive wild game into bow range.

goods reached Italian merchants at Venice and Genoa, they were so costly that purchasers and profits alike were narrowly limited. European consumers and distributors were naturally eager to find a less expensive route to the riches of Asia or to develop alternate sources of supply.

Europeans Enter Africa

European appetites were further whetted when foot-loose Marco Polo, an Italian adventurer, returned to Europe in 1295 and began telling tales of his nearly twenty-year sojourn in China. Though he may in fact never have seen China (legend to the contrary, the hard evidence is sketchy), he must be regarded as an indirect discoverer of the New World, for his book, with its descriptions of rose-tinted pearls and golden pagodas, stimulated European desires for a cheaper route to the treasures of the East.

These accumulating pressures brought a breakthrough for European expansion in the fifteenth century. Before the middle of that century, European sailors refused to sail southward along the coast of West Africa because they could not beat their way home against the prevailing northerly winds and south-flowing currents.

About 1450, Portuguese mariners overcame those obstacles. Not only had they developed the caravel, a ship that could sail more closely into the wind, but they had discovered that they could return to Europe by sailing northwesterly from the African coast toward the Azores, where the prevailing westward breezes would carry them home.

The new world of sub-Saharan Africa now came within the grasp of questing Europeans. The northern shore of Africa, as part of the Mediterranean world, had been known to Europe since antiquity. But because sea travel down the African coast had been virtually impossible, Africa south of the forbidding Sahara Desert barrier had remained remote and mysterious. African gold, perhaps two-thirds of Europe's supply, crossed the Sahara on camelback, and shadowy tales may have reached Europe about the flourishing West African kingdom of Mali in the Niger River valley, with its impressive Islamic university at Timbuktu. But Europeans had no direct access to sub-Saharan Africa until the Portuguese navigators began to creep down the West African coast in the middle of the fifteenth century.

The Portuguese promptly set up trading posts along the African shore for the purchase of gold—and slaves. Arab flesh merchants and Africans themselves had traded slaves for centuries before the Europeans arrived. They routinely charged higher prices for slaves from distant

Resource #2

A Cultivated World

Reviewed by Alan Taylor Sunday, August 7, 2005

1491

New Revelations of the Americas Before Columbus

By Charles C. Mann

As a schoolboy, Charles C. Mann learned that the original American Indians migrated from Asia during an Ice Age about 13,000 years ago. Living in small bands of big-game hunters, they barely affected a wilderness that endured until 1492, when Christopher Columbus initiated a period of European colonization that transformed the Americas, introducing historic change to timeless, primeval continents. "When my son entered school, [he] was taught the same things I had been taught," Mann discovered. That persistent story troubled Mann, who, as a correspondent for *Science* and the *Atlantic Monthly*, had encountered dramatic new evidence for a radically different history of pre-Columbian America.

In *1491*, Mann introduces readers to the controversies provoked by the latest scholarship on native America before European exploration and colonization. Many scholars now insist that native settlement began at least 20,000 years ago, when fishing peoples arrived in small, open boats from coastal Siberia. Their descendants developed especially productive modes of horticulture that sustained a population explosion. By 1492, Indians in the two American continents numbered about 100 million -- 10 times previous estimates.

Far from the indolent, ineffective savages of colonial stereotypes, the Indians cleverly transformed their environments. They set annual fires to diminish underbrush, to encourage large, nut-bearing trees and to open the land to berry bushes that sustained sizable herds of deer. In the Andes, they built massive stone terraces for farming. In the Amazon River basin, they improved vast tracts of soil by adding charcoal and a fish fertilizer.

Sometimes they overcrowded the land, straining local supplies of water, wood and game animals. More often, however, the natives ably managed their local nature, sustaining large populations in plenty for centuries. Amazonia, for example, probably supported more people in 1491 than it does today.

Their environmental management came to a crashing end after 1492. Colonizers swarmed over the land, determined to subdue, to exploit and to convert the natives. The newcomers carried destructive new weapons of gunpowder and steel. They also introduced voracious livestock -- cattle, pigs and horses -- which invaded and consumed native crops. Worst of all, they conveyed diseases previously unknown to the natives. Lacking immunity, the Indians died by the millions, reducing their numbers to a tenth of their previous population by 1800, in the greatest demographic catastrophe in global history.

As Indian populations collapsed, the land lost their management. Underbrush and some species of wildlife surged after the initial epidemics but, significantly, before the arrival of large numbers of colonists. Seeing a wilderness, the colonizers misunderstood it as primeval evidence that the surviving Indians were lazy savages who did not deserve to keep so much promising land.

During the 20th century, anthropologists and environmentalists developed a more positive spin, but one still based on misunderstanding: They recast the Indians as simple conservationists who trod lightly on their beautiful land for centuries, setting examples of passivity that we should emulate.

By dispelling these myths to recover the intensive and ingenious native presence in the ancient Americas, Mann seeks an environmental ethos for our own future. Instead of restoring a mythical Eden, we should emulate the Indian management of a more productive and enduring garden. In sum, Mann tells a powerful, provocative and important story -- especially in the chapters on the Andes and Amazonia.

Mann's style is journalistic, employing the vivid (and sometimes mixed) metaphors of popular science writing: "Peru is the cow-catcher on the train of continental drift. . . . its coastline hits the ocean floor and crumples up like a carpet shoved into a chairleg." Similarly, the book is not a comprehensive history, but a series of reporter's tales: He describes personal encounters with scientists in their labs, archaeologists at their digs, historians in their studies and Indian activists in their frustrations. Readers vicariously share Mann's exposure to fire ants and the tension as his guide's plane runs low on fuel over Mayan ruins. These episodes introduce readers to the debates between older and newer scholars. Initially fresh, the journalistic approach eventually falters as his disorganized narrative rambles forward and backward through the centuries and across vast continents and back again, producing repetition and contradiction. The resulting blur unwittingly conveys a new sort of the old timelessness that Mann so wisely wishes to defeat.

He is also less than discriminating in evaluating the array of new theories, some far weaker than others. For example, he concludes with naive speculations directly linking American democracy to Indian precedents that supposedly dissolved European hierarchies of command and control. In the process, he minimizes the cultural divide separating consensual natives from coercive colonists: "Colonial societies could not become too oppressive, because their members -- surrounded by direct examples of free life -- always had the option to vote with their feet. . . . Historians have been puzzlingly reluctant to acknowledge this [Indian] contribution to the end of tyranny worldwide." Mann would be less puzzled if he knew that Indians would not have welcomed thousands of colonial refugees; that colonial societies sustained a slave system more oppressive than anything practiced in Europe; and that the slaveowners relied on Indians to catch runaways.

Despite these missteps, Mann's *1491* vividly compels us to re-examine how we teach the ancient history of the Americas and how we live with the environmental consequences of colonization.

Alan Taylor, the author of "American Colonies," is a professor of history at the University of California at Davis.

The Columbian Exchange

by Alfred W. Crosby



Detail from a 1682 map of North America, *Novi Belgii Novaeque Angliae*, by Nicholas Visscher. (Gilder Lehrman Collection)

Millions of years ago, continental drift carried the Old World and New Worlds apart, splitting North and South America from Eurasia and Africa. That separation lasted so long that it fostered divergent evolution; for instance, the development of rattlesnakes on one side of the Atlantic and vipers on the other. After 1492, human voyagers in part reversed this tendency. Their artificial re-establishment of connections through the commingling of Old and New World plants, animals, and bacteria, commonly known as the Columbian Exchange, is one of the more spectacular and significant ecological events of the past millennium.

When Europeans first touched the shores of the Americas, Old World crops such as wheat, barley, rice, and turnips had not traveled west across the Atlantic, and New World crops such as maize, white potatoes, sweet potatoes, and manioc had not traveled east to Europe. In the Americas, there were no horses, cattle, sheep, or goats, all animals of Old World origin. Except for the llama, alpaca, dog, a few fowl, and guinea pig, the New World had no equivalents to the domesticated animals associated with the Old World, nor did it have the pathogens associated with the Old World's dense populations of humans and such associated creatures as chickens, cattle, black rats, and *Aedes aegypti* mosquitoes. Among these germs were those that carried smallpox, measles, chickenpox, influenza, malaria, and yellow fever.

The Columbian exchange of crops affected both the Old World and the New. Amerindian crops that have crossed oceans—for example, maize to China and the white potato to Ireland—have been stimulants to population growth in the Old World. The latter's crops and livestock have had much the same effect in the Americas—for example, wheat in Kansas and the Pampa, and beef cattle in Texas and Brazil. The full story of the exchange is many volumes long, so for the sake of brevity and clarity let us focus on a specific region, the eastern third of the United States of America.

As might be expected, the Europeans who settled on the east coast of the United States cultivated crops like wheat and apples, which they had brought with them. European weeds, which the colonists did not cultivate and, in fact, preferred to uproot, also fared well in the New World. John Josselyn, an Englishman and amateur naturalist who visited New England twice in the seventeenth century, left us a list, "Of Such

Plants as Have Sprung Up since the English Planted and Kept Cattle in New England," which included couch grass, dandelion, shepherd's purse, groundsel, sow thistle, and chickweeds. One of these, a plantain (*Plantago major*), was named "Englishman's Foot" by the Amerindians of New England and Virginia who believed that it would grow only where the English "have trodden, and was never known before the English came into this country." Thus, as they intentionally sowed Old World crop seeds, the European settlers were unintentionally contaminating American fields with weed seed. More importantly, they were stripping and burning forests, exposing the native minor flora to direct sunlight and to the hooves and teeth of Old World livestock. The native flora could not tolerate the stress. The imported weeds could, because they had lived with large numbers of grazing animals for thousands of years.

Cattle and horses were brought ashore in the early 1600s and found hospitable climate and terrain in North America. Horses arrived in Virginia as early as 1620 and in Massachusetts in 1629. Many wandered free with little more evidence of their connection to humanity than collars with a hook at the bottom to catch on fences as they tried to leap over them to get at crops. Fences were not for keeping livestock in, but for keeping livestock out.

Native American resistance to the Europeans was ineffective. Indigenous peoples suffered from white brutality, alcoholism, the killing and driving off of game, and the expropriation of farmland, but all these together are insufficient to explain the degree of their defeat. The crucial factor was not people, plants, or animals, but germs. The history of the United States begins with Virginia and Massachusetts, and their histories begin with epidemics of unidentified diseases. At the time of the abortive Virginia colony at Roanoke in the 1580s the nearby Amerindians "began to die quickly. The disease was so strange that they neither knew what it was, nor how to cure it." [1] When the Pilgrims settled at Plymouth, Massachusetts, in 1620, they did so in a village and on a coast nearly cleared of Amerindians by a recent epidemic. Thousands had "died in a great plague not long since; and pity it was and is to see so many goodly fields, and so well seated, without man to dress and manure the same." [2]

Smallpox was the worst and the most spectacular of the infectious diseases mowing down the Native Americans. The first recorded pandemic of that disease in British North America detonated among the Algonquin of Massachusetts in the early 1630s: William Bradford of Plymouth Plantation wrote that the victims "fell down so generally of this disease as they were in the end not able to help one another, no not to make a fire nor fetch a little water to drink, nor any to bury the dead." [3]

The missionaries and the traders who ventured into the American interior told the same appalling story about smallpox and the indigenes. In 1738 alone the epidemic destroyed half the Cherokee; in 1759 nearly half the Catawbas; in the first years of the next century two-thirds of the Omahas and perhaps half the entire population between the Missouri River and New Mexico; in 1837–1838 nearly every last one of the Mandans and perhaps half the people of the high plains.

European explorers encountered distinctively American illnesses such as Chagas Disease, but these did not have much effect on Old World populations. Venereal syphilis has also been called American, but that accusation is far from proven. Even if we add all the Old World deaths blamed on American diseases together, including those ascribed to syphilis, the total is insignificant compared to Native American losses to smallpox alone.

The export of America's native animals has not revolutionized Old World agriculture or ecosystems as the introduction of European animals to the New World did. America's grey squirrels and muskrats and a few

others have established themselves east of the Atlantic and west of the Pacific, but that has not made much of a difference. Some of America's domesticated animals are raised in the Old World, but turkeys have not displaced chickens and geese, and guinea pigs have proved useful in laboratories, but have not usurped rabbits in the butcher shops.

The New World's great contribution to the Old is in crop plants. Maize, white potatoes, sweet potatoes, various squashes, chiles, and manioc have become essentials in the diets of hundreds of millions of Europeans, Africans, and Asians. Their influence on Old World peoples, like that of wheat and rice on New World peoples, goes far to explain the global population explosion of the past three centuries. The Columbian Exchange has been an indispensable factor in that demographic explosion.

All this had nothing to do with superiority or inferiority of biosystems in any absolute sense. It has to do with environmental contrasts. Amerindians were accustomed to living in one particular kind of environment, Europeans and Africans in another. When the Old World peoples came to America, they brought with them all their plants, animals, and germs, creating a kind of environment to which they were already adapted, and so they increased in number. Amerindians had not adapted to European germs, and so initially their numbers plunged. That decline has reversed in our time as Amerindian populations have adapted to the Old World's environmental influence, but the demographic triumph of the invaders, which was the most spectacular feature of the Old World's invasion of the New, still stands.

[1] David B. Quinn, ed. *The Roanoke Voyages, 1584–1590: Documents to Illustrate the English Voyages to North America* (London: Hakluyt Society, 1955), 378.

[2] Edward Winslow, Nathaniel Morton, William Bradford, and Thomas Prince, *New England's Memorial* (Cambridge: Allan and Farnham, 1855), 362.

[3] William Bradford, *Of Plymouth Plantation, 1620–1647*, ed. Samuel E. Morison (New York: Knopf, 1952), 271.

Alfred W. Crosby is professor emeritus of history, geography, and American studies at the University of Texas at Austin. In addition to his seminal work on this topic, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (1972), he has also written *America's Forgotten Pandemic: The Influenza of 1918* (1989) and *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (1986).

Resource #4

Native American Discoveries of Europe by Daniel Richter

Excerpt

Native Americans discovered Europe at the same time Europeans discovered America. As far as we know, no birch bark canoes caught the gulf stream to Glasgow (although dozens of individual people did make the trip on European vessels, voluntarily or involuntarily), and no Native American conquistadores planted flags at Florence, but just as Europeans struggled to fit evidence of "new worlds" into their frames of understanding, so too did Native North Americans in the sixteenth and early seventeenth century.

A story recorded by French Jesuit missionary Paul Le Jeune in 1633 suggests how the process worked. According to Le Jeune, an Innu (Montagnais) man whose people lived near the mouth of the Gulf of St. Lawrence

...has told us that his grandmother used to take pleasure in relating to him the astonishment of the Natives, when they saw for the first time a French ship arrived upon their shores. They thought it was a moving Island; they did not know what to say of the great sails which made it go; their astonishment was redoubled in seeing a number of men on deck. The women at once began to prepare houses for them, as is their custom when new guests arrive, and four canoes of Natives ventured to board these vessels. They invited the Frenchmen to come into the houses which had been made ready for them, but neither side understood the other. They were given a barrel of bread or biscuit. Having brought it on shore they examined it; and finding no taste in it, threw it into the water. . . . [The Innu] said the Frenchmen drank blood and ate wood, thus naming the wine and the biscuits...

Copper, axes, knives, cloth, and the technologies that produced them were the most important aspect of Native peoples' discovery of Europe, and the most important reason that Native leaders persistently sought alliances with Europeans, untrustworthy as those who ate wood and blood might be. Copper kettles, iron cutting implements, woolen textiles, and other articles from a world new to Americans soon proved their superiority to earthenware pottery, stone tools, and fur robes. Perhaps more importantly, arrowheads fashioned from scrap copper and, later, firearms purchased from traders spawned Native American arms races that required people to ally with Europeans or succumb to those with access to superior weapons. It is little wonder then, that rumors of the marvels to be had in exchange for beaver pelts and other furs apparently preceded the axe-makers wherever they went; a constant theme in European accounts of first explorations of bays and rivers is the appearance of canoe-loads of people waving beaver pelts they desired to trade... The beaver, the deerskin, the corn, or whatever else could be traded for European goods could also increase the political power of Native leaders and their communities in a system where exotic material goods embodied the strength that came from alliance with their source.

Yet a far greater threat to Native political structures—indeed, to the entire fabric of Native

communities—came from an aspect of the discovery of Europe that no chief, and no colonist, could control. Before communities could fully assimilate their discovery of Europeans and their goods, viral diseases that the newcomers inadvertently brought with them swept through Native America. Smallpox was the greatest of these killers, but measles, mumps, chicken pox, and influenzas in their ever-evolving forms were nearly as deadly. Bubonic plague and hemorrhagic fevers similar to Ebola might also have been part of the gruesome mix.

As early as 1585, at Roanoke on the Outer Banks of today's North Carolina, English colonists reported that Native "people began to die very fast, and many in short space" after the English colonists visited their villages. "In some towns about twenty, in some forty, in some sixty, and in one six score" perished. Similarly, in 1616 a French missionary said that the Native people of Acadia "often complain that, since the French mingle with and carry on trade with them, they are dying fast, and the population is thinning out." ... A Dutch chronicler was likely not exaggerating when he wrote in 1650 that "the Indians ... affirm, that before the arrival of the Christians, and before the small pox broke out amongst them, they were ten times as numerous as they now are."

Le Jeune heard the Innu story about the first arrival of the French in 1633 on the eve of the great smallpox epidemic. The image of persons who "drank blood and ate wood" thus takes on a prophetic tone. For Native people, the discovery of Europe was a discovery of death on an unimaginable scale and of a struggle for cultural survival that continues to this day.

Source: http://www.gilderlehrman.org/historynow/06_2007/historian3.php

DOCUMENT 1.7

BARTOLOMÉ DE LAS CASAS, *Brief Account of the Destruction of the Indies*

1542

Dominican priest Bartolomé de las Casas (1484–1566), one of the first settlers in New Spain, protested the treatment of Indians by the Spanish in this address to Prince Philip, the future king of Spain. In this passage, Las Casas advocates for the rights of native peoples and rejects the encomienda system.

They are by nature the most humble, patient, and peaceable, holding no grudges, free from embroilments, neither excitable nor quarrelsome. . . . They are also poor people, for they not only possess little but have no desire to possess worldly goods. For this reason they are not arrogant, embittered, or greedy. . . . They are very clean in their persons, with alert, intelligent minds, docile and open to doctrine, very apt to receive our holy Catholic faith, to be endowed with virtuous customs, and to behave in a godly fashion. And once they begin to hear the tidings of the Faith, they are so insistent on knowing more and on taking the sacraments of the Church and on observing the divine cult that, truly, the missionaries who are here need to be endowed by God with great patience in order to cope with such eagerness. . . .

Yet into this sheepfold, into this land of meek outcasts there came some Spaniards who immediately behaved like ravening wild beasts, wolves, tigers, or lions that had been starved for many days. . . .

Bartolomé de las Casas, *The Devastation of the Indies: A Brief Account*, ed. Bill M. Donovan (Baltimore, MD: Johns Hopkins University Press, 1992), 28.

PRACTICING Historical Thinking

Identify: A historian's **summary** can provide a short but accurate account of the original text. Summaries include key details and feature general statements of fact, attitude, or purpose. Summarize Las Casas's presentation of native peoples and the actions of the Spaniards.

DOCUMENT 1.8

JUAN GINÉS DE SEPÚLVEDA, *Concerning the Just Causes of the War against the Indians*

1547

Juan Ginés de Sepúlveda (1489–1573), a Spanish theologian and philosopher, was tasked by Charles V, grandson of Ferdinand and Isabella, to respond to Bartolomé de las Casas's assertions that the Spaniards were unjustly treating Native Americans. Below is an excerpt from his book, *Concerning the Just Causes of the War against the Indians*.

... [T]he Spanish have a perfect right to rule these barbarians of the New World and the adjacent islands, who in prudence, skill, virtues, and humanity are as inferior to the Spanish as children to adults, or women to men, for there exists between the two as great a difference as between savage and cruel races and the most merciful, between the most intemperate and the moderate and temperate and, I might even say, between apes and men. . . .

Compare, then, these gifts of prudence, talent, magnanimity, temperance, humanity, and religion with those possessed by these half-men . . . , in whom you will barely find the vestiges of humanity, who not only do not possess any learning at all, but are not even literate or in possession of any monument to their history except for some obscure and vague reminiscences of several things put down in various paintings; nor do they have written laws, but barbarian institutions and customs. Well, then, if we are dealing with virtue, what temperance or mercy can you expect from men who are committed to all types of intemperance and base frivolity, and eat human flesh? And do not believe that before the arrival of the Christians they lived in that pacific kingdom of Saturn which the poets have invented; for, on the contrary, they waged continual and ferocious war upon one another with such fierceness that they did not consider a victory at all worthwhile unless they sated their monstrous hunger with the flesh of their enemies. . . .

Columbia University, "Democrates Alter; Or, On the Just Causes for War against the Indians," in *Introduction to Contemporary Civilization in the West*, 3rd ed. (New York: Columbia University Press, 1960), 526–527.