The Earth and Its Peoples

A Global History Seventh Edition

Volume II: Since 1500

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ABBREVIATIONS

AUS.	AUSTRIA
BEL.	BELGIUM
B. H.	BOSNIA AND HERZEGOVINA
CR.	CROATIA
CZ.	CZECH REPUBLIC
DEN.	DENMARK
HUNG.	HUNGARY
K.	KOSOVO
LUX.	LUXEMBOURG
MAC.	MACEDONIA
MO.	MONTENEGRO
NETH.	NETHERLANDS
SE.	SERBIA
SLK.	SLOVAKIA
SLN.	SLOVENIA
SWITZ.	SWITZERLAND

***The Earth and Its Peoples: A Global History, Volume II: Since 1500,* Seventh Edition**

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Preface

The overall goal of *The Earth and Its Peoples* remains as it has been since its first edition: to be a textbook that speaks not only for the past but also to today's student and teacher. Students and instructors alike should take away from this text a broad and flowing impression of human societies beginning as sparse and disconnected communities reacting creatively to local circumstances; experiencing ever more intensive stages of contact, interpenetration, and cultural expansion and amalgamation; and arriving at a twenty-first-century world in which people increasingly visualize, and sometimes challenge, a single global community.

Process, not progress, is the keynote of this book: a steady process of change over time, at first experienced differently in various regions but eventually connecting peoples and traditions from all parts of the globe. Students should come away from this book with a sense that the problems and promises of their world are rooted in a past in which people of every sort, in every part of the world, confronted problems of a similar character and coped with them as best they could. We believe that our efforts will help students see where their world has come from and thereby learn something useful for their own lives.

Central Themes and Goals

We subtitled *The Earth and Its Peoples* "A Global History" because the book explores the common challenges and experiences that unite the human past. Although the dispersal of early humans to every livable environment resulted in a myriad of different economic, social, political, and cultural systems, all societies displayed analogous patterns in meeting their needs and exploiting their environments. Our challenge was to select the particular data and episodes that would best illuminate these global patterns of human experience.

To meet this challenge, we adopted two themes for our history: "technology and the environment" and "diversity and dominance." The first theme represents the commonplace material bases of all human societies at all times. It grants no special favor to any cultural group even as it embraces subjects of the broadest topical, chronological, and geographical range. The second theme expresses the reality that every human society has constructed or inherited structures of domination. We examine practices and institutions of many sorts: military, economic, social, political, religious, and cultural, as well as those based on kinship, gender, and literacy. Simultaneously we recognize that alternative ways of life and visions of societal organization continually manifest themselves both within and in dialogue with every structure of domination.

With respect to the first theme, it is vital for students to understand that technology, in the broad sense of experience-based knowledge of the physical world, underlies all human activity. Writing is a technology, but so is oral transmission from generation to generation of lore about medicinal or poisonous plants. The magnetic compass is a navigational technology, but so is Polynesian mariners' hard-won knowledge of winds, currents, and tides that made possible the settlement of the Pacific islands.

All technological development has come about in interaction with environments, both physical and human, and has, in turn, affected those environments. The story of how humanity has changed the face of the globe is an integral part of our first theme. Yet technology and the environment do not explain or underlie all important episodes of human experience. The theme of "diversity and dominance" informs all our discussions of politics, culture, and society. Thus when narrating the histories of empires, we describe a range of human experiences within and beyond the imperial frontiers without assuming that imperial institutions are a more fit topic for discussion than the economic and social organization of pastoral nomads or the lives of peasant women. When religion and culture occupy our narrative, we focus not only on the dominant tradition but also on the diversity of alternative beliefs and practices.

Organization

The *Earth and Its Peoples* uses eight broad chronological divisions to define its conceptual scheme of global historical development.

In **Part I: The Emergence of Human Communities, to 500 BCE**, we examine important patterns of human communal organization primarily in the Eastern Hemisphere. Small, dispersed human communities living by foraging spread to most parts of the world over tens of thousands of years. They responded to enormously diverse environmental conditions, at different times in different ways, discovering how to cultivate plants and utilize the products of domestic animals. On the basis of these new modes of sustenance, population grew, permanent towns appeared, and political and religious authority, based on collection and control of agricultural surpluses, spread over extensive areas.

Part II: The Formation of New Cultural Communities, 1000 BCE–400 CE introduces the concept of a "cultural community," in the sense of a coherent pattern of activities and symbols pertaining to a specific human community. While all human communities develop distinctive cultures, including those discussed in Part I, historical development in this stage of global history prolonged and magnified the impact of some cultures more than others. In the geographically contiguous African-Eurasian landmass, as well as in the Western Hemisphere, the cultures that proved to have the most enduring influence traced their roots to the second and first millennia BCE.

Part III: Growth and Interaction of Cultural Communities, 300 BCE–1200 CE deals with early episodes of technological, social, and cultural exchange and interaction on a continental scale both within and beyond the framework of imperial expansion. These are so different from earlier interactions arising from more limited conquests or extensions of political boundaries that they constitute a distinct era in world history, an era that set the world on the path of increasing global interaction and interdependence that it has been following ever since.

In **Part IV: Interregional Patterns of Culture and Contact, 1200–1550**, we look at the world during the three and a half centuries that saw both intensified cultural and commercial contact and increasingly confident self-definition of cultural communities in Europe, Asia, Africa, and the Americas. The Mongol conquest of a vast empire extending from the Pacific Ocean to eastern Europe greatly stimulated trade and interaction. In the West, strengthened European kingdoms began maritime expansion in the Atlantic, forging direct ties with sub-Saharan Africa and entering into conflict with the civilizations of the Western Hemisphere.

Part V: The Globe Encompassed, 1500–1750 treats a period dominated by the global effects of European expansion and continued economic growth. European ships took over, expanded, and extended the maritime trade of the Indian Ocean, coastal Africa, and the Asian rim of the Pacific Ocean. This maritime commercial enterprise had its counterpart in European colonial empires in the Americas and a new Atlantic trading system. The contrasting capacities and fortunes of traditional land empires and new maritime empires, along with the exchange of domestic plants and animals between the hemispheres, underline the technological and environmental dimensions of this first era of complete global interaction.

In **Part VI: Revolutions Reshape the World, 1750–1870**, the word *revolution* is used in several senses: in the political sense of governmental overthrow, as in France and the Americas; in the metaphorical sense of radical transformative change, as in the Industrial Revolution; and in the broadest sense of a perception of a profound change in circumstances and worldview. Technology and environment lie at the core of these developments. With the rapid ascendancy of the Western belief that science and technology could overcome all challenges—environmental or otherwise—technology became an instrument not only of transformation but also of domination, to the point of threatening the integrity and autonomy of cultural traditions in nonindustrial lands and provoking strong movements of resistance.

Part VII: Global Diversity and Dominance, 1750–1945 examines the development of a world arena in which people conceived of events on a global scale. Imperialism, international economic connections, and world-encompassing ideological tendencies, such as nationalism and socialism, present the picture of a globe becoming increasingly involved with European political and ideological concerns. Two world wars arising from European rivalries provide a climax to these developments, and European exhaustion affords other parts of the world new opportunities for independence and self-expression.

For **Part VIII: Perils and Promises of a Global Community, 1945 to the Present**, we divide the period since World War II into three time periods: 1945–1975, 1975–2000, and 2000 to the present. The challenges of the Cold War and postcolonial nation building dominate much of the period and unleash global economic, technological, and political forces that become increasingly important in all aspects of human life. With the end of the Cold War, however, new forces come to the fore. Technology is a key topic in Part VIII because of its integral role in both the growth and the problems of a global community. However, its many benefits in improving the quality of life become clouded by negative impacts on the environment. Other negative impacts come from the spread of instability, terrorist disruption, and military intervention in many troubled parts of the globe along with a growth of animosity toward groups that are suspected of supporting such disruptions.

Features and New Pedagogical Aids

As with previous editions, the seventh edition offers, in addition to enhanced visual design, a number of valuable features and pedagogical aids designed to pique student interest in specific world history topics and help them process and retain key information. Challenging questions designed to prompt inquiry into historical processes have been added to each map, to every feature box, and to the end of every chapter. And each of the eight parts now climaxes in two essays called Issues in World History and Material Culture. These are specifically designed to alert students to broad and recurring conceptual issues that are of great interest to contemporary historians. The Issues in World History essay for Part VIII, "Popular Culture: Words of Warning," is entirely new; "Religious Conversion" has been restored from an earlier edition; and "Little Ice Age" has been substantially updated. A Material Culture essay on "Roads" is also new. The Environment & Technology feature, which has been a valuable resource in all prior editions of *The Earth and Its Peoples*, serves to illuminate the major theme of the text by demonstrating the shared material bases of all human societies across time. Eight of the features are new with this edition: "Nomad Homes," "Roads," "Stained Glass Windows," "The West African Voyage of Hanno the Carthaginian," "East Asian Transportation," "Persian Rugs," "New Wars, New Tools," and "Intelligence and Technology." Finally, there are six new or heavily revised Diversity & Dominance features containing primary source readings that bring a myriad of real historical voices to life in the age-old tug-of-war between power and autonomy: "Poetry and Society in Early China and Greece," "Becoming Muslim," "Justice and Kingship," "Understanding Cross-Cultural Encounters," "The Manchu Moment from Ming to Ching," and "Madame de Staël Remembers Napoleon."

Pedagogical aids include:

- **Focus Questions** These questions are keyed to every major subdivision of the chapter and serve to help students focus on the core chapter concepts.
- **Subsection Listings** These have been added to the chapter outline to make the structure of the chapter clear from the outset.
- **Section Reviews** Short bullet-point reviews summarize each major section in every chapter and remind students of key information.
- **Chapter Conclusions** Every chapter ends with a comparative conclusion that helps students better synthesize chapter material and understand how it fits into the larger picture.
- **Marginal Key Term with Definitions** Students can handily find key term definitions on the same page where the term first appears.
- **Pronunciation Guide** Hard-to-pronounce words are spelled phonetically for students throughout the text.
- **Suggested Readings** These have been expanded and resituated from the end of each chapter to a separate online instructor's resource.

Changes in This Edition

In addition to the pedagogical aids outlined above, numerous chapter-by-chapter changes have been made, including new illustrations, new maps, streamlining of the textual discussion, and updates to many of the boxed feature essays. Here are a few highlights:

- Chapter 1 includes new discussion of the recent discovery of *Homo naledi* (now a key term) in South Africa, with a new photo of the skeleton of the hand and foot.

- Chapter 3 contains a new Environment & Technology feature, "The West African Voyage of Hanno the Carthaginian," and includes new Map 3.6 depicting the path of Hanno's expedition. Crucial information from the previous edition's feature, "Ancient Textiles and Dyes," has been incorporated into the section on Phoenician city-states.
- Chapter 4 has a new Diversity & Dominance feature, "Poetry and Society in Early China and Greece," that compares outlooks on Chinese society through poems from the Chinese *Book of Songs*, with Greek poems by Sappho and Tyrtaeus.
- Chapter 7 includes new art, including a new chapter-opening photo of the exterior of the Temple of Minakshi at Madurai, a sculpture depicting Buddha at the moment he achieves enlightenment, and a new wall painting from the caves at Ajanta that reflects members of different castes and ethnic groups.
- Chapter 10 includes a new subsection, "Marginal Communities," as well as a Diversity & Dominance feature, "Becoming Muslim," that gives firsthand accounts of conversions to the faith.
- Chapter 12 has changed the title and all internal references from "Inner Asia" to "Central Asia." The introduction has also been heavily updated.
- Chapter 14 contains new discussion of the coach's introduction to western Europe from Hungary in the late 1400s. It also includes a new Environment & Technology feature, "Stained Glass Windows."
- Chapter 15 includes revisions to the introduction to the section "Tropical Africa and Asia" and the subsection "The Tropical Environment in Africa and Asia." The Diversity & Dominance feature contains a new excerpt from *The Tale of the Anklet*.
- In addition to several new illustrations, Chapter 17 contains added discussion of the Catholic Church's council meetings between 1545 and 1563 and of Phillip II.
- Chapter 18 contains new discussion of the application of the label "Indian" and the position of native elites, as well as new coverage of the hundreds of distinct native peoples in the English and French colonies in North America.
- Chapter 19 contains updates to the modern conversions of a planter's expenses and a rural laborer and wealthy noble family's incomes and provides the most recent research and statistics on the importation of African slaves into Islamic regions.
- Chapter 22 includes several new illustrations, as well as updated and expanded subsections on "Changes in Society," "Protests and Reforms," "India," and the "Conclusion."
- Chapter 23 contains new coverage of the baroness Germaine de Staël, including a portrait and a new Diversity & Dominance feature that uses an excerpt from de Staël's memoir to shed light on Napoleon's character.
- Chapter 24 includes an updated Environment & Technology feature, "The Web of War," with the addition of a firsthand account of the siege of Sevastopol (the Crimean capital) from the *Times* of London.
- Chapter 27 includes revisions to several sections, including "The New Power Balance, 1850–1900," "Nationalism and the Rise of Italy, Germany, and Japan," and "China, Japan, and the Western Powers."
- Chapter 28 includes a new Environment & Technology feature, "New War, New Tools," that describes the technological advances of World War I including chemical warfare, flamethrowers, concertina wire, radios, food rations, and camouflage.
- In this edition, the chapter "The Collapse of the Old Order, 1929–1949" (now Chapter 29) appears before the chapter "Revolutions in Living, 1900–1950" (now Chapter 30).
- Chapter 31 contains an updated introduction to Part VIII that adds insight about industrial and economic recovery after the end of World War II, as well as additions about global famine.
- Chapter 32 contains new and updated statistics throughout that reflect the most recent research, including data through 2000 in Table 32.1. The chapter also notes the recent violence and civil wars in Syria and Libya.
- Chapter 33 covers updates in world affairs through the first half of 2017, including the 2016 terror attacks in Paris and Brussels; the elevation of Pope Francis I; Brexit; the abortive military coup in Turkey in 2016; and the election of Donald Trump and the early acts of the new administration. The section "The Question of Values" has been moved and is now the first section in the chapter.

Formats

To accommodate different academic calendars and approaches to the course, *The Earth and Its Peoples* is available in two formats. There is a one-volume hardcover version containing all 33 chapters, along with a two-volume paperback edition: Volume I: To 1550 (Chapters 1–16) and Volume II: Since 1500 (Chapters 16–33).

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When textbook authors set out on a project, they are inclined to believe that 90 percent of the effort will be theirs and 10 percent that of various editors and production specialists employed by their publisher. How very naive. This book would never have seen the light of day had it not been for the unstinting labors of the great team of professionals who turned the authors' words into beautifully presented print and supplied a marvelous set of visual accompaniments. Our debt to the staff of Cengage Learning remains undiminished in the seventh edition. Scott Greenan helped shape this edition as Product Manager for Western Civilization and World History. Sarah Edmonds, our Content Developer, has been an extraordinarily helpful and multitasking manager for the project. Phil Scott has overseen the technical side of things as Project Manager from SPi Global. Carol Newman, our coworker for several editions, has again kept us on schedule. And Charlotte Miller continues to do her wonderful work on maps.

We also thank the many students whose questions and concerns, expressed directly or through their instructors, shaped much of this revision. We continue to welcome all readers' suggestions, queries, and criticisms. Please contact us at our respective institutions.

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Note on Spelling and Usage

Where necessary for clarity, dates are followed by the letters CE or BCE. The abbreviation CE stands for "Common Era" and is equivalent to AD (anno Domini, Latin for "in the year of the Lord"). The abbreviation BCE stands for "before the Common Era" and means the same as BC ("before Christ"). In keeping with our goal of approaching world history without special concentration on one culture or another, we chose these neutral abbreviations as appropriate to our enterprise. Because many readers will be more familiar with English than with metric measurements, however, units of measure are generally given in the English system, with metric equivalents following in parentheses.

In general, Chinese has been Romanized according to the pinyin method. Exceptions include proper names well established in English (e.g., Canton, Chiang Kaishek) and a few English words borrowed from Chinese (e.g., kowtow). Spellings of Arabic, Ottoman Turkish, Persian, Mongolian, Manchu, Japanese, and Korean names and terms avoid special diacritical marks for letters that are pronounced only slightly differently in English. An apostrophe is used to indicate when two Chinese syllables are pronounced separately (e.g., Chang'an).

For words transliterated from languages that use the Arabic script—Arabic, Ottoman Turkish, Persian, Urdu—the apostrophe indicating separately pronounced syllables may represent either of two special consonants, the hamza or the ain. Because most English-speakers do not hear the distinction between these two, they have not been distinguished in transliteration and are not indicated when they occur at the beginning or end of a word. As with Chinese, some words and commonly used place-names from these languages are given familiar English spellings (e.g., Quran instead of Qur'an, Cairo instead of al-Qahira). Arabic romanization has normally been used for terms relating to Islam, even where the context justifies slightly different Turkish or Persian forms, again for ease of comprehension.

Before 1492 the inhabitants of the Western Hemisphere had no single name for themselves. They had neither a racial consciousness nor a racial identity. Identity was derived from kin groups, language, cultural practices, and political structures. There was no sense that physical similarities created a shared identity. America's original inhabitants had racial consciousness and racial identity imposed on them by conquest and the occupation of their lands by Europeans after 1492. All of the collective terms for these first American peoples are tainted by this history. *Indians*, *Native Americans*, *Amerindians*, *First Peoples*, and *Indigenous Peoples* are among the terms in common usage. In this book the names of individual cultures and states are used wherever possible. Amerindian and other terms that suggest transcultural identity and experience are used most commonly for the period after 1492.

There is an ongoing debate about how best to render Amerindian words in English. It has been common for authors writing in English to follow Mexican usage for Nahuatl and Yucatec Maya words and place-names. In this style, for example, the capital of the Aztec state is spelled Tenochtitlán, and the important late Maya city-state is spelled Chichén Itzá. Although these forms are still common even in the specialist literature, we have chosen to follow the scholarship that sees these accents as unnecessary. The exceptions are modern place-names, such as Mérida and Yucatán, which are accented. A similar problem exists for the spelling of Quechua and Aymara words from the Andean region of South America. Although there is significant disagreement among scholars, we follow the emerging consensus and use the spellings *khipu* (not *quipu*), *Tiwanaku* (not *Tiahuanaco*), and *Wari* (not *Huari*). In this edition we have introduced the now common spelling *Inka* (not *Inca*) but keep *Cuzco* for the capital city (not *Cusco*), since this spelling facilitates locating this still-important city on maps.

The Earth and Its Peoples

INTRODUCTION

The World Before 1500

INTRODUCTION OUTLINE

History occurs in a continuous stream. Because new events are the products of their past, each historical period is intimately linked to what preceded it. As a Roman historian put it, "History doesn't make leaps." Nevertheless, modern historians find it useful to divide the past into eras or ages to make sense of the sweep of history. The longest historical eras are antiquity, the Middle Ages, and modern times. Volume II of *The Earth and Its Peoples* is devoted to the third of these—modern world history, the five centuries since about 1500.

World historians largely agree that the intensity of interaction around the world during the modern period distinguishes it from all earlier times. European maritime exploration opened up or intensified these contacts. The modern era is also characterized by the steady expansion of European political, economic, and cultural leadership in every part of the world.

How and when different parts of the world felt the impact of the West varied. By 1500 parts of the Americas were already reeling under the impact of their first contacts with Europeans, but in most other parts of the world the West did not make a big difference until the century after 1750 or even later. Thus, while in hindsight Western ascendancy seems to be a defining theme of modern history, for the people of Asia, Africa, and elsewhere the modern era was a time in which the internal patterns of historical change only gradually became altered by the growing influence of Westerners and by their own reactions to these influences.

In order to explain how the modern era came into being, the first chapter of Volume II of *The Earth and Its Peoples* (Chapter 16) begins in about 1450. To help the reader understand the broader sweep of history, this Introduction provides an overview of earlier eras. The Introduction reviews three periods of decreasing temporal length. The first is the very long period from human origins until the end of ancient history in about 400 CE. Next comes the early medieval period down to about 1200; and, finally, the 300 years immediately preceding 1500. Because the centuries after 1200 were most important for shaping the transition to the modern era, they receive the most detailed treatment.

I-1 Antiquity: Humans, Cultures, and Conquests, to 400 CE

All historical periods were shaped by natural environment and human technology (whether simple tools, techniques, or complex machines). The paramount role played by environmental forces is apparent when historians seek to explain how human beings—and thus history—began. Like all other living creatures, early humans were products of biological adjustments to changing environments. Over millions of years, our ancestors in eastern and southern Africa evolved biologically to enhance their chances for survival. The evolution of an upright posture enabled early people to walk and run on two legs, thereby freeing their hands for tool making. The evolution of larger brains gave them the capacity to learn and understand all sorts of new things and devise techniques for putting them to use. Finally, evolutionary changes in the throat gave humans the capacity for speech, which, as language developed, had the dual effect of making complex social relations easier and fostering the development of intellectual culture.

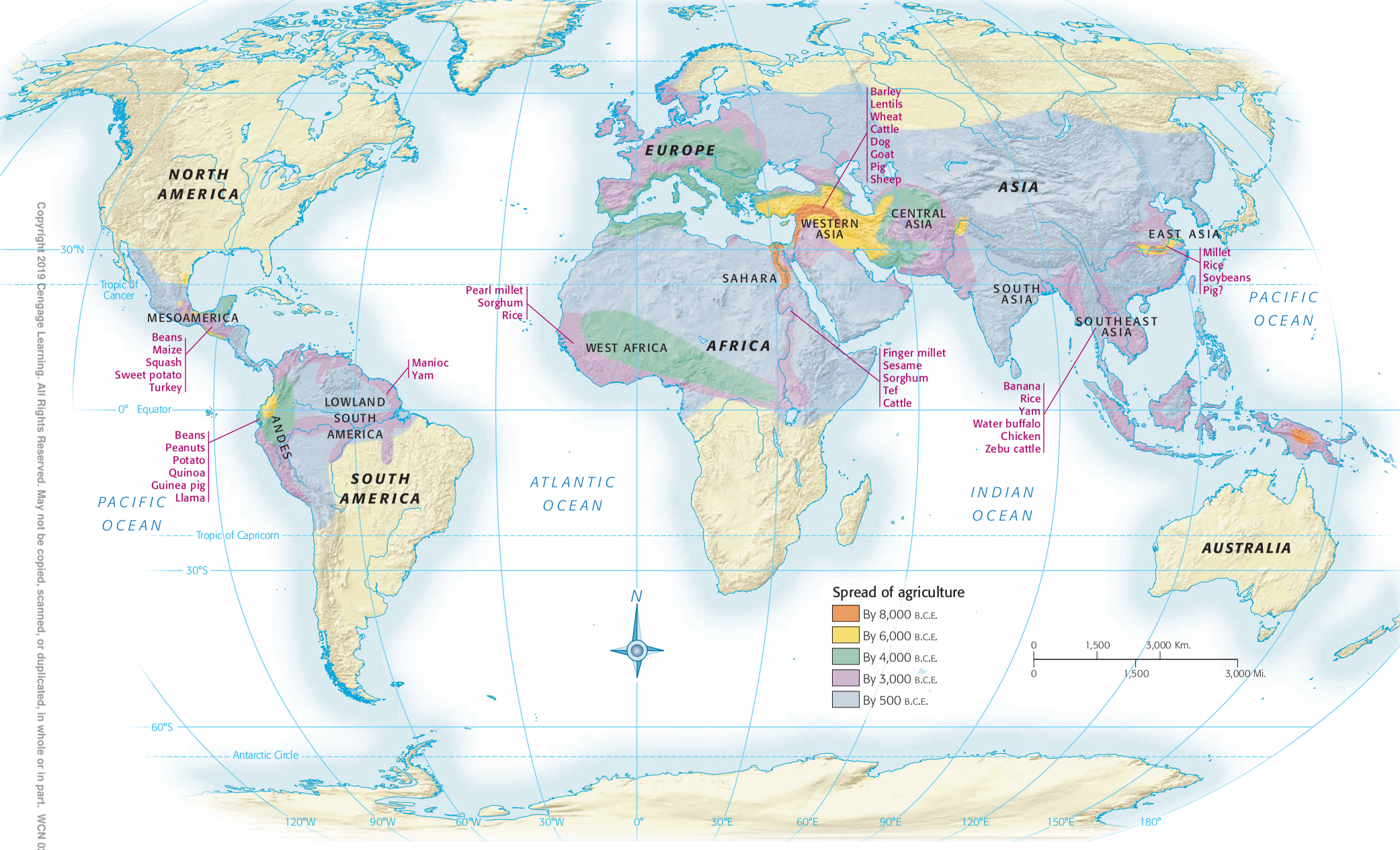
With these physical traits in place, humans were able to develop in a direction taken by no other creature. Instead of relying on the glacially slow process of biological evolution to adapt their bodies to new environments, our ancestors used their minds to devise technologies for transforming nature to suit their needs. By the standards of today, these early technologies may seem crude—stone tools for cutting and chopping, clothing made from plants and animal skins, shelters in caves and huts—but they were sufficient to enable humans to survive environmental changes in their homelands. They also enabled bands of humans to migrate to new environments in every part of the world. Through trial and error Stone Age people learned what could safely be eaten in new environments. Other primates acted primarily by instinct; humans acted according to the dictates of culture. The capacity to create and change material and intellectual culture marked the beginning of human history.

I-1a Agricultural Civilizations

Beginning about 10,000 years ago, the transition from food gathering to food production marked a major turning point in history. Human communities in many different parts of the world learned to alter the natural food supply. Some people promoted the growth of foods they liked by scattering seeds on good soils and restricting the growth of competing plants. In time some people became full-time farmers. Other communities tamed wild animals whose meat, milk, fur, and hides they desired, and they controlled their breeding to produce animals with the most desired characteristics. Promoted by a warmer world climate, these agricultural revolutions slowly spread from the Middle East around the Mediterranean. People in South and East Asia, Africa, and the Americas domesticated other wild plants and animals for their use. Just as humans had ceased to rely on evolution to enable them to adjust to new surroundings, so too they had bypassed evolution in bringing new species of plants and animals into existence (see Map I.1).

The agricultural revolutions greatly enhanced people's chances for survival in two ways. One was a rapid increase in population fostered by the ability to grow and store more food (see Issues in World History: Climate and Population, to 1500). A second change was taking place in the composition of human communities. The earliest communities consisted of small bands of biologically related people and their spouses from other bands.

▶ **Scene from the Egyptian Book of the Dead, ca. 1300 BCE** The mummy of a royal scribe named Hunefar is approached by members of his household before being placed in the tomb. Behind Hunefar is jackal-headed Anubis, the god who will conduct the spirit of the deceased to the afterlife. The Book of the Dead provided Egyptians with the instructions they needed to complete this arduous journey and gain a blessed existence in the afterlife. The Trustees of the British Museum/Art Resource, NY



MAP I.1 **Early Centers of Plant and Animal Domestication** Many different parts of the world made original contributions to domestication during the Agricultural Revolutions that began about 10,000 years ago. Later interactions helped spread these domesticated animals and plants to new locations. In lands less suitable for crop cultivation, pastoralism and hunting remained more important for supplying food.

Why are most of the regions where crops were first domesticated relatively close to the Equator?

However, more complex societies made their first appearances as more and more unrelated people concentrated in river valleys, where the soils, temperatures, and potential to irrigate with river water produced conditions suitable for farming.

In the Fertile Crescent of the Middle East, Egypt, India, and China the existence of a regular food surplus enabled a few people to develop highly specialized talents and tools that were not tied to food production. Some talented military leaders became rulers of large areas and headed governments with specialized administrators. Specialists constructed elaborate irrigation systems, monumental palaces, and temples. Others made metal tools and weapons, first of bronze, then of iron. Because of the value of their talents these specialists acquired privileges. It was grandest to be a king, queen, or head priest. For the average person, life was harder in complex societies than in parts of the world where such specialization had not yet occurred.

I-1b Culture and Civilization

Complex and populous agricultural societies developed specialists who dealt with abstract and unseen forces. This development was not entirely new. For tens of thousands of years before the first settled societies, humans had used their minds to think about the meaning of life. The remains of elaborate burials and sites of worship suggest that some early societies had clear beliefs in an afterlife and in spiritual forces that controlled their lives. Many cultures believed the sun, moon, and nature had supernatural powers.

Another form of intellectual activity was the collection of technical knowledge about the environment. Cultural communities learned what plants were best for food, clothing, or building materials and passed this knowledge along to later generations. Most specialized was the knowledge of how to make medicines, intoxicants, and poisons. Assigning names for all these facilitated the transmission of this knowledge. In the absence of written records, very little specific information about these early treasuries of knowledge exists, but the elaborate and beautiful paintings in caves dating to tens of thousands of years before the emergence of early agricultural societies provide the clearest evidence of the cultural sophistication of early humans.

Cultural change surged as settled agricultural communities became more specialized. Temple priests devised elaborate rituals and prayers for the gods who protected the community, and they studied the movements of stars, planets, and the moon for signs of the progress of the seasons or the will of the gods. In Mesopotamia, Egypt, and elsewhere a new class of scribes used written symbols to preserve administrative and commercial records, laws, and bodies of specialized knowledge. Thoughtful people recorded the myths and legends passed down orally from earlier days, systematizing them and often adapting them to new social conditions, as well as creating new literary forms. Communications could now be sent unchanged over long distances. Some of these works were lost for millennia only to be rediscovered in recent times, allowing us to know much more about the lives, thoughts, and values of ancient peoples.

I-1c Empires and Regional Networks

In time governments weakened or fell victim to conquest. Egypt, for example, fell to Nubians from up the Nile then to the Assyrians from Mesopotamia. Some conquerors created vast new empires. Late in the fourth century BCE, Alexander the Great brought everything from the eastern Mediterranean to India and Egypt under his sway, spreading Greek culture and language. After the collapse of Alexander's empire, the first of a series of Indian empires arose. In the second and first centuries BCE, Latin-speakers spread their rule, language, and culture throughout the territories ruled by Rome, which encompassed the Mediterranean and reached across the Alps into Gaul (France) and Britain. At much the same time, the Han consolidated control over the densely populated lands of northern China, and successive rulers extended the sway of their empire over much of East Asia. In the isolated continents of the Americas, advanced agricultural societies were also building larger states in late antiquity.

Essential to empire formation was the significant enhancement of old technologies and the development of new ones. In many parts of the world iron replaced bronze as the preferred metal for tools and weapons. In Central Asia, the Middle East, and China chariots and cavalry played important military roles. In most places there were advances in the fighting techniques and in defensive strategies and fortifications.

Empires encouraged the growth of cities to serve as administrative, economic, and cultural centers. Temples, palaces, monuments, markets, and public amenities advertised the glory of these imperial centers. Large states regularly mobilized large pools of labor for massive

construction projects. By late antiquity, a few cities had populations in the hundreds of thousands—Alexandria in Egypt, Rome in Italy, Chang'an in China, Pataliputra in India—though such large numbers strained cities' capacities to supply food and water and dispose of waste. Such cities established "classical" architectural styles that were frequently imitated and affected wide areas even after the empires were gone.

Other imperial building projects were more practical. The Roman and Chinese governments built road networks for moving troops and communication; long barrier walls and strings of forts defended frontier areas from invasion. Trade often flourished on these political frontiers. Improvements in shipping also encouraged the movement of goods over long distances and allowed transport of bulkier cargoes. Much long-distance trade in antiquity was in luxury goods for the privileged classes in urban civilizations. The search for exotic items tied remote parts of the world together and gave rise to new specialists both within the urban civilizations and in less stratified parts of the world. Gold, ivory, animal pelts, and exotic feathers from inner Africa reached Egypt. Phoenician mariners marketed lumber, papyrus (for paper), wine, and fish around the Mediterranean Sea. Other merchants carried silk from China across arid Central Asia to the Middle East and lands to the west. The advent of coinage in the first millennium BCE stimulated local and regional economies.

The routes that carried goods also helped spread religions, inventions, and ideas. The Zoroastrian religion of the Persians became one of the great ethical creeds of antiquity. The diaspora of Jews from Palestine after their southern kingdom was destroyed by the Neo-Babylonian Empire in the seventh century BCE also helped spread monotheistic beliefs. The beliefs and culture of the Greeks and Romans spread throughout their empires, largely because many of their subjects saw the advantages in adopting the ways of the ruling elite. Similarly, Indian traders introduced Hinduism and Buddhism to Southeast Asia.

I-2 Growth and Interaction, 400–1200

During the Early Middle Ages expanding political and commercial links drew regions closer together. In addition, the growth of interregional trade and the spread of new world religions helped unite and redefine the boundaries of cultural regions, though divisions within religions undercut some of this cultural unity. All of these factors were interrelated, but let's begin with the one that left the most enduring impression on the course of history: the spread of world religions.

I-2a World Religions

The first religious tradition to experience widespread growth in this period was Buddhism, which spread from the Indian homeland where it had arisen around 500 BCE. One direction of growth was eastward into Southeast Asia. After 500 CE there were strongholds of the faith on the large islands of Ceylon, Sumatra, and Java, whose kings supported the growth of schools and monasteries and constructed temple complexes. Traders also carried Buddhism to Tibet and China and from there to Korea and Japan. In some places Buddhism's growing strength led to political reactions. In China the Tang emperors reduced the influence of the monasteries in 840 by taking away their tax exemption and by promoting traditional Confucian values. A similar effort by the Tibetan royal family to curtail Buddhism failed, and Buddhist monks established their political dominance in mountainous Tibet. In India, however, Buddhism gradually lost support during this period and by 1200 had practically disappeared from the land of its origin.

Meanwhile, people in western Eurasia were embracing two newer religious systems. In the fourth century, Christianity became the official religion of the Roman Empire, adding new followers all around the Mediterranean to this once persecuted faith. But when the western half of the empire collapsed under the onslaught of "barbarian" invasions in the late fifth century, the Latin Church had to shoulder alone the challenge of converting these peoples to Christianity and preserving the intellectual, political, and cultural heritage of Roman antiquity. In its religious mission the Latin Church was quite successful. One by one Frankish, German, English, Irish, Hungarian, and other leaders were converted, and their subjects gradually followed suit. Preserving other Roman achievements was more difficult. The church continued to use the Latin language and Roman law, and Christian monasteries preserved manuscripts of many ancient works. But the trading economy and urban life that had been the heart blood of ancient Rome became only a memory in most of the Latin West.

In the eastern Mediterranean, Byzantine Roman emperors continued to rule, and the Greek and Syriac-speaking Christian churches continued to enjoy political protection. Greek monks also conducted missions among the Slavic peoples of eastern Europe. The conversion of the

► **Armored Knights in Battle** This painting from around 1135 shows the armament of knights at the time of the Crusades. Chain mail, a helmet, and a shield carried on the left side protect the rider. The lance carried underarm and the sword are the primary weapons. Notice that riders about to make contact with lances have their legs straight and braced in the stirrups, while riders with swords and in flight have bent legs.

Pierpont Morgan Library/Art Resource

Russian rulers in the tenth century was a notable achievement. However, by the middle of the next century, cultural, linguistic, and theological differences led to a deep rift between Greek and Russian Christians in the east and Latin Christians in the west.

Meanwhile, a prophetic religion founded by Muhammad in the seventh century was spreading like a whirlwind out of its Arabian homeland. With great fervor Arab armies introduced Islam and an accompanying state system into the Middle East, across North Africa, and into the Iberian Peninsula. Over time most Middle Eastern and African Christians and members of other religions chose to adopt the new faith. Muslim merchants helped spread the faith along trade routes into sub-Saharan Africa, South Asia, and China. Like Christianity, Islam eventually split along cultural, theological, and political lines as it expanded. Beginning in 1095, Latin Christians launched military Crusades against Muslim dominance of Christian holy places in Palestine. In later Crusades, political and commercial ends became more important than religious goals, and the boundaries between Christianity and Islam changed little.

I-2b Commercial and Political Contacts

In other parts of the world empires played a fundamental role in defining and unifying cultural areas. Under the Tang and Song dynasties (618–1279) China continued to have stability and exhibited periods of remarkable economic growth and technological creativity. Ghana, the first notable empire in sub-Saharan Africa, emerged to control one end of the trans-Saharan trade. In the isolated continents of the Americas a series of cultural complexes formed in the Andes, among the Maya of the Yucatán, along the Mississippi, and in the arid North American southwest. But despite efforts by Christian northern Europeans to create a loosely centralized "Holy Roman Empire," a very decentralized political system prevailed in most of western Europe. In Japan development was also moving toward political fragmentation.

Political and religious expansion helped stimulate regional and long-distance trade. The challenge of moving growing quantities of goods over long distances produced some important innovations in land and sea travel. Two of the most important land-based, long-distance routes in this period depended on pack animals, especially the camel. One was the Silk Road, a caravan route across Central Asia. On the other trade route, between sub-Saharan Africa and North Africa, camels carried goods across the Sahara, the world's largest desert.

The Silk Road took its name from the silk textiles that were carried from eastern China to the Mediterranean Sea. In return, the Chinese received horses and other goods from the West. In existence since about 250 BCE, this series of roads nearly 6,000 miles (9,000 kilometers) in length passed through grasslands and deserts whose pastoral populations provided guides, food, and fresh camels (specially bred for caravan work).

After 900 CE the Silk Road declined for a time. By coincidence, the trans-Saharan caravan routes were growing more important during the period from 700 to 1200. Here, too, horses were an important trade item purchased by African rulers to the south in return for gold, slaves, and other goods. The pastoralists who controlled the Saharan oases became essential guides for the camel caravans.

Since ancient times sea travel had been important in moving goods over relatively short distances, usually within sight of land, as around the Mediterranean Sea, the Red Sea, the Persian Gulf, and among the islands of the East Indies. During this period the water links around and through the Indian Ocean were increasing enough to make it an alternative to moving goods from China to the Middle East. Shipments went from port to port and were exchanged many times. Special ships known as dhows made use of the seasonal shifts in the winds across the Indian Ocean to plan their voyages in each direction. These centuries also saw remarkable maritime voyages in the Pacific (see Chapter 16).

I-3 Interregional Conquests and Exchanges, 1200–1500

Between 1200 and 1500, cultural and commercial contacts grew rapidly across wide expanses of Eurasia, Africa, the Americas, and the Indian Ocean. In part, the increased contacts were the product of an unprecedented era of empire building around the world. The Mongols conquered a vast empire spanning Eurasia from the Pacific to eastern Europe. Muslim peoples created new empires in India, the Middle East, and sub-Saharan Africa. Amerindian empires united extensive regions of the Americas. Most of Europe continued to lack political unity, but unusually powerful European kingdoms were expanding their frontiers.

Empires stimulated commercial exchanges. The Mongol conquests revived the Silk Road across Central Asia, while a complex maritime network centered on the Indian Ocean stretched around southern Eurasia from the South China Sea to the North Atlantic, with overland connections in all directions (see Map I.2). Trade in the Americas and Africa also expanded. In the fifteenth century, Portuguese and Spanish explorers began an expansion southward along the Atlantic coast of Africa that by 1500 had opened a new all-water route to the riches of the Indian Ocean and set the stage for transoceanic routes that for the first time were to span the globe.

Mongol, Muslim, and European expansion promoted the spread of technologies. Printing, compasses, crossbows, gunpowder, and firearms—all East Asian inventions—found broader applications and new uses in western Eurasia. Both the Ottomans and the kingdoms of Europe made extensive use of gunpowder technologies. However, the highly competitive and increasingly literate peoples of the Latin West surpassed all others of this period in their use of technologies that they borrowed from elsewhere or devised themselves. Europeans mined and refined more metals, produced more books, built more kinds of ships, and made more weapons than did people in any other comparable place on earth.

Why was so much change taking place all at once? Historians attribute many of the changes in South and Central Asia directly or indirectly to the empire building of the Mongols. But other changes took place far from that area. The role of simple coincidence, of course, should never be overlooked in history. And some historians believe that larger environmental factors were also at work—changes in climate that promoted population growth, trade, and empire building.

I-3a Mongols and Turks

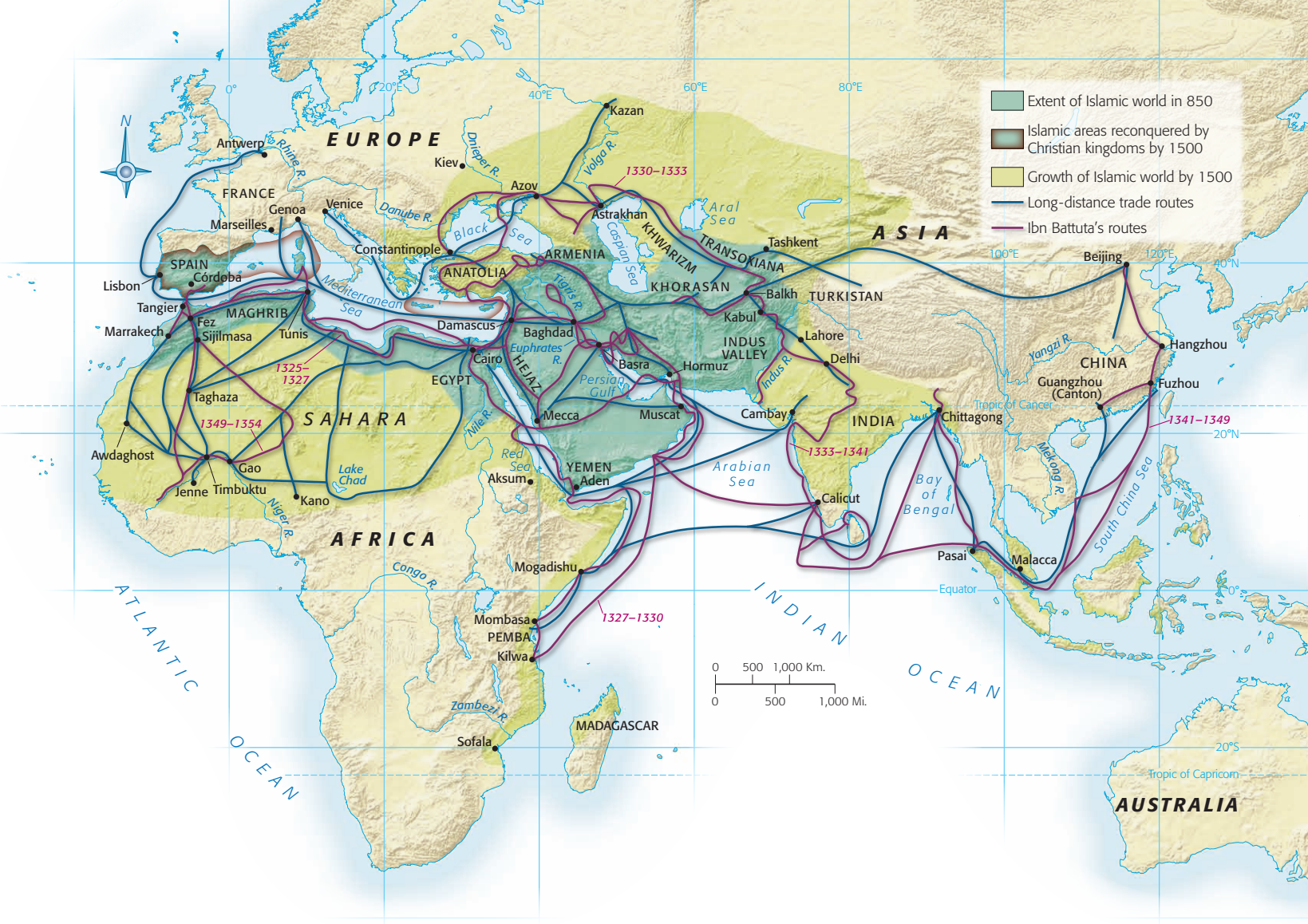
The earliest and largest of the new empires was the work of the Mongols of northeastern Asia. Using their extraordinary command of horses and refinements in traditional forms of military and social organization, Mongols and allied groups united under Genghis Khan overran northern China in the early thirteenth century and spread their control westward across Central Asia to eastern Europe. By the later part of the century, the Mongol Empire stretched from Korea to Poland. It was ruled initially in four separate khanates: one in Russia, one in Iran, one in Central Asia, and one in China.

By ensuring traders protection from robbers and excessive tolls, the Mongol Empire revitalized the Silk Road. Never before had there been such a volume of commercial exchanges between eastern and western Eurasia. Easier travel also helped Islam and Buddhism spread to new parts of Central Asia.

The strains of holding such vast territories together caused the Mongol Empire to disintegrate over the course of the fourteenth and early fifteenth centuries. The Ming rulers of China overthrew Mongol rule in 1368 and began an expansionist foreign policy to reestablish China's predominance and prestige. Their armies repeatedly invaded Mongolia, reestablished dominion over Korea, and occupied northern Vietnam (Annam). One by one the other khanates collapsed.

The Mongols left a formidable legacy, but it was not Mongolian. Instead, Mongol rulers tended to adopt and promote the political systems, agricultural practices, and local customs of the peoples they ruled. Their encouragement of local languages helped later literary movements to flower. The political influence of the administrations the Mongols established in China, Iran, and Russia lingered even after locals had overthrown their rule, creating the basis for new national regimes.

At about the same time as the early Mongol expansion, Turkic war leaders from what is now Afghanistan surged through the Khyber Pass and established a Muslim empire centered at Delhi. In short order, they overwhelmed the several Hindu states of north and central India



MAP I.2 **Arteries of Trade and Travel in the Islamic World, to 1500** Ibn Battuta's journeys across Africa and Asia made use of land and sea routes along which Muslim traders and the Islamic faith had long traveled.

Why might Ibn Battuta have traveled through China outside the Muslim world but not through Europe?

and established a large empire ruled from the city of Delhi. The subsequent migration of large numbers of Muslims into India and the prestige and power of the Muslim ruling class brought India into the Islamic world. After their conquests in the Middle East, Mongols had recruited other Turkic-speaking Muslims from Central Asia to serve as their agents. In the decades after 1250, a small Turkic community in northwest Anatolia (now Turkey) known as the Ottomans took advantage of their proximity to Byzantine Constantinople to attract Muslim warriors who wanted to battle Christians. They then crossed into the Balkan Peninsula of southeastern Europe.

In the late 1300s, the Central Asian conqueror Timur (Tamerlane) shattered the Delhi Sultanate and stopped the expansion of the Ottoman Empire. The conquest and pillage of Timur's armies left the Delhi Sultanate a shadow of its former self, but the Ottoman Turks were able to reconstitute their empire in the fifteenth century. Ottoman conquerors swept deep into southeastern Europe (taking Constantinople, the last surviving remnant of the Byzantine Empire, in 1453) and southward into the Middle East, establishing a stable presence that was to endure into the twentieth century.

I-3b Indian Ocean Exchanges

In the wake of the Mongol Empire's collapse, the Indian Ocean assumed greater importance in the movement of goods across Eurasia. Alliances among Muslim merchants of many nationalities made these routes the world's richest trading area. Merchant dhows sailed among the trading ports, carrying cotton textiles, leather goods, grains, pepper, jewelry, carpets, horses, ivory,

▲ **Defending Japan** Japanese warriors board Mongol warships with swords to prevent the landing of the invasion force in 1281.
The Granger Collection, NY

and many other goods. Chinese silk and porcelain and Indonesian spices entered from the east, meeting Middle Eastern and European goods from the west. It is important to note that Muslim merchant networks were almost completely independent of the giant Muslim land empires.

As a consequence of the Islamic world's political and commercial expansion, the number of adherents to the Muslim faith also grew. By 1500 Islam had replaced Buddhism as the second most important faith in India and was on its way to displacing Hinduism and Buddhism in Southeast Asia. The faith was also spreading in the Balkans. Meanwhile, raids by Arab pastoralists undermined ancient Christian states along Africa's upper Nile, leaving Ethiopia as the only Christian-ruled state in Africa. In the trading cities below the Sahara and along the Indian Ocean coast where Islam had established itself well before 1200, the strength and sophistication of Islamic religious practice was growing.

I-3c Mediterranean Exchanges

The Mediterranean Sea, which since antiquity had been a focus of commerce and cultural exchange for the peoples of Europe, the Middle East, and Africa, saw increased activity in the later Middle Ages. Part of the Mediterranean's importance derived from its trading links to the Indian Ocean by land and water routes. Another area that contributed to expanded trade was northern Africa. Camel caravans brought great quantities of gold and large numbers of slaves to the Mediterranean from the lands below the Sahara. This trade facilitated the growth of the powerful empire of Mali, which controlled some of the main gold-producing regions of West Africa. The rulers of Mali became rich and Muslim. Their wars and those of other states produced the captives that were sold north. In the fourteenth century the disruption of supplies of slaves from the eastern Mediterranean led to more African slaves being purchased in southern Europe.

Another part of the expansion of Mediterranean trade was tied to the revival of western Europe. In 1204 the Italian city-state of Venice had shown its determination to be a dominant player in the eastern Mediterranean by attacking the Greek city of Constantinople and ensuring access to the Black Sea. Trade routes from the Mediterranean spread northward to the Netherlands and connected by sea to the British Isles, the Baltic Sea, and the Atlantic. The growth of trade in Europe accompanied a revival of urban life and culture. Both the cities and the countryside saw increased use of energy, minerals, and technologies from printing to gunpowder. Despite a high level of warfare among European states and devastating population losses in the fourteenth century, much of Europe was exhibiting cultural and economic vitality that was to have great consequences for the entire world in the centuries that followed.

I-3d The Aztecs and Inca

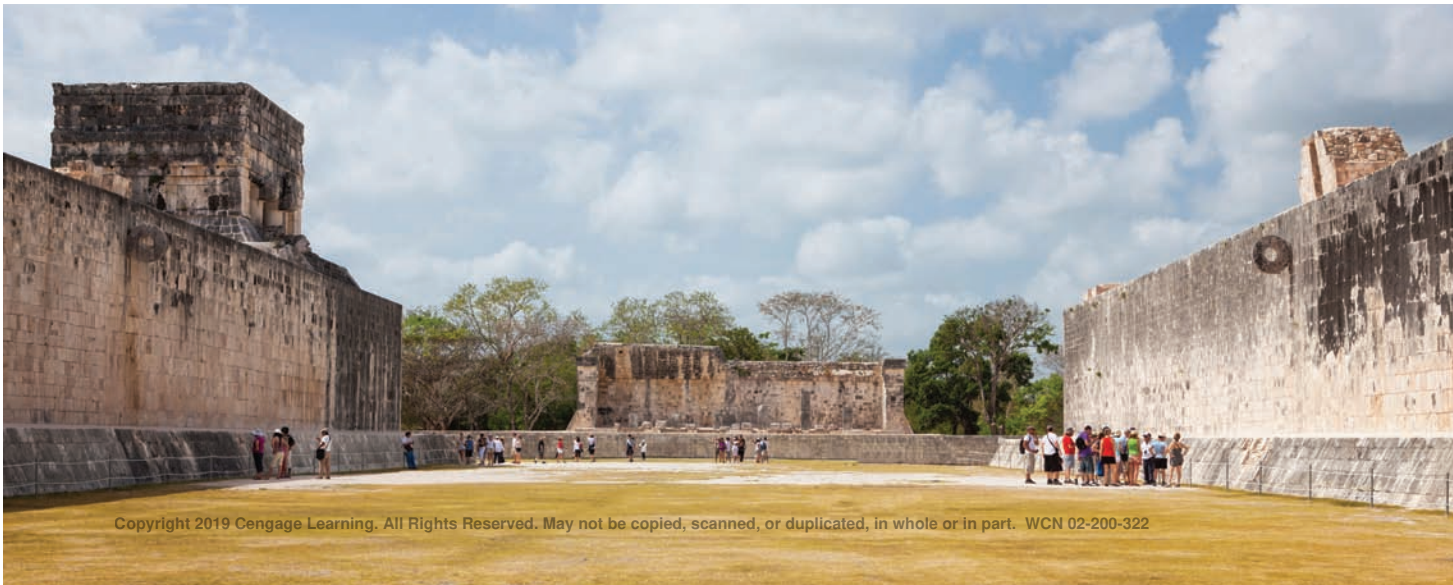
In the continents of the Western Hemisphere, American peoples were also creating important empires in the period from 1200 to 1500, although they had more limited resources with which to do so. For thousands of years their cultures had developed in isolation from the rest of humanity and thus had been unable to borrow any plants, animals, or technologies. Amerindian conquests were made without the aid of riding animals like the Mongols' horses, without the iron weapons all Old World empire builders had been using for many centuries, and without the new gunpowder weaponry that some Eurasians were employing in their conquests in this period.

In the wake of the collapse of the Toltec Empire, a martial people known as the Aztecs pushed southward into the rich agricultural lands of central Mexico. At first the Aztecs placed themselves at the service of strong indigenous residents, but after 1300 they began to build their own empire. Relying on their military skills, members of the Aztec warrior elite were able to conquer territories and reduce peasants to their service. The growth of a servile class at the bottom of society was paralleled by the growth of a powerful ruling class housed in well-constructed two-story dwellings in the Aztec capital cities. The servile laborers supplied the food needs of the growing cities and were impressed into building elaborate canals and land reclamation projects. Underpinning the power of the Aztec rulers were religious rituals that emphasized human sacrifice, mostly of war captives. By 1500 the Aztecs ruled a densely populated empire of subject and allied peoples.

Meanwhile, in the Andean highlands of western South America another powerful Amerindian empire was forming. Like central Mexico this region already had a rich agricultural base and a dense population when, in the fifteenth century, the Inca began using military skills to expand from a chiefdom into an empire. The Inka rulers, like the Aztecs, built impressive cities, promoted irrigation projects, and relied on religious rituals to bolster their authority. Tribute in goods and labor from their subject peoples supported their projects, and a network of mountain roads tied together the pieces of an empire that stretched for more than 3,000 miles (nearly 5,000 kilometers) north to south.

Both empires were cultural and commercial centers as well as political ones. In the Aztec Empire, well-armed private merchants controlled a long-distance trade in luxuries for the elites, including gold, jewels, feathered garments, and animal skins. There was also a network of local markets, large and small, that supplied the needs of more ordinary folks. State direction featured more prominently in Inka-ruled areas and promoted a vast exchange of specialized goods and a huge variety of foodstuffs grown at different altitudes.

▼ **The Mesoamerican Ball Game** From Guatemala to Arizona, archaeologists have found evidence of an ancient ball game played with a solid rubber ball on slope-sided courts shaped like a capital T. Among the Maya the game was associated with a creation myth and thus had deep religious meaning. Evidence suggests that some players were sacrificed. This illustration shows the impressive ball court at the great postclassic Maya city of Chichen Itza near modern Mserida, Mexico. You can see hoops or rings placed vertically on the two walls. Players drove the solid rubber ball to carom off the walls and along the court without using their hands or feet. They commonly wore protective pads around their waists. Bryan Mullennix World View/Alamy Stock Photo



16

The Maritime Revolution, to 1550

CHAPTER OUTLINE

In 1511 young Ferdinand Magellan sailed from Europe around the southern tip of Africa and eastward across the Indian Ocean as a member of the first Portuguese expedition to explore the East Indies (maritime Southeast Asia). Eight years later, this time in the service of Spain, he led an expedition that sought to reach the East Indies by sailing westward. By the middle of 1521 Magellan's expedition had achieved its goal by sailing across the Atlantic, rounding the southern tip of South America, and crossing the Pacific Ocean—but at a high price.

Of the five ships that had set out from Spain in 1519, only three made the long passage across the vast Pacific. During this long voyage, dozens of sailors died from starvation and disease. Magellan survived numerous mutinies during his voyage, but died in battle on April 27, 1521, while aiding the forces of a Philippine ruler who had promised to become a Christian.

To consolidate their dwindling resources, the expedition's survivors burned the least seaworthy of their remaining three ships and consolidated men and supplies. In the end only the *Victoria* made it across the Indian Ocean and back to Europe. Nevertheless, the *Victoria's* return to Spain on September 8, 1522, was a crowning example of Europeans' determination to make themselves masters of the oceans. A century of daring and dangerous voyages backed by the Portuguese crown had opened new routes through the South Atlantic to Africa, Brazil, and the rich trade of the Indian Ocean. Rival voyages sponsored by Spain since 1492 opened new contacts with the American continents. A maritime revolution was under way that would change the course of history.

▲ **Ferdinand Magellan Navigating the Straits Connecting the Atlantic and Pacific Oceans** This late-sixteenth-century print uses fanciful representations of native peoples and creatures to embellish Magellan's circumnavigation of the globe. INTERFOTO/Alamy Stock Photo

This new maritime era marked the end of a long period when Asia had initiated most overland and maritime expansion. Asia had previously been the source of the world's most useful new technologies as well as the most influential systems of belief. Asia was also home to the world's most powerful states and the richest trading networks. The success of Iberian voyages of exploration in the following century would redirect the world's center of power, wealth, and innovation from Asia to the West.

This maritime revolution broadened and deepened contacts, alliances, and conflicts across ancient cultural boundaries. Some of these contacts would prove disastrous for entire populations: Amerindians, for instance, suffered conquest, colonization, and a rapid decline in numbers. And sometimes the results were mixed: Asians and Africans found both risks and opportunities in their new relations with Europe. ●

16-1 Global Maritime Expansion Before 1450

What were the objectives and major accomplishments of the voyages of exploration undertaken by Chinese, Polynesians, and other non-Western peoples?

Since ancient times travel across the world's seas and oceans had been one of the great challenges to technological ingenuity. Ships had to be sturdy enough to survive heavy winds and seas, and pilots had to learn how to cross featureless expanses of water to reach their destinations. In time, ships, sails, and navigational techniques perfected in the more protected seas were adapted to open oceans.

However complex and expensive the new technologies and regardless of the dangers of these long-distance voyages, the rewards of sea travel and commerce made them worthwhile. Ships could move goods and people more profitably than any form of overland travel then possible. Crossing unknown waters, finding new lands, developing new markets, discovering new commodities, and establishing new settlements attracted adventurers from every continent. By 1450 daring mariners had discovered and settled most of the islands of the Pacific, the Atlantic, and the Indian Ocean, but no one had yet crossed the Pacific in either direction. Even the smaller Atlantic remained a barrier to contact between the Americas, Europe, and Africa. The inhabitants of Australia were also nearly cut off from contact with the rest of humanity. All this was about to change.

16-1a The Indian Ocean

The archipelagos and coastal regions of Southeast Asia were connected in networks of trade and cultural exchange from an early date. While the region was divided politically, culturally, and religiously, the languages of Malaysia, Indonesia, and the Philippines—as well as coastal regions of Thailand, southern Vietnam, Cambodia, and Hainan, China—all originated from a common Austronesian linguistic root. Scholars often use the term *Malayo Indonesians* or *Malay* to describe the early peoples of this maritime realm.

The region's sailors were highly skilled navigators as well as innovative shipbuilders and sail makers who, in addition to their own achievements, influenced later Chinese and Arab maritime advances. Around 350 they discovered two direct sea routes between Sri Lanka and the South China Sea through the Straits of Malacca and Sunda, thus opening a profitable link to China's silk markets. They were also the first to use the seasonal monsoon winds of the Indian Ocean to extend their voyages for thousands of miles, ultimately reaching East Africa and settling in Madagascar.

By the first century CE the mariners and merchants of India and Southeast Asia were trading across the region for spices, gold, and aromatic woods, even sending spices as far west as Rome through Mediterranean intermediaries (see Chapter 7). Their success attracted African, Arab, and Chinese mariners and merchants into the region, creating a large, integrated, and highly profitable market in the centuries that followed. By 1000 the dhows **(dow)** of Arabs and Africans, as well as Malay *jongs* and Chinese junks, came together in the region's harbors for commerce.

The rise of medieval Islam (see Chapter 10) gave Indian Ocean trade an important boost. The great Muslim cities of the Middle East provided a demand for valuable commodities, and networks of Muslim traders were active across the region. These traders shared a common language, ethic, and law and actively spread their religion to distant trading cities. By 1400 there were Muslim trading communities all around the Indian Ocean. Chinese merchant communities were present as well.

Indian Ocean traders largely operated outside the control of the empires and states they served, but in East Asia imperial China's rulers were growing more and more interested in these wealthy ports of trade. In 1368 the Ming dynasty overthrew Mongol rule and began to reestablish China's predominance and prestige abroad. Having restored Chinese power and influence in East Asia, the Ming moved to establish direct contacts with the peoples around the Indian Ocean, extending their authority into Vietnam through conquest and sending out seven imperial fleets between 1405 and 1433 (see Chapter 13). The enormous size of these expeditions was far

CHRONOLOGY

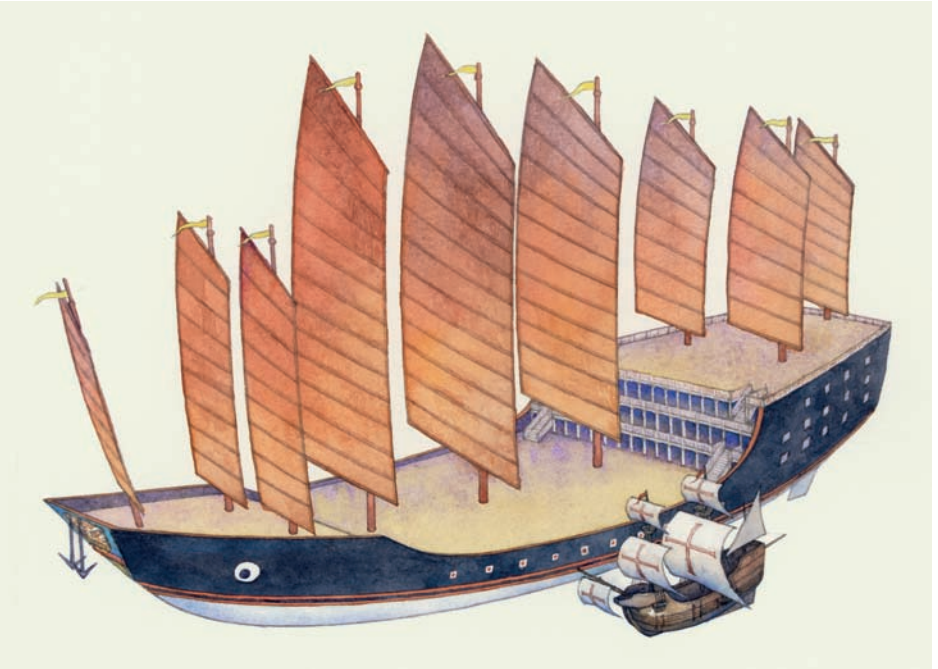
	Pacific Ocean	Atlantic Ocean	Indian Ocean
1400	300 BCE–1000 CE Polynesian settlement of Pacific islands By 1000 Sporadic Polynesian contacts with American mainland 1200–1300 Polynesian societies in Hawaii, Tonga, and elsewhere develop clear class structures with hereditary chiefs	770–1200 Viking voyages 1300s European settlement of Madeira, Azores, Canaries Early 1300s Mali voyages 1418–1460 Voyages of Henry the Navigator 1440s First slaves from West Africa sent to Europe 1482 Portuguese at Gold Coast and Kongo 1486 Portuguese at Benin 1488 Bartolomeu Dias reaches Indian Ocean 1492 Columbus reaches Caribbean 1492–1500 Spanish conquer Hispaniola 1493 Columbus returns to Caribbean (second voyage) 1498 Columbus reaches mainland of South America (third voyage)	350–1000 Development and integration of Southeast Asian maritime markets 1405–1433 Voyages of Zheng He 1497–1498 Vasco da Gama reaches India
1500	1519–1522 Magellan expedition	1500 Cabral reaches Brazil 1519–1521 Cortés conquers Aztec Empire 1531–1533 Pizarro conquers Inka Empire 1536 Rebellion of Manco Inka in Peru	1505 Portuguese bombard Swahili Coast cities 1510 Portuguese take Goa 1511 Portuguese take Malacca 1515 Portuguese take Hormuz 1535 Portuguese take Diu 1538 Portuguese defeat Ottoman fleet 1539 Portuguese aid Ethiopia

larger than needed for exploration or promoting trade alone. While the Ming sought to inspire awe of their power and achievements, there were three occasions when military force was used to achieve objectives, including the defeat and capture of the king of Ceylon (now Sri Lanka). While curiosity about this prosperous region may have been a motive for these expeditions, the ports visited by the fleets were major commercial centers and some already had trade relationships with China.

The scale of the Ming expeditions to the Indian Ocean Basin reflects imperial China's resources and ambitions. The first consisted of sixty-two specially built "treasure ships," large Chinese junks each about 300 feet long by 150 feet wide (90 by 45 meters). There were also at least a hundred smaller vessels. Each treasure ship had nine masts, twelve sails, many decks, and a carrying capacity of 3,000 tons (six times the capacity of Columbus's entire fleet). One expedition carried over 27,000 crew and passengers, including infantry and cavalry troops. The ships were armed with small cannon, but in most Chinese sea battles arrows from highly accurate crossbows dominated the fighting.

Admiral **Zheng He (jung huh)** (1371–1435) commanded seven key expeditions, but additional fleets were organized and dispatched as well. A Chinese Muslim with ancestral connections to the Persian Gulf, Zheng was a fitting emissary to the increasingly Muslim-dominated Indian Ocean Basin. The expeditions carried other Arabic-speaking Chinese as interpreters like Ma Huan (see Diversity & Dominance: Understanding Cross-Cultural Encounters). He recorded local customs and beliefs in a journal, observing new flora and fauna and noting exotic

Zheng He An imperial eunuch and Muslim, entrusted by the Ming emperor Yongle with a series of state voyages that took his gigantic ships through the Indian Ocean, from Southeast Asia to Africa.



▲ **Chinese Junk** This modern drawing shows how much larger one of Zheng He's ships was in relationship to one of Vasco da Gama's vessels. Watertight interior bulkheads increased the seaworthiness of these junks. Sails made of pleated bamboo matting hung from the junk's masts, and a stern rudder provided steering. European ships of exploration, though smaller, were faster and more maneuverable.
Gregory A. Harlin/National Geographic Stock

animals such as the black panther of Malaya and the tapir of Sumatra. In India he described the division of the coastal population into five classes, which correspond to the four Hindu varna and a separate Muslim class. He also recorded that traders in the rich Indian trading port of Calicut **(KAL-ih-kut)** could perform error-free calculations by counting on their fingers and toes rather than using the Chinese abacus. After his return, Ma Huan went on tour in China, telling of these exotic places and "how far the majestic virtue of [China's] imperial dynasty extended."[1]

The Chinese "treasure ships" carried rich silks and other valuable goods intended as gifts for distant rulers. In return some of those rulers returned with the fleet to visit the Chinese court while others sent gifts to the Ming emperor. Although the main purpose of these exchanges was diplomatic, they also stimulated trade between China and its southern neighbors. Interest in new contacts was not limited to the Chinese.

At least three trading cities on the Swahili **(swah-HEE-lee)** Coast of East Africa sent delegations to China between 1415 and 1416. The delegates from one of them, Malindi, presented the emperor of China with a giraffe, creating quite a stir among normally reserved imperial officials. These African delegations may have encouraged more contacts because the next three of Zheng's voyages reached the African coast. Unfortunately, no documents record how Africans and Chinese reacted to each other during these historic meetings between 1417 and 1433, but it appears that China's lavish gifts stimulated the Swahili market for silk and porcelain.

Had the Ming court wished to promote trade for the profit of its merchants, Chinese fleets might have come to play a dominant role in Indian Ocean trade. But some high Chinese officials opposed increased contact with peoples whom they regarded as barbarians incapable of making contributions to China. Such opposition caused a suspension in the voyages from 1424 to 1431. The final Chinese expedition sailed between 1432 and 1433.

[1]Ma Huan, *Ying-yai Sheng-lan*: *"The Overall Survey of the Ocean's Shores,"* ed. Feng Ch'eng-Chün, trans. J. V. G. Mills (Cambridge, UK: Cambridge University Press, 1970), 180.

While later Ming emperors would focus their attention on internal matters, long-established Chinese merchant communities continued as major participants in Indian Ocean trade, contributing to the rapid growth of prosperous commercial *entrepôts* **(ON-truh-pohs)** (places where goods are stored or deposited and from which they are distributed) throughout the region. As the sultan of one of the most prosperous trade centers, Melaka (in modern Malaysia), described the era in 1468, "We have learned that to master the blue oceans people must engage in commerce and trade. All the lands within the seas are united in one body. Life has never been so affluent in preceding generations as it is today."[2]

16-1b The Pacific Ocean

Around 3000 BCE seafaring peoples from Southeast Asia reached the island of New Guinea. Sustained contact between these Austronesian-speaking migrants and the island's original population accelerated agricultural development and led to a population expansion that propelled migration to and settlement of nearby islands. The descendants of these peoples, called Lapita by archaeologists, eventually forged a new cultural identity as they colonized the island chains of Melanesia **(mel-uh-NEE-zhuh)**. Lapita settlers finally arrived as settlers in Tonga, Fiji, and Samoa between 1000 and 800 BCE.

By 500 BCE a linguistically and culturally distinct Polynesian culture began to emerge from this Lapita origin. Over the following centuries Polynesian peoples would prove to be among the world's most adventurous long-distance voyagers. While the dates for Polynesian discovery and colonization of the remote islands of the Pacific are still debated, their mastery of long-distance maritime exploration in an era when European sailors still feared to stray far from shore is undeniable. Flourishing Polynesian populations pushed east from Tonga, Samoa, and Fiji to colonize the Marquesas **(mar-KAY-suhs)** and the Cook and Society archipelagos sometime before 800 CE.

Polynesians soon launched a second wave of discovery and settlement. Samoa and Tonga provided most of the voyagers and settlers but some voyages sailed from the Marquesas as well. Eventually, these voyages led to the peopling of the most remote areas of the Pacific. Polynesians established settlements on the Hawaiian Islands, roughly 2,300 miles (3,701 kilometers) from the Marquesas and 2,566 miles (4,114 kilometers) from Samoa, around 800 CE. Risky long-distance voyages were soon organized to the southeast and southwest from the Polynesian heartland.

While Polynesian society and political life was generally organized around villages controlled by hereditary chiefs, the Tongan polity established control of the entire archipelago by around 1000 CE and, as a result, had the resources to project its power over long distances. Despite these Tongan advantages, sailing and navigational skills were broadly distributed across this cultural area and Polynesian seafarers from Tahiti and the Marquesas often mixed fishing and regional trading voyages with longer distance exploratory voyages and colonizing ventures.

Recent radiocarbon measurements have forced us to revise the timeline for the discovery and settlement of the island groups furthest from the Polynesian homelands of Tonga and Samoa after 1000 CE. Polynesian colonists, most likely setting off from the Marquesas, settled Easter Island, 2,275 miles (3,662 kilometers) away around 1200 CE. Scientists estimate that around this same time Polynesian settlers also arrived in New Zealand having sailed from the Cook and Society Islands 2,009 miles (3,233 kilometers) away.[3] More impressive still, Polynesian voyagers also made periodic contact with the mainland of South America after 1000 CE, passing on the domesticated Asian chicken and returning home with the sweet potato, an American domesticate that soon became a staple throughout the Pacific region. Contacts were maintained among these distant colonies and the Polynesian homeland, with the possible exceptions of Easter Island and New Zealand, until around 1400 CE when these links were ruptured, an event that accelerated the development of distinct regional cultures and dialects.

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[2]Quotation in Craig A. Lockard, "'The Sea Common to All': Maritime Frontiers, Port Cities, and Chinese Traders in the Southeast Asian Age of Commerce, ca. 1400–1750," *Journal of World History* 21, no. 2 (2010): 228.

[3] The estimates for the Polynesian settlement of the Pacific islands used here follow closely the the radiocarbon-based research reported in Terry L. Hunt and Carl P. Lipo, "Late Colonization of Easter Island," *Science*, 311:5767 (March 17, 2006), 1603–1606.

MAP 16.1 **Exploration and Settlement in the Indian and Pacific Oceans Before 1500** Over many centuries, mariners originating in Southeast Asia gradually colonized the islands of the Pacific and Indian Oceans. The Chinese voyages led by Zheng He in the fifteenth century were lavish official expeditions.

How did the organization and objectives of Zheng He's voyages differ from those of the Polynesians?

Both DNA evidence and linguistic evidence make clear that the Polynesian settlement of the islands of the eastern Pacific was largely the result of purposeful voyages and not the result of accidental drifting, although storms could have forced some outrigger canoes hundreds of miles off course as a part of this larger experience of adventure and discovery. Following voyages of reconnaissance, Polynesian mariners carried colonizing expeditions in fleets of large double-hulled canoes that relied on scores of paddlers as well as sails. Their largest canoes reached 120 feet (37 meters) in length and carried crews of up to fifty. A wide platform connected the two hulls of these crafts and permitted the transportation of animals and plants crucial to the success of distant and isolated settlements. Long-range expeditions included both men and women and sometimes children. DNA evidence from New Zealand, for example, indicates that the original settlers of New Zealand included one hundred women. The Voyagers carried the staples of Polynesian diet with them: pigs, dogs, and chickens as well as domesticated plants such as taro, bananas, yams, and breadfruit. They also unintentionally carried rats that thrived in the virgin territories of the Pacific. The success of these voyages depended upon reliably navigating across thousands of miles of ocean using careful observation of the currents, stars, and flocks of birds as the crews searched for evidence of land (see Map 16.1). Without a doubt many lives were lost along the way.

While all Polynesian societies descended from the same originating culture and all began with the same tools and the same farming and fishing technologies, significant differences in the geography and climate of the islands they came to inhabit and the isolation of the most distant, like Easter Island and Hawaii, led inexorably to the development of unique societies. Most Polynesian communities depended on farming and fishing, but the intensity of these practices depended on local conditions. In Hawaii, for example, low-lying native forests were converted to farmland using controlled burns, and fishponds were built to increase fish yields. As a result, the Polynesian communities of this archipelago thrived into the era of European expansion.

The most hierarchical social structures and political systems among Polynesians developed in the Hawaiian and Tongan archipelagos, where powerful hereditary chiefs controlled the lives of commoners and managed resources. In these locations, as well as in New Zealand, competition among chiefs led to violence and chronic warfare. On Easter Island, the most isolated of the Polynesian colonies, the combination of population growth, deforestation, and soil erosion intensified this competition, leading ultimately to a brutal cycle of warfare that drastically reduced the population.

16-1c The Atlantic Ocean

The Vikings were the greatest mariners of the Atlantic in the early Middle Ages. These northern European raiders used their small, open ships to attack Europe's coastal settlements for several centuries. Like the Polynesians, the Vikings used their knowledge of the heavens and the seas rather than maps and other navigational devices to find their way over long distances.

The Vikings first settled Iceland in 770 and established a colony on Greenland in 982. By accident one group of Viking voyagers sighted North America in 986. Fifteen years later Leif Ericsson established a short-lived Viking settlement on the island of Newfoundland, which he called Vinland. When the earth's climate cooled after 1200 (see Issues in World History: Climate and Population to 1500), the northern settlements in Greenland went into decline and the Vikings abandoned Vinland.

Some southern Europeans applied maritime skills acquired in the Mediterranean and along the North Atlantic coast to explore to the south. Genoese and Portuguese expeditions pushed into the Atlantic in the fourteenth century, eventually exploring and settling the islands of Madeira **(muh-DEER-uh)**, the Azores **(A-zorz)**, and the Canaries.

There is some evidence of African voyages of exploration in this period. The celebrated Syrian geographer al-Umari (1301–1349) relates that when Mansa Kankan Musa **(MAHN-suh KAHN-kahn MOO-suh)**, the ruler of the West African empire of Mali, passed through Egypt on his lavish pilgrimage to Mecca in 1324, he told of voyages into the Atlantic undertaken by his predecessor, Mansa Muhammad. According to this source, Muhammad had sent out 400 vessels with men and supplies, telling them, "Do not return until you have reached the other side of the ocean or if you have exhausted your food or water." After a long time one canoe returned, reporting that the others were lost in a "violent current in the middle of the sea." Muhammad himself then set out at the head of a second, even larger, expedition, from which no one returned.

In the Americas, early Amerindian voyagers from the Caribbean coast of South America colonized the West Indies. By the year 1000 Amerindians known as the **Arawak** **(AR-uh-wahk)** (also called Taino) had pushed North following the small islands of the Lesser Antilles (Barbados, Martinique, and Guadeloupe) to the Greater Antilles (Cuba, Hispaniola, Jamaica, and Puerto Rico) as well as to the Bahamas (see Map 16.2). The Carib followed the same route in later centuries, and by the late fifteenth century they had overrun most Arawak settlements in the Lesser Antilles and were raiding parts of the Greater Antilles. Both Arawak and Carib peoples also made contact with the North American mainland.

Arawak Amerindian peoples who inhabited the Greater Antilles of the Caribbean at the time of Columbus.

The transfer of maize cultivation to South America after its domestication in Mesoamerica is suggestive of an early chain of contacts among Amerindian peoples, including the use of small boats along the Pacific coast. In the centuries after 100 CE there were significant ongoing maritime contacts between Pacific coast populations in South America and Mesoamerica. Mariners carried pottery, copper, gold and silver jewelry, and textiles from the coast of Ecuador north in two-masted, balsa wood rafts that measured up to 36 feet (11 meters) in length. Rafts of this size could carry more than 20 metric tons of cargo and ten or more crew members. Travel north was facilitated by the favorable winds and currents of the Pacific, but these craft had the capacity to make the return trip carrying cargos of sacred spondylus shells, although sailing southward against the wind added many months to the voyage. One important result of these contacts was the introduction of metallurgy to Mesoamerica after 500.

Section Review

- Polynesians explored and settled the eastern Pacific from the Marquesas to Hawaii, New Zealand, and Easter Island.
- The Indian Ocean became a center of commerce and cultural exchange. Between 1405 and 1433 Chinese Admiral Zheng He's seven expeditions established contacts with South Asian and African peoples.
- Vikings, Amerindians, and Africans also pursued long-distance explorations and settlements.

MAP 16.2 **Middle America to 1533** Maritime contacts led to the settlement of the islands of the Greater and Lesser Antilles by South American peoples and to the dissemination of important technologies like metallurgy and maize agriculture along the Pacific coast. The arrival of Europeans in 1492 led to conquest and colonization.

How did the geography of the Western Hemisphere give direction to the spread of technologies and contacts among cultures?

16-2 European Expansion, 1400–1550

In this era of long-distance exploration, did Europeans have any special advantages over other cultural regions?

While the pace and intensity of maritime contacts increased in many parts of the world before 1450, the epic sea voyages sponsored by the Iberian kingdoms of Portugal and Spain are of special interest because they began a maritime revolution that profoundly altered the course of world history. The Portuguese and Spanish expeditions ended the isolation of the Americas and increased the volume of global interaction.

Iberian overseas expansion was the product of two related phenomena. First, Iberian rulers had strong economic, religious, and political motives to expand their influence. And second, improvements in maritime and military technologies gave Iberians the means to master treacherous and unfamiliar ocean environments, seize control of existing maritime trade routes, and conquer new lands.

16-2a Motives for Exploration

While the ambitions and adventurous personalities of the rulers of Portugal and Spain led them to sponsor voyages of exploration in the fifteenth century, these voyages built upon four trends evident in Latin Europe since about the year 1000: (1) the revival of urban life and trade, (2) the unique alliance between merchants and rulers in Europe, (3) a struggle with Islamic powers for dominance of the Mediterranean that mixed religious motives with the desire for trade, and (4) growing intellectual curiosity about the outside world.

By 1450 the city-states of northern Italy had well-established trade links to northern Europe, the Indian Ocean, and the Black Sea, and their merchant princes had also sponsored an intellectual and artistic Renaissance. The Italian trading states of Venice and Genoa also maintained profitable commercial ties in the Mediterranean that depended on alliances with Muslims and gave their merchants privileged access to lucrative trade from the East. Even after the expansion of the Ottoman Empire disrupted their trade to the East, these cities did not take the lead in exploring the Atlantic. However, many individual Italians played leading roles in the Atlantic explorations.

In contrast, the history and geography of the Iberian kingdoms led them in a different direction. Muslim invaders from North Africa had conquered most of Iberia in the eighth century. Centuries of warfare between Christians and Muslims followed, and by 1250 the Iberian kingdoms of Portugal, Castile, and Aragon had reconquered all of Iberia except the southern Muslim kingdom of Granada (see Chapter 14). The dynastic marriage of Isabel of Castile and Ferdinand of Aragon in 1469 facilitated the conquest of Granada in 1492 and promoted the development of a more centralized and powerful Spanish government, sixteenth-century Europe's most powerful state.

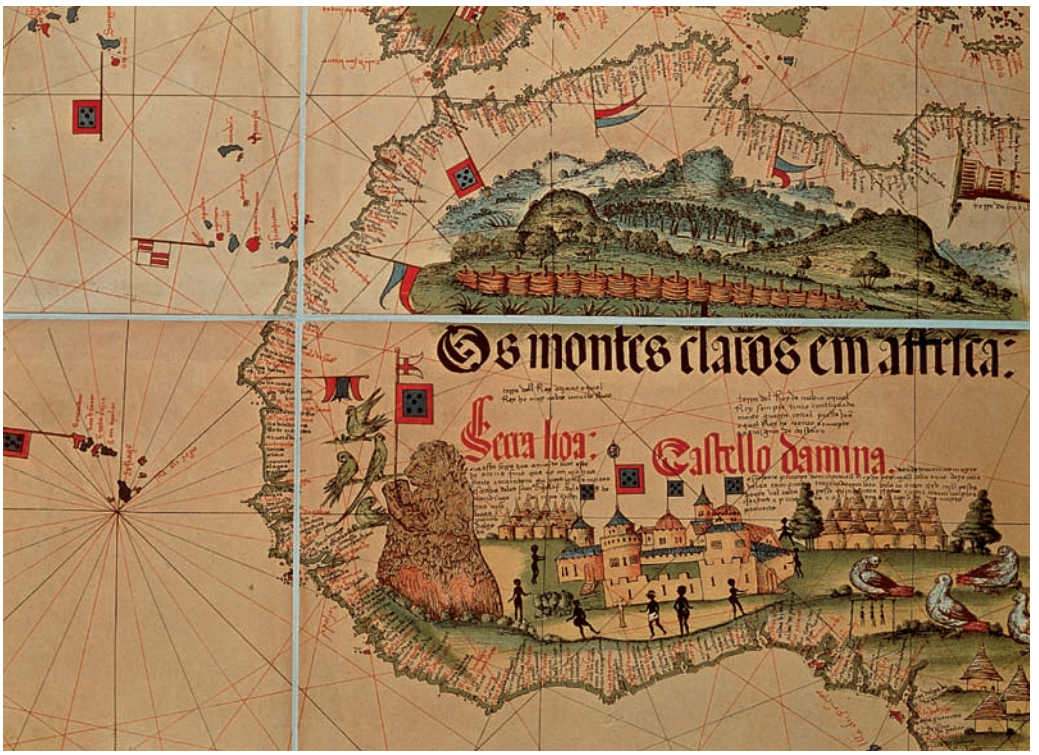
The long wars with Muslim rivals created a legacy of Christian militancy that influenced the overseas ventures of both Portugal and Spain. But the Iberian rulers and their adventurous subjects also sought material returns. With only a modest share of the Mediterranean trade, they were much more willing than the Italian trading states to seek new routes to the rich trade of Africa and Asia via the Atlantic. Both kingdoms participated in the shipbuilding and the gunpowder revolutions that were under way in Atlantic Europe, and both were especially open to new geographical knowledge.

16-2b Portuguese Voyages

Portugal's decision to invest significant resources in new exploration rested on its well-established Atlantic fishing industry and a history of anti-Muslim warfare. When the Muslim government of Morocco in northwestern Africa showed weakness in the fifteenth century, the Portuguese attacked, conquering the city of Ceuta **(say-OO-tuh)** in 1415. The capture of this rich North African city gave the Portuguese better intelligence of the caravans bringing gold and slaves to Ceuta from African states south of the Sahara. Militarily unable to push inland and gain direct access to the gold trade, the Portuguese sought contact with the gold producers by sailing down the African coast.

Prince Henry (1394–1460), third son of the king of Portugal, had led the attack on Ceuta. Because he devoted the rest of his life to promoting exploration, he is known as **Henry the Navigator**. His official biographer highlighted Henry's religious motives for exploration—converting Africans to Christianity, making contact with Christian rulers in Africa, and launching joint crusades with them against the Ottomans. But Prince Henry also wished to discover new places and stimulate profitable new commercial links. Early explorations focused on Africa, but gaining access to India's riches soon became the central objective of Portuguese explorers. While called "the Navigator," Henry himself never ventured far from home. Instead, he sponsored the study of navigation at Sagres **(SAH-gresh)**, building on the pioneering efforts of Italian merchants and fourteenth-century Jewish cartographers. His agents collected geographical information from sailors and travelers and fostered new expeditions to explore the Atlantic. Henry's efforts established permanent contact with the Atlantic islands of Madeira in 1418 and the Azores in 1439.

Henry the Navigator
Portuguese prince who promoted the study of navigation and directed voyages of exploration down the western coast of Africa in the fifteenth century.



▲ **Portuguese Map of Western Africa, 1502** This map shows in great detail a section of African coastline that Portuguese explorers charted and named in the fifteenth century. The cartographer illustrated the African interior, which was almost completely unknown to Europeans, with drawings of birds and views of coastal sights: Sierra Leone (Serra lioa), named for a mountain shaped like a lion, and the Portuguese Castle of the Mine (Castello damina) on the Gold Coast. akg-images

Henry's staff also improved navigational instruments that had been first developed elsewhere. These instruments included the magnetic compass, first developed in China, and the astrolabe, an instrument of Arab or Greek invention that enabled mariners to determine their location at sea by measuring the position of the sun or the stars in the night sky. Even with such instruments, however, voyages still depended on the skill and experience of navigators.

Portuguese mariners also developed vessels appropriate for voyages of long-distance exploration. Neither the galleys in use in the Mediterranean, powered by both sails and large numbers of oarsmen, nor the three-masted ships of northern Europe with their square sails proved adequate for the Atlantic. The large crews of the galleys could not carry enough supplies for long voyages and the square-rigged northern vessels had trouble sailing at an angle to the wind. Instead, the voyages of exploration made use of a new vessel, the **caravel** **(KAR-uh-vel)**, that was much smaller than either the largest European ships or the Chinese junks Zheng used to explore the Indian Ocean. Their size permitted them to enter shallow coastal waters and explore upriver, but they were strong enough to weather ocean storms. They could be equipped with triangular lateen sails that could take the wind on either side for enhanced maneuverability or fitted with square Atlantic sails for greater speed in a following wind. The addition of small cannon made them good fighting ships as well. The caravels' economy, speed, agility, and power justified a contemporary's claim that they were "the best ships that sailed the seas."[4]

Pioneering captains had to overcome the common fear that South Atlantic waters were boiling hot or contained ocean currents that would prevent any ship entering them from ever returning home. It took Prince Henry fourteen years—from 1420 to 1434—to coax an expedition

caravel A small, highly maneuverable three-masted ship used by the Portuguese and Spanish in the exploration of the Atlantic.

[4]Alvise da Cadamosto in *The Voyages of Cadamosto and Other Documents*, ed. and trans. G. R. Crone (London, UK: Hakluyt Society, 1937), 2.

to venture beyond southern Morocco (see Map 16.3). It would ultimately take the Portuguese four decades to cover the 1,500 miles (2,400 kilometers) from Lisbon to Sierra Leone **(see-ER-uh lee-OWN)**; it then took only three additional decades to explore the remaining 4,000 miles (6,400 kilometers) to the southern tip of the African continent. With experience, navigators learned how to return home speedily by sailing northwest into the Atlantic to the latitude of the Azores, where they could pick up prevailing westerly winds. The knowledge that ocean winds tend to form large circular patterns helped later explorers discover many other ocean routes.

During the 1440s Portuguese raids on the northwest coast of Africa and the Canary Islands began to return with slaves, finding a profitable market in an Iberia still recovering from the population losses of the Black Plague. The total number of Africans captured or purchased on voyages exceeded 80,000 by the end of the century and rose steadily thereafter. However, the gold trade quickly became more important once the Portuguese contacted the trading networks that flourished in West Africa and reached across the Sahara. By 1457 enough African gold was coming back to Portugal for the kingdom to issue a new gold coin called the *cruzado* (crusader), another reminder of how deeply the Portuguese entwined religious and secular motives.

While the Portuguese crown continued to sponsor voyages, the growing participation of private commercial interests accelerated the pace of exploration. In 1469 a prominent Lisbon merchant named Fernão Gomes purchased from the Crown the privilege of exploring 350 miles (550 kilometers) of African coast in return for a trade monopoly. He discovered the uninhabited island of São Tomé **(sow toh-MAY)** located on the equator and converted it to a major producer of sugar dependent on the labor of slaves imported from the African mainland. In the next century the island would serve as a model for the sugar plantations of Brazil and the Caribbean. Gomes also explored the **Gold Coast**, which became the headquarters of Portugal's West African trade.

The desire to find a passage around Africa to the rich spice trade of the Indian Ocean spurred the final thrust down the African coast. In 1488 **Bartolomeu Dias** became the first Portuguese explorer to round the southern tip of Africa and enter the Indian Ocean. This achievement was followed up by **Vasco da Gama** who sailed around Africa and reached India in 1497–1498 (see Environment & Technology: Vasco da Gama's Fleet). Then, in 1500, ships on the way to India under the command of Pedro Alvares Cabral **(kah-BRAHL)** sailed too far west and reached the South American mainland. This discovery established Portugal's claim to Brazil, which would become one of the Western Hemisphere's richest colonies. The gamble that Prince Henry had begun eight decades earlier was about to pay off handsomely.

16-2c Spanish Voyages

In contrast to the persistence and planning behind Portugal's century-long exploration of the South Atlantic, haste and blind luck lay behind Spain's early maritime expansion. Throughout most of the fifteenth century, the Spanish kingdoms were preoccupied with internal affairs: completion of the reconquest of southern Iberia from the Muslims; consolidation of the territories of Isabel and Ferdinand; and the conversion or expulsion of religious minorities. As a result, the Portuguese had already found a new route to the Indian Ocean by the time the Spanish monarchs were ready to turn to overseas exploration.

The leader of the Spanish overseas mission was **Christopher Columbus** (1451–1506), a Genoese mariner who gained experience with Portuguese voyages to the African coast. His four voyages between 1492 and 1504 established the existence of a vast new world across the Atlantic, a land mass with tens of millions of inhabitants and an enormous diversity of languages and cultures that few in "old world" Eurasia and Africa had ever anticipated. But Columbus refused to accept that he had found unknown new continents and peoples, insisting instead that he had found a shorter route to the Indian Ocean.

As a young man Columbus gained considerable experience in the South Atlantic while sailing with Portuguese explorations of the African coast, but he had become convinced there was a shorter way to reach the riches of the East than the route around Africa. By his reckoning (based on a serious misreading of a ninth-century Arab authority), the Canaries were a mere 2,400 nautical miles (4,450 kilometers) from Japan. The actual distance was five times as far.

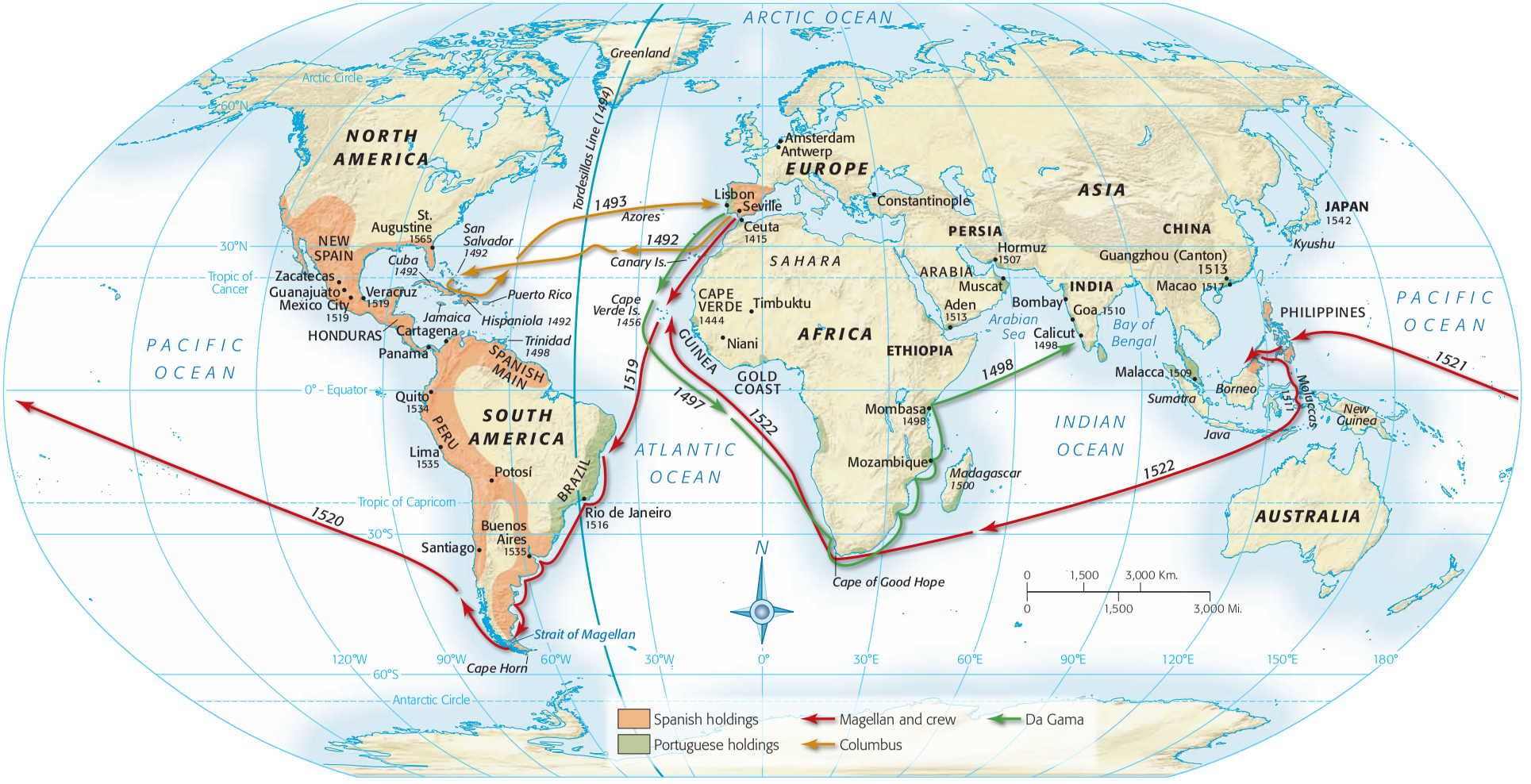
Columbus proposed to reach Asia by sailing west, but Portuguese authorities twice rejected his plan. Columbus first proposed his expedition to Castile's able ruler Queen Isabel in 1486, but was rejected. In 1492 his persistence was finally rewarded when the queen and her husband, King Ferdinand of Aragon, agreed to fund a modest expedition.

Gold Coast Region of the Atlantic coast of West Africa occupied by modern Ghana; named for its gold exports to Europe from the 1470s onward.

Bartolomeu Dias Portuguese explorer who in 1488 led the first expedition to sail around the southern tip of Africa from the Atlantic and sight the Indian Ocean.

Vasco da Gama Portuguese explorer. In 1497–1498 he led the first naval expedition from Europe to sail to India, opening an important commercial sea route.

Christopher Columbus Genoese mariner who in the service of Spain led four expeditions across the Atlantic, reestablishing contact between the peoples of the Americas and the Old World and opening the way to Spanish conquest and colonization.



MAP 16.3 **European Exploration, 1420–1542** Portuguese and Spanish explorers showed the possibility and practicality of intercontinental maritime trade. Before 1540 European trade with Africa and Asia was much more important than that with the Americas, but after the Spanish conquest of the Aztec and Inka Empires, transatlantic trade increased dramatically. Notice the Tordesillas line, which in theory separated the Spanish and Portuguese spheres of activity.

What are the most important geographic differences between the Portuguese and Spanish empires as represented in this map?

Environment & Technology
Vasco da Gama's Fleet

The four small ships that sailed for India from Lisbon in June 1497 may seem a puny fleet compared to the sixty-two Chinese vessels that Zheng He had led into the Indian Ocean ninety-five years earlier. But given the fact that China had a hundred times as many people as Portugal, Vasco da Gama's fleet represented at least as great a proportional commitment of resources. In any event, the Portuguese expedition had a far greater impact on the course of history. Having achieved its key aims, the Chinese throne sent out no more expeditions after 1433. Although da Gama's ships seemed more odd than awesome to Indian Ocean observers, that modest fleet began a revolution in global relations.

Portugal spared no expense in ensuring that the fleet would make it to India and back. Craftsmen built extra strength into the hulls to withstand the powerful storms that Dias had encountered in 1488 at the tip of Africa. Small enough to be able to navigate shallow harbors and rivers the expedition might encounter, the ships were crammed with casks and barrels of water, wine, oil, flour, meat, and vegetables far in excess of what was required even on a voyage that would take the better part of a year. Arms and ammunition were also in abundance.

Three of da Gama's ships were rigged with square sails on two masts for speed and a lateen sail on the third mast. The fourth vessel was a caravel with lateen sails. Each ship carried three sets of spare sails and plenty of extra rigging so as to be able to repair any damages due to storms. The Crusaders' red crosses on the sails signaled one of the expedition's motives.

The captains and crew—Portugal's most talented and experienced—received extra pay and other rewards for their service. Yet there was no expectation that the unprecedented sums spent on this expedition would bring any immediate return. According to a contemporary chronicle, the only prompt return the Portuguese monarch received was "the knowledge that some part of Ethiopia and the beginning of Lower India had been discovered." However, the scale and care of the preparations suggest that the Portuguese expected the expedition to open up profitable trade to the Indian Ocean. And so it did.

▲ **Vasco da Gama's Flagship** This vessel carried the Portuguese captain on his second expedition to India in 1505. The Pierpont Morgan Library / Art Resource, NY

Questions for Analysis

1. Why did the Portuguese voyages have a greater long-term impact than the earlier voyages of the Chinese?
2. What technological innovations aided the success of Vasco da Gama?
3. What was the chief objective of the Portuguese fleet?

Columbus recorded in his log that he and his crew of ninety men "departed Friday the third day of August of the year 1492" toward "the regions of India." Their mission, the royal contract stated, was "to discover and acquire certain islands and mainland in the Ocean Sea." He carried letters of introduction from the Spanish sovereigns to Eastern rulers, including one to the "Grand Khan" (meaning the Chinese emperor), and brought along an Arabic interpreter to facilitate communication with the peoples of eastern Asia. The expedition traveled in three small ships, the *Santa María*, the *Niña*, and the *Pinta*. The *Niña* and the *Pinta* were caravels.

Unfavorable headwinds had impeded other attempts to explore the Atlantic west of the Azores, but Columbus chose a southern route because he had learned in his service with the Portuguese of west-blowing winds in the latitudes of the Canaries. In October 1492 the expedition reached the islands of the Caribbean. Columbus insisted on calling the inhabitants "Indians" because he believed that the islands were part of the East Indies. His second voyage to the Caribbean in 1493 did nothing to change his mind. Even when, two months after Vasco da Gama reached India in 1498, Columbus first sighted the mainland of South America on his third voyage, he stubbornly insisted it was part of Asia. But by then other Europeans were convinced that he had discovered islands and continents previously unknown to the Old World. Amerigo Vespucci's explorations, first on behalf of Spain and then for Portugal, led mapmakers to name the new continents "America" after him, rather than "Columbia" after Columbus.

Section Review

- Portugal and Spain initiated oversees explorations to expand Christianity and gain new markets.
- Portugal, aided by Prince Henry the Navigator, created a trading empire in Africa and the Indian Ocean.
- Columbus first revealed the Americas to Europe, and other Spanish explorers reached Asia by crossing the Pacific.

To prevent disputes arising from their efforts to exploit their new discoveries and spread Christianity, Spain and Portugal agreed to split the world between them. The Treaty of Tordesillas **(tor-duh-SEE-yuhs)**, negotiated by the pope in 1494, drew an imaginary line down the middle of the North Atlantic Ocean. The treaty allocated lands east of the line in Africa and southern Asia to Portugal; lands to the west in the Americas were reserved for Spain. Cabral's discovery of Brazil, however, gave Portugal a valid claim to the part of South America located east of the line.

Where would Spain's and Portugal's spheres of influence divide in the East? Given Europeans' ignorance of the earth's true size in 1494, it was not clear whether the Moluccas **(muh-LOO-kuhz)**, whose valuable spices had been a goal of the earlier Iberian voyages, were on Portugal's or Spain's side of the Tordesillas line. The size of the Pacific Ocean would determine the boundary. In the end, the Moluccas turned out to lie well within Portugal's sphere, as Spain formally acknowledged in 1529.

In 1519 **Ferdinand Magellan** (ca. 1480–1521) began his expedition to complete Columbus's interrupted westward voyage by sailing around the Americas and across the Pacific. Despite his death during this voyage on behalf of the king of Spain, Magellan was considered the first person to encircle the globe because a decade earlier he had sailed from Europe to the East Indies as part of an expedition sponsored by his native Portugal. His two voyages took him across the Tordesillas line, through the separate spheres claimed by Portugal and Spain, and established the basis for Spanish colonization of the Philippines after 1564.

Although Columbus failed to find a new route to the East, the consequences of his voyages for European expansion were momentous. Those who followed in his wake laid the basis for Spain's large colonial empire in the Americas and for the empires of other European nations. In turn, these empires promoted the growth of a major new trading network whose importance rivaled and eventually surpassed the Indian Ocean network. Both the eastward and the westward voyages of exploration marked a tremendous expansion of Europe's role in world history.

16-3 Encounters with Europe, 1450–1550

What explains the different nature of Europe's interactions with Africa, India, and the Americas?

European actions alone did not determine the global consequences of these new contacts. The ways in which Africans, Asians, and Amerindians perceived these visitors and interacted with them influenced developments as well. Everywhere indigenous peoples evaluated the Europeans as potential allies or enemies, and everywhere Europeans attempted to maximize their economic advantage by inserting themselves into existing commercial and geopolitical arrangements. In general, Europeans made slow progress in establishing colonies and asserting political influence in Africa and Asia, even while profiting from new commercial ties. In the Americas, however, Spain, Portugal, and later other European powers moved rapidly to create colonial empires. In this case the long isolation of the Amerindians from the rest of the world made them more vulnerable to the diseases that these outsiders introduced, limiting their potential for resistance and facilitating European settlement.

16-3a Western Africa

Many along the West African coast were eager for trade with the Portuguese, since it offered new markets for exports and access to imports cheaper than those transported overland from the Mediterranean. This was evident along the Gold Coast of West Africa, first visited by the Portuguese in 1471. Miners in the hinterland had long sold their gold to traders, who took it to trading cities along the southern edge of the Sahara, where it was sold to traders who had crossed the desert from North Africa. Recognizing that they might get more favorable terms from the new visitors from the sea, coastal Africans were ready to negotiate with the royal representative of Portugal who arrived in 1482 to seek permission to erect a trading fort.

Ferdinand Magellan
Portuguese-born navigator who led the Spanish expedition of 1519–1522 that was the first to sail around the world.