DISCOVERY & EXPLORATION

Exploration in the World of the Middle Ages 500–1500

PAMELA WHITE

JOHN S. BOWMAN AND MAURICE ISSERMAN, GENERAL EDITORS

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This book is printed on acid-free paper.

For Kitskie and Schwartz,
who helped.

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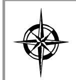
Preface



The term *Middle Ages* is sometimes hard to pin down, either as a time frame or as a series of historical events. For one thing, the idea of the Middle Ages is a strictly European one—it looks back at the past according to the Europeans' sense of their own history. In this context, it is regarded as the period between the ancient world and the modern world, a period generally thought of as beginning in about A.D. 500 with the end of the Roman Empire. (The last Roman emperor was removed in A.D. 476.) Most of the world's peoples do not describe their own past in this way; they do not divide up their history into ancient, middle, and modern eras.

The end date assigned to the European Middle Ages often depends on point of view. Students of European painting, for example, sometimes regard the end of the Middle Ages as the late 1300s. Historians of European architecture or science, on the other hand, would extend the Middle Ages at least another century. Historians of European culture in general regard the Middle Ages as ending with the Renaissance, the rebirth of the spirit of inquiry and creativity that had marked the best of the ancient Greek and Roman achievements. This Renaissance commenced in Italy in the 1300s and spread throughout Europe during the 1400s and 1500s.

Aside from the issue of its imprecise time frame, popular notions about the Middle Ages suffer from genuine confusion about the historical events that occurred during the period, called the medieval period. Even within the restricted European arena, a welter of tribes, invasions, wars, migrations, languages, short-lived kingdoms, and shifting political boundaries seemed to abound. For many centuries, in fact, the Middle Ages were actually referred to dismissively as the Dark Ages, suggesting that little of importance had happened during the time period. (This volume takes up and fully disposes of that notion.) This narrowly European focus is inadequate in another way, for these thousand years encompassed periods of sophisticated civilization and learning and outstanding achievement in many cultures around the world. China, Japan, India, the vast Islamic world, Ethiopia, Mali, Central and South America, even parts of North America—all were the sites of remarkable cultures during the European Middle Ages.

For many Westerners who have a passing familiarity with the European Middle Ages, the adjective *medieval* conjures up monks and knights, moated castles and Gothic cathedrals, King Arthur and high-minded romance—an exotic world, perhaps most associated in people's minds these days with the wildly

successful film version of *Lord of the Rings*. Whatever grains of truth this image of the Middle Ages contains, they are a small part of the real picture. Within the last 75 years or so, historians have demonstrated that the Middle Ages were not so long ago and far away and that the modern world has deeper roots in the medieval period than had previously been recognized.

Part of the reason for the better understanding is that scholars have broadened their research into science and technology, commerce, social and cultural history, women's history, comparative studies, anthropology, archaeology, and other areas that make history come alive. A great deal of information has become available in all these fields across a great range of cultures. Even nonspecialists can now appreciate how rich, exciting, and interesting the medieval period was and how relevant it is to the subject matter of this set of books—the discovery and exploration of the world.

This book is a testament to the importance of the Middle Ages to exploration. It is an account of travels, expeditions, discoveries, achievements, and cross-cultural contacts that will almost certainly be new to many readers. A few of the principal individuals and events are relatively well known from the standard curriculum: Marco Polo and his long stay in China; the Vikings' brief attempt to settle in the land they called Vinland, in Newfoundland, Canada; Christian pilgrims and the Crusaders in the Holy Land; and Portuguese expeditions to Africa and Asia sponsored by Henry the Navigator. But chapter after chapter of this volume sets forth events that will be little known to most readers. The time frame may be the European Middle Ages, but in many other societies that do not regard these years as *their* Middle Ages, people were confidently exploring and mastering the wider world beyond their own highly sophisticated civilizations.

Asians and Muslims are given a prominence in this book that they seldom receive in standard histories of discovery and exploration. Readers will meet many fascinating Chinese and Arab explorers, for example, including the two greatest travelers of the period, the admiral Zheng He and the scholar Ibn Battutah. As with all volumes in this set, *exploration* encompasses a far broader definition of the word than is usually applied. This book introduces a varied cast of individuals—monks and pilgrims, sailors and traders, scientists and scholars, famous princes and unsung commoners, tourists and migrants, historians and fabulists, adventurers, and even hoaxers—all contributing to the history of discovery and exploration. A glance at the chapter titles reveals how wide ranging this history is, in terms of peoples and cultures as well as lands and seas.

A number of surprises await the readers of this volume, including, to single out just a few, the other Europeans who traveled across Asia at roughly the same time as their better-known contemporary Marco Polo; the many Muslims who traveled so widely and wrote so knowledgeably, and yet who are all but unknown in the West; the far-flung activities and varied accomplishments of the Scandinavians, all too often dismissed as barbarous Vikings; and the contributions of obscure Indian navigators and merchants, the amazing Polynesian navigators, and trans-Saharan traders. One chapter here might even appear to call for an explanation for its inclusion in a history book. Chapter 8 is devoted to some of the more prominent imaginary, mythical, and legendary creatures, islands, and lands that inspired actual voyages, or at least tales of such voyages. Considering that almost all serious scholars today dismiss these as fantasies, it could be asked why they gain a place in a history that claims to be establishing the facts. Chapter 8 answers this fully, but, briefly, it is because in the Middle Ages

most people believed a great deal that today would be dismissed out of hand as imagination, myth, or superstition. Long before the Enlightenment and the broad acceptance of empirical thinking and scientific methodology, and in the face of so much that was uncertain and unknown, people believed in miracles, magic, and impossibilities. In fact, the thread of the fabled and the fantastic weaves throughout this volume, as it did throughout the Middle Ages.

Several patterns and themes that pervade these chapters should stimulate readers to consider just what is involved in exploration. One is the prominent role that trade played in spurring travels and discoveries. Equally significant is the role played by three major religions: Christianity, Buddhism, and Islam. Readers will also want to consider other motives that lie behind expeditions: scientific research, territorial acquisition, royal command, personal advancement, the attraction of an irresistible challenge, and sheer curiosity. The means, methods, and conditions of travel are other recurrent subjects: overland routes, maps, food and accommodation, language problems, and the time spans and costs of long-distance journeys. Geographic and climatic conditions often presented incredible challenges. Travel by sea was at least as arduous: Over and over again, routine voyages and the great voyages of discovery alike resulted in enormous loss of lives. On another level, the reader will learn a considerable amount about the science and technology that supported medieval travel by land and sea—the knowledge behind maps and charts, navigational instruments such as the compass and astrolabe, the materials and techniques mastered in building various types of ships.

In recent years, historians of medieval discovery and exploration have published a number of exciting findings and claims, many of them controversial. This volume discusses several of them, from the long-disputed Vinland Map, just possibly the earliest map to show North America, to the journal of Jacob d'Ancona, a record (forged or genuine?) of a journey to China that predated Marco Polo's. The dispute over the authorship of the 14th-century *Voyage and Travels of Sir John Mandeville,* still hotly debated after 650 years, is presented alongside the conflicting claims still made about the remote Christian kingdom of Prester John (Was it in Asia or Africa? Did it exist at all?).

One of the lessons of this book is that there is still much to be learned about the Middle Ages. To cite one area, cultural similarities between Asian and some Native American cultures in Central and South America have long led to speculation that the Chinese might have landed in the Americas before the Europeans did. In a recent book, *1421: The Year the Chinese Discovered the World* (2002), retired British submarine commander Gavin Menzies took up the story of the Chinese admiral Zheng He, whose achievements introduce this volume. Menzies proposed that on Zheng's sixth voyage (1421–22), two of his vice admirals actually circumnavigated the globe. Menzies contends that they rounded southern Africa, crossed the Atlantic, explored the Caribbean Sea, circled South America, and crossed the Pacific to return home to China via Australia. Menzies even claims that the Chinese established settlements along the west coast of North America all the way from Vancouver to New Mexico. No solid evidence exists to prove that the Chinese crossed the Pacific Ocean in the 15th century, and most serious scholars have dismissed Menzies's claim. It is perhaps natural, however, that the greatest of the medieval seafarers should have attracted stories suggesting that the globe was within his grasp.

This volume takes pride in including the activities of Zheng He and other exceptional medieval travelers who for too long have been unrecognized in the West except by specialists. Many of these individuals speak from the pages of this book in their own voices. Their itineraries and journals, letters, and published accounts of their travels survive in abundance. So do contemporary records of their preparations and efforts, their struggles and disappointments, and their achievements. Wherever possible, the text quotes relevant excerpts to bring these remarkable people to life.

The text is supplemented by numerous sidebar essays that deal with topics that add extra dimensions, to the main story. So, too, do the many maps and illustrations provide visual support for often unfamiliar subject matter. Although technical terms and specialized words are briefly defined where they first appear in the text, a glossary provides a convenient source for fuller definitions. The final Further Information section provides reading lists not only of nonfiction works about the many topics covered in the book but of novels that can provide more informal access to these exotic worlds. Also included in that section is a list of films (available in VHS or DVD formats), both fictional and documentary, that bring these topics to life and a brief selection of the thousands of Web sites that provide almost unlimited resources for investigating medieval exploration and related topics.

Finally, a word about the organization of chapters in this book. Because of the enormous chronological and geographical sweep of the material, the approach taken here is both chronological and highly selective. With the exception of Chapter 1, which discusses Zheng He, the other chapters are arranged chronologically. Chapter 2 summarizes world civilizations and their knowledge about the world, achievements to date, and opportunities presenting themselves at the beginning of the Middle Ages. The intermediate chapters are more narrowly focused. Chapter 3 follows early Christian, Muslim, and Buddhist pilgrims in Europe, the Middle East, and Asia. Chapter 4 moves northward to the Vikings and their wide travels, particularly their historic voyages across the North Atlantic. Chapter 5 accompanies the outstanding Muslim travelers who logged many thousands of miles in Africa, the Middle East, and Asia gathering experience and information, while Chapter 6 and 7 discuss their contemporaries, the European missionary friars and Marco Polo, who crossed the central Asian steppes, deserts, and mountains to China. Chapter 8 takes an enjoyable sidetrack into the myths and legends that flourished alongside (and, often, inside) the more factual accounts written by and about real travelers. In Chapter 9, the Portuguese mariners take to the eastern Atlantic and the west coast of Africa. Chapter 10 shows how the accumulated experience of medieval explorers prepared the way for the European Age of Discovery.

During the thousand years between 500 and 1500, it is clear the world's far-flung peoples began to come into contact in large numbers across long distances for the first time. In that sense, the Middle Ages may be said to have sown the seeds of the global community of today, and it is this among other themes that makes this volume so relevant as well as informative.

1

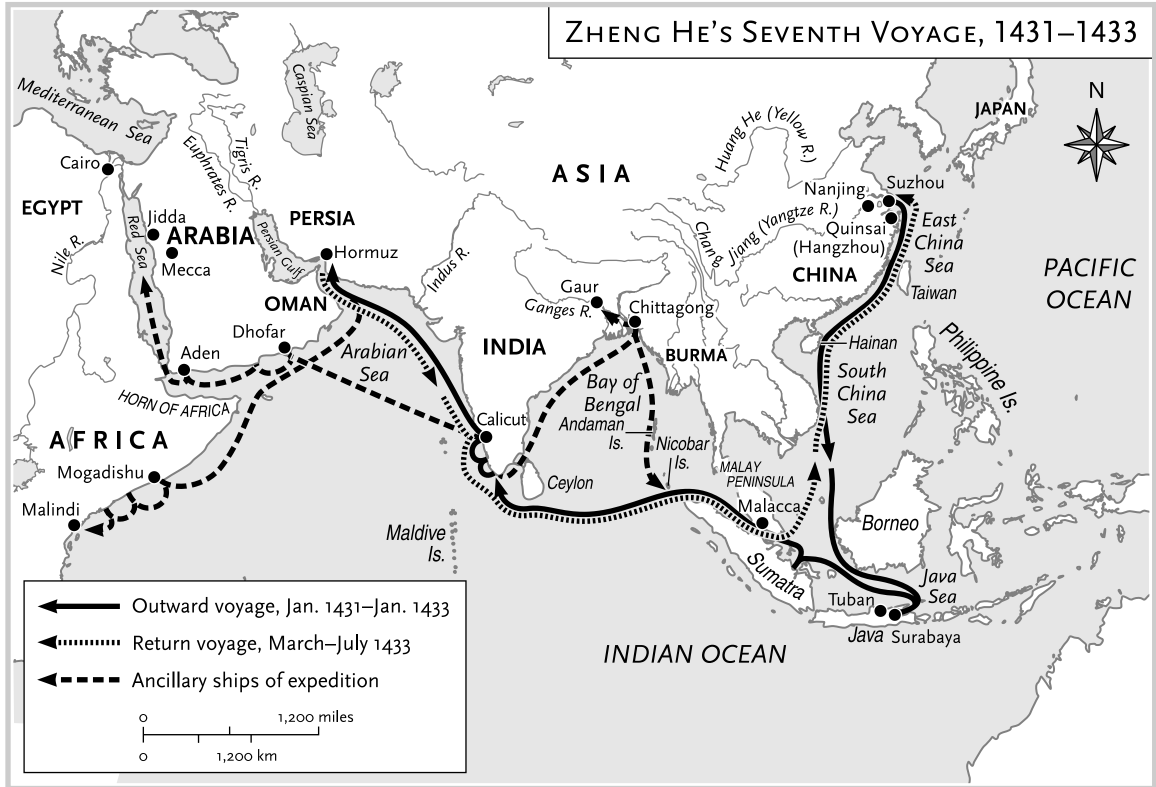
The Chinese Admiral and the Grand Fleet of Treasure Ships

On June 29, 1430, the emperor of China, Xuande (Hsüan-te), sent an order to his admiral Zheng He (Cheng Ho):

> I have received Heaven's mandate and I have inherited a great empire. . . . [But] distant lands beyond the seas have not yet been informed. I send . . . Zheng He . . . to instruct these countries to follow the way of Heaven with reverence and to watch over their people so that all might enjoy the good fortune of lasting peace.

Zheng (ca. 1371–ca. 1433) was a Muslim eunuch with a distinguished military record. The eunuchs in China were a privileged class. Typically, they were castrated as children and groomed for imperial service after being captured as prisoners of war or given up by their impoverished families. Assigned as a boy to the service of Zhu Di (1360–1424), a northern Chinese prince, Zheng had risen over the years to become a trusted general. When Zhu Di was enthroned as the emperor Yongle (Yung-lo) in 1402, he commissioned Zheng to a position higher than any other eunuch had ever achieved. He ordered Zheng, "the Great Eunuch," to "take general command of the treasure ships and go to the various foreign countries in the Western Ocean to read out the imperial commands and to bestow rewards."

In the service of Yongle, Zheng led six maritime expeditions to kingdoms from the East Indies to Africa. His fleets were the largest and most powerful the world had ever seen. In 1430, eight years after his sixth expedition, the veteran admiral received his final commission from Yongle's grandson, Xuande, who reigned as emperor from 1425 to 1435. Once again Zheng assembled his fleet, this one consisting of 100 enormous oceangoing



ships bearing names such as *Pure Harmony* and *Lasting Tranquillity*. The 27,500 officers and crew he brought together included seamen, soldiers, scholars, scientists, secretaries, interpreters, artisans, astrologers, and meteorologists.

The itinerary was, even for Zheng, ambitious. His ships sailed from Nanjing on January 19, 1431. By the time they returned in the summer of 1433, they had visited Champa (present-day Vietnam), Java, Sumatra, Malacca (on the Malay Peninsula), Ceylon (Sri Lanka), and the Indian seaport of Calicut. Part of the fleet had sailed to the great Persian Gulf port of Hormuz and the Arabian ports of Dhofar, Aden, and Jidda. (Jidda is the port of Mecca; as a Muslim and the son of a hajj, or a man who had made a pilgrimage to Mecca, Zheng would have had particular interest in the Islamic holy city.) The other part of the fleet had crossed the Indian Ocean to East Africa, visiting the trading stations of Mogadishu and Brava (both in present-day Somalia) and of Malindi (Kenya). Zheng's fleet had voyaged an astounding 12,600 miles, sometimes covering more than 100 miles a day. Zheng himself is unlikely to have survived to celebrate his accomplishment. Although no definite evidence exists, recent scholarship suggests that he died in India on the return voyage. Zheng's exploits lived on, however: He would become a national hero and the subject of novels and plays.

CHINA'S IMPERIAL POLICIES

The expedition was an achievement that made China, already centuries ahead of its rivals technologically, the dominant power in the kingdoms bordering the China Sea and Indian Ocean. But after the triumphant conclusion of the voyage, Emperor Xuande suddenly turned his back on the outside world. He broke up the imperial fleet, destroying some vessels and reassigning others to river service. The great imperial shipyards were closed and naval personnel redeployed. In about 1480, a court official who wished to retrace Zheng's routes found that the official records of all seven expeditions had been destroyed. A later imperial history reported that a War Office official had burned them, regarding their reports of foreign lands as "deceitful exaggerations of bizarre things far removed from the testimony of people's eyes and ears." By 1500, it was a capital offense in China to build an oceangoing vessel with more than two masts, and in 1525, all such ships were ordered to be destroyed. Inexplicably, the great age of Chinese maritime exploration was over.

Although Chinese navigators and traders had been active in the South China Sea and the Indian Ocean for a thousand years, the emperors of the Ming dynasty (1368–1644) were ambivalent about allowing maritime trade to take place beyond government supervision, or to exist at all. The policy of Zheng's original patron, the Yongle emperor, was one of close control. Yongle fine-tuned China's unique system of tributary trade, under which the goods brought to China by foreign merchants and ambassadors—he received a dozen such delegations a year—were accepted by the emperor as tribute, or payment made in recognition of Chinese supremacy. The foreigners were rewarded with "gifts" of Chinese luxury goods of at least equal value, chiefly silks, porcelain, and horses. The emperor also dispatched envoys to foreign rulers with gifts intended to elicit further tribute. (The heavily armed troops who accompanied them were an additional incentive.) Transporting ambassadors and luxury goods to and from foreign countries was central to Zheng He's mission.

Documentary evidence is sparse, but some of Yongle's motives for commissioning Zheng's first six voyages (1405–22) seem clear. Political and economic factors were paramount. The emperor—known as the Son of Heaven—wished to display his power and grandeur as widely abroad as possible, spread China's civilizing influence, and gain

Mongol rulers sent much Chinese blue-and-white porcelain as gifts to other countries. Created during the Ming dynasty, this particular piece is a jar known as a *zhadou*, or slop jar, and was used mainly to hold table scraps. *(Smithsonian Institution)*

Chinese Porcelain

Fine Chinese porcelain rated among the most sought-after luxury goods carried by Zheng He's treasure ships. The Chinese discovered the secret of manufacturing this very fine, white, translucent ceramic—it was made from pulverized petuntse, or porcelain stone (also called china stone), mixed with kaolin, a white clay—and used it to make functional and decorative wares of incomparable delicacy and beauty. Chinese dishes, bowls, cups, jars, vases, platters, and other wares were exported to Japan and Southeast Asia as early as the 9th century.

By the early 15th century, the Chinese had recently developed and refined the technique of painting blue designs onto porcelain under a clear glaze, producing the decorated blue-and-white ware that later came to epitomize Chinese pottery. Among common designs were floral motifs, foliage, landscapes, dragons, phoenixes, and other animals. Blue-and-white porcelain became a favorite of China's Mongol rulers.

The Mongols' encouragement of exports to West Asia and Africa in the 14th and 15th centuries coincided with their development of a tributary trade system, in which the emperor maintained a monopoly on trade and cloaked it in the guise of exchanges of gifts with foreign rulers. Reserving the finest examples for their own use, the Mongol emperors sent large quantities of porcelain (mostly decorated blue and white or with the delicate pale green glaze known as celadon) as "diplomatic gifts" to foreign rulers. According to the official history of the Ming dynasty (1368–1644), 19,000 pieces of porcelain were sent abroad as diplomatic gifts in 1383.

By the 15th century, ordinary traders' ships were a common sight in Arabian and African ports, but Zheng He's huge, showy, and exotic treasure ships occupied a different order of magnitude than anything that had preceded them. They stirred enormous excitement wherever they put in along the Arabian and African coasts. Foreign demand for Chinese goods soared.

Zheng He's interpreter Ma Huan wrote that "blue" porcelain from the imperial Chinese kilns was highly prized in Champa, Java, Ceylon, and Dhofar (on the southeastern coast of the Arabian Peninsula). It also reached Africa. The dome of the great medieval mosque at Kilwa, off the Tanzanian coast of eastern Africa, was lined with precious blue-and-white Chinese bowls. The British archaeologist Sir Mortimer Wheeler, excavating in Tanzania and Kenya in the 1950s, wrote, "I have never seen so much broken china as in the last fortnight between Dar-es-Salaam and the Kilwa Islands; literally fragments of Chinese porcelain by the shovelful."

submission and tribute. The Chinese could be supplied with desirable goods such as spices, rare woods, gems, and exotic animals and plants; they were especially interested in finding sources of new medicines. Another officially announced but probably minor

goal was to track down the emperor's nephew, from whom Yongle had usurped the throne and who, although reported dead, was rumored to have fled the country.

CHINA'S NAVAL TECHNOLOGY

In the early 15th century, China's naval technology was the most advanced in the world. Soon after his accession, Yongle enlisted the imperial shipyards in a major shipbuilding program. Between 1404 and 1431, 2,000 ships were constructed for the imperial fleet. They included dozens of specialized craft: patrol and combat vessels; warships powered by rowers; water tankers containing enough freshwater to supply the thousands-strong crews for a month; supply ships carrying food for the crews and materials for repairs; transports designed to carry horses or troops.

The mainstay of the fleet, however, was the strong, oceangoing junk, first developed in China in the 11th century. These high-prowed vessels were clinker-built—that is, with overlapped wooden planks fastened with iron nails. They could reach 440 feet in length and 185 feet across the beam; they contained several decks below the main deck and three more above it at the stern. The largest war junks typically carried 450–700 crew members. Then by far the largest vessels on the seas, medieval Chinese junks remain some of the largest wooden sailing ships ever built.

Junks were able to cut through heavy seas because they had a very deep, sharp keel. Ballast provided stability, as did internal watertight bulwark compartments, an innovation not adopted in Europe for nearly 400 years. Another innovation was the huge stern-mounted rudder—one recent excavation indicates that these could exceed 450 square

A junk, shown in an early 20th-century photograph, is a large, stable ship first developed by the Chinese in the 11th century. The ship's design has changed little over the centuries. *(Library of Congress, Prints and Photographs Division [LC-USZ62-91255])*

feet. Junks had from one to nine masts staggered across the deck, carrying sails generally made of canvas or matting. Complex rigging was designed for maximum flexibility. These features made junks uniquely responsive and maneuverable.

Because of their precious cargoes, the largest of Zheng's junks were called treasure ships. (The fleet was in fact known as the Treasure Fleet; Zheng himself was called the Three Jewels Eunuch.) The grandest were built for display and luxury; they were intricately carved and painted, and their sails were of silk.

For all their remarkable speed, strength, and range, Zheng's fleets largely followed familiar coastal routes, and they never entered

unknown waters. Chinese navigators certainly used traditional navigational methods such as identifying coastal landmarks and taking depth soundings. Dead reckoning, a simple method of following a given direction for a specified time, was used on familiar routes. The mariners also understood winds, currents, tides, and the seasonal pattern of the monsoons. Where their own knowledge was incomplete, particularly in the Indian Ocean, they hired local pilots.

But Zheng also had sophisticated navigational technology unavailable in Europe. The Chinese had invented the compass a thousand years earlier, and by the 13th century, their ships were carrying magnetic marine compasses that enabled them to steer and record precise courses. One 13th-century Chinese geographer noted that compasses needed to be watched closely in the open sea, "for life or death depend on the slightest fraction of error." Time could be tracked accurately by burning measured sticks of incense or by using clocks—another Chinese invention—in which the movement of sand drove the mechanism.

The Chinese had invented printing by the eighth century, and among the numerous geographical works available to Zheng were printed atlases, maps, and sea charts. He carried portolans, or coastal charts, as well as a 21-foot-long sailing chart of the Indian Ocean. Many of his maps showed compass directions of major routes and distances measured in watches of about two and a half hours. Fifteenth-century Chinese astronomy was the most advanced in the world, and mariners also had star maps for major long-distance routes. They calculated their latitude by aligning a measuring board with the horizon and using their arms to indicate the position of Polaris or the Southern Cross.

ZHENG'S SEVERAL VOYAGES

Records of Zheng's voyages are incomplete and contradictory. It is known with certainty that he made a total of seven voyages between 1405 and 1433, each lasting about two years and all in the emperor's service. His full fleet numbered more than 300 ships, with a crew of 28,000: Some expeditions employed them all, and most of them involved at a minimum his 63 large junks.

Trade and diplomacy were his major assignments, and his itinerary was concentrated on strategically located kingdoms and ports. The basic route Zheng followed on his first expedition (1405–07) was the core of all his later voyages: Champa (Vietnam), Java (home to wealthy colonies of Chinese traders), Sumatra, and Malacca (an Islamic state that controlled the strategically vital Strait of Malaya), then a direct run from the East Indies to Calicut, on the southwest coast of India, the most important trading center of the Indian Ocean, and on to Ceylon.

On the emperor's behalf, Zheng created kingdoms and legitimized kings. He drew the East Indies, Malacca, Calicut, and other strategically important kingdoms into China's tributary sphere, thereby securing bases of naval operations. On a very few occasions, Zheng resorted to warfare. On his first expedition he routed the pirates who plagued shipping in the China Sea, in one engagement destroying an entire pirate fleet and killing 5,000 men. On Zheng's third voyage (1409–11), King Alagonakkara of Ceylon attacked the Treasure Fleet with 50,000 soldiers, but the admiral outwitted him, defeating him with only 2,000 troops. Zheng's Chinese troops suppressed a rebellion in Sumatra on his fourth expedition (1413–15).

The most significant achievement of the fourth expedition, however, was to reach the ports of the Persian Gulf and East Africa, which he was to revisit on his fifth and sixth voyages (1417–19, 1421–22). The fleet was divided into squadrons. One visited the East Indies, then sailed directly from Sumatra to Mogadishu, 6,000 miles away on the Somali coast; it was the major port connecting Africa with Arabia and Persia. This squadron proceeded onward to the Arabian ports of Aden and Dhofar. From a base in Ceylon, another squadron sailed to Hormuz, the key trading center of the Persian Gulf. Zheng returned to the imperial court bringing ambassadors from 30 foreign states. In 1416, the Yongle emperor announced with satisfaction that the "seas had been conquered and there was quiet in the four corners." But the emperor, Zheng's longtime patron, died in 1424. It would be seven more years before Zheng undertook his seventh and greatest voyage.

THE IMPACT OF ZHENG'S VOYAGES

Zheng's expeditions were an unqualified success. On an inscribed stone tablet he erected on the coast of modern-day Fujian Province before he embarked on his last expedition, Zheng himself declared that he had succeeded "in unifying seas and continents. . . . The countries beyond the horizon from the ends of the earth have all become subjects . . . bearing precious objects and presents" to the emperor. He had in fact extended the Chinese sphere of influence from Southeast Asia and the East Indian islands across South Asia and

How Far Did Zheng He Go?

Of all Zheng He's expeditions, his voyages along the southeast coast of Africa offer perhaps the only instance of pure exploration. The Chinese certainly understood African geography much earlier than Europeans did; the geographer Zhu Siben's (Chu Ssu-Pen) atlas of 1320 contained the earliest map anywhere to depict Africa as a southward-pointing triangle, with indications of Zanzibar, the Blue Nile, and the Congo River. Some writers have suggested that some of Zheng's ships may have been the first to round the Cape of Good Hope.

Others cite suggestive archaeological and cultural evidence that Zheng's ships may have reached Australia. The Australian evidence is a Chinese statue, quite possibly from the Ming dynasty (1368–1644), unearthed where it had been buried in northern Australia since at least the 17th century. Aboriginal Australian legend tells of ancient visits by a technologically advanced, golden-skinned people they called the Baijini, who came seeking trepangs, sea cucumbers used to make soup. Zheng's interpreter Fei Xin reported that the Treasure Fleet reached Timor (in present-day Indonesia), only 400 miles from the northern Australian coast. Zheng's navigators could certainly have mastered the Timor Sea, although Indonesian fishing boats might just as easily have made this relatively easy crossing to Australia.

Arabia to East Africa. This was a remarkable feat as it was accomplished by almost entirely peaceful means. While he commanded a powerful naval force, Zheng came as an ambassador and trader, not a conqueror.

The treasure ships allowed China to dominate long-distance trade in Southeast Asia and the Indian Ocean, thousands of miles away from its imperial center. A huge quantity of luxury goods and spices flowed into China: The emperor particularly enjoyed foreign rulers' gifts of lions, leopards, giraffes, ostriches, and other exotic animals. Foreign demand for Chinese silk, porcelain, and lacquer also increased dramatically. Chinese colonists followed in the wake of the Treasure Fleet and were dominant in Southeast Asia until the 19th century.

The Treasure Fleet's voyages provided much new documentation in China of the Asian seas and oceans and the countries that bordered them. On the Fujian tablet, Zheng expressed satisfaction that "the distances and routes" he had traveled "may be calculated." His interpreters Ma Huan and Fei Xin, amazed at what they encountered, wrote descriptions of the geography, climate, flora and fauna, peoples, customs, products, and exports of the countries they visited. Ma's *Overall Survey of the Ocean's Shores* (1451), in particular, remains an important source of information about the expeditions. And Zheng's voyages along the African coast can be regarded as pure exploration.

Except for some brief interludes, Beijing has been the capital of China since 1421. In this 1901 photograph, a caravan of camels enters the city. *(Library of Congress, Prints and Photographs Division [LC-USZ62-121550])*

WHY THE CHINESE WITHDREW FROM EXPLORATION

Zheng He's expeditions were among the greatest achievements in medieval exploration. Although he relied on existing shipbuilding technology, navigational experience, and naval organization, the scale and breadth of his voyages were unprecedented: No one had ever before mustered and supplied such a huge fleet over such vast distances. In 1433, China was the richest and arguably the most advanced civilization in the world, apparently unassailable as the only global maritime power. So, why did the Xuande emperor later give it all up?

This question cannot be fully answered from the surviving documentation. Certainly the designation of the northern city of Beijing as the Mongol capital in 1421 strengthened the influence of landed northerners at the expense of the southern maritime interests that had supported Zheng's expeditions. This shift in focus was reinforced by the constant threat of attack from the Mongols to the

north. Decades-long military expeditions against both the Mongols and the Vietnamese and the rebuilding of the defensive Great Wall had seriously depleted the Ming dynasty treasury. The recent construction of the Forbidden City in Beijing and Zheng's large expeditions had been enormously costly as well.

Finally, Xuande was swayed by conservative Confucian advisers who promoted isolationism and regarded agriculture rather than trade as the true source of imperial wealth. In any case, having no interest in Europe or European products, which were inferior to their own manufactures, the Chinese had little incentive to seek Mediterranean or Atlantic trade routes. In the mid-15th century, therefore, Asian seaborne trade reverted to private Arab and Indian merchants. The Indian Ocean trade routes to the East Indies were to prove an irresistible target for the emerging European maritime powers and the individuals who would soon set out to explore the lands along these routes.

2

THE DARK AGES?

The *Dark Ages*—the term connotes ignorance and superstition, backwardness, crudeness, and stagnancy. It was formerly the common name used for the period in Europe between about A.D. 475 and 800, between the end of the Roman Empire (and with it the culture of classical Greece and Rome) and the emergence of a widespread Christian culture in Europe. Sometimes it was also very broadly used to describe the period from about A.D. 500 to 1000, when near-constant warfare and economic decline plagued Europe. Modern historians generally prefer the more neutral term *early Middle Ages.*

The label *Dark Ages* was coined by the Renaissance humanists, scholars who revived classical learning and secular values in the 1400s and 1500s. They regarded the period that preceded them as primitive and ignorant, as it offered them little of interest or value. A charitable view of the Renaissance intellectuals' harsh judgment might be that they had little access to historical sources that would have enabled them to evaluate the early medieval period. Recent historical research has uncovered and analyzed numerous texts, artifacts, and other evidence showing that this was in fact a time of considerable vitality in Europe. Civilization had not died: Community life continued; scholarship was carried out in the many monasteries; artisans created objects of beauty; trade links throughout Europe, the Mediterranean, and the Middle East were maintained; and Christian pilgrims to Jerusalem were beginning to establish direct contacts with the lands to their east.

A WORLD PERSPECTIVE

Equally significant, a narrow European focus diverts attention from the many vigorous non-European cultures that flourished during the period. In A.D. 500, an estimated 300 to 500 million people populated nearly every inhabitable part of the Earth: Europe, all of Asia, Africa, and the Americas, Australia, Japan, and many islands of the Indian Ocean and the South Pacific. (The notable exceptions were New Zealand, Iceland, and perhaps Greenland.)

It is true that the majority of the world's people were farmers, hunter-gatherers, or nomads. They were uneducated, illiterate,

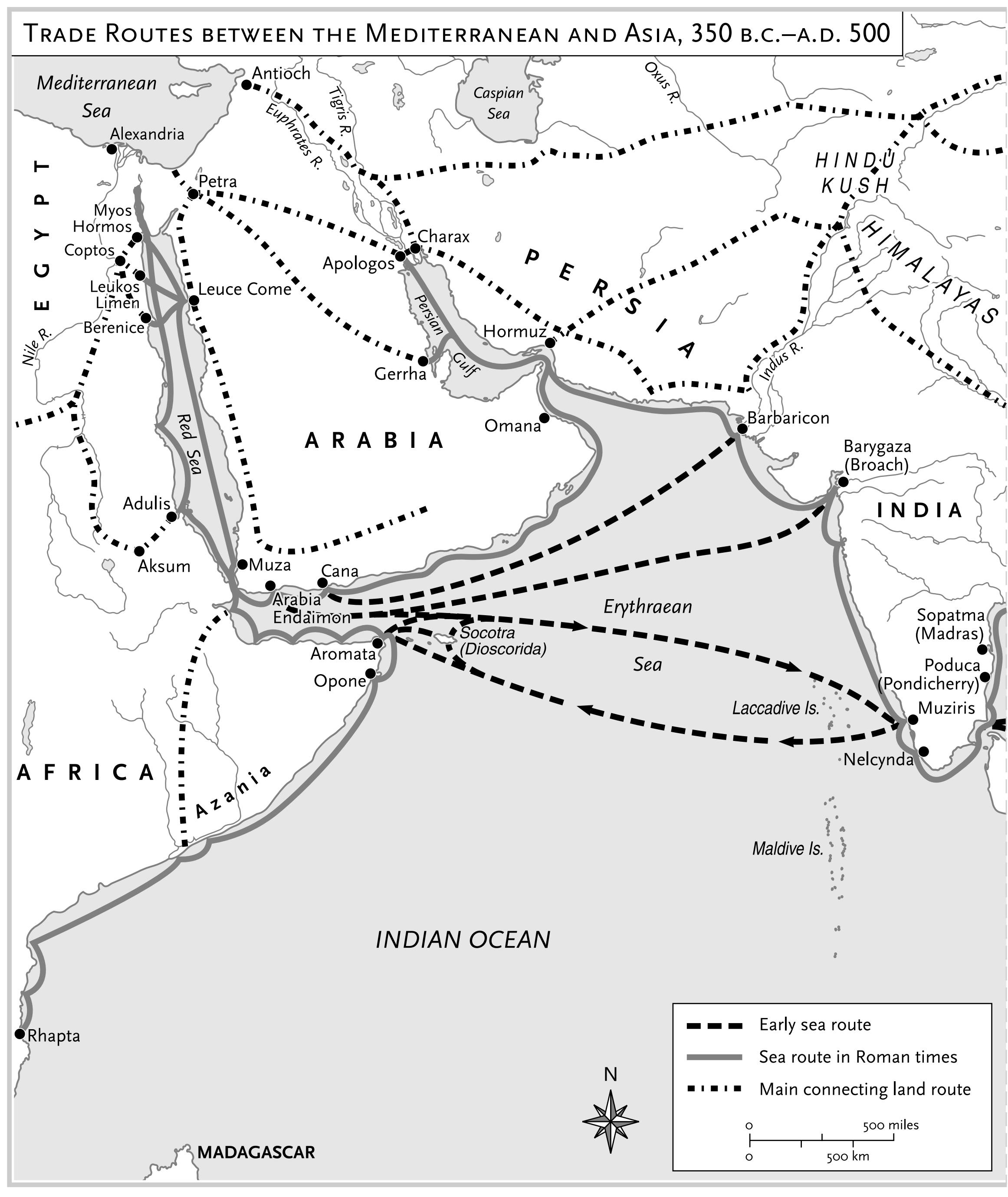
A Geographical Dead End

One of the geographical oddities of the early Middle Ages is the *Topographia Christiana* (Christian topography), a survey written by Cosmas Indicopleustes in about A.D. 550. A Christian monk and the author of several works of geography and biblical interpretation, Cosmas composed his topography, a detailed description of the physical features of regions, to refute pre-Christian and non-Christian descriptions of the world. He especially derided the belief, widely held among educated people, that the Earth was spherical. In the *Topographia Christiana,* Cosmas dismissed this theory not only as pagan but as "capricious, self-contradictory, inconsistent, doomed to be utterly confounded and to be whirled round and round even more than that unstable and revolving mythical sphere of yours."

Instead, he put forward a description of the universe that strictly conformed with the Bible, supporting it with biblical citations and schematic diagrams. The Earth was, he claimed, a flat rectangle, much longer than it was wide. In the center was the inhabited world, also rectangular, surrounded on all sides by water that was itself enclosed by another continent of uninhabited land. A wall ascended from the distant edges of this outer continent, forming a box; the wall supported the sides of the curving vault of the sky, and above the sky was heaven.

A native of Alexandria, Egypt, Cosmas had been a maritime trader in his younger years and was well acquainted with the eastern Mediterranean and Arabian coasts: He certainly knew the Red Sea, the Persian Gulf, and the East African coast; he may even have traveled as far as India and Ceylon (present-day Sri Lanka). The latter travels inspired his second name, Indicopleustes, which is Latin for "Indian voyager." In structuring the universe, Cosmas disregarded his considerable firsthand geographical knowledge in favor of religious dogma. Nevertheless, he did include in the *Topographia* valuable—and accurate—information found in no other works of the period. He discussed the fine points of the annual six-month-long trade expeditions into the interior of Africa from the Ethiopian kingdom of Aksum (Axum), then in its heyday. He gave details about East Africa, Zanzibar, and the Indian Ocean trade network. He described Ceylon and the plants and animals of India. And he was apparently the first writer to suggest that it was possible to sail eastward from the Persian Gulf to China, while acknowledging that "one who comes by the overland route from Tzinitza [China] to Persia [Iran] makes a very short cut."

Cosmas's flat-Earth theory exerted little influence in the Middle Ages, and today is interesting chiefly as an example of the decline of scientific geography in Europe after the fall of the Roman Empire. But the *Topographia Christiana* is still valuable as contemporary evidence of some of the activities and knowledge of sixth-century European travelers.


Trade Routes between the Mediterranean and Asia, 350 B.C.–A.D. 500
Mediterranean Sea
Antioch
Alexandria
Caspian Sea
Oxus R.
Tigris R.
Euphrates R.
Petra
EGYPT
Myos Hormos
Coptos
Leukos Limen
Berenice
Leuce Come
Charax
Apologos
PERSIA
HINDU KUSH
HIMALAYAS
Persian Gulf
Hormuz
Gerrha
Indus R.
Nile R.
Red Sea
ARABIA
Omana
Barbaricon
Barygaza (Broach)
INDIA
Adulis
Aksum
Muza
Cana
Arabia Endaimon
Erythraean Sea
Socotra (Dioscorida)
Aromata
Opone
Sopatma (Madras)
Poduca (Pondicherry)
Muziris
Laccadive Is.
Nelcynda
AFRICA
Azania
Maldive Is.
INDIAN OCEAN
Rhapta
MADAGASCAR
N
Early sea route
Sea route in Roman times
Main connecting land route
0 500 miles
0 500 km

Tarim R.
TAKLIMAKAN DESERT
GOBI DESERT
Seres
Huang He (Yellow R.)
Luoyang
Chang'an
TIBET
Fuzhou
PACIFIC OCEAN
Yangtze R.
Sinae
Formosa (Taiwan)
Lhasa
Guangzhou
Canton
HIMALAYAS
Brahmaputra R.
Hanoi
Ganges R.
BURMA
Cattigara
Gulf of Tongking
South China Sea
Ganges
Irrawaddy R.
Mekong R.
INDIA
Sada
INDO CHINA
Bay of Bengal
Temala
Oc-Eo
to Moluccas
Malaya
Borneo
Ceylon
Sumatra
Java Sea
to Moluccas
Java
INDIAN OCEAN

and relatively immobile. Most lived in small groups or villages, their contacts limited to family members, neighbors, and passing travelers. Any ideas, inventions, or practical innovations that were developed tended to stay localized; news passed by word of mouth, a slow and random process over large distances.

The Maya, a highly developed culture that peaked between A.D. 300 and 900, settled primarily in the area of the present-day Yucatán Peninsula and northern Central America and are known for their grand architecture. One of the sites they settled was Chichén Itzá, the location of this large, stone Chacmool statue (so named by a 19th-century archaeologist). The statue, near the Temple of the Warriors, reclines and holds a basin on its lap for offerings. *(PhotoDisc)*

At the same time, civilizations were flourishing that were at least as old and sometimes far in advance of Europe's, notably in the Middle East, India, China, and Central America. These were societies with unbroken and well-documented traditions of scholarship, advanced mathematics, astronomy, engineering, medicine, philosophy, literature, art, methods of production and transportation, and links to neighboring peoples. The world of the early Middle Ages, then, might be thought of as a patchwork of discrete cultures whose primary contacts were with their immediate neighbors and whose direct knowledge of the world extended barely any farther. A relatively small number of soldiers, traders, pilgrims, and missionaries did make long-distance journeys, and these were the groups that were to broaden contacts and people's knowledge of the world during the succeeding centuries.

CHINA IN THE EARLY MIDDLE AGES

At the beginning of the Middle Ages, the Chinese had the most advanced civilization and the highest standard of living in the world. A vast country with enormous natural resources, it had long been a rich empire united and governed by a strong central bureaucracy. The administrative demands posed by such a large territory had led to the development of sophisticated systems for describing, controlling, and reporting on it.

Three primary factors contributed to China's sophistication. First, China had a nearly 1,000-year-old tradition of Confucian philosophy and ethics. Confucianism placed a premium on scholarship and learning; the Chinese were able to draw on centuries, even millennia, of accumulated knowledge. In

astronomy, mathematics, medicine, and other sciences, China was far in advance of other cultures.

Second, China benefited from extensive contacts with many other cultures in Asia, India, the Middle East, and the Mediterranean. The fabulously rich city of Chang'an (present-day Xi'an), the Chinese capital and the largest city on Earth at the time, was home to people from nearly every part of the known world. Many foreigners, especially Arabs, made their way to other Chinese cities in the early medieval period as well: 120,000 Muslims, Christians, Jews, and Zoroastrians (adherents of a Persian religion) were said to have been slaughtered in the southeastern port of Guangzhou (Canton) in a raid by a warlord in 878. Even allowing for exaggeration, this number reflects the fact that China hosted a large foreign population.

Finally, the Chinese had an unparalleled genius for invention and the application of innovative ideas and technology. By A.D. 500, the Chinese had already invented papermaking (second century A.D.), the magnetic compass (third century A.D.), and the clock (fifth century A.D.). They were soon to discover printing (eighth century). This inventiveness extended to the development of shipbuilding and navigational expertise, for China's massive mountain systems and extensive deserts made its long coastline and great river systems the easiest means of transportation.

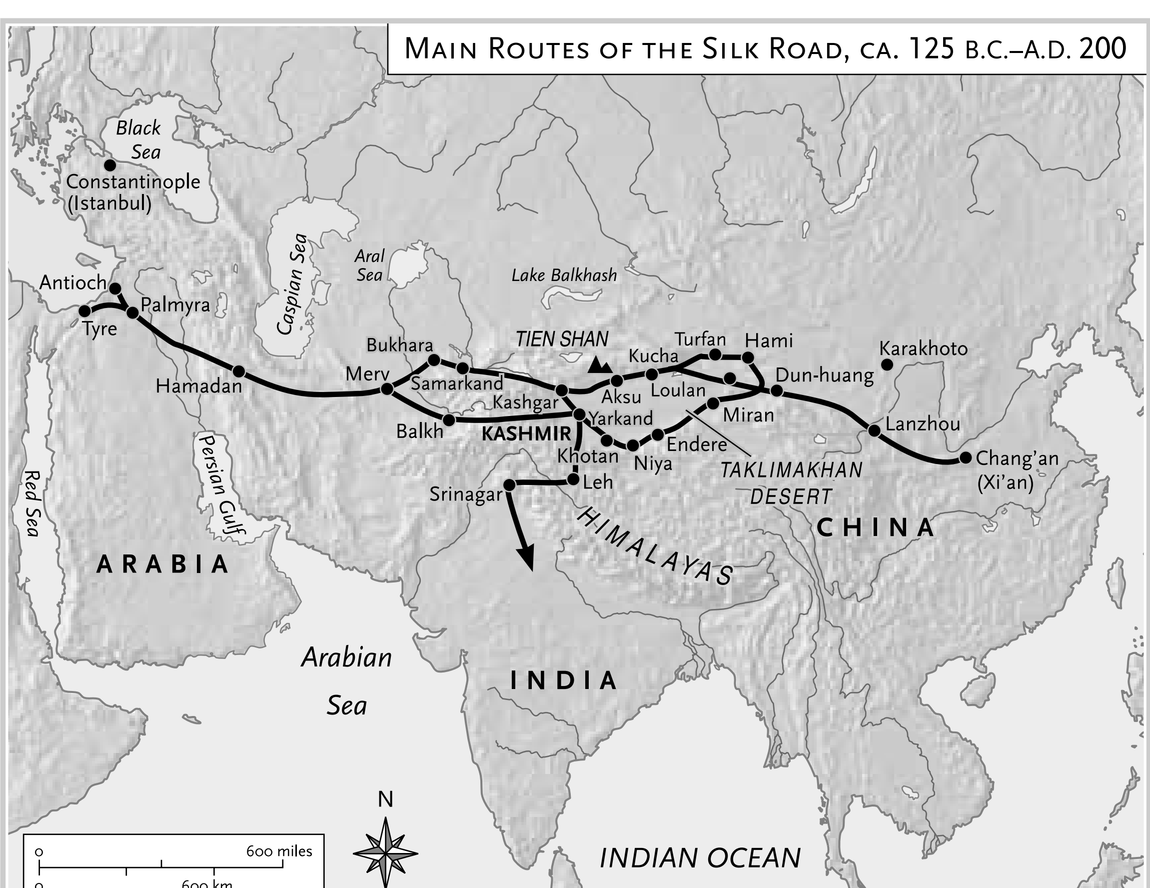
China's geography was recorded on surveys and scientifically prepared maps; in fact, China was fully mapped in A.D. 267 by Phei Hsiu, the imperial minister of public works. Together with national census figures, this information was used by the central authorities to plan roads and canals. An extensive network of road and water routes, post stations, and accommodations for traders and travelers as well as imperial officials connected every part of the empire.

The Chinese developed printing with blocks during the eighth century A.D. This particular scroll, 68 feet long and 6 1/2 inches wide, was printed using this method in Hangzhou, China, around 1050. It is the Chinese version of the *Saddharma Pundarika Sutra*, or the *Sutra of the Lotus Flower of the Wonderful Dharma*, one of many Buddhist sutras, or scriptures. *(Library of Congress, Prints and Photographs Division [LC-USZ62-75751])*

China's topography dictated its trade routes. Several overland routes reached westward from eastern China through central Asia to Afghanistan, India, Persia, and Syria. The fabled Silk Roads, with their legendary cities and oases, luxury trade, and rich cultural exchanges, had been traversed by traders' caravans for hundreds of years. The well-traveled northern route ran along the Huang He (Yellow River), skirted the Himalaya Mountains by crossing the Gobi and Taklimakan Deserts, and headed southward through Turkestan and the high mountain passes of the Hindu Kush into present-day Pakistan. The southern overland route, even more demanding, crossed the Himalayas through Tibet and Nepal into India.

Traveling these routes was a slow and expensive undertaking, and the unforgiving terrain, widespread banditry, and political instability of central Asian tribes often made it dangerous, even in the relative safety of caravans. Buddhist missionaries and Arab, Jewish, Persian, and Turkish merchants hazarded the routes in considerable numbers nevertheless. Chinese overland trade with India and the Mediterranean flourished during the Tang dynasty (618–907), until political turmoil among the tribes of central Asia made travel too risky.

In this late 19th-century drawing, a caravan of camels transporting goods along the Silk Road rests outside Beijing. *(Library of Congress, Prints and Photographs Division [LC-USZ62-133695])*



Chinese mariners had mastered the China Sea and the coasts of East Asia and Southeast Asia by A.D. 500. Foreign traders were sailing regularly between China and the Malay Peninsula, Ceylon (present-day Sri Lanka), and India. By the seventh century, Persian and Arab mariners were trading in China; the route from the Persian Gulf to Guangzhou was the longest regularly-traveled sea route anywhere until the 16th century. The Chinese mariners never ventured far into the Pacific and had only intermittent contact with Japan. (Japan's own mariners, limited by the fragility of their ships and inadequate navigation, knew no foreign lands beyond China and Korea.)

At the beginning of the medieval period, China had the potential to become a major force in exploration. There were, however, significant inhibiting factors. Perpetual tribal unrest in the central Asian steppes made westward overland travel hazardous. Only foreigners were permitted to engage in foreign trade, so it was Arab and Indian navigators, not Chinese, who developed their maritime technology on the long-distance sea routes. The Chinese Empire fractured after the fall of the Tang dynasty in 907 and was not securely

reunified until the Mongol conquest of the 13th century, the period when China did in fact briefly open up to the rest of the world.

Finally, the orientation of the Chinese was essentially inward. They were intellectually and technologically self-sufficient; they showed no interest in importing and studying the works of the Phoenicians, Greeks, and Romans. Nor did they seek territorial expansion. For all the precision of their domestic maps, Chinese world maps were ill informed and inaccurate. It was this lack of curiosity, the belief that their own culture was superior and the rest of the world had little to offer that decisively restricted the horizons of the Chinese.

INDIA IN THE EARLY MIDDLE AGES

Another ancient and sophisticated Asian civilization was that of India, and India, too, was possessed of considerable resources. Hemmed in to the north by the Himalayas, India nevertheless has a very long coastline, and by A.D. 500, its navigators were able to exploit this opportunity to the full. The predictable monsoon winds—southerly in summer, northerly in winter—and dependable currents of the Indian Ocean made for straightforward navigation.

India had a venerable tradition of science and advanced learning based on the Vedas, the ancient founding texts of Hinduism. Indian scholars led the world in the closely related fields of astronomy and mathematics. Aryabhata the Elder was using the decimal system in about A.D. 500; by 550, Varahamihira had discovered zero. By the sixth century, too, Indian mathematicians had devised the symbols that are misleadingly called "Arabic" numerals. These advances gave Indian seafarers the tools to navigate in open seas a thousand years before their western European counterparts could. By the early medieval period, India had long-established maritime trade links throughout the Indian Ocean region, from Arabia and the Persian Gulf to Java and Sumatra (part of present-day Indonesia).

India also had overland routes to central Asia and the Middle East, much traveled despite being slower and more demanding than the sea-lanes. Buddhist missionaries from India reached China in the fourth century A.D., establishing a relationship that was to be strengthened by the conversion of many Chinese from their ancient belief system, Daoism (Taoism) and Confucianism. A lively exchange of pilgrims, missionaries, and eventually ambassadors would end with the suppression of Buddhism in China by the emperor in the ninth century. By then, Buddhism had become strongly established in the East Indies, reinforcing the historic trade links of this region with India.

Like China, India in the sixth century might appear to have been poised to strike out from its immediate region and explore the wider world. But India, too, was subject to restraining factors. South Asia was divided into numerous kingdoms engaged in constant warfare. No single kingdom dominated regional politics, communications, or trade. The vast armies the rulers commanded turned outward only to defend against attack, not to conquer distant territories.

India's people were uninterested in exploration for its own sake. Buddhism was a quietist, contemplative faith. Another native belief system, Hinduism, with its powerful intellectual traditions, was not a proselytizing religion; its reach never extended much beyond India. Further, the ancient and learned texts of India were written in Sanskrit, a language unknown outside South Asia. Fortunately, the considerable knowledge of Indian scholars, shipbuilders, and

First developed in about 2000 B.C., Hinduism never spread as widely as Buddhism, possibly because the religion does not emphasize converting nonbelievers. Hinduism encompasses a broad range of schools with varying beliefs. This Hindu goddess statue is located in present-day New Delhi, India. *(PhotoDisc)*

mariners would be put to use by others more interested in broadening their horizons: It was passed on to Arabs intent on mastering the Indian Ocean and reaching the East Indies themselves.

ARABS AND ISLAM IN THE EARLY MIDDLE AGES

In A.D. 500, the Arab world and the Middle East were politically disorganized but were on the threshold of momentous change. Islam, founded by the prophet Muhammad early in the seventh century, would spread with extraordinary rapidity, in less than a century uniting peoples across a vast region from the westernmost Mediterranean all the way to northwestern India. Adherents came together under the banner of a single faith and with it a common language—Arabic—an integrated economic and political system, and a shared culture. The caliphs, or Islamic rulers, followed the lead of the Roman emperors in constructing a network of roads and facilities for imperial messengers and armies, linking far-flung regions.

The development of a specifically Islamic culture was fostered by the requirement that every Muslim make one pilgrimage to Mecca, in western Arabia, during his or her lifetime. The annual observance of this pilgrimage, the hajj, brought together people from an enormous geographical area; they returned home to disseminate information about the lands through which they had traveled, partly by writing about their journeys. Muslims would become the greatest travelers of the Middle Ages.

One of the strongest elements of Islamic culture is its reverence for learning. In the early Middle Ages, Muslim scholars were unique in having the benefit of ancient Greek, Roman, Persian, and Indian texts, which they translated into Arabic. In addition to science, philosophy, and medicine, they excelled at astronomy and mathematics. Among their key texts were the *Almagest* and *Geography,* astronomical and geographical works, respectively, written by the Greek-Egyptian scholar Ptolemy in the second century A.D., and the astronomical and mathematical work *Brahmasiddhanta,* written in verse by the seventh-century Indian astronomer Brahmagupta. Ptolemy's works would be largely unavailable to Europeans

until Latin translations appeared in the 15th century.

Geographical knowledge was furthered by Muslim traders. Muhammad himself had been a merchant, and Islamic societies held trade in high esteem. The combination of sea and overland routes put Muslims in communication with much of the known world. Experienced Egyptian and Persian shipbuilders built fleets for Muslim traders, and Muslim navigators learned from and improved on the practices of Indian, Arab, and Persian mariners familiar with the Indian Ocean.

Basra, in present-day Iraq, was founded in 638 and rapidly became the preeminent seaport in the Persian Gulf. Muslim merchants were in India by the mid-eighth century and soon established their own communities along India's western coast. Detailed written instructions for sailing in the Indian Ocean were recorded by Arab and Persian mariners

Considered an extraordinary work of Byzantine architecture, the Hagia Sophia (shown in a late 19th-century photograph) was constructed in Constantinople (present-day Istanbul, Turkey, and formerly the ancient city of Byzantium) in the sixth century to replace the original Christian church of the fourth century A.D. In 1453, the Ottoman Turks captured the city, which had been the capital of the Byzantine Empire, and converted the church into an Islamic mosque, adding four minarets (the slender towers visible in this image) to the structure. *(Library of Congress, Prints and Photographs Division [LC-USZ62-82162])*

Muslim merchants traded many goods along the Indian Ocean. This illuminated manuscript dating from 1237 shows Muslims carrying cloth and spices for export. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2151])*

in the eighth century. By the ninth century, Middle Eastern traders were settling in the East Indies.

The Islamic holy book, the Qur'an (Koran), describes the world as two seas (the Mediterranean Sea and Indian Ocean) separated by

Present-day Turkey is at the center of the Islamic world. Located on a narrow strip of land between the Black Sea and the Sea of Marmara, Constantinople (present-day Istanbul) became the capital of the expansive Ottoman Empire in 1453 after the Byzantine Empire lost control of the city. Originally built as a Christian church under Byzantine rule, the Hagia Sophia cathedral was converted into an Islamic mosque. *(PhotoDisc)*

an insurmountable barrier. But Muslims valued personal experience and empirical evidence as well as the Qur'an's spiritual authority, and the discoveries of generations of pilgrims, merchants, and other travelers were welcomed. Islamic geographers were unrivaled in the early medieval world for the breadth of accurate information they accumulated and disseminated.

Their knowledge of Islamic regions was detailed and precise. The more distant from their homelands, however, the less reliable their information became. They knew very little about northern Europe or East Asia. Their trust in Ptolemy led them to believe that the Indian Ocean was an inland sea and that the known landmasses were vastly larger than they actually are. Like the other inhabitants of the Eastern Hemisphere, they had no idea of the existence of the Americas.

Nevertheless, the Islamic world benefited from sophisticated geographical information, astronomy and mathematics, oceangoing shipbuilding and navigational skills, and direct experience across a very wide area. The Islamic empires were centrally located, sharing borders with Europe, Africa, and Asia. Muslim scholars were disinterested seekers of

knowledge; however, their focus was confined to Islamic territories, and their discoveries did not spread among neighboring, non-Arabic-speaking cultures.

EUROPE IN THE EARLY MIDDLE AGES

By almost any measure, Europe lagged behind the Chinese, Indians, and Arabs in A.D. 500. Europe was relatively poor in resources, its infrastructure of Roman roads and waterworks decaying, its people impoverished. The Roman Empire had collapsed: Rome was sacked by the Visigoths in 410 and by the Vandals in 455; the Goths finally defeated the last Roman emperor in 476. The small western European kingdoms and principalities that succeeded the Roman Empire were tenuous and vulnerable, and they were repeatedly ravaged by the marauding Germanic tribes from the north.

The only strong, unifying, and stable force among western Europeans during the early

Gregory the Great was pope from 590 until his death in 604. Among many other reforms, he actively converted pagan European tribes and centralized church administration, contributing greatly to the unification of Christian Europe. *(Library of Congress, Prints and Photographs Division [LC-USZ62-87523])*

The Rigors of Early Medieval Travel

Overall, travel in the early Middle Ages was slow, difficult, expensive, and dangerous. The 3,000-mile network of old Roman roads in Europe was in disrepair and inadequately marked; the routes frequently dwindled into tracks or crossed bridgeless rivers. Travelers between northern and southern Europe had to cross the Alps; there were several major routes through high mountain passes. Weather was the biggest problem for medieval travelers. One contemporary account describes a treacherous alpine crossing by Emperor Henry IV of Germany in January 1077.

> *Then the men rose to overcome the danger by sheer exertion, now crawling on hands and feet, now leaning on their guides, now staggering and falling and rolling on the slippery slope, until at length they reached the plain after severe fatigue. The queen and the women in her company were installed in oxhides, and slid down by their guides. Some of the horses were lowered by certain devices, others were slid down with their legs bound; but many of them were killed in their course, many were much weakened, only a few came through whole and unharmed.*

Brother John of Canterbury, an English monk, described his own misery crossing the Alps in 1188: 'I found my ink bottle filled with a dry mass of ice. My fingers refused to write; my beard was stiff with frost, and my breath congealed in a long icicle. I could not write.'

Only important travelers rode mounts, the rich or noble on horseback and clerics on mules. The rest went on foot; European pilgrims to Jerusalem faced a 3,000-mile trek, and some of them walked barefoot. In good weather and passable terrain, walkers could cover 20–25 miles a day, riders, 30–35. A day's travel might gain only two or three miles in a mountain pass, however, or be lost completely because of adverse weather. Travelers usually had to take indirect routes, and they frequently stopped for illness, rest, business, or private visits.

Europeans had numerous choices of Mediterranean routes if they were traveling by sea: Commercial shipping was well developed by A.D. 500, linking west-

medieval period was the Christian church: Ireland, Gaul (modern-day France), and Britain had all been Christianized by the sixth century. In the absence of strong political structures, the highest church official, the pope, served as a unifying authority over a new kind of church-state: Christendom. Monasteries were the sole custodians of ancient Roman learning. (The monks knew very little Greek, and the knowledge of the ancient Greeks was effectively lost to Europeans until the end of the Middle Ages.)

Cloistered Christian monks became the Europeans' only source of written geographical information, nearly all of it taken from Roman sources. They had only the vaguest

ern European seaports with North African ports, Alexandria in Egypt, Palestine (parts of modern-day Israel and Jordan), and Constantinople (present-day Istanbul, Turkey). Winds and high seas made the Mediterranean treacherous between mid-September and mid-March; the safest sailing was in the short season between the end of May and September.

Rich or noble travelers enjoyed comfortable, leisurely passages by hiring private vessels that offered a high standard of food and accommodation and took safe coastal routes. Others typically took passage on small cargo ships, huddling together on the open decks or hunched in cramped, stinking accommodation below deck as the vessels steered direct routes. As did land travel, sea voyages threatened danger: storms, shipwreck, pirate attacks, and the crossfire of war. Contemporary manuscript illustrations depict violent storms at sea, with passengers fervently praying for their escape and struggling with loose sheets and broken masts. Routes would sometimes have to be altered or improvised because of wars. Aboard ship, passengers also suffered from diseases and infections caused by filth, vermin, bad food, and foul water. Or ships could become becalmed, unmoving due to lack of wind, for weeks at a time, until there was no food or water at all.

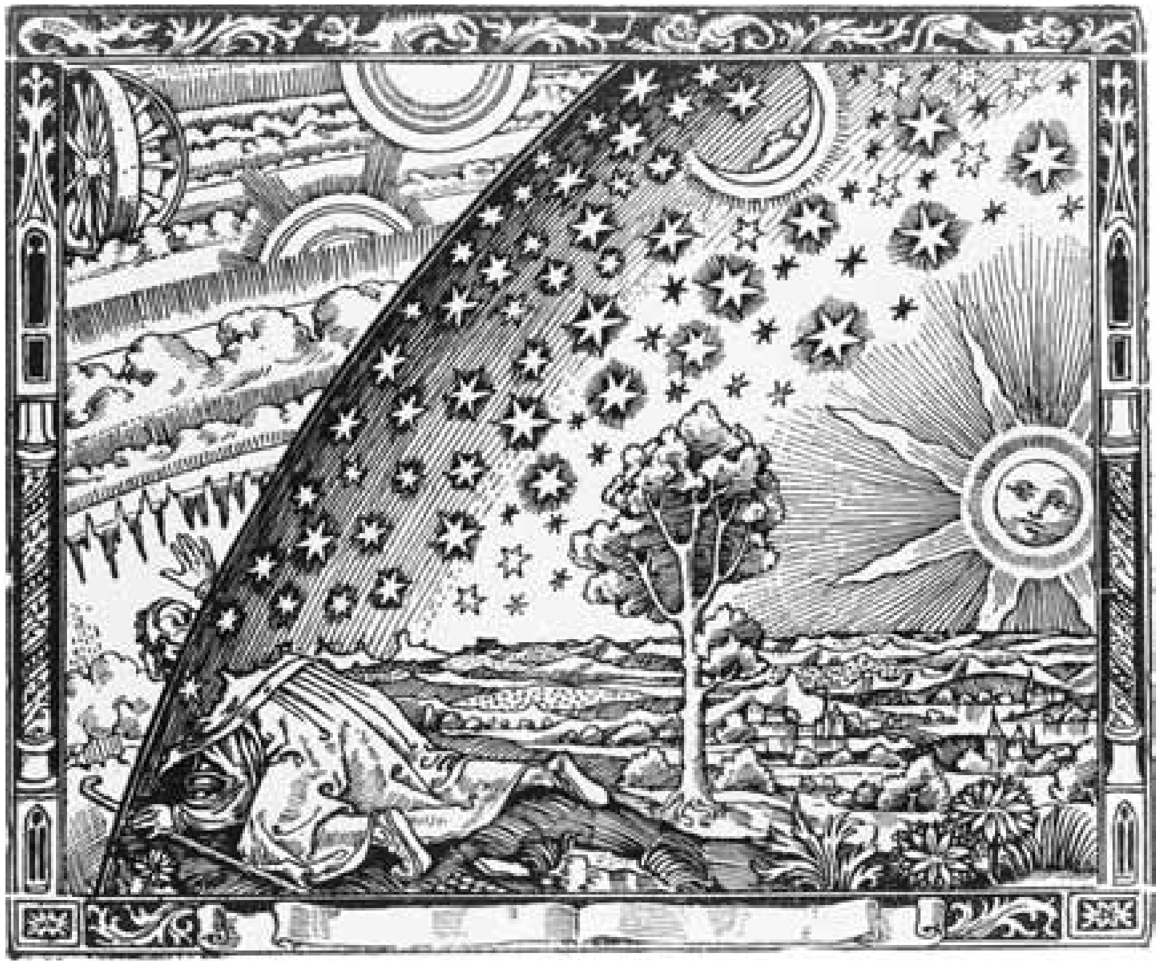
Long-distance travel was expensive. Apart from the cost of transportation, food, and lodging, tolls and bribes were repeatedly demanded en route. Some travelers worked odd jobs or brought goods to trade along the way, while others begged. Travelers who carried cash or valuables were extremely vulnerable, for highwaymen and bandits infested the roads.

Monasteries undertook to provide travelers with shelter, food, fire, and freshwater. When travelers began to outnumber capacity, bishops organized hostels along major routes. Usually run as charities by religious orders or monks, the hostels provided travelers with free lodging—usually on straw mats on the floor—water, and sometimes food, baths, and medical care; individual travelers were offered facilities commensurate with their social status. Church-run accommodation was by no means always available, however, and many travelers were forced to sleep in the open.

notion of Africa beyond its Mediterranean coastline and of Asia beyond the Near East. Their ideas about these distant lands were therefore formed by myths and fables.

With rare exceptions, Christian scholarship was nonempirical, that is, it was not based on actual data. Instead of correcting their sources by means of direct observations or measurements, these geographers developed cosmographies, or descriptions of the visible world, that conformed with the Bible. The Bible was viewed as the sole source of truth, and firsthand experience was beside the point—with one exception: Personal visits to the Holy Land were felt to intensify religious faith.

The single most important early medieval geographical text in Europe was the *Etymologiae* (*Etymologies,* or *Origins*) of the Spanish bishop Isidore of Seville (ca. 560–636). This work was to exert enormous influence on European explorers up to and including Christopher Columbus (1451–1506). Based largely on Ptolemy's writings, it was an encyclopedia of all the knowledge a Christian needed. The *Etymologies* located Paradise as one of the four provinces of Asia and the source of the four great rivers of the world (the Nile, Ganges, Tigris, and Euphrates). More accurately, the known world was bounded, clockwise from the east, by the country of Seres (literally, the "source of silk," that is,



During the Middle Ages, people rarely had an understanding of the world beyond the place they lived. Consequently, most of Asia and Africa remained mysterious to Europeans. In this 1888 illustration, a man peers out from Earth into the mysterious universe as envisioned during the Middle Ages. *(Library of Congress, Prints and Photographs Division [LC-USZ62-112460])*

Many early medieval maps showed the Earth as a circle surrounded by ocean. These so-called T-O maps showed the three known major landmasses separated by T-shaped waterways; Asia occupied the top half of the circle, while Europe and Africa shared the lower half. This illustration, from the 1472 edition of Isidore of Seville's seventh-century *Etymologiae,* shows the first world map ever printed in Europe—a classic T-O design. *(Library of Congress, Prints and Photographs Division [LC-USZ62-95151])*

China); the Malay Peninsula, India, and Ceylon (described as 875 by 625 miles—far larger than its actual size); the (mythical) Fortunate Isles, off the West African coast; and the island Ultima Thule, where the sea is "calm and frozen" (possibly Iceland). This was roughly the world known to the ancient Romans.

Other geographical texts also influenced early medieval Europeans. The *Historiarum adversus paganos libri septem* (Seven books of history against the pagans) by the fifth-century Spanish priest Orosius was influential until the 13th century. It evidenced knowledge of a region from the British Isles to the Red Sea, extending southward as far as Egypt,

Although Orosius thought Africa uninhabitable and many people during the Middle Ages did not know much about the continent, civilizations had flourished there for centuries. One such civilization was Egypt. In this contemporary photograph, some people sail a traditional felucca on the Nile River near Aswan, Egypt. *(PhotoDisc)*

Ethiopia, and the Nile. (Orosius thought Africa to be torrid, uninhabitable, and quite small.) The sixth-century *De origine actibusque Getarum* (On the origin and deeds of the Getae) by the historian Jordanes focused on Scandza (Scandinavia), described as a large northern island and the homeland of the Goths. A world map drawn in Ravenna, Italy, in the seventh century and another by the Spanish monk Beatus in the eighth century showed land as far east as India. In *De mensura orbis terrae* (Concerning the measurement of the world), the early ninth-century Irish monk Dicuil carefully compiled very inaccurate geographical statistics and measurements of the two seas, 72 islands, 40 mountains, 281 towns, and 55 rivers that he believed made up the world and gave a near-contemporary account of the discovery of Iceland, based on firsthand reports.

The western Europeans naturally had the firmest grasp on the geography of their own land and seas. Because the easiest, cheapest, and fastest long-distance transportation in Europe was by water, they had a variety of sturdy river and coastal vessels to carry trade goods. They lacked advanced shipbuilding and navigational skills that would have allowed them to sail in open seas, however, or to master the tremendous Atlantic currents off the Straits of Gilbraltar at the western end of the Mediterranean Sea. This technological handicap would take centuries to overcome.

OTHER REGIONS' VIEWS IN THE EARLY MIDDLE AGES

Africa is a huge continent whose interior is characterized by extremes of climate and terrain: agriculture and overland communication are nearly impossible over its vast tracts of desert and jungle. The coasts offer few natural harbors, and the currents off western and southern Africa are notoriously difficult to navigate.

In A.D. 500, Africa was occupied by many different tribes of farmers and hunter-gatherers. Most Africans neither experienced nor knew of anything far beyond their own locality. Coastal peoples used dugout canoes for short distances, hugging the shores, but Africans had no means of long-distance travel by either land or sea, and the settlements of western and southern Africa, in particular, were isolated from each other and the rest of the world.

There were exceptions. Camel caravans began crossing the western Sahara Desert about A.D. 300, creating a link between the coast and the interior. Northern and northeastern Africa were connected to the wider world by their historic trading links with Greece and Arabia. The kingdom of Aksum, located in present-day Ethiopia, gained control over the gold trade and became the dominant maritime trading power in the Red Sea from about the fourth century until it was conquered by Islamic armies in the eighth century. By the eighth century, Indian Ocean traders were bringing food and other goods from Indonesia to a handful of East African ports.

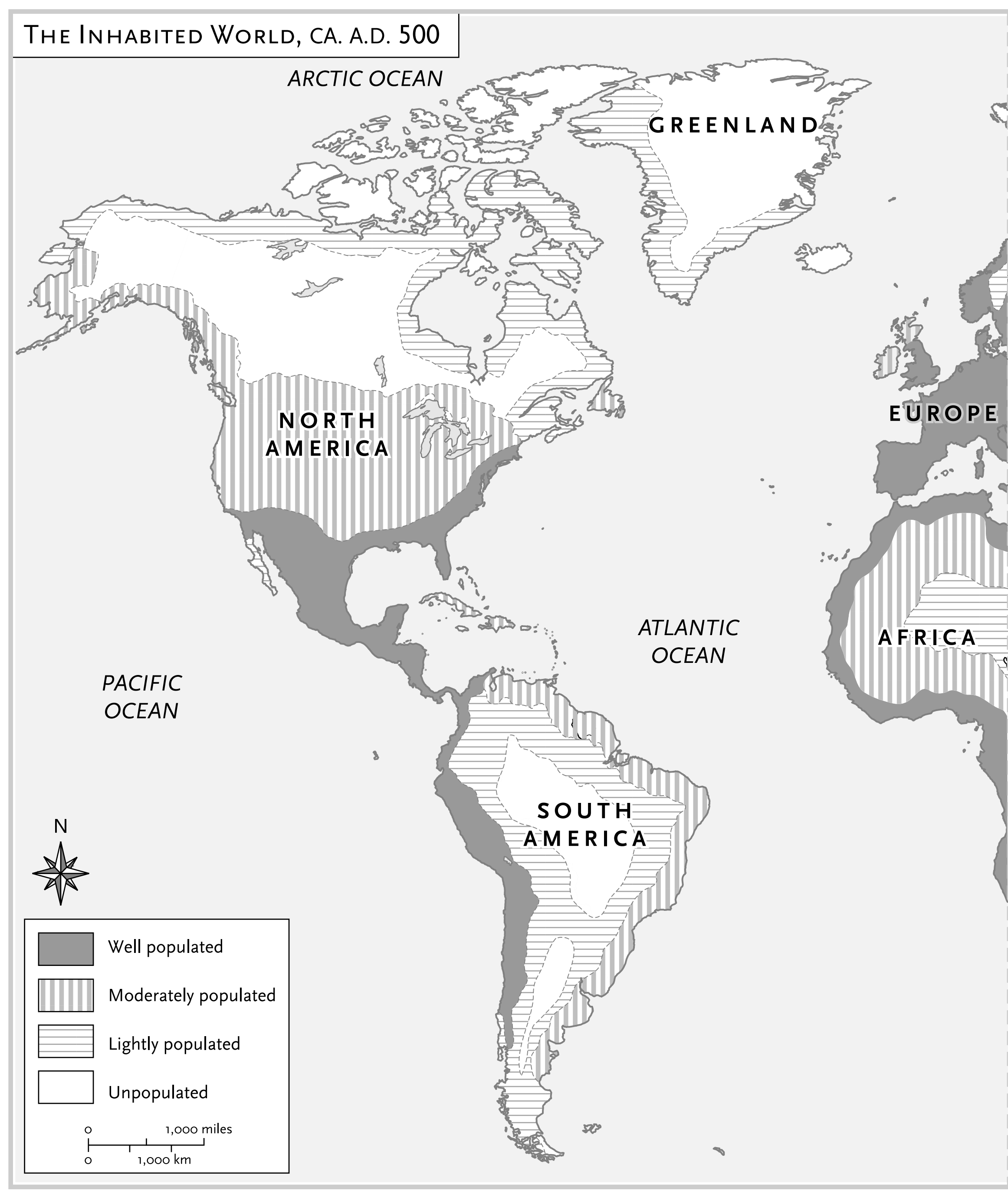
Foreign visitors to Africa, mostly merchants, rarely got beyond the coastal regions served by maritime trade routes. They were familiar with the Mediterranean coast of North Africa and had patchy knowledge of the east coast, but they were utterly ignorant of the vast extent and shape of the continent. Europeans would lack the oceangoing shipbuilding and navigational capabilities required to explore Africa's long west coast for nearly a thousand years, and European expeditions would not fully investigate and map the African interior until the 19th century.

The Pacific Ocean, meanwhile, was the preserve of those exceptional seafarers the Polyne-

This illustration from a 14th-century illuminated manuscript shows nomadic Turks on their travels. They were famous as expert riders, but even such a well-mounted traveler was limited by servants and domestic animals accompanying on foot. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2154])*

sians. Australia was long settled by A.D. 500, as were New Guinea, Melanesia, Samoa, Fiji, the Marquesas, and many other Pacific islands. The Polynesians had explored a sizable part of the Pacific Ocean's 70 million square miles, visited a large number of island groups, and, in a significant expansion in about A.D. 400, settled the Hawaiian Islands and Easter Island.

The American Indians who populated the Western Hemisphere were hunter-gatherers, farmers, and fishermen with localized geographical knowledge, but at least one major civilization, the Maya, reached the height of its power between about A.D. 300 and A.D. 900. The Maya occupied a large region in Mesoamerica (modern-day Mexico, Guatemala, and Belize). Their monumental architecture and carefully planned cities, advanced mathematics (they discovered zero independently), complex calendar, and system of hieroglyphic writing made them among the most sophisticated of the world's cultures at the time. They established commercial and diplomatic contacts with neighboring peoples, and they are known to have made maps of their own territory, evidently to record migrations, trade, and conquests. The Maya had no means of long-distance travel, however, nor a seafaring tradition. Their influence and their geographical knowledge remained purely regional.


THE INHABITED WORLD, CA. A.D. 500
ARCTIC OCEAN
GREENLAND
NORTH AMERICA
EUROPE
ATLANTIC OCEAN
AFRICA
PACIFIC OCEAN
SOUTH AMERICA
N
Well populated
Moderately populated
Lightly populated
Unpopulated
0 1,000 miles
0 1,000 km

ARCTIC OCEAN

ASIA

EUROPE

PACIFIC OCEAN

AFRICA

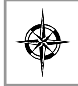
INDIAN OCEAN

AUSTRALIA

At the start of the European Middle Ages, the people of the Eastern and Western Hemispheres, separated by vast, impassable oceans, knew nothing of each other. Indeed, people everywhere were very far from having a complete geographical understanding of the world that was known to them. The world's peoples, particularly the merchants, missionaries, and pilgrims among them, were beginning to explore others' territories and broaden their horizons, however. Quite clearly, the term *Dark Ages* does an injustice to the intelligence, accumulated knowledge, practical capabilities, ingenuity, and vitality of the people who lived in the early Middle Ages.

3

Pilgrims and Missionaries of the Early Middle Ages



Traveling to holy places for spiritual purification is an ancient and nearly universal custom. The *Epic of Gilgamesh,* one of the world's oldest recorded stories and one that was widely known in Mesopotamia during the third millennium B.C., celebrates the journey of a Sumerian hero to the underworld where the gods live. Religious writings from India, the Vedic texts, dating from about 1500 B.C., prescribe pilgrimages to thousands of sacred rivers, mountains, and other sites. The ancient Greeks visited the shrines of their gods, too, particularly favoring sites where they could consult oracles and, during the Olympic Games, the great temple of Zeus at Olympia. By the beginning of the Middle Ages, the practice of taking to the road to visit holy sites and religious shrines was several thousand years old.

Between A.D. 500 and 800, the spread of three great religions—Buddhism, Christianity, and Islam—inspired the first wave of medieval long-distance travel as missionaries and pilgrims crisscrossed Europe and Asia. During the Middle Ages, only merchants would travel in larger numbers or cover longer distances than religious travelers did. Although the people traveling for religious purposes did not regard themselves as explorers, in fact many of them were true pioneers and pathfinders, and many of the accounts they wrote of their travels served to introduce remote and little-known parts of the world to a larger public.

BUDDHIST PILGRIMS ACROSS ASIA

In accordance with the Buddha's instructions, his ashes and other relics were divided after his death in 483 B.C. and placed in large dome-shaped shrines called stupas. These were located in northern India at eight sites the Buddha himself identified as places of pilgrimage, chief among them the locations of his birth and death and where he preached his first sermon and achieved enlightenment.

Spread largely by missionaries along trade routes, Buddhism rapidly established itself

From about A.D. 400, Buddhist pilgrims from as far away as China visited holy sites in northern India. This statue of the seated Buddha is in Punjab, Pakistan, formerly part of northwestern India. *(Library of Congress, Prints and Photographs Division [LC-USZ62-116439])*

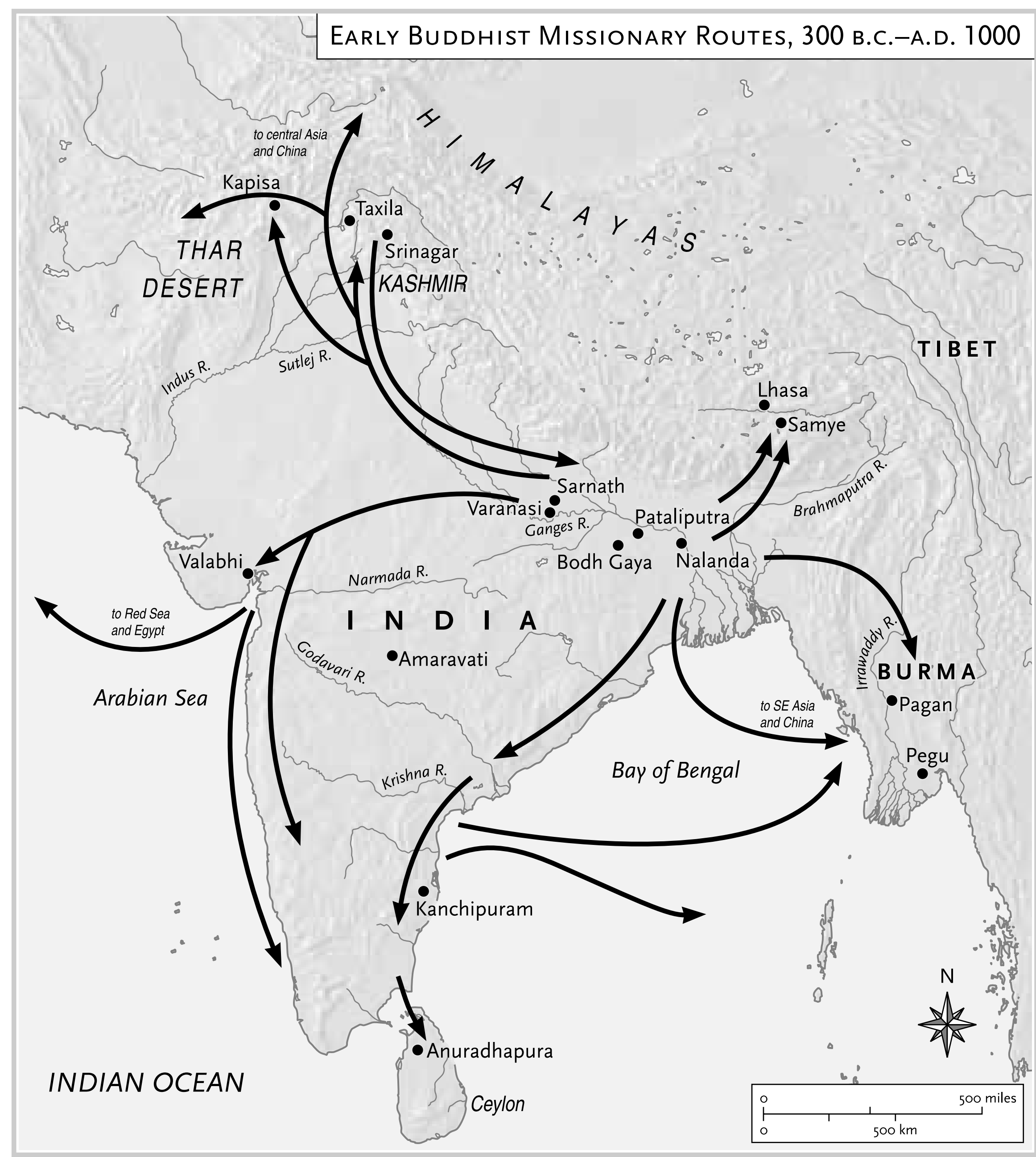
throughout southern and eastern Asia, from India and Ceylon through the kingdoms of Southeast Asia, Sumatra, and Java and into China. By the fifth century A.D., China had become a major center of the faith along with India, and close ties were maintained between their Buddhist communities.

For the next 300 years, a number of Chinese Buddhist travelers made their way to India. Although they are usually referred to as pilgrims and undoubtedly worshipped at the major shrines, they were primarily scholars seeking intellectual exchanges and the foundation texts of Buddhism (sutras). Copies of these Sanskrit texts were carried back to China, where, translated into Chinese, they formed the basis of the distinct schools and traditions of Chinese Buddhism.

The first known Chinese Buddhist pilgrim was Faxian (Fa-hsien), who traveled overland from eastern China to India in A.D. 399. Faxian spent 10 years in northern India before returning home to China by ship in an unusually stormy voyage via Ceylon and Java, bringing with him a cargo of precious Buddhist statues and texts. Faxian was able to take advantage of well-established routes and facilities for travelers. The Chinese had been renowned traders and travelers for centuries; China's strong centralized bureaucracy, the only one of its kind in the world, had mapped and built roads and guest houses throughout its enormous territory. Innumerable merchants' caravans plied the great Silk Road, connecting eastern China with Persia and thence even farther westward with Syria, while Chinese ships were reaching Malaya and Ceylon.

Trekking the Silk Road, crossing the Himalayas, or putting out to sea, many Chinese Buddhists followed Faxian on what they called a "Western journey," seeking out the holy sites and scholars of India. Historically dominated by traders, Chinese-Indian relations were maintained by Buddhist pilgrims during the Sui and Tang dynasties (589–907), a golden age for China, which had become not only the world's most technologically and culturally advanced society but also the world center of Buddhism.

The travelers were scholar-monks wishing to study Buddhist teachings and practice at their source; many learned Sanskrit, the ancient language of India, in order to study and teach in the Buddha's homeland. The majority of them recorded what they learned as well as their observations about the peoples



and lands among which they traveled in journals that make this a richly documented period.

The most renowned Chinese pilgrim was Xuanzang (Hsüan-tsang, 602–664), a Buddhist monk who visited more than 110 countries

The Himalaya Mountains present a daunting terrain to travelers. Darjeeling, India, is visible in this undated photograph with the Himalayas in the distance north of the city. *(Library of Congress, Prints and Photographs Division [LC-USZ61-915])*

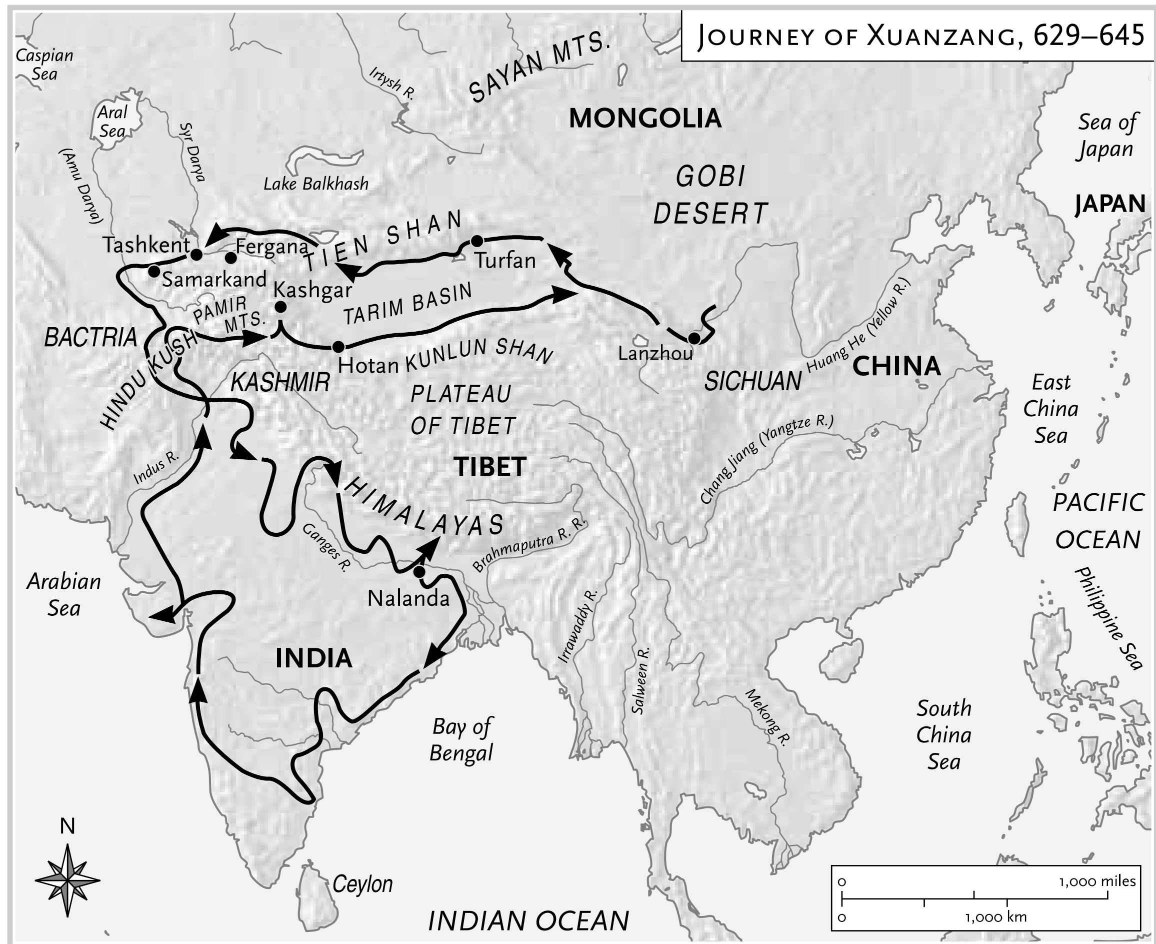
and cities and covered more than 16,000 miles during a trip to India that lasted 16 years. Many facts of his life are uncertain, but thanks to his written account, *Record of the Western Regions,* his pilgrimage is documented in more detail than any comparable journey of the age. Xuanzang set out from Sichuan (Szechuan) in southern China in 629 on his own Western journey, undertaken because of a vision in a dream and, he said, "for the sake of religious truth."

On the way, he got lost in the trackless wasteland of the Gobi Desert, running out of water and having no means of navigation "except by following the heaps of bones and the horse-dung. . . . In all four directions the expanse was boundless . . . in the night the demons and goblins raised fire-lights to confound the stars." As Xuanzang describes it, his life was saved by his horse, which led him to an oasis when he himself was stupefied by exposure, hunger, and fatigue.

After two years of spiritual preparation in Kashmir, on the present-day India-Pakistan border, Xuanzang made his way among the Buddhist temples along the Ganges River valley, noting that "millions" of them had been sacked by marauding Huns. He studied philosophy at the great Buddhist university at Nalanda in northeastern India and traveled the length of India's east and west coasts before returning overland on the caravan route to Chang'an, the Chinese imperial capital. Xuanzang had made a longer journey than any pilgrim ever had before.

Although Xuanzang had been denied official permission to make his trip, he was welcomed on his return in 645 by the emperor Taizong (T'ai-tsung; reigned 626–649), to whom he presented his *Record of the Western Regions* the following year. Xuanzang's report—dispassionate, detailed, and factual within its medieval worldview—provided the imperial administration with vital intelligence about the geography, culture, and politics of central Asia and India. It had enormous practical value to an emperor interested in organizing military campaigns in distant regions:

The Himalayan region of Kashmir lay on a major Buddhist pilgrim route between India and China. The seventh-century Chinese pilgrim-scholar Xuanzang was among those who visited Kashmir, shown here in a contemporary photograph. (*Photo Disc*)



I proceeded northwest from this country for more than a hundred miles, crossed the Rocky Desert and arrived at the Icy Mountains. They are at the northern plateau of the Onion Range, where the rivers mostly flow east. The snow that accumulates in the mountain valleys remains ice through spring and summer. Although it sometimes thaws, it soon freezes over again. The road is dangerous and difficult; cold winds are pitiless and biting. There are many ferocious dragons, who create trouble for anyone who commits an offense. . . . For even the slightest offense, a disaster will appear before one's eyes: violent winds will arise, sand will fly about and pebbles fall like rain. Anyone encountering this will die, for it is difficult to escape alive.

So useful were Xuanzang's observations, in fact, that the emperor tried unsuccessfully to convince him to abandon his religious vocation and work in the imperial administration. His pilgrimage became the subject of one of the most enduringly popular stories in China.

Numerous other Chinese Buddhists made similar pilgrimages. Among the best known are Huisheng (Hui-sheng; fifth century), Songyun (Song-yun or Sung Yun; sixth century), and Yijing (I-ching or I-tsing; seventh century). Yijing alone knew of more than 50 other pilgrims. These travelers could choose from four established routes, three overland and one by sea. The emperor or others often sponsored the pilgrimages, and the travelers took goods to barter en route. They stayed in Buddhist monasteries where they could, often carrying silk textiles and garments with which to compensate their monastic hosts for hospitality or to endow shrines.

These scholar-pilgrims were only one group among a sizable community of Buddhist travelers from various lands throughout Asia. Buddhist missionaries and priests were inveterate travelers, establishing their faith as far afield as Ceylon, Japan, and the East Indies. The seventh-century scholar Dharmapala journeyed from his home in northeastern India to Indonesia. The eighth-century Indian mystic Padmasambhava was invited to Tibet soon after that kingdom was converted and the first Buddhist monastery was built there. In 960, Song emperor Taizu (T'ai-tsu) dispatched 150 monks from China to India "in search of the law."

The prospect of journeying thousands of miles was no impediment to the Buddhist faithful, and lay people commonly traveled long distances to visit the Buddha's relics in northern India. In addition, pilgrims from as far away as Tibet and India traveled to certain sacred mountains in China, the most famous being Mount Wutai (Wu-t'ai) in the northeast of the country.

This astonishing volume of travel was made possible by the wealth, religious tolerance, and lavish patronage of China's Tang emperors (618–907). The traffic was by no means confined to Buddhists. Many Tang emperors were known for their learning and open-mindedness. Islam was introduced to China in 651. Three missionaries who visited China's imperial court introduced Nestorianism, a form of Christianity that had originated in Syria; they were Bishop Reuben (in 635), Bishop Cyriacus (732), and Bishop Adam (781). In 872, when the Iraqi traveler Ibn Wahab visited China's imperial court, Emperor Yizong (I-tsung) showed him scrolls summarizing the teachings of Christianity, Islam, and Buddhism and illustrated with pictures of Moses, Jesus, Muhammad, and the Buddha, and he was able to discuss them all.

Tang power began to decline by the end of the eighth century; the western trade routes were cut off by hostile Arabs and Tibetans a century later. During his short reign in the 840s, Chinese emperor Wuzong (Wu-tsung) suppressed Buddhism, destroying tens of thousands of temples and shrines, confiscating their wealth, and ejecting more than a quarter of a million Buddhist monks and nuns from religious life. Later rulers relaxed the suppression, but the great period of pilgrimages to India and of Chinese Buddhism was over.

CHRISTIAN PILGRIMS IN EUROPE AND THE MIDDLE EAST

By A.D. 500, Christianity had spread over a very wide geographical area based on the old Roman Empire, concentrated in western Europe and the Mediterranean basin and extending eastward into the newly established Byzantine Empire with its capital in Constantinople. As a proselytizing faith, Christianity was spread by missionaries. Centralized papal authority required regular communications

St. Augustine established Canterbury Cathedral in Kent, England, soon after his arrival there as a missionary in A.D. 597. The cathedral, rebuilt in the 12th century and shown here in an early 20th-century photograph, attracted thousands of Christian pilgrims in the Middle Ages. *(Library of Congress, Prints and Photographs Division [LC-D4-73176])*

over a large region. Early medieval Christians were consequently great travelers.

St. Patrick and St. Augustine were among the missionaries who converted the peoples of Britain and Ireland from the fifth century onward, and Irish monks themselves became famous as missionaries throughout northern and western Europe. St. Columban (ca. 540–615) left Ireland to found abbeys in both France and Italy, attracting many fellow emigrants; a contemporary biographer of one of his companions noted, "Of late so many Scots [Irish] are pilgrims that it would appear that the habit of traveling is part of their nature." (The Scots were originally a northern Irish people. They colonized Scotland and converted the native people beginning in the late fifth century in a migration that included many Christian monks.) The ninth-century religious biographer Heiric wondered in a letter to Charles I of France, "Why is it that almost the entire population of Ireland, con-

The Canterbury Tales

The Canterbury Tales, a classic work of medieval English literature, is framed as a group of tales told by a group of English pilgrims traveling on foot from London to the shrine of St. Thomas Becket in Canterbury, about 65 miles away. It was written in the early 1380s by Geoffrey Chaucer, a civil servant and diplomat.

In the tales, it is April, the beginning of fair weather for travel and therefore of the pilgrimage season. Twenty-nine pilgrims meet at the Tabard Inn in Southwark, across the Thames River from London, prior to starting their journey. Harry Bailly, the innkeeper, proposes that each of them should tell stories en route, for "It makes no sense, and really it's no fun / To ride along the road dumb [quiet] as a stone." Whoever tells the "most amusing and instructive" tale will win a free dinner at the Tabard. *The Canterbury Tales* is unfinished. Of the 120 stories projected, parts or all of only 24 survive, together with various prologues and epilogues.

The Canterbury pilgrims are taking part in an unbroken Christian tradition dating back more than a thousand years of visiting shrines and places of significance to the faithful. From the early Middle Ages, church leaders worried that pilgrimages would lead to immorality—after all, male and female pilgrims traveled together in mixed groups free of usual social constraints, and they had plenty of leisure time to get into mischief. Chaucer's pilgrims embody the clerics' worst fears.

Representing a cross-section of English society, the Canterbury pilgrims include men and women, high born and humble alike. They are variously pious, earthy, profane, self-righteous, argumentative, and jealous. Many of them flaunt expensive, stylish clothing instead of wearing the simple attire prescribed for pilgrims; some of the churchmen are worldly, gluttonous, avaricious, and hypocritical. The Wife of Bath, a five-times-married widow of means, enjoys pilgrimages as status symbols—this is at least her eighth—but only if she can travel in style.

Far from exhibiting single-minded piety, the pilgrims amuse themselves and one another with bagpipes, popular tunes, and stories about romance, wickedness, and sin. All in all, the Canterbury pilgrims are enjoying a tourist romp, and Chaucer claims that this behavior has a long tradition of its own:

Every man in his wise made hearty chere,
Telling his fellows of sportes and of cheer,
And of mirthes that fallen by the waye,
As custom is of pilgrims, and hath been many a day.

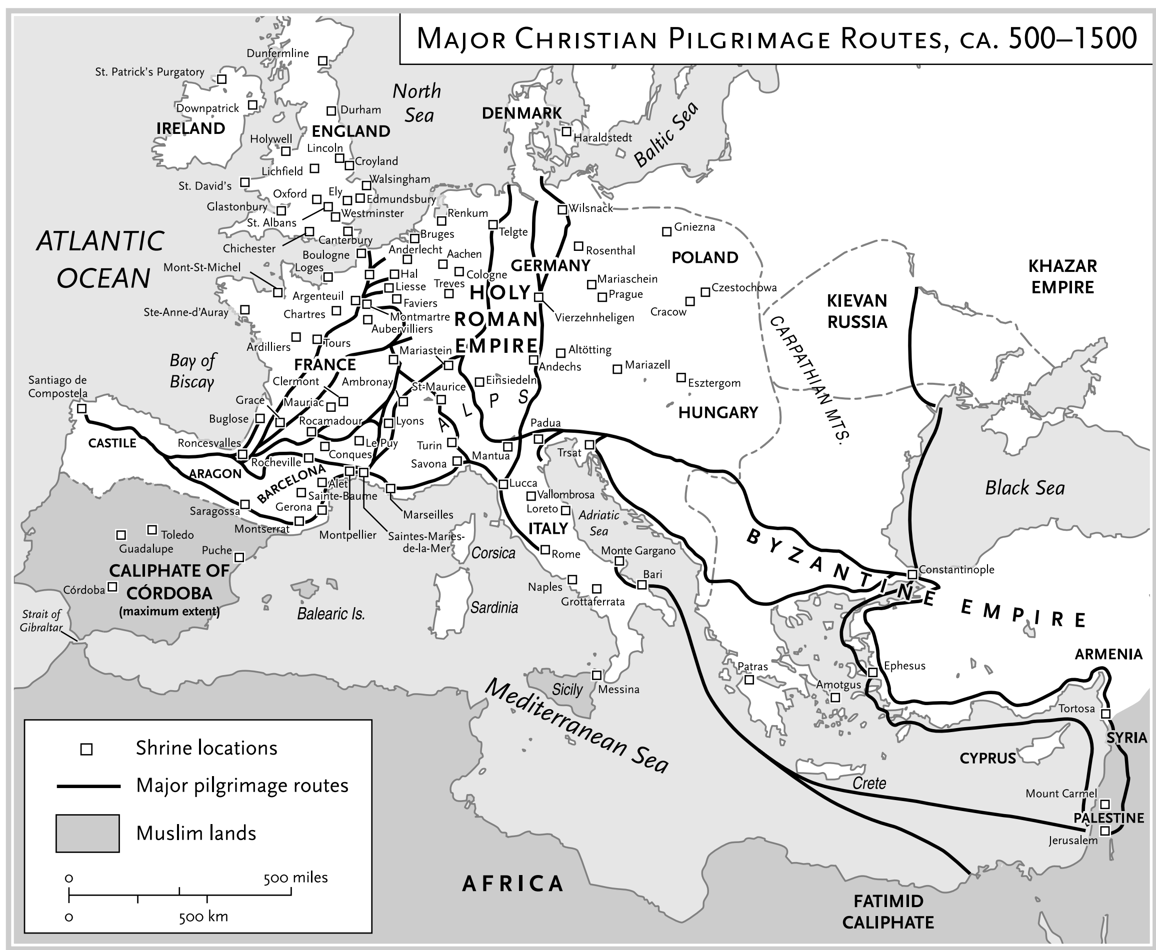
Chaucer's readers, of course, were well aware of the discrepancy between his troop of worldly pilgrims and the austere ideals of their enterprise, and that disconnect added immeasurably to their enjoyment of *The Canterbury Tales.*

temptuous of the perils of the sea, has migrated to our shores with a great crowd of teachers? The more learned they are, the more distant their chosen place of exile."

Irish monks also observed the distinctive practice of venturing out to sea in long, solitary voyages at the mercy of the weather, winds, and ocean currents. They sailed in a distinctive type of small, lightweight boat called a coracle, or curragh, made of a light wooden frame covered with animal hide waterproofed with tallow and fitted with both sails and oars. In the course of these spiritual retreats in the far northern Atlantic Ocean, Irish monks discovered the Faeroe Islands and Iceland, where they were the first settlers in the late eighth century.

The majority of Christian travelers in the Middle Ages, however, were pilgrims. These were for the most part ordinary people who spent long periods, sometimes many years, facing the physical privation, financial hardship, life-threatening hazards, and terror of long-distance travel in order to visit holy sites for the purposes of piety, penance, supplication, or prayer. Mortality was high: Scholars estimate that during some periods, 10 percent of medieval pilgrims died on their travels. The Venerable Bede (ca. 673–735), an English theologian and historian, wrote that pilgrims

Jerusalem has long been a holy site for Christians, Jews, and Muslims. In this undated photograph are visible the tall walls protecting Jerusalem's Old City, as well as the Dome of the Rock, a mosque and shrine on the summit of Mount Moriah. *(PhotoDisc)*



were motivated by the wish "to live as pilgrims on earth that they might be welcomed by the saints when they were called away from their earthly sojourn." They felt they were reenacting Jesus' pilgrimage on Earth.

Christian sites in the Holy Land connected with the life and ministry of Jesus and incidents related in the Bible were already being sought out by the faithful in the second century A.D., in an echo of the ancient requirement that Jews make annual visits to the Temple in Jerusalem. (*The Holy Land* refers to Jerusalem and the surrounding region, parts of modern-day Israel and Jordan. In speaking of the ancient region, the Holy Land is sometimes also called *Palestine*.)

Many of the earliest Christian pilgrims came from the east, especially Mesopotamia (modern-day Iraq), where Jewish communities had long been in contact with Jews living in Jerusalem. The early Christians came simply to see sites connected with Jesus, and they singled out what were to become the core sites of the Holy Land pilgrimage: the spot in Bethlehem where Jesus was born; Golgotha (Calvary), the hill on which he was crucified; the

Mount of Olives, where he ascended into heaven; and the Holy Sepulcher, the tomb in which he was buried. They often extended their travels to visit apostles' tombs and saints' shrines as well as holy hermits and monks in Egypt, Syria, and Mesopotamia. All these sites and destinations would continue to feature in later itineraries.

In the 320s and 330s, the Roman emperor Constantine, who had converted to Christianity, renovated existing sites in Jerusalem and built a magnificent New Jerusalem, with great basilicas, churches, golden and marble buildings, and public spaces. These spaces were designed specifically to accommodate large crowds of pilgrims. The discovery in 326 by his mother, Helena, of the True Cross—allegedly the very one on which Jesus was crucified—provided a potent relic that attracted thousands of Christians. By the fifth century, there were reportedly 200 hostels for pilgrims in Jerusalem.

In the early Middle Ages, pilgrims were likely to be clerics, scholars, or noblewomen. These were an educated, cultured elite whose common language was Latin, the liturgical language of Christianity. Many of them wrote or dictated accounts of their travels, recording information about routes, sites, and relics for the benefit of other would-be pilgrims. Antoninus of Placentia made a pilgrimage from his native Italy in

Bishop Arculf visited the ancient city of Tyre, shown here in an 1839 lithograph, in the 670s. *(Library of Congress, Prints and Photographs Division [LC-USZC4-3489])*

about 560–570, visiting the Sinai Peninsula, Egypt, Syria, and Mesopotamia in addition to the Holy Land. An unnamed companion wrote an account of his trip, the *Itinerarium* (Itinerary). As many pilgrim narratives do, the *Itinerarium* mixes random personal observations, fanciful notions, and hearsay such as the secondhand report that nothing can float in the Dead Sea (whose high salinity actually supports flotation very well). Some information is reliable, such as the report of the well-organized system of charitable hostels in the Holy Land. Located at customary stopping points on the pilgrim circuit, they provided shelter, food, and medical care; Antoninus estimated that in total they could accommodate 3,000 people.

The French bishop Arculf made a pilgrimage to Palestine in about 670–680, spending nine months in Jerusalem and extending his travels to Damascus, in Syria, the Phoenician city of Tyre (in modern-day Lebanon), and Constantinople. Shipwrecked in Britain on the return voyage, he related his story to his host, the Irish abbot and historian Adamnan. It is Adamnan's written account, *De locis sanctis* (On the sacred places), that provides the details of Arculf's journey. Unlike Antoninus, Arculf was a careful, empirical observer. He measured and sketched churches and shrines on wax tablets, bringing back precise plans and descriptions that enabled Adamnan to compile a detailed account of Jerusalem, Bethlehem, other Holy Land cities, and Constantinople.

Many other early medieval pilgrims' accounts survive. Among the best known are those of the Piacenza Pilgrim (ca. 570), Joseph the Armenian (ca. seventh century), Willibald (the first known English pilgrim to the Holy Land, 721), Fidelis (ca. 767), and Bernard the Wise (870).

THE DEVELOPMENT OF CHRISTIAN PILGRIMAGE

As time went on, according to the Venerable Bede, pilgrims were clerics and laypeople, men and women, rich and poor, old and young alike. Rome, home to the tombs of the apostles St. Peter and St. Paul, became a popular pilgrimage destination, too. The seventh-century West Saxon kings Caedwalla and Ina abdicated their thrones to make pilgrimages there. Contemporary literature is full of references to such pilgrims, including two seventh-century Englishmen, Benedict Biscop and Wilfrid of York, who made five and two Roman pilgrimages, respectively. The emperor Charlemagne himself made a pilgrimage to Rome in 800, his contemporary biographer Einhard remarking that he "spent some few days there in his personal devotions at the holy places."

A substantial "publishing" industry developed to serve the growing pilgrim trade: Aside from the pilgrims' own narratives, itineraries, guides to sites and accommodations, and travel guides proliferated. There were early phrasebooks in European languages, Greek, and Hebrew, and interpreters and guides competed for customers at the holy sites. By the early eighth century, Bede could draw on a substantial body of literature in compiling his edited and abridged version of Adamnan's account of Arculf's journey, *De locis sanctis.* Bede's became the definitive guidebook to the Holy Land throughout the Middle Ages, even though he himself had never left England.

Christianity and the shared experience of pilgrimage helped to create an awareness of European-ness and left indelible marks on Europe and the Holy Land. The numerous roads that were improved, bridges built, and

churches, hostels, and other buildings constructed contributed to the economic development of Europe and the Holy Land. Larger markets stimulated the manufacture and trade of Asian luxuries such as spices, silks, jewels, and perfumes. Travel and communication became safer and more comfortable. Monastic care of large numbers of weakened, injured, sick, and dying travelers led to advances in medical science.

The Christian church, too, was changed. Pilgrims endowed churches, shrines, monasteries, and other sacred sites with gifts of land, gold, jewels, cash, and other valuables that created the basis of the enormous wealth of the later medieval church. In the meantime, however, the first great wave of Christian pilgrimage ended in the ninth century. Repeated raids by Vikings, Magyars, Arabs, and other peoples made travel from Europe too unsafe.

MUSLIM PILGRIMAGES TO ARABIA

Islam was established in Arabia by the prophet Muhammad in the early seventh century. During his lifetime, Muhammad (ca.

Rome's role as the center of Christianity dates from the fourth century A.D., when Emperor Constantine built a church there dedicated to St. Peter. A fifth-century pope erected a palace on adjacent land. Charlemagne certainly visited both sites in Vatican City, as the area became known, on his pilgrimage to Rome in 800. This 1835 engraving shows St. Peter's as it was magnificently rebuilt in the 16th and 17th centuries. *(Library of Congress, Prints and Photographs Division [LC-USZ62-72077])*

Many spices were luxuries that Europeans imported from Asia. Alexandria, Egypt, was a center of the medieval spice trade. The spices in this photograph are for sale at a traditional market in Luxor, Egypt, on the Nile River. *(PhotoDisc)*

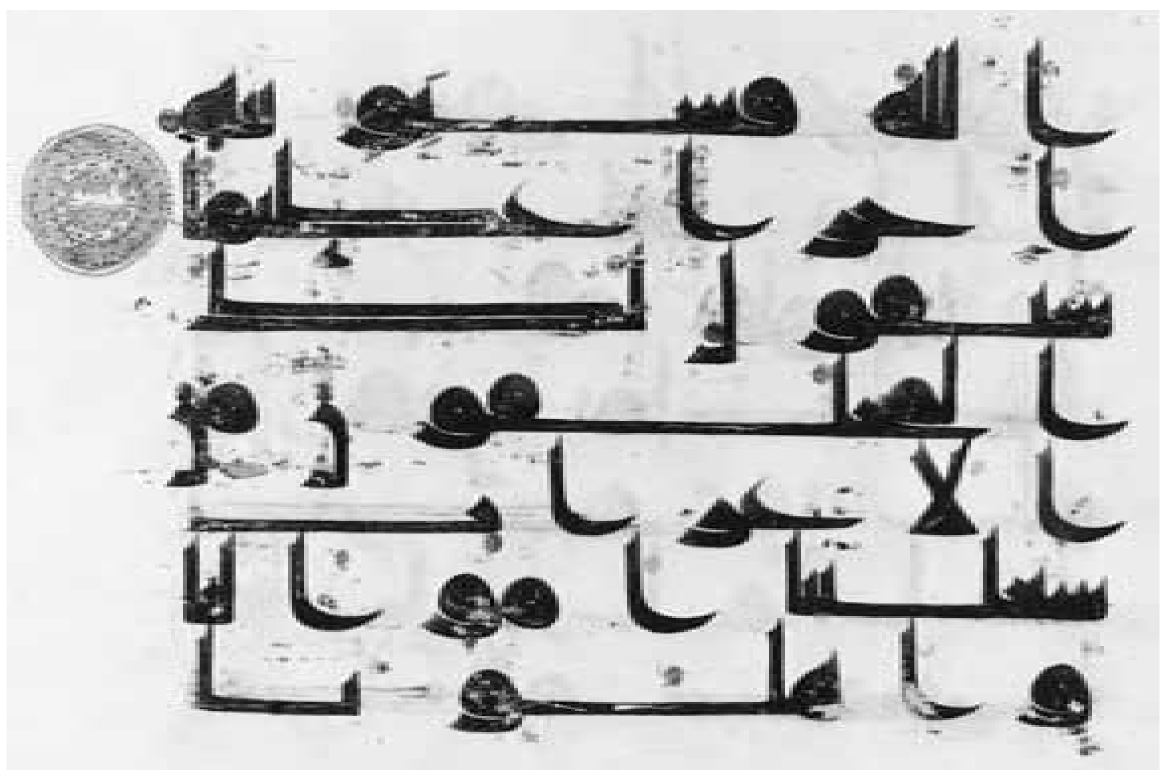
570–632) united the often quarrelsome tribes of Arabia into an Islamic confederacy. Within 20 years of the Prophet's death, Muslim missionaries had reached China, and Islamic armies had defeated and taken over the Byzantine and Persian empires, thereby spreading Islam far beyond the Arabian Peninsula. Within a century, a vast territory extending from Spain through North Africa and the Middle East all the way to India was transformed into a region bound by religion, language, culture, and economic ties. Islam's remarkably rapid spread was the result of conversion, alliance, and conquest; the sophisticated Arab trade network, reaching from the Mediterranean to China, speeded the process. The obligatory Islamic pilgrimage to Mecca, called the hajj, was instrumental in melding the diverse peoples and cultures of this huge empire into a community.

Pre-Islamic Arabs had a long history of making annual pilgrimages to sites associated with pagan gods. In the holy months of the year, when tribal feuds were put aside in favor of communal religious interests, Arabs would travel to specific sites in Arabia. Large fairs and markets were held annually along the major routes and at the pilgrimage sites. Mecca, in the west-central part of modern-day Saudi Arabia, was the site of a religious

sanctuary known as the Kaaba. Because of its origins as an oasis on ancient caravan routes between the Mediterranean and southern Arabia, East Africa, and South Asia, Mecca was also an important regional trade center. By the Middle Ages, it was the site of one of the largest commercial fairs in the world, attracting merchants from Europe, Arabia, and the Indian Ocean. These were the pagan traditions Muhammad adapted to the hajj.

The Qur'an (Koran), the sacred text of Islam that is regarded by Muslims to be the word of God as revealed to Muhammad, instructs, "The hajj to the House [of Worship, in Mecca] is a duty humankind owes to God, that is, for those who are able to journey to it." All adult Muslims physically, mentally, and financially able to undertake it, women and men alike, are required to make a hajj once in their lifetime. Those who complete it are entitled to take the honorific title *hajji.*

Muslims therefore journeyed long distances from every corner of the vast Islamic world and became the most mobile population that ever existed before the modern age of mass travel. Mandatory pilgrimage made the west coast of Arabia one of the most heavily visited places on Earth. Muslim travelers frequently wrote detailed descriptions of what they saw, creating a rich travel literature and a highly sophisticated science of geography. Caravan convoys of pilgrims con-



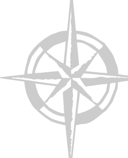
The Qur'an (Koran) is the sacred text of Islam; Muslims believe it contains the word of God as revealed to the prophet Muhammad. This passage from a 10th-century manuscript of the Qur'an is written in Kufic, an early Arabic script. *(Library of Congress, Prints and Photographs Division [LC-USZ62-67593])*

Muslims on their annual pilgrimage to Mecca traveled in caravans that probably looked much like the one resting in this late 19th-century photograph of bedouins in the Syrian Desert north of the city. *(Library of Congress, Prints and Photographs Division [LC-USZ62-93097])*

verged on Mecca from south Arabia and what is present-day Yemen, Syria, and Iraq. Many others came by ship to Jidda, the port serving Mecca and the major Arabian port on the Red Sea. Groups of North African pilgrims traveled eastward to Egypt, either by sea or along a parallel overland caravan route. They would join Egyptian Muslims in Cairo; from there, groups would set off for Mecca every 24 hours. This final leg of the journey—from Cairo through the port of Aqaba (in modern-day Jordan), along the eastern shore of the Red Sea, and overland to Mecca—took 35 days. Central Africans traveled overland to Port Sudan on the east coast of Africa, and sailed across the Red Sea to Jidda before making their way overland to Mecca, where they would join Muslims from Europe, the Middle East, and Asia in the annual supranational congress of the hajj.

Islamic authorities maintained forts along the major routes, and to ensure pilgrims' safety, they provided caravans with military escorts and offered protection money and gifts to the tribes controlling the territories through which pilgrims had to pass. Sea and overland journeys alike were dangerous: Seafarers faced the usual hazards of piracy, storms, and shipwreck, while pilgrims traveling on foot might easily get lost in the desert, attacked by bedouins (nomadic peoples of the Arabian, Syrian, or North African deserts), smothered in sandstorms, or drowned by flash floods. Illness and accidents threatened

Jidda is the closest port city to Mecca; consequently, many Muslim pilgrims pass through it each year. This 1950 photograph shows a quay in Jidda where dhows (long narrow boats) and launches can dock. *(T. F. Walters/Saudi Aramco World/PADIA)*



The Hajj

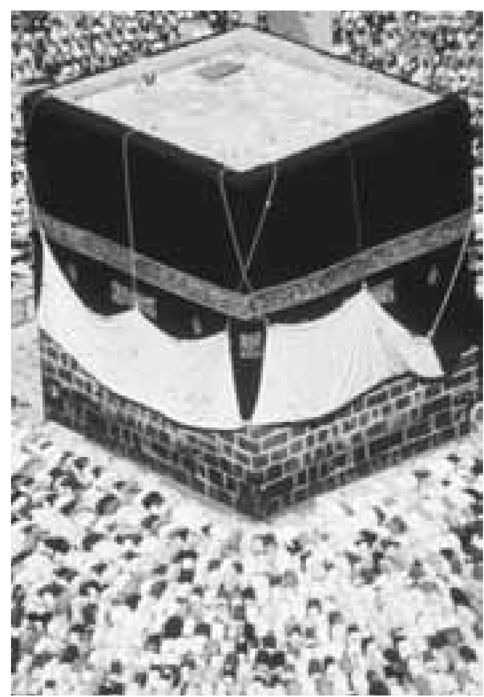
Muslims from all over the world gather every year in Mecca, Saudi Arabia, for the hajj, the great pilgrimage required of every Muslim. The hajj takes place from the eighth through the 13th days of Dhul Hijjah, the last month of the Islamic calendar, bringing every year to a joyful close. Muhammad specifically prescribed the times, locations, and rituals of the hajj. In addition to the observances in Mecca itself, the pilgrims were directed to travel to several nearby sites.

Before crossing the boundary into Mecca, pilgrims consecrate themselves with prayers and by putting on simple garments—two white unsewn cloths for men and plain dresses and head coverings for women—and removing all their jewelry or other signs of wealth. They ritually wash, trim their hair and nails, and vow to abstain from all worldly activities during the hajj. In this way the *umma,* or Islamic community of faith, comes together in complete equality.

The first part of the pilgrimage takes place in Mecca itself. Within an open courtyard in the center of the Great Mosque (Masjid al-Haram) is the holiest site in Islam: the Kaaba, a cube-shaped sanctuary believed to have been built by the prophet Abraham as the first house of worship. Embedded in the Kaaba is the sacred Black Stone, a block of black basalt believed to have been part of Abraham's original shrine and reincorporated into the structure by Muhammad. The

The Great Mosque, or Masjid al-Haram, shown in this undated photograph, is at the center of Mecca and is one of the major sites Muslims visit during the hajj. *(S. M. Amin/Saudi Aramco World/PADIA)*

pilgrims enter the holy mosque right foot first, touch and kiss the stone (or move as if to do so), and then walk counterclockwise around the Kaaba seven times. Next, they complete seven laps between two small hillocks adjacent to the mosque. The pilgrims then shave their head or trim their hair. Special prayers accompany each of these actions. Apart from serving as the first part of the Greater Hajj, this part of the ritual satisfies the requirements of the *umrah,* or Lesser Hajj, which may be performed at any time of year.



The Kaaba, which contains the Black Stone, is located in the center of the Great Mosque. In this undated photograph, pilgrims bow before the Kaaba as the *kiswah,* a cloth covered in Koranic verses and carried by pilgrims to Mecca each year, is lowered over it. *(S. M. Amin/Saudi Aramco World/PADIA)*

Having completed the Mecca rites on the morning of the eighth of Dhul Hijjah, pilgrims making the Greater Hajj travel to Mina, about five miles east of Mecca, to spend the night. At sunrise on the ninth, the pilgrims go to the Mount of Mercy (Jabal al-Rahma) in Arafat, about nine miles east of Mecca, where the prophet Muhammad is believed to have preached his last sermon in 632. At Arafat, as Muhammad prescribed, a "day of standing" is observed, with sermons and prayers from noon until sunset. After sunset, the pilgrims travel to Muzdalifah, halfway between Mina and Mecca. There they spend the night.

Before sunrise on the 10th, the pilgrims return to Mina for the last three days of the hajj. At this "place of sacrifice," they commemorate Abraham's willingness to sacrifice his son Isaac as a test of his faith (a story told in the Bible in Genesis 22). At Mina, each pilgrim ritually throws pebbles at three pillars over the course of the three days. A ritual sacrifice and eating of sheep and goats and shaving or trimming of the hair finishes this part of the pilgrimage.

The pilgrimage itself is concluded in Mecca on the 13th day of Dhul Hijjah with seven more circuits around the Kaaba. It is preferable, though optional, to follow the hajj with a visit to Muhammad's tomb in Medina; many pilgrims also visit other holy sites.

Each year, many Muslims make the pilgrimage to Mecca called the hajj. In this 1889 picture, Muslim pilgrims camp outside Mecca. *(Library of Congress, Prints and Photographs Division [LC-USZ62-87338])*

constantly. Extremes of temperature were yet another factor.

The pilgrims lodged en route at inexpensive hotels funded by endowments from wealthy Muslims. The richest might take goods to sell en route to pay expenses, although before entering the sacred precincts of Mecca, all were required to shed every sign of wealth and put on the same simple ritual garments in order to create a truly egalitarian community of the faithful.

The Muslim elite met during these journeys, and scholars often visited distant colleagues or stopped at mosques to teach along the way. Merchants might do business en route, and they would come to know other traders and products, routes, and foreign customs and languages. Yet the hajj reinforced the central values of Islam—equality before God and the community of the faithful. Muslim pilgrims, rich and poor, representing a multitude of language, ethnic, and political groups, came together on equal terms.

Because two or three major languages were understood in common by Muslims of all cultures and classes, pilgrims were able to create an extensive network of direct communication. Pilgrimage united the Islamic world

MUSLIM PILGRIMAGE ROUTES TO MECCA, 800–1500

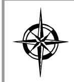
at a time that it was establishing itself over a huge geographical area, replacing local tribal religions and cultures with a common religious, social, economic, and political culture and providing a strong social cohesion unknown in the medieval West.

During their journey to Mecca for the hajj, medieval merchants sometimes traded goods. In this undated photograph, shoppers browse the Egyptian Spice Bazaar in Istanbul, Turkey, near the Grand Bazaar, both of which date to the 17th century. These continuously functioning shopping areas are a source of goods for travelers and residents alike. (*Photo Disc*)

Pilgrims of every faith continued to travel throughout the Middle Ages. The destinations and customs of Christian pilgrims varied slightly over time, while Buddhist and Islamic practices continued essentially unchanged. But it was pilgrimage in the early medieval period that most profoundly changed the thinking, culture, and environment of European, Asian, and North African societies. Thousands of individual travelers gained first-hand knowledge of near and distant lands, peoples, and customs. The travel guides they used and their own written accounts created a large body of travel literature that disseminated knowledge about the wider world to those who remained at home. Although pilgrims were largely uninterested in mixing with people of different beliefs or in visiting sites sacred to other religions, they developed a broad sense of community with their co-religionists across political and cultural boundaries. The world was widening.

4

The Vikings



By the early medieval period—about A.D. 750—the European continent was already well traveled. Kings and their messengers, armies, Christian priests and church officials, pilgrims, and merchants could be seen in large numbers on what remained of the old Roman roads. One European region was a stark exception to this mobility: the far northern region known in the present day as Scandinavia.

Scandinavia was geographically remote, located across the frigid North Sea and Baltic Sea from the European mainland. It was largely, and forbiddingly, mountainous and cold. These lands were essentially terra incognita, unknown land, to continental Europeans, who believed that the frozen northern latitudes were uninhabitable and whose attentions were instead drawn south and east. Scandinavian peoples were further isolated by their language (Old Norse was distinct from other European tongues) and by their paganism. In turn, these peoples knew nothing of the geographical discoveries made in the Mediterranean, Africa, and Asia by the ancient Greeks and Romans, the Hindus, and the Arabs.

The Northmen, or Norse, as they were called, were composed of a number of peoples living in modern-day Denmark, Norway, and Sweden. They shared an ethos, or set of values, that prized strength, courage, and martial prowess as the basis of a person's reputation. "The Seafarer," a poem written by their descendants in England sometime before the 10th century, summarizes their expectation that each man

> . . . will work ere he pass onward,
> Frame on the fair earth 'gainst foes his
> malice,
> Daring ado, . . .
> So that all men shall honor him after
> And his laud beyond them remain 'mid the
> English.

SUPREME MARINERS

Their ferocity and skill as fighters indirectly gave the Northmen their popular name—the Vikings. From the late eighth through the mid-11th centuries, Norse raiding parties rampaged along the northwestern European coast, repeatedly swooping in from the sea,

Scandinavia's mountainous, rocky terrain is apparent in this photograph of the Hardanger Fjord on the western coast of Norway. *(Library of Congress, Prints and Photographs Division [LC-DIG-ppmsc-06139])*

looting and burning property, and murdering and capturing people. It is this image of vicious piracy that survived them. The name *Viking,* dating from the eighth century, derives from the word *vík,* referring either to a "creek" or "inlet"—safe moorings for their ships during raids—or to an "encampment"—their temporary camps. In Old Norse, *víking* meant "piracy"; and the pirates were *víkingr.*

But the Vikings had another, more peaceable side. During the same period, the Swedes established an extensive trading network from the Baltic through eastern Europe, reaching to the Black and Caspian Seas and Constantinople (present-day Istanbul, Turkey). And in an amazing feat of maritime skill, the Danes and Norse sent exploratory, mercantile, and colonizing expeditions across the North Atlantic, settling successively in Iceland, Greenland, and finally North America. Their mastery of an enormous geographical area from Canada to Constantinople was one of the greatest achievements of medieval exploration.

Land travel was difficult in medieval Scandinavia. On the other hand, the region is distinctive in its thousands of miles of coastline and many thousands of islands, and from early times, water provided the easiest means

The Norse Sagas

Storytelling was a popular entertainment among the Norse, and hundreds of the tales they told for their own enjoyment have survived in written form, providing a rich record of their history and culture. The word *saga* can be defined in various ways, but as a literary term, it denotes a prose epic, a story of heroes and their deeds.

The Norse sagas reinforced Viking ideals of heroism, bravery, loyalty, and justice, but they also told of less lofty behavior—romance, revenge, and family feuds. Young lovers, farmers, and outlaws took their place alongside chieftains and royalty in a broad social panorama. Sagas were written in Latin and Norse vernaculars in Norway, Iceland, and Ireland. The authors of some are named; others were written anonymously.

The Icelanders were the acknowledged masters of the genre: Storytelling was especially valued in their isolated farmsteads from the earliest days of the Norse settlement there in the ninth century A.D. Generations of Icelanders learned and repeated the sagas from memory until they were finally written down, probably beginning in about 1200. New ones were constantly being

(continues)

The Norse settled Greenland, depicted on this historical map with vignettes of people hunting seals and whales. *(Library of Congress, Prints and Photographs Division [LC-USZ62-77699])*

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composed and added to the literary hoard, which came to include sagas about Norse myths and legends, kings, bishops, family histories, and the Norse expansion into Europe and settlement of Iceland and Greenland.

Among the Icelandic sagas two stand out for their descriptions of the Norse voyages to North America in about A.D. 1000. These are the *Groenlendinga saga* (Saga of the Greenlanders), probably written in the late 12th century, and *Eiríks saga* (Saga of Erik the Red), which probably dates from the 13th century. Their accounts of Leif Eriksson's discovery of Vinland are slightly different; scholars believe that the earlier *Groenlendinga saga* is more reliable.

Although much of the information in the sagas is historically accurate, scholars are not sure of the precise proportion of fact and invention they contain. Despite their inconsistencies and ambiguities, the Norse sagas present a detailed, near-contemporary record of the individual and collective lives of the Vikings and of their history, culture, technology, and knowledge. As a body of literature, they are regarded as one of the finest literary achievements of the Middle Ages.

of communication. Centuries of fishing and trading in northern seas and rivers made the Northmen superb mariners: Early medieval Scandinavian shipbuilding, seamanship, and navigation were the finest in the world.

VIKING SHIPS

The Vikings owed their success in raiding, colonization, and trade to their advanced shipbuilding technology. By the mid-eighth century, their ships were powered by sails rather than oars, and they were stabilized by long keels. These innovations enabled the Norse to seek adventure across open seas at a time when their European counterparts were largely limited to coastal sailing. It would be another 600 years before other European shipwrights, navigators, and mariners could match the Vikings' skill.

The workhorse of the Viking raiding fleets was the longship, a distinctive type of seagoing craft that was larger, lighter, and more flexible than anything previously produced. This was a long, graceful vessel whose bow and stern curved upward to end in a ferocious carved dragon's head and tail (they were sometimes called dragon boats). Its keel was an enormous single timber; its sides were clinker built, that is, with overlapping planks fastened with iron rivets, or clinkers.

At sea, Viking longships were powered by means of a single large, square sail, made of rough wool and often striped in red, green, and blue. When in shallow water or if the wind failed, they could be rowed by pairs of rowers sitting on benches: 15 pairs of long sweep oars would be typical, although King Canute (Knut) of Denmark (ca. 995–1035) had a longship with 69 pairs. They were steered with a rudder on the right-hand side of the ship as one faced front (the "steer-board," hence *starboard,* side). Longships ranged from 45 feet to 75 feet in length; they were capable of carrying

three dozen people, in addition to food and water, cargo, and livestock. Warships were tarred black, their sides hung with the brightly painted shields of the warriors onboard.

Norse longships had a very shallow draft, that is, the ship's bottom did not go much below the water's surface. Fully laden, they could float in water only a few feet deep, allowing them to navigate rivers, and they were light enough to be pulled up onto the land; both of these features made them perfect for raiding. This elegant and powerful design served Viking mariners for 300 years.

Equally important were the oceangoing cargo ships known as *knarr*s. Large, stable, and strong, these were the first boats in history that could withstand heavy open seas. They were broader and heavier than longships, with a lower bow and stern, but otherwise similar in being clinker built, powered

Shown here, in an 1893 photograph, is a replica of a Viking longship, or dragon ship. The warriors' painted shields are hung along the sides to provide extra protection against the sea. *(Library of Congress, Prints and Photographs Division [LC-D4-21183])*

King Canute ruled Denmark, England, and Norway variously from 1014 until 1035. This is an 18th-century English portrait. *(Library of Congress, Prints and Photographs Division [LC-USZ62-120668])*

by either a single woolen sail or oars, and steered with a side-mounted rudder. They were partly decked, or covered over, to protect passengers, and their large capacity was designed for cargo. *Knarr*s were the ships in which Norse explorers and settlers crossed the Atlantic.

NAVIGATING THE SEAS

The Vikings had a long history of exploring around unknown northern coasts and pushing into uncharted rivers. Sailing close to shore, they observed the common navigational technique of calculating their location by recognizing familiar coastal landforms and landmarks and identifying flora and fauna specific to particular localities. By the eighth century, Viking navigators had detailed knowledge of the coasts of the Baltic Sea, the North Sea, and Britain and northwestern Europe. In the ninth century, a Norseman named Ottar reached the Arctic Ocean. Looking for new sources of walrus for fur and ivory to trade, he explored the northernmost coast of Scandinavia and the White Sea before sailing home to write about his discoveries.

Viking navigators hugged coastlines where they could, but they sailed willingly in uncharted waters and out of sight of land; they could stay at sea for days at a time. They had neither compasses nor detailed nautical charts, and their precise navigational methods at sea are not fully understood. Latitude was their primary guide. They devised a system of four cardinal directions, and they recognized that the Pole Star indicated true north; they could thus calculate approximate latitudes by measuring the angle of the star. Norse mariners simply sailed along the western Norwegian coast to the known latitude of their destination, then steered due west until they reached it. The *Landnámabók* (Book of settlements), a 12th-century chronicle of the settlement of Iceland, describes this method:

> From Hernar in Norway sail due west. You should see Shetland on a clear day, and have the Faeroe Islands halfway below the horizon. Sail so far south of Iceland that you do not see the land, but you should encounter seagulls and whales. This takes you to the south tip of Greenland.

They also used dead reckoning, a simple technique in which a voyage is broken down into segments, each of known direction and a given number of days' duration. The same saga indicates the Vikings' understanding of North Atlantic geography:

> Wise men report that from Stad in Norway it is a voyage of seven days west to Horn in Iceland, and from Snaefellsnes [in western Iceland] it is four days' sail west to Greenland, at the point where the sea is narrowest. . . . From Reykjanes in southern Iceland it is five days' sail south to Slyne Head in Ireland, and from Langanes in northern Iceland it is four days northward to Svalbard in the Arctic Sea.

These were crude methods given the uncertainties of winds, currents, tides, and

weather, but skillful Viking navigators were thoroughly familiar with conditions along their regular routes and knew how to adjust for them. In shallow waters, navigators could sample the seabed and tell from its composition where they were. At sea, they inferred the existence of islands from distant cloud formations and the flight patterns of seabirds. The Vikings' confident mastery of the sea should not obscure the reality of the danger and hardship they faced. Many ships were lost at sea, shipwrecked, or destroyed in raids. The North Atlantic is a cold and unforgiving environment; the physical discomfort aboard ship is well captured in another passage from "The Seafarer":

> . . . there I oft spent
> Narrow nightwatch nigh the ship's head
> While she tossed close to cliffs. Coldly
> afflicted,
> My feet were by frost benumbed.
> Chill its chains are; chafing sighs
> Hew my heart round and hunger begot
> Mere[Sea]-weary mood.

VIKING TACTICS AND STRATEGIES

It was their maritime skill that enabled the Vikings to begin their career of deadly attacks and raids on their neighbors in the eighth century. Their motives were several. Foremost was undoubtedly that the Viking chieftains needed to maintain their power and status by buying the loyalty of the wealthiest and most powerful inhabitants of their territories. Their chief occupation was accordingly to obtain wealth by extortion, piracy, and plunder and to distribute it to their followers. Where they could extort money without a fight, they usually did. Otherwise, they attacked in devastating lightning raids, taking what they wanted and destroying whatever was left. For three centuries the Norwegians and Danes terrorized the people of Ireland and Britain, France, Spain, and the Mediterranean. They chose places and times to attack with precision.

Their method was to come in with anything from several to dozens of longships, and dozens to hundreds of men. Viking longships approached their targets silent and undetected until they were within an hour of landfall. Then they would suddenly heave

The Vikings are best known for their raids on western European countries, especially Great Britain, Ireland, France, and Spain. This helmet would have served as part of a Viking's armor. *(Library of Congress, Prints and Photographs Division [LC-USZ62-71594])*

Despite Ireland's coastline of steep, rocky cliffs, the Vikings conducted numerous raids on Irish monasteries and ports. *(PhotoDisc)*

into view and inexorably close in on their helpless victims. The raiding Norse would completely despoil a territory, mercilessly slaughtering people in the streets, in their houses, and in church, capturing others to sell into slavery (the capture of slaves to trade or sell was an important motivation for their raids). They plundered whatever could be carried away—cash, food, gold and silver, and other luxury items—robbed graves, and torched entire towns.

Long since converted to Christianity, the British Isles and western Europe were studded with monasteries that had accumulated significant wealth in the form of gold and silver, cash, ritual vessels, and other valuables. Isolated and undefended monastic communities were easy targets for plunder, and these were

the Viking raiders' earliest targets. Ports and trading centers, rich in portable wealth—coins, commodities, and luxury items—were similarly singled out.

In the mid-ninth century, the Norse adopted two new strategies. In some instances, local kings began to pay the Norse to stay away. This protection money, or tribute, might even be demanded after a raid to guarantee that it would not be repeated. The Vikings needed more than cash and gold, however. Largely confined by mountains to coasts, fjords, and river valleys, Scandinavia's population was outgrowing the available space. Norwegians, in particular, hemmed into a narrow region along their southwestern coast, needed more arable land to accommodate the younger sons of their nobility. The second major strategic change, therefore, was territorial expansion: Instead of simply raiding, the Vikings began to conquer foreign kingdoms in order to establish their own settlements. By 1060, in fact, they had established a kingdom in distant Sicily and southern Italy.

THE NORSE IN THE BRITISH ISLES

The British Isles provided the Vikings' earliest target. The Danes made their first attack on England in about 790 and harried the eastern, southern, and southwestern coasts of Britain mercilessly for the next two centuries. In addition to its mild climate, England offered rich farmland and opportunities for trade. In 865, according to a contemporary English chronicle, "a great heathen army," believed by modern scholars to number between 500 and 1,000 men, landed on the east coast. Over the next 15 years, Vikings conquered and occupied the kingdoms of Northumbria, Mercia, and East Anglia, killing the English kings and installing their own chieftains across most of northern, central, and eastern England.

The raiders were followed by a wave of Norse, mainly Danish, farmers and traders, who settled a vast area that came to be known as the Danelaw. The Viking immigrants intermarried with local people, became Christians, and assimilated, but the language, laws, social structure, place-names, and customs they introduced were to exert a lasting influence on half of England.

The Norse occupation of this territory was formally recognized in a treaty by Alfred the Great (849–899), king of Wessex, after he stopped their westward expansion by defeating them in battle in 878. But Danish attacks on the Atlantic coasts recurred in the late 10th century. *The Anglo-Saxon Chronicle,* a history of England written from the ninth century onward, gives a melancholy list of attacks:

> 997. In this year the enemy army went round Devonshire to the mouth of the Severn [River], and there plundered and laid waste the land, and killed the inhabitants as also in Cornwall, and also in Wales and Devon . . . the enemy brought about great devastation . . . they burnt and slew everything that was in their path; . . . and took incalculable booty on board their ships. . . .
>
> 1003. Exeter was destroyed. . . .
>
> 1004. Fleet to Norwich, plundering and burning the whole town. . . .

The Danish king Canute jointly ruled Scandinavia and England for nearly 20 years (1016–35). His successors were unable to retain the English crown, however, and in the mid-11th century, Viking rule in England finally came to an end. Ireland, too, was a target of the Norse raiders. The *Annals of Ulster,* a medieval Irish chronicle, describes how in

Welsh clans were converted to Christianity in the sixth century, and Norse raiders targeted monasteries in Wales in the early 850s. Accustomed to rugged coastal terrain like northern Wales, shown here, the Vikings were successful in their plundering, but they neither subjugated nor settled this wild region. *(PhotoDisc)*

820, "the sea spewed forth floods of foreigners over [Ireland], so that no haven, no landing-place, no stronghold, no fort, no castle might be found, but it was submerged by waves of Vikings and pirates." Ireland became a major Viking trading center, and of the many fortified ports they created there, some developed into major cities, including Dublin, Waterford, Cork, and Limerick.

THE NORMANS OF FRANCE

The wealthy but weak Frankish kingdoms in what is modern-day France fell victim to Viking raids from 810 onward. The Vikings' attacks, plundering, destruction, and, ultimately, settlement in France roughly paralleled their activity in England. They looted Paris in 845. The French monk Ermentarius of Noirmoutier lamented in the 860s, "The endless flood of Vikings never ceases to grow bigger. Everywhere Christ's people are the victims of massacre, burning, and plunder. The Vikings overrun all that lies before them, and none can withstand them."

In France, the Vikings dominated the river valleys, particularly those of the Seine and the Loire in the northwest of the country. Their pattern was to raid during the summers and spend the winters safely encamped on islands

in the estuaries, where the sea meets the mouths of rivers. The Norse scored a major coup in France in 911 that was to change the course of both French and English history. In that year, the French king Charles the Simple paid an obscure Viking leader to protect the Seine River valley against other Norse invaders. Converted to Christianity and baptized as Rollo, the Viking chief was created a duke and awarded possession of a large territory in northern France. Viking settlers poured in and assimilated, adopting French language and culture; in time, the region was named Normandy (after the immigrant Nor[th]men), and the Nordmanni ("the north people") became the Normans. In 1066, Rollo's descendant William, duke of Normandy (ca. 1028–87), led a massive seaborne invasion of England and defeated King Harold II. Known to posterity as William the Conqueror, he established a Norman royal line and brought a second tidal wave of Scandinavian influence to bear on England.

THE VIKINGS MOVE EASTWARD

While the Norwegians and Danes were busy in western Europe, the Swedes were active in the east. Their location on the Baltic Sea offered enormous commercial potential, and the Norse expansion eastward was based on

Crossing the Baltic Sea and following rivers on the European continent, the Swedes eventually reached the Black Sea, which allowed them direct access to Constantinople. This 1842 illustration shows the Bosporus, a strait that links the Black Sea and the Sea of Marmara, a region well known to the Swedes. *(Library of Congress, Prints and Photographs Division [LC-USZ62-66702])*

trade. The Swedes fulfilled their early ambitions to control the trade routes and adjoining territories between northern Europe and the Black Sea. Sweden had direct access via the North Sea to the trading centers of western Europe and Britain. Across the Baltic, the Dnieper and Volga river systems wound through eastern Europe, then, via the Black Sea, the Swedes' routes reached south to Constantinople, Baghdad, and the land routes to Asia.

Along these routes, furs, ivory, fish, wool, and slaves flowed southward and were exchanged for gold and silver and luxury items such as fine cloth, clothing, and gems: Millions of medieval Asian and Arabian coins have been found in excavations along the Baltic coast. Among the trading posts the Swedes established were the foundations of Kiev (in present-day Ukraine) and Novgorod (in present-day Russia), where their chieftains were installed as rulers by the latter ninth century. (The very name *Russia* is derived from the Finnish term for the Swedes, *Ros* or *Rus.*) Scandinavian settlers—traders and farmers—came in their wake and by 1050 had thoroughly assimilated among the native Slav population. By the late 10th century, the Rus were established in Constantinople, the capital of the Byzantine Empire. Renowned as warriors, the Scandinavians were sought as mercenaries; they entered the Byzantine emperor's service, eventually forming his personal bodyguard, the famous Varangian guard.

WESTWARD EXPLORATION AND COLONIZATION

In contrast to their widespread expansion into Europe, the Vikings' greatest achievements in pure exploration were westward. This part of their story, at least, is one of fearless expeditions and peaceful colonization, and it took them all the way across the North Atlantic to Iceland, Greenland, and eventually to North America, 500 years before Christopher Columbus (1492).

By all accounts, the Vikings were an adventuresome people, and part of their motivation in taking on the unknown Atlantic Ocean was undoubtedly joy in the challenge. They apparently harbored a belief that unknown lands lay to the west. Other important factors were their perennial land-hunger, their quest for trading opportunities, and a need for raw materials.

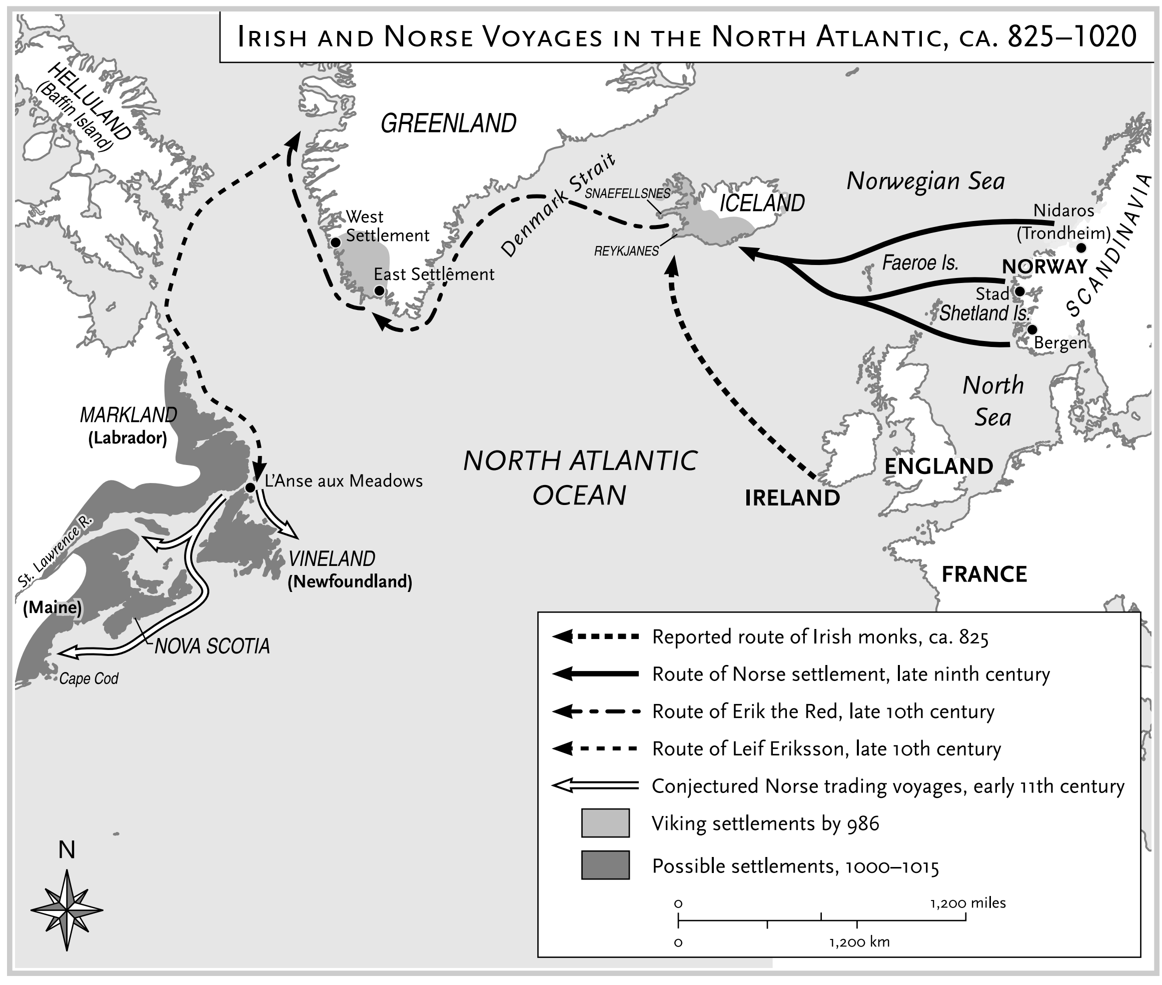
From Scandinavia, the summer winds and currents of the North Atlantic favor westward voyages, carrying sailors to Ireland and on to Greenland; from there, the Labrador Current washes southward past modern-day Labrador to Newfoundland, in Canada. This was indeed the vector of the Vikings' discoveries. They began in the early 800s with the permanent settlement of the uninhabited small island groups of the far north—the Shetland and Orkney Islands north of Britain and the Faeroe Islands, farther north still. The first Viking expedition to reach Iceland was led by Flóki Vilgerdason in about 860, some 70 years after the arrival of the few Irish monks who were its original inhabitants. As the *Book of Settlements* tells it, "The spring was extremely cold. Flóki climbed a high mountain and looked north toward the coast, and saw a fjord full of drift-ice. So they called the country Ice-Land, and that has been its name ever since." Flóki's disgust with the climate did not dissuade others from exploratory voyages; one group soon afterward stayed for a year.

The first group of permanent Norse settlers in Iceland, led by Ingolf Arnarson and Leif Hrodmarsson, arrived in 874 with their families, servants, and some Irish slaves. They lived in isolated homesteads, fishing, hunting, and farming sheep and cattle. They were soon

joined by others, mostly Norwegians escaping the harsh and overbearing rule of King Harold I Fairhair (ca. 870–ca. 940). All the arable land on Iceland was fully occupied within 60 years. By the end of the 10th century, the population of Iceland was 60,000.

Ships regularly plied the sea-lanes between Iceland and Norway. The Icelanders exported fish and coarse woolen cloth. Because of the climate and poor natural resources of their island, they were utterly dependent on the Norwegian timber, iron, and grain they imported in exchange. The continuance of the colony was possible only as long as this maritime lifeline was maintained, and famine and hardship were a way of life.

Looking farther west, Erik the Red is credited with the Norse settlement of Greenland. He was evidently an extremely violent man, even by Viking standards: In about 982, having already been twice exiled for manslaughter, he was exiled from Iceland for three years for yet another killing. He knew that 50 years earlier, the Icelander Gunnbjörn had been blown off



course on a voyage home from Norway and accidentally reached Greenland, 300 miles beyond his intended destination.

During his exile Erik explored Greenland, marking out potential homesteads and farms. According to the *Islendingabok* (Icelanders' book) by 12th-century historian Ari Thorgilsson, Erik named it Greenland because "people would be much more tempted to go there if it had an attractive name." In 986, he set off to settle the island, with 25 ships full of Norwegian and Icelandic families and their livestock. Only 14 vessels reached their destination.

Two main settlements were established on the more temperate southwest coast, at present-day Nuuk (Godthåb) and Julianehåb. Like the Icelanders, the Greenlanders lived by farming, hunting, and fishing, and they were reliant on imported timber, metals, and grain. Greenland was immediately added to the North Atlantic shipping routes, but its complete economic dependence and very long supply line made its long-term survival as a Norse colony problematic. Climatic deterioration during the so-called Little Ice Age adversely affected North Atlantic navigation; further, it drove the Inuit of northern Greenland southward into Norse territory. Norse colonists never numbered more than about 3,000, and by the end of the 15th century, the last of them left Greenland to the native peoples.

REACHING A NEW WORLD

With their mastery of the North Atlantic nearly complete and their expeditionary zeal still strong, it was perhaps inevitable that the Vikings would eventually reach North America. Historians now agree that Erik's son Leif Eriksson explored the North American coast in about 1000. The story of the Norse exploration of Greenland and North America is told in two Icelandic sagas recorded in the 12th and 13th centuries, *Eiríks saga* (Saga of Erik the Red) and the *Groenlendinga saga* (Saga of the Greenlanders).

The *Eiríks saga* insists that Leif found "lands which he did not even know existed," and many scholars believe that Leif reached North America by accident after being blown far off course on a summer voyage from Norway to Iceland. Leif, however, was not necessarily the first European to sight the New World. The *Groenlendinga saga* reports that the Icelandic merchant Bjarni Herjulfsson had been blown off course on a voyage from Iceland to Greenland in 986 and had told Leif Eriksson of finding an unknown land far to the west. According to this version, Leif acquired Bjarni's ship and set out in the summer of 1001 specifically to find and explore that country.

In either case, Leif sailed westward and reached North America. The Greenlanders' saga goes on to describe how he first sighted a frozen waste he called Helluland ("Flat-stone-land," generally agreed to be Baffin Island, in Canada, lying southwest of Greenland and north of Hudson Bay). Sailing southward along the coast, he came to a wooded region with grasslands and an enormous stretch of sandy beach. He named this place Markland ("Forest-land," tentatively identified as Labrador). Sailing farther south, he came to a temperate forested land where wild wheat and grapevines grew. This place he named Vinland ("Wine-land"); modern scholars identify the likeliest locale as Newfoundland and suggest that the so-called grapes, which do not grow at this latitude, were in fact some kind of cranberry or red currant. The Norse built themselves shelters and explored during the winter and spring. They returned to Greenland in the summer to tell of the plentiful "grapes," salmon, timber, and grassland they had discovered.

Of several subsequent Norse voyages to North America, none resulted in permanent

Leif Eriksson sailed to and explored North America. In this 1996 photograph, a man dressed in traditional Viking clothing and armor poses at L'Anse aux Meadows in Newfoundland, Canada. *(Parks Canada/Shane Kelly/1996)*

settlement. Leif's brother Thorvald led one group of colonists to Vinland in 1003, but after only two winters, hostilities with Native Americans caused them to leave. Another serious attempt to colonize Vinland came a year or so later when Eriksson relative Thorfinn Karlsefni organized a fleet of three ships carrying more than 100 settlers and their livestock. They are believed to have spent their first winter on the shore of the St. Lawrence River estuary, where Snorri was born to Thorfinn and his wife, Gudrid, becoming the first European child to be born in North America.

The Vikings referred to the Native Americans as *skroelings* ("barbarians" or "weaklings") but were nevertheless willing to trade with them, the Norse taking animal skins in exchange for red cloth. Workable business relations turned hostile, however, and Thorfinn's group abandoned their settlement after a few years. Yet another expedition to Vinland led by Erik the Red's daughter Freydis failed after she murdered her partner. The Vikings finally gave up on North America sometime between 1010 and 1025. They may have continued to harvest much-needed timber in Markland, but it evidently proved unsound economically to maintain settlements there. In their own terms—the desire to colonize—the Viking adventure in North America must be judged a failure.

THE VIKINGS IN HISTORY

Archaeological evidence supports the North American claims of the Norse sagas. In the 1960s, the Norwegian husband-and-wife team, explorer Helge Ingstad and archaeologist Anne Stine, discovered and excavated the remains of a Norse settlement at L'Anse aux Meadows, at the northernmost tip of Newfoundland in Canada. The structures there included more than a dozen dwellings, a forge, and an iron smeltery. Material from the site has been scientifically dated to about the year 1000, making this the earliest known European settlement in North America. Whether it was Leif Eriksson's original camp and whether it was a colonial settlement or simply a trading base are open questions.

The Vikings' outstanding achievements in the North Atlantic exerted no significant historical influence. One reason was that Scandinavia and the North Atlantic were so remote and inhospitable that few outsiders ventured there. Another was that the Viking expansion was not a systematic imperial, military, or commercial effort: Scandinavian emigrants and settlers were individuals, families, or small groups. The Vikings' North Atlantic colonies were politically and economically marginal, and details of their North American explorations, though recorded, remained untranslated and inaccessible in Old Norse sagas for

L'Anse aux Meadows in Newfoundland is a site of Norse settlement in North America excavated in 1960 and now designated a national historic site in Canada. Historians and archaeologists are not sure if this is the Vikings' Vinland. *(Parks Canada/Andre Cornellier)*

The Vinland Map

In 1965, Yale University announced "the most exciting cartographic discovery of the century": a medieval world map in faded ink on a folded sheet of worm-eaten parchment. It showed Iceland, Greenland, and, farther west, an island labeled "Vinilanda Insula" (Vinland Island). Vinland was unquestionably located in North America, yet the map dated from 50 years before Christopher Columbus's first voyage across the Atlantic in 1492. The university claimed to have acquired the earliest map ever to show North America; it established that news of the new continent had spread among Europeans long before Columbus set sail.

There was no doubt that *Vinilanda Insula* denoted the territory Leif Eriksson had called Vinland, for the map bore a Latin inscription: "By God's will after a long voyage from the island of Greenland to the south toward the most distant remaining parts of the western ocean sea, sailing southward amidst the ice, the companions Bjarni and Leif Eriksson discovered a new land, extremely fertile and even having vines, the which island they named Vinland."

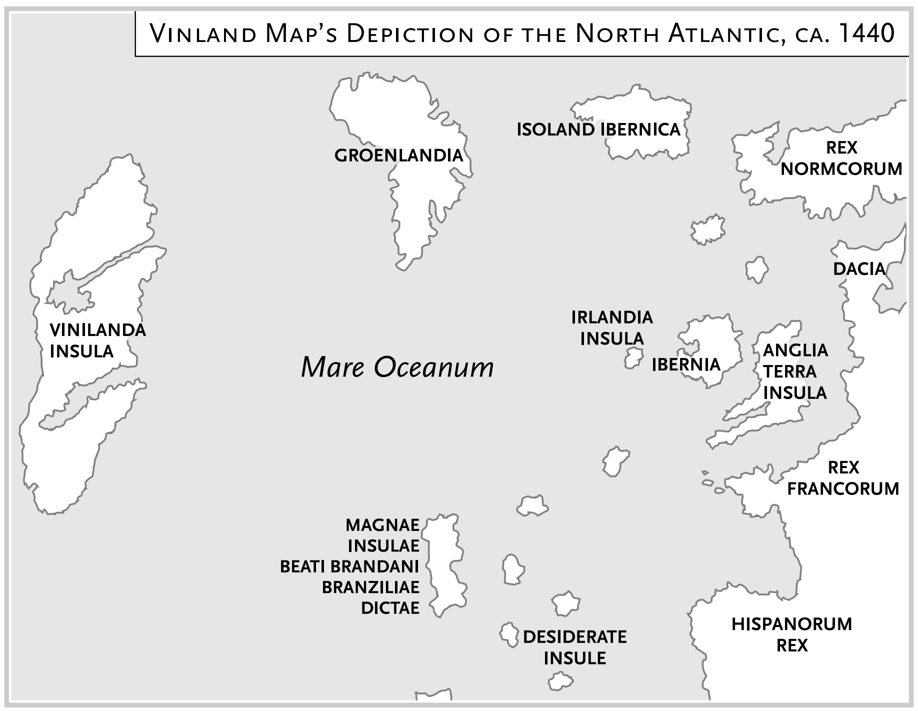
The map had surfaced in the 1950s, and by the time of Yale's announcement, scholars had exhaustively studied it, examining its parchment, testing its ink, analyzing its script, and poring over the meaning of its geographical information. They had dated the map to around 1440. Not only did it show North America, it also depicted the outline of Iceland ("Isolanda") accurately, and it was the earliest map to correctly show Greenland ("Groenlandia") as an island—a fact not incorporated into any other European map until the 1600s. This was a pre-Columbian treasure.

Or was it? Passionate scholarly controversy immediately erupted over the map's authenticity. More tests were carried out, with dismaying results. In 1974, Yale retracted its claims. The parchment was agreed to be 15th-century, but newly available chemical tests showed that the ink dated from the 1920s or later: The map was a clever modern forgery. But then another raft of scientific tests subsequently seemed to confirm its medieval credentials. Yale hosted an academic conference in 1995 at which most of the participants agreed that the Vinland Map was probably genuine.

hundreds of years. The sagas also contain much information about the Vikings' unmatched shipbuilding, navigation, and seamanship, and this knowledge, too, was effectively lost until it was too late for it to be useful.

A few Europeans did hear about the North Atlantic discoveries in the 11th century. The Danish king Sweyn II related the story to the German historian Adam of Bremen, who recorded the king's "description of the islands of the north" in his *History of the Archbishops of Hamburg-Bremen* (1075). Adam added, "He spoke also of yet another island of the many found in that ocean. It is called Vinland because vines producing excellent wine grow there." This is the earliest known written men-

Champions and skeptics continued to weigh in on the argument. Numerous experts have spent a great deal of modern ink publishing scholarly analyses of the map's Latin; its handwriting, spelling, and geography; the materials; the results of electron microscopy and trace element analysis, and the like. To date, no one has been able to offer conclusive evidence one way or the other, and the Vinland Map remains a tantalizing mystery.



tion in Europe of the existence of North America, but it had no practical effect. There is no evidence to connect Adam's text with the 15th-century Spaniards who were the next Europeans to cross the Atlantic Ocean.

By contrast, information about Viking raids was widely disseminated by medieval European historians. These writers were on the receiving end of the barbarous and terrifying Norse invasions; they painted the Vikings simply as thugs who reveled in violence, murder, and mayhem. The historical record was thus skewed, and not until relatively recently have the Vikings' contributions to maritime technology, exploration, settlement, and trade been fully appreciated.

5

Muslim Travelers of the Middle Ages

Within a century of its foundation in Arabia in the seventh century, Islam had spread west across North Africa to Morocco and southern Spain (Andalusia) and eastward as far as India. Islam's arrival in East Africa and India guaranteed Muslim traders increasingly stable commercial routes, both overland and across the Indian Ocean to destinations in the Far East. Islam was eventually carried to coastal China, introduced by Arab importers and exporters.

Desire for knowledge about world geography for religious and commercial reasons ensured that travel literature became popular as Islam extended beyond Arabia. Between the eighth and 11th centuries, while medieval Europe was still mired in wars, disease, and intellectual stagnation, Islamic culture was enjoying its golden age. The study of mathematics, medicine, astronomy, botany, and other sciences flourished. Islamic arts and architecture were more sophisticated than any found in Europe. Libraries in Baghdad (in present-day Iraq), and Córdoba (Spain)—the intellectual centers of the Arabic world—filled with new literature: religion, poetry, biography, and history. Ancient Greek texts were translated, debated, and preserved for future generations of explorers at Baghdad's center for learning, the House of Wisdom. Travel writing acquired new stature amid this atmosphere of scientific inquiry.

Much as later explorers from other cultures tended to view their discoveries only in terms of what they sought—goals such as wealth, national power, or opportunities for religious conversion—medieval Muslim travelers and geographers nearly always presented their observations of the world as they related to Islam.

TALES AND DICTIONARIES

Centuries-old trade routes followed by Arab merchants extended the scope of Islamic travel writing halfway around the globe. The first Arab accounts of life in the Far East appeared in observations by Suleiman (Sulay-

man) al-Tajir, a merchant who traded in South Asia and China around 840. An anonymous editor published Suleiman's descriptions of Asian seaports, the manufacture of Chinese porcelain, and Islamic trading communities. The legendary tales of Sinbad the Sailor, part of the *Arabian Nights,* or *Thousand and One Nights,* date from this era.

The first Arab geographers studied and preserved new translations of ancient Greek theorists such as the philosopher Aristotle and the Greek-Egyptian astronomer and geographer Ptolemy. From the start, however, Arab scholarship combined such material with new information from the farthest borders of the Islamic world. Around 820, a global geography with maps was compiled by the Baghdad-based mathematician al-Khwarizmi. (His other works include the mathematical treatise whose Arabic title provided the modern world with the word *algebra* [*al-jabr*].)

Another geographic compiler who wrote about the world without seeing much of it in person was Ibn Khurdadhbih, the postmaster general of Baghdad. In about 846, he completed the *Book of Roads and Provinces,* providing maps and descriptions of trade routes by which mail was exchanged across the Muslim world, including Asia. Similar geographical data and travel commentary remained a fixture of Arabic scholarship for centuries. New writers continually updated travel literature, as the 13th-century Greek-Arab geographer Yaqut al-Hamawi did in his influential *Dictionary of the Lands.*

Personal travel accounts soon began to appear in Islamic literature. Al-Ya'qubi's *Book of the Countries* (891) was one of the first accounts of both Islamic provinces and foreign lands. A native of Baghdad, al-Ya'qubi lived in Armenia and provinces within modern Iran, Afghanistan, Turkmenistan, and Uzbekistan.

Some Arab stories and travel accounts endure as part of popular culture. Sinbad the Sailor, a character in the *Arabian Nights,* is an example. The title page of an English chapbook (a small, cheaply made publication produced in the 18th and 19th centuries) about Sinbad demonstrates the story's longevity and popularity. *(University of Pittsburgh Library, Elizabeth Nesbitt Room, Chapbook Collection)*

After journeying to India, al-Ya'qubi became the first Arab geographer to document travel westward to Egypt and the Maghreb, the name by which northwestern Africa is known. In addition to cataloguing countries, governments, and natural resources, al-Ya'qubi was

Al-Ya'qubi visited Uzbekistan and described it in his account of his journeys. In this 1870s photograph, people shop and trade goods at the bazaar in Samarkand, a city in present-day Uzbekistan along the ancient Silk Road. *(Library of Congress, Prints and Photographs Division [LC-USZ62-82725])*

one of the first sources of information about gold trade routes north to Africa's Mediterranean coast from sub-Saharan Africa, which Arabs called Bilad al-Sudan, the "Land of the blacks."

MEADOWS OF GOLD

One of the most popular and influential Islamic geographical works was al-Mas'udi's *Meadows of Gold.* The 10th-century book relied on the work of Ptolemy, but al-Mas'udi's extensive travels allowed him to challenge early Greek misperceptions and advance original ideas.

After leaving his Baghdad home in the early 900s, al-Mas'udi traveled widely in Persia (present-day Iran) and the province of Gujarat on India's northwest coast, a significant trading center and stopover for oceangoing travelers, as well as home to thousands of Muslims. Al-Mas'udi sailed extensively, continuing by

The *Rihla*

As Arabic geographical literature developed, travel dictionaries and analyses of Greek translations were fleshed out by firsthand accounts by Muslim travelers. Such travel books, or *rihla*s, were especially popular between the 12th and 14th centuries. Most described pilgrimages from North Africa to Mecca. Aside from their practical value to other pilgrims, the best *rihla*s were rich in observations of people, religious personalities, governments, and regional customs across the Islamic world.

Not all Arab *rihla*s described pilgrimages. Ibn Fadlan was a Baghdad diplomat ordered in 921 to travel deep into modern-day Russia to try to convert the Bulghar and other tribes to Islam. In addition to returning with information about the landscape, weather, and customs of northern tribes, Ibn Fadlan's *rihla* contains colorful descriptions of traders called the Rus from the vicinity of modern Sweden, whom he met near the Volga River. He was revolted by the Rus, whose hygiene made them seem to him to be "the filthiest of God's creatures." He described the Rus tradition of cremation, particularly the elaborate ceremonies accorded dead men of wealth, who were exhumed after 10 days in a grave and seated aboard a flaming ship, accompanied by an executed slave girl, livestock, food, and strong drink. Ibn Fadlan's disapproval of the spectacle must have been obvious to his hosts:

> *One of the Rus was at my side and I heard him speak to the interpreter, who was present. I asked the interpreter what he said. He answered, "He said, 'You Arabs are fools.'" "Why?" I asked him. He said, "You take the people who are most dear to you and whom you honor most and put them into the ground where insects and worms devour them. We burn him in a moment, so that he enters Paradise at once." Then he began to laugh uproariously. When I asked why, he laughed. He said, "His Lord, for love of him, has sent the wind to bring him away in an hour." And actually an hour had not passed before the ship, the wood, the girl, and her master were nothing but cinders and ashes.*

sea to Ceylon (Sri Lanka) and possibly China, before eventually returning to Basra (in present-day Iraq) by way of Madagascar, Zanzibar, and Oman. Al-Mas'udi completed *Meadows of Gold* in Basra in 947 before moving on. *Meadows of Gold* could be blunt, as when it described Egypt as "the old home of the Pharaohs and the dwelling place of tyrants . . . a land where one can become rich but where one does not want to dwell because of troubles and disorders which depress one." Despite this uncomplimentary portrait, al-Mas'udi spent his last days in Cairo, perhaps influenced by his observation that "people live there to an advanced age." He wrote constantly until his death in 957, producing influential books about history, geography, travel, and nature. He cited his own experiences and reports of other Arab seafarers in disputing Ptolemy's misconception that the Indian

Ocean was a closed sea. Al-Mas'udi's interest in science and the environment set him apart from more casual observers. In addition to describing people and lands, he was a perceptive observer of weather, climate, geology, and the evolution of plants and animals.

FACE OF THE WORLD

The oldest surviving Islamic maps are found in *Description of the Earth*—a frequently used title, also translated as *Picture of the Earth* or *Face of the World*—by Ibn Hawqal (Ibn Hauqal). After leaving his native Baghdad in 943, Ibn Hawqal appears to have spent 30 years traveling as a merchant or perhaps as a refugee because of his minority Shiite Muslim faith. He first went west to northwest Africa, then visited Andalusia before traveling south to the desert oasis city of Sijilmassa (Tafilalt, in modern-day Morocco), an important stop on the gold trade caravan route between the Niger River and the Moroccan port city of Tangier. He collected information about Africa south of the Sahara Desert, noting the names of kingdoms along the growing trade route eastward from Morocco to Sudan.

After returning to the Middle East around 965, Ibn Hawqal headed into central Asia and visited Bukhara, an important city in Uzbekistan on the overland silk trade route to China. By 973, he had passed through Egypt and

North Africa to settle in Sicily, where he compiled his maps and wrote commentaries on the societies he had encountered. Thanks to a meeting with al-Istakhri, another Islamic geographer and cartographer, Ibn Hawqal was able to include part of Sind (present-day Pakistan) in his work.

Drawing on travelers' reports and his own reminiscences, Ibn Hawqal's work described people and places ranging from the primitive tribes living near Russia's Volga River to the sophisticated beauty of Islamic Spain, which he described from his own experience:

> There is running water everywhere, forests and orchards, and rivers with sweet water. Abundance and ease are characteristic of life; the enjoyment of it and the means of acquiring wealth are equally accessible to the great men and the little ones, and these blessings are even extended to workers and to artisans thanks to low taxes, to the excellent condition of the land, and because the prince does not impose heavy demands upon his people.

Although Ibn Hawqal's work contained mistakes, he corrected other long-held misperceptions, such the Greek belief that the equatorial regions were a "torrid zone" whose intense heat made them unfit for human life. Ibn Hawqal could be dismissive and sometimes wildly misleading about peoples beyond Dar-ul-Islam—the Islamic world—but his overall accuracy made his work popular and gave it practical value for other travelers.

BEYOND GEOGRAPHY

While some Muslim geographers were content to reach their conclusions in the academic centers of Baghdad and Córdoba, al-Maqdisi (al-Muqaddasi) was dedicated to learning about the world in person. The author of the classic *Best Divisions for Knowledge of Regions* (985) was raised in Jerusalem. He did not visit Spain or India but traveled across much of the rest of the Islamic world, preferring to trust his own perceptions and expand upon the work of previous academic geographers. "There is nothing that befalls travelers of which I did not have my share, barring begging and grievous sin," he wrote, admitting that circumstances occasionally led him to stray from Muslim customs:

> At times I have been scrupulously pious; at times I have openly eaten forbidden food. . . . I have ridden in sedans and on horseback, have walked in the sandstorms and snows. I have been in the courtyards of the kings, standing among the nobles; I have lived among the ignorant in the workshops of weavers. What glory and honor I have been given!

For all of the appeal of al-Maqdisi's work as an adventure, his attention to detail gave his writing deeper significance. Sociology, politics, archaeology, economics, and even public works were included in his portraits of the places he had seen.

Another well-traveled Muslim intellectual was al-Biruni, a widely respected mathematician, physicist, physician, poet, historian, geologist, and astronomer. He was also a talented linguist who spoke at least seven languages, and this allowed him to compare and analyze geographical information from a variety of sources, from ancient Greek texts to contemporary reports. During his career, he became attached to the court of Mahmud of Ghazni, a sultan (Muslim sovereign) who funded the transformation of his Afghan

Al-Biruni, a Muslim intellectual, traveled to and settled in India and eventually wrote a *History of India,* in 1030. In this photograph by William Henry Jackson of a traditional scene, several men row a narrow passenger boat in Calcutta, India, in 1895. *(Library of Congress, Prints and Photographs Division [W7-556 B (a)])*

capital into a major cultural center by repeatedly invading India. Ironically, while such looting earned Mahmud the hatred of Hindus, the incursions presented an opportunity to al-Biruni. He settled in India and produced the first thorough Islamic portrait of the country and its diverse cultures, a *History of India* (1030).

THE GEOGRAPHER AND THE KING

An unusual partnership between a Muslim geographer and a Christian king produced some of the most influential scientific literature of the Middle Ages. Around 1138, a noted Moroccan geographer named al-Idrisi (al-Edrisi) was invited to Palermo by Sicily's Norman ruler Roger II, who was an avid student of geography. Al-Idrisi had traveled through much of North Africa, Asia Minor, and Europe, perhaps as far north as England. Al-Idrisi and Roger II sent investigators abroad to collect geographical and navigational data, which was evaluated and compiled at court in Palermo.

Al-Idrisi's most famous map was a type called a planisphere, a representation of a sphere on a flat surface. Made of silver, it was an enormous—and accurate, for its time—map of Europe, northern Africa, and western Asia. Al-Idrisi's reputation, however, rested equally on his geographical opus, originally entitled *Pleasure Excursion of One Eager to Traverse the World's Regions.* Al-Idrisi dedicated the book and its extensive collection of maps to Roger II when the king died shortly after the work's completion in 1154. Subsequently, the

Islam, Travel, and Geography

Even more so than trade, religion inspired Muslims to travel and study geography. One of the five duties, or "pillars," of Islamic faith requires that every Muslim pray five times daily while facing Mecca, the holiest of Islamic cities, located in western present-day Saudi Arabia. Determining the precise direction of Mecca from points across an increasingly large Islamic world made geography a basic and legitimate field of study.

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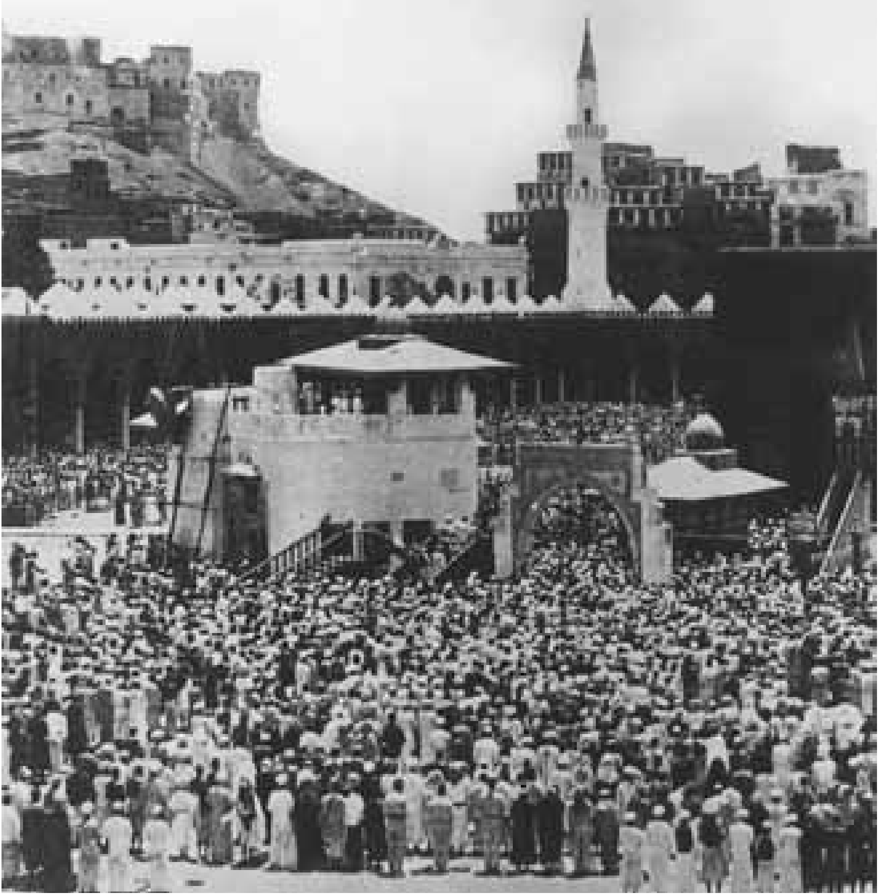

The holiest city of the Islamic faith, Mecca is open only to Muslims. Many gather annually at the shrine of the Kaaba in the Great Mosque's courtyard, as shown in this 1880s photograph. *(Library of Congress, Prints and Photographs Division [LC-USZ62-99278])*

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One duty of Islam requires every Muslim to visit Mecca once in a lifetime, if possible. The duty of making this pilgrimage, called the hajj, added fresh importance to the study of navigation and other practical sciences of value to pilgrims trying to reach sacred sites associated with the prophet Muhammad. The religious duty of Muslims to extend hospitality to one another made travel safer. While normal hardships remained, travelers expected a warm reception from fellow Muslims wherever they traveled in the Islamic world. Treatment of Muslims in foreign lands was a constant topic, both in the writings of travelers and in geographies compiled by nontraveling scholars.

When al-Idrisi visited Palermo, Sicily, around 1138, the great cathedral had not yet been built. Construction for it was begun in 1185 while Sicily was still ruled by the Normans, descendants of the Vikings who had taken over part of France in the 800s. The cathedral's architecture, characterized as Sicilian Norman, combines Norman, Byzantine (eastern Greek), and Arabic elements. *(Library of Congress, Prints and Photographs Division [LC-USW3-039908])*

result of their partnership became better known as the *Book of Roger.*

Despite the accuracy of al-Idrisi's cartography and the insights his descriptions still provide into medieval life in Mediterranean, the *Book of Roger* was neglected for centuries. The planisphere was destroyed by looters. Later European explorers were unaware of the *Book of Roger,* for despite the high quality of its research, a translation from the original Arabic into Latin was not published until 1619. Early copies of the manuscript, however, still survive, immortalizing the name of al-Idrisi's patron and cementing the Moroccan traveler's reputation as one of the greatest geographers of medieval times.

IBN JUBAYR

The *rihla* of Ibn Jubayr became a literary model for other travelers' memoirs. While serving as secretary to the governor of Granada, Spain, in 1182, Ibn Jubayr was forced by his employer to drink seven cups of wine. As recompense for having inflicted this indignity, which violated the laws of Islam, the governor gave Ibn Jubayr seven cups full of gold coins, which he used to fund a pilgrimage to Mecca. His journals of his hajj were of great value to geographers and travelers.

Leaving Spain in 1183, Ibn Jubayr first went to Egypt, where he saw one of the "seven wonders" of the ancient world, the Lighthouse of Alexandria. In his journal, Ibn Jubayr described the nearly 400-foot landmark, whose imposing tower and mirrored light guided mariners:

> It can be seen for more than seventy miles, and is of great antiquity. It is most strongly built in all directions and competes with the skies in height. Description of it falls short, the eyes fail to comprehend it, and words are inadequate, so vast is the spectacle.

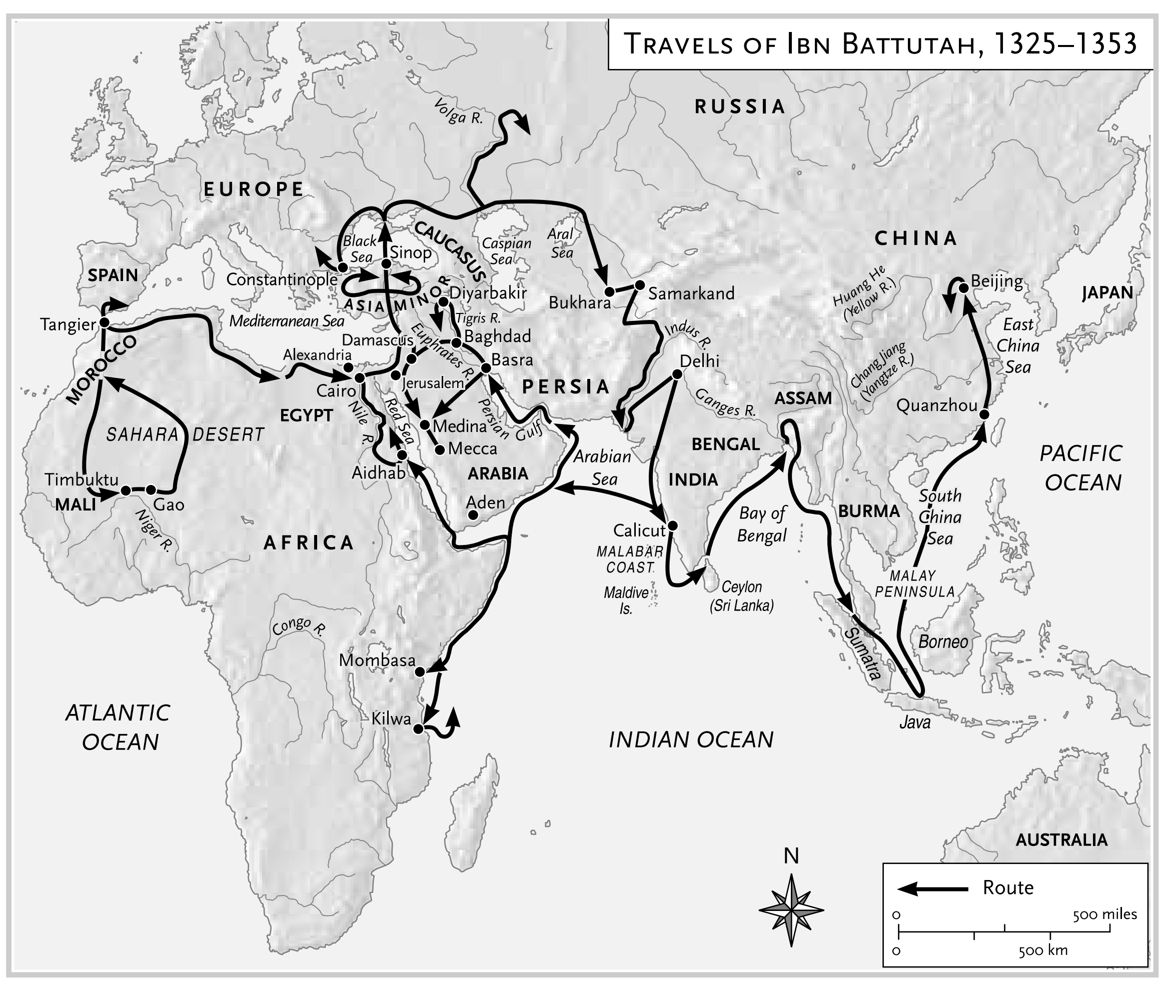
Ibn Jubayr, an influential Muslim travel writer, commented on the Christian women wearing veils in Palermo, Sicily. In this contemporary photograph, veiled women stand near a wooden door. *(PhotoDisc)*

After completing his holy pilgrimage to Mecca, Ibn Jubayr returned to Spain by way of the seaport of Acre on the coast of present-day Israel, then in the hands of Christian crusaders from Europe. Ibn Jubayr set sail for Spain in late 1184. When his ship was wrecked, he found himself in Sicily, which was then ruled by Christian Normans. He described Palermo as an "elegant city, magnificent and gracious, and seductive to look upon. Proudly set between its open spaces

and plains filled with gardens, with broad roads and avenues, it dazzles the eyes with its perfection." Ibn Jubayr compiled his experiences after his return to Granada in 1185. Always a pious Muslim and frequently critical of Christian behavior, he recorded in his journal the practices of Christians in countries he visited. "The Christian women of this city," he noted in Palermo, "follow the fashion of Muslim women, are fluent of speech, wrap their cloaks about them, and are veiled."

TRAVELS OF IBN BATTUTAH

Arab civilization faced disaster in the early 13th century when Mongol invaders swept southwest across Asia Minor, destroying everything in their path. The Mongol conquerors soon adopted Islam as their faith, but not before burning Baghdad in 1258. Libraries full of maps and geographical treatises written during Islam's golden age were lost. The greatest *rihla* of the Middle Ages, however, had yet to be written.



During his journeys, Ibn Battutah visited Damascus, capital city of present-day Syria. It is featured here in an 1875 photograph. *(Library of Congress, Prints and Photographs Division [LC-USZ62-93029])*

The author was Ibn Battutah (Ibn Battuta), whose journeys covered an astonishing 75,000 miles over roughly 30 years. In 1325, when he was 21, Ibn Battutah left his native Tangier, in Morocco, to make the hajj to Mecca. Rather than returning home after accomplishing this goal, however, Ibn Battutah continued to travel. After visiting Baghdad, he made his way down the Red Sea to Yemen, then sailed to the east coast of Africa, stopping in present-day Somalia and Kenya.

Ibn Battutah returned to Mecca for subsequent pilgrimages, but he always went by a different route and used Mecca as a base for new travels to great cities such as Damascus and Jerusalem. He relied on hospitality shown to pilgrims by other Muslims, from common citizens to emperors curious to hear about the wonders he had seen. Some hosts returned the favor. In eastern Turkey, a sultan showed Ibn Battutah a meteorite:

> He said to me, "Have you ever seen a stone that has fallen from the sky?" I replied, "No, nor ever heard of one." "Well," he said, "a stone fell from the sky outside this town." . . . A great black stone was brought, very hard and with a glitter in it, I reckon its weight was about a hundredweight. The sultan sent for stone breakers, and

Ibn Battutah traversed the Sahara on camel, a reliable—and enduring—means of travel, as evidenced by this early 20th-century photograph of Arabs crossing the same desert. *(Library of Congress, Prints and Photographs Division [LC-USZ62-76262])*

> four of them came and struck it all together four times over with iron hammers, but made no impression on it. I was amazed.

In 1333, after traveling throughout central Asia, Ibn Battutah reached India, much of which had been conquered by Muslim armies over the previous century. After eight years of serving as a judge in Delhi, Ibn Battutah was sent by the city's sultan as an ambassador to the Mongol emperor of China. The trip took Ibn Battutah to the Maldive Islands, Ceylon, Sumatra, and probably China. His journey to China was the least well documented of his journeys and remains controversial, but it is generally thought that he reached his destination, the Chinese court in Beijing.

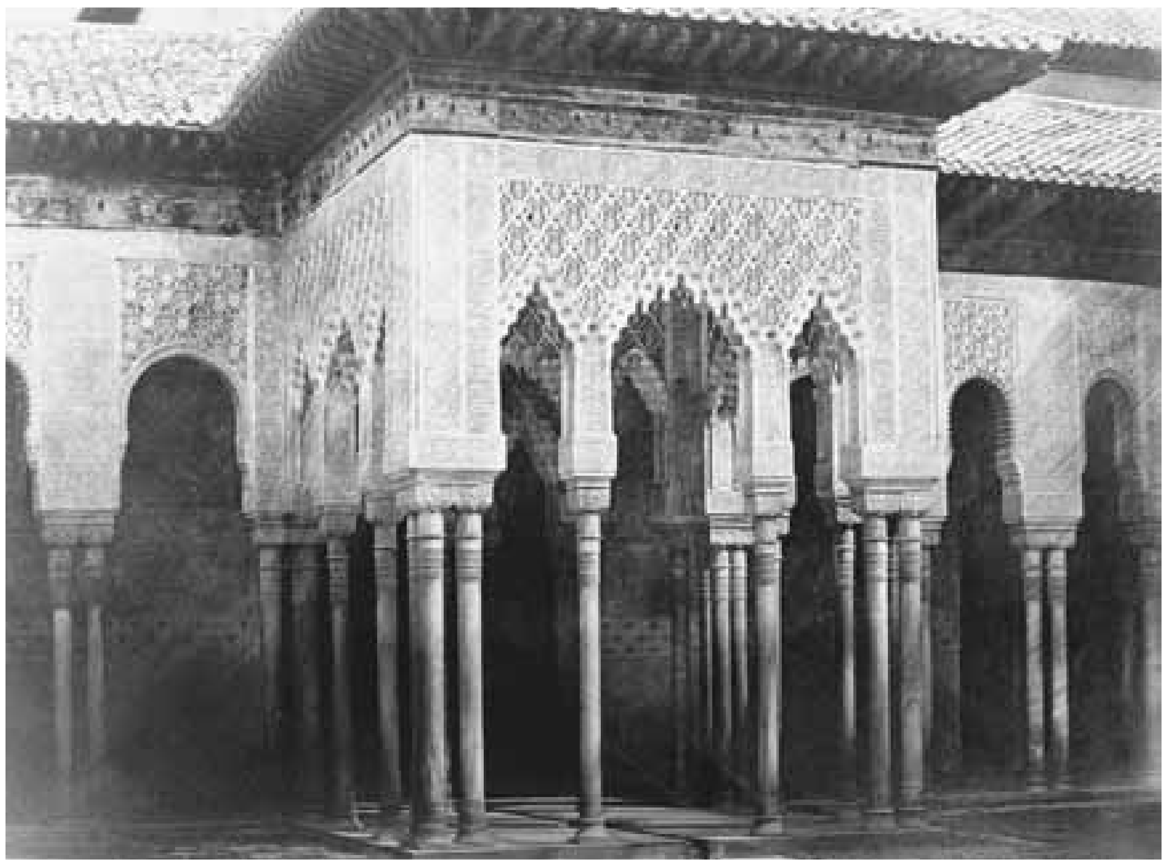
Finally he returned to Morocco in 1349, 24 years after leaving home, but Ibn Battutah was soon moving again. After a brief visit to Islamic Spain, in 1352 he headed south across the Sahara Desert by camel, passing bleak salt mines and treacherous sandy wastelands. He eventually reached the kingdom of Mali, where he secured an audience with the sultan. The sultan's African subjects

struck the Arab as pious, law abiding, and peaceful. He also noted the traveling conditions, religions, food, customs, wildlife, laws, and relationships between men and women. He described enormous baobab trees, whose shade was wide enough to shelter an entire caravan:

> Some of these trees are rotted in the interior and the rain-water collects in them, so that they serve as wells and the people drink of the water inside them. In others there are bees and honey, which is collected by the people. I was surprised to find inside one tree, by which I passed, a man, a weaver, who had set up his loom in it and was actually weaving.

When Ibn Battutah returned north in 1353, the Moroccan sultan commanded him to put the story of his journeys into writing. A professional scribe named Ibn Juzayy was appointed to help. Ibn Battutah dictated his experiences to the young writer, who edited and polished

In 1352, Ibn Battutah traveled to the kingdom of Mali, in western Africa. The city of Tombouctou (Timbuktu), long known as a trade center, became part of Mali during the 14th century. In this mid-20th-century photograph, Tuaregs (Muslim Berbers) gather in a walled marketplace in Tombouctou, much as their medieval ancestors did. *(Library of Congress, Prints and Photographs Division [LC-USZ62-132423])*



Ibu Battutah's extensive travels took him as far as Islamic Spain. One of the marvels he saw there was the Alhambra palace, built in Granada between 1238 and 1358. A fine example of the horseshoe arches and geometric patterns that characterize Moorish architecture, it is shown here in a photograph from the mid-1800s. *(Library of Congress, Prints and Photographs Division [LC-USZ62-108689])*

the prose into a conventional travel narrative relating an extraordinary life. Its formal title was *A Gift to the Observers Concerning the Curiosities of the Cities and the Marvels Encountered in Travels,* but it is commonly referred to as Ibn Battutah's *Rihlah.* Although it was not widely read until the 1800s, Ibn Battutah's *rihla* remains one of the great geographical, ethnological, and religious sourcebooks of the Middle Ages.

IBN KHALDUN

Like al-Mas'udi, al-Maqdisi, and al-Biruni, the Tunisian intellectual Ibn Khaldun was not solely a geographer. He traveled and lived in Algeria, Tunisia, Spain, and Egypt. In the 1370s, he wrote *Muqaddimah,* the introductory volume to his history of the world. His travels informed his influential original views and writings on geography, politics,

the environment, business, science, poetry, Islamic society, and the rise and decline of civilizations.

Ibn Khaldun was one of the last great Muslim intellectual travelers of the Middle Ages. By the time the achievements of explorers from other cultures began to eclipse them, Muslim travelers and geographers had already significantly increased humankind's knowledge of the Earth's geography. Not only had Muslims saved the writings of classical Greek geographical theorists; during the Middle Ages, Muslim travelers and scholars had created their own lasting legacy of geographical literature, increasingly accurate maps, and cultural commentaries on the medieval societies of the Eastern Hemisphere.

6

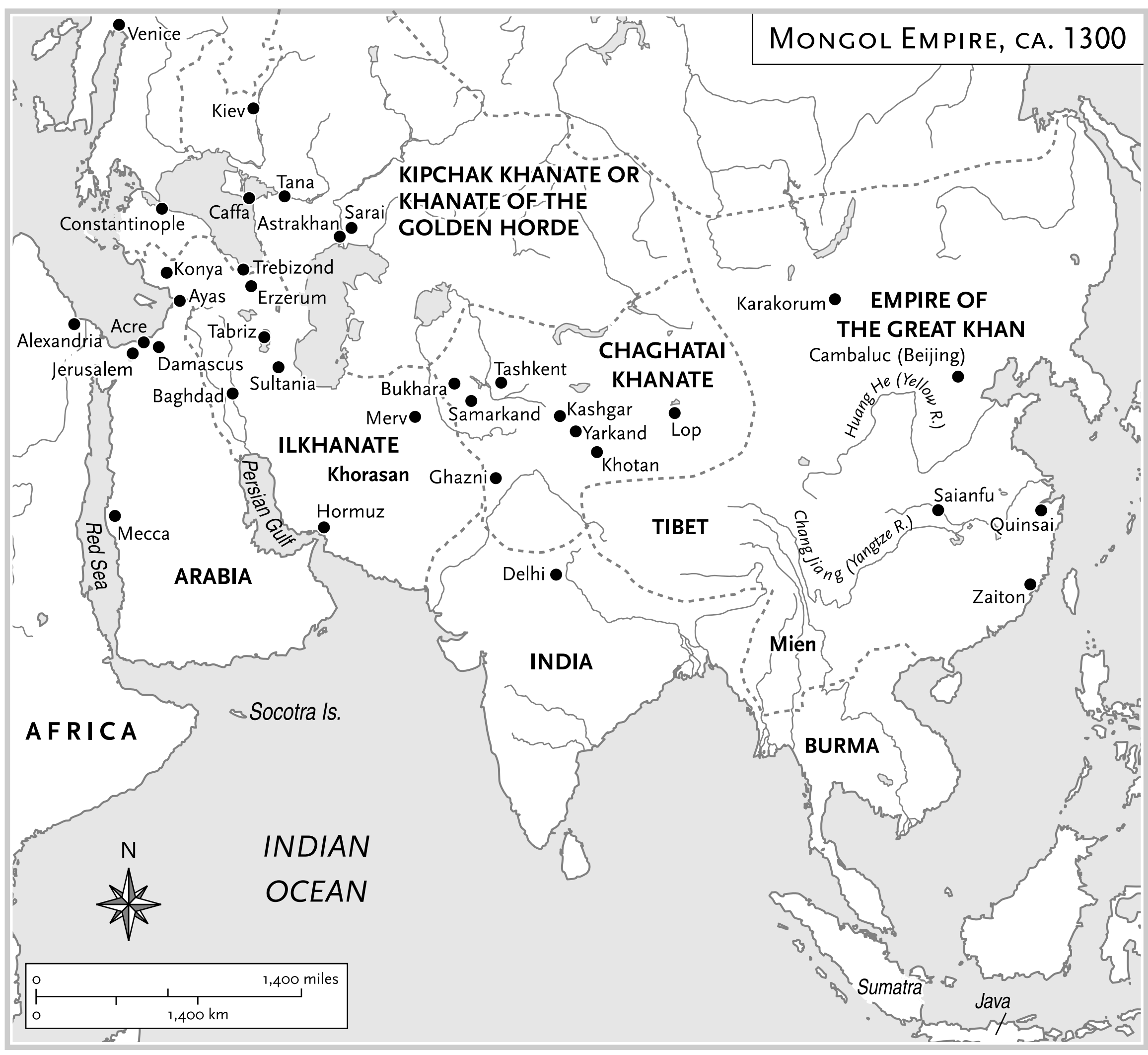
EUROPEANS SEEKING ASIA

Until the mid-13th century, Europeans had no firsthand information about the geography or peoples of central Asia, India, or East Asia. They themselves had barely traveled beyond the limits of the ancient Greek and Roman world; the farthest-flung Europeans were merchants settled in the region of the Black Sea. The knowledge of Asian, Arab, and Jewish travelers, meanwhile, was largely confined within their own communities. Europeans knew Asia only as the source of luxury imports such as silks and spices; their primary sources of information about eastern lands were the Bible, legends, and fabulous tales of heroes, especially stories about Alexander the Great (356–323 B.C.), king of Macedonia.

THE MONGOL EMPIRE

The Mongol conquest of Asia and eastern Europe provided the opportunity for the Europeans to extend their eastern horizon. The Mongols, whom the Europeans called Tartars, were unorganized nomads of the central Asian steppes (plains) until Genghis (Chingis) Khan assumed supreme power over them (reigned 1206–27) and adopted the explicit goal of world domination. By the tens of thousands, Mongol troops, who were expert horsemen and archers famous for their savagery, rapidly overran a patchwork of kingdoms from northern and eastern China westward to Persia and eastern Europe. Mongol armies conquered Russia in 1237–40 and by 1241 were camped outside of Vienna (in modern-day Austria). Only the death of Ögödei (Ogotai), their great khan, or supreme leader, and son of Genghis, in December 1241 and the Mongol commanders' abrupt withdrawal from Europe to elect a successor prevented western Europe, too, from being overwhelmed. Genghis Khan's ambition was nevertheless realized: His grandsons Mangu (Möngke) Khan (reigned 1251–59) and Kublai (Khubilai) Khan (reigned 1260–94) ruled over the largest empire the world has ever known, one that stretched from the China Sea to the Mediterranean Sea.

Under Mongol rule, the Silk Roads, the ancient overland caravan routes linking the Middle East with the Far East, came under unified political control for the first time in history. The Mongols, like the Chinese before



them, maintained and closely supervised roadways and facilities for travelers. The transportation of goods along the overland routes—traditionally slow, expensive, and prone to disruption by bandits, wars, and accidents—became much more secure. The long chain of intermediaries was eliminated, as were the intervening borders. Long barred by hostile Islamic states from the lucrative Far Eastern trade routes across northern Africa and southwest Asia, the Europeans were quick to seize their opportunity.

The pope and other western European rulers determined to make direct contact with the new empire to their east. They had several motives. The first was their urgent need for military intelligence. Mongol armies continued to harass eastern Europe until 1290. The 13th-century English historian Matthew Paris vividly described the "terrible destruction,"

The Mongols who controlled much of Asia in the later Middle Ages were nomads. This 1870s photograph, taken in Russian Turkestan, shows tents similar to the Mongols' yurts, which they carried with them on their travels. *(Library of Congress, Prints and Photographs Division [LC-USZ62-96952])*

"fire and carnage," and "ravaging and slaughtering" that were taking place to the east. The Mongols were "rather monsters than men," he wrote, "thirsting for and drinking blood, tearing and devouring the flesh of dogs and men." Western Europeans needed to know exactly how serious a military threat the Mongols posed and whether the Mongols might be persuaded to ally themselves with Christian Europe to fight the Muslims, who then controlled Jerusalem and the Holy Land. Second, the Europeans were seeking direct access to the overland trade routes to reach the fabulous wealth of China. This was their only opportunity to participate in the lucrative Far Eastern trade, for they had no means of rounding Africa by ship in order to gain direct access to the sea routes to the Far East. Thirteenth-century European navigational and shipbuilding technology restricted European mariners to the Mediterranean Sea and the coasts of northern Europe.

Finally, the Europeans wanted to convert the Mongols to Christianity. Primarily Shamanists, that is, believers in powerful invisible spirits that controlled the physical world, the Mongols were tolerant of all faiths and allowed the many Muslims, Jews, Buddhists, and others who lived among them to practice their religions freely. It had been rumored for

Jacob d'Ancona

REAL OR A HOAX?

Among the several Europeans known to have traveled to East Asia around the time of Marco Polo (late 13th century), the most mysterious and controversial one is Jacob d'Ancona. In 1997, East Asian scholars were startled to be confronted with a book entitled *The City of Light: The Hidden Journal of the Man Who Entered China Four Years Before Marco Polo*. Its editor, David Selbourne, was a respected British academic who claimed the text was a translation from the original Italian of a journal kept by Jacob, a scholarly Jewish merchant from Ancona, in Italy, who sailed off to China in 1270, arriving there in 1271 (four years before Marco Polo). In this journal, the author describes Chinese society and its customs with even more precision and insight than did Polo; he also provides a more detailed description of medieval trading practices as well as an unusual view of the particular situation of Jews in the realms in which he traveled. Jacob is a perceptive traveler; Marco Polo appears to be a naive tourist in comparison.

Why did Jacob d'Ancona and his journal startle the scholarly world? Because neither had been heard of before Selbourne edited and published this book. Furthermore, Selbourne claimed that the original (and sole) manuscript belonged to a private collector who had sworn him not to divulge his name or the whereabouts of the manuscript. Since this defied the normal rules of scholarship, many specialists claimed the book was a hoax—a clever one to be sure, but a hoax. They attacked it on several grounds, especially for what they claimed were anachronistic details, that is, references to things that are not believed to have been known at that time. Critics also pointed out that Jacob d'Ancona seemed to hold forth on all kinds of subjects of modern interest—feminism, homosexuality, education, and so on—that sounded suspiciously like Selbourne's own views of what was wrong with 20th-century society.

So critical were American scholars that at first no U.S. publisher would bring out an edition. A U.S. edition finally was published in 2000, and in the meantime, a number of scholars had come to Selbourne's defense, dealing with the points made by the objectors and generally defending the journal as authentic. Most scholars of Chinese and Jewish studies as well as students of such travel literature, however, regard the work as a hoax and will continue to do so unless Selbourne can produce an authentic manuscript of the journal.

centuries in Europe that there were many Christians deep inside Asia, even a Christian king with the title of Prester John. Pope Alexander III had dispatched his personal physician, Master Philip, to try to find this king in 1177, but Philip had never returned. Europeans still hoped that the Mongol ruler, at least, might be converted.

FATHER JOHN PLANO CARPINI'S MISSION

The first western European emissaries to the Mongol court were Christian friars assigned to diplomatic and political duties in addition to their religious role. The Hungarian king Béla IV, who was on the front lines (the Mongols destroyed about three-quarters of Hungary), is known to have sent emissaries to the Mongols to gather intelligence; the precise chronology of these missions is unknown, but his last ambassador, the Dominican friar Julian, returned with some information in 1236–37. The thrust was that the Mongols simply demanded submission. Pope Innocent IV, eager to bring Asia into the Christian fold, was also quick off the mark. In 1245, only four years after the Mongol withdrawal from western Europe's borders, he dispatched two separate Franciscan embassies to the great khan to gather intelligence about the Mongols, protest their bloody invasion of Europe, and convert them to Christianity. One, led by Lawrence of Portugal, failed. The leader of the other, the Italian Franciscan friar John Plano Carpini (ca. 1180–1252), became the first European to penetrate the land routes to central Asia: He covered 15,000 miles during his two-and-a-half-year journey from France to Mongolia and back.

Carpini and his companions left Lyon, France, on Easter Day 1245. It took them nearly a year to reach the *ordu,* or *horde* (camp) at Sarai, near the Volga River of Batu Khan, the ruler of the western Mongol empire called the Golden Horde, under whose command the recent brutal massacres of the Russians and Hungarians had taken place. Batu Khan supplied provisions and guides and fast Mongol horses so that Carpini and his party could ride in relays eastward along the northern route to the court of the great khan. Carpini covered the last 3,000 miles of his journey in just 106 days, crossing the steppes north of the Caspian and Aral Seas, parching deserts, barren plains, and forbiddingly high mountains, enduring bitter cold, unappetizing food, and humiliating treatment from his

Saint Francis of Assisi founded the religious order known as the Franciscans in 1209. This drawing, created between 1830 and 1840, depicts a Franciscan monk in his distinctive garb. *(Library of Congress, Prints and Photographs Division [LC-USZC4-458])*

hosts. He reached the imperial camp near the Mongol capital of Karakorum in central Mongolia on July 22, 1246—just in time to join 3,000 other ambassadors in witnessing the formal election and enthronement of Güyük as the new great khan. Carpini spent four months at the Mongol imperial court.

He duly delivered a papal letter in which Innocent IV addressed the great khan as one civilized ruler to another. "We are . . . greatly surprised," it said, "that you, as We have learned, have attacked and cruelly destroyed many countries belonging to Christians and many other peoples." The letter invited the khan to be baptized and accept supreme papal authority.

Güyük's reply, dated November 1246, was blunt. He did not understand either the pope's distress or his claim to sovereignty. "Through the power of God, all empires from sunrise to sunset have been given to us, and we own them," wrote the great khan. "You personally, at the head of the Kings, you shall come, one and all, to pay homage to me, and to serve me." If Innocent disobeyed this divine order, Güyük wrote, "we shall know that you are our enemies." Leaving Mongolia that same month, the friar carried the khan's letter on the strenuous year-long journey home. "We . . . traveled right through the winter," he later wrote. "We often had to lie in snow in the wilderness."

Shortly after his return, the friar submitted a formal diplomatic report of his mission. In addition to the skeletons and burned-out towns the Mongols had left behind them in eastern Europe, Carpini had witnessed acts of terrible cruelty and savagery, often fearing for his own life. The friar had found the Mongols to be violent, arrogant, dishonest, sly, greedy, drunken, and filthy in their personal habits. He tried to put aside his contempt, however, and write objectively.

Carpini's *Historia Mongalorum* (History of the Mongols), written in Latin in the form of a letter to the pope, was a systematic, accurate record of the Mongols' religion, politics, military, laws, customs, and history. It was the first European work ever written about central Asia or China and the first piece of European travel writing that relied, not on legends and fables, but on personal observation and fact. Carpini's objectivity, breadth, and depth made his *Historia* an exceptionally valuable portrait of the Mongols soon after the foundation of their empire. A milestone in medieval travel writing, it set the standard by which its successors would be judged. Vincent of Beauvais included Carpini's report in his *Speculum historiale* (1256–59), 31 books representing but one of four parts of the monumental encyclopedia *Speculum majus* (Great mirror), which reached a wide medieval readership.

WILLIAM OF RUBRUCK'S JOURNEY

William of Rubruck (ca. 1215–ca. 1295) was the most celebrated of the missionaries who followed in Carpini's footsteps. A French Franciscan friar, he volunteered for an informal embassy representing Louis IX of France after accompanying the French king on the failed Seventh Crusade (1248–50). His mission was similar to Carpini's: to gain military intelligence, seek a military alliance, and convert the Mongols to Christianity.

William left Constantinople on May 7, 1253, armed with Turkish and Arabic translations of a letter from the French king to the Mongol prince Sartach, who had been baptized, according to rumors circulating in Europe. William sailed to the Black Sea, a two-week voyage, and continued overland with oxen and carts, reaching Sartach's camp

William of Rubruck's journey to Mongol China included a two-week voyage across the Black Sea. This illustration of seagoing crusaders comes from a 15th-century illuminated manuscript, but it shows ships similar to the one William would have boarded in the 1250s. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2155])*

at the end of July. Sartach referred him to his father, Batu Khan, who in turn sent William's party on to Mangu, the great khan. They endured a difficult journey on horseback over the same route Carpini had followed, sleeping "always under the open skies or under our wagons." "There was no end to hunger and thirst, cold and exhaustion," William later wrote. "We had run out of wine, and the water was so churned up by the horses it was undrinkable. If we hadn't had biscuit and God's help, we would possibly have died."

William reached Mangu's camp on December 27 and stayed for six months at the imperial court at Karakorum. "When I found myself among [the Mongols]," he recalled, "it seemed to me as if I were in another world." The khan treated him politely, but as Carpini had before him, William found the Mongols coarse, rude, arrogant, untrustworthy, and greedy; they clamored incessantly ("shamelessly . . . like dogs") for gifts and shares of whatever he had, including his very meager stores of wine and food. Even the khan's secretaries and interpreter questioned him closely about the spoils they might be able to seize in France.

Despite the physical hardships and his disgust at his hosts, William was patient, persistent, and self-effacing. He spent the summer of 1254 at Karakorum. He compared the city unfavorably with Paris while noting its 12 temples to Mongol gods, two mosques, and one Christian church, its markets and palaces, and its separate residential quarters for Muslims and Chinese. William primarily conversed with and ministered to the Europeans who lived among the Mongols, most of them slaves or artisans captured during western raids; he also participated in a public debate between Christians, Muslims, and Buddhists.

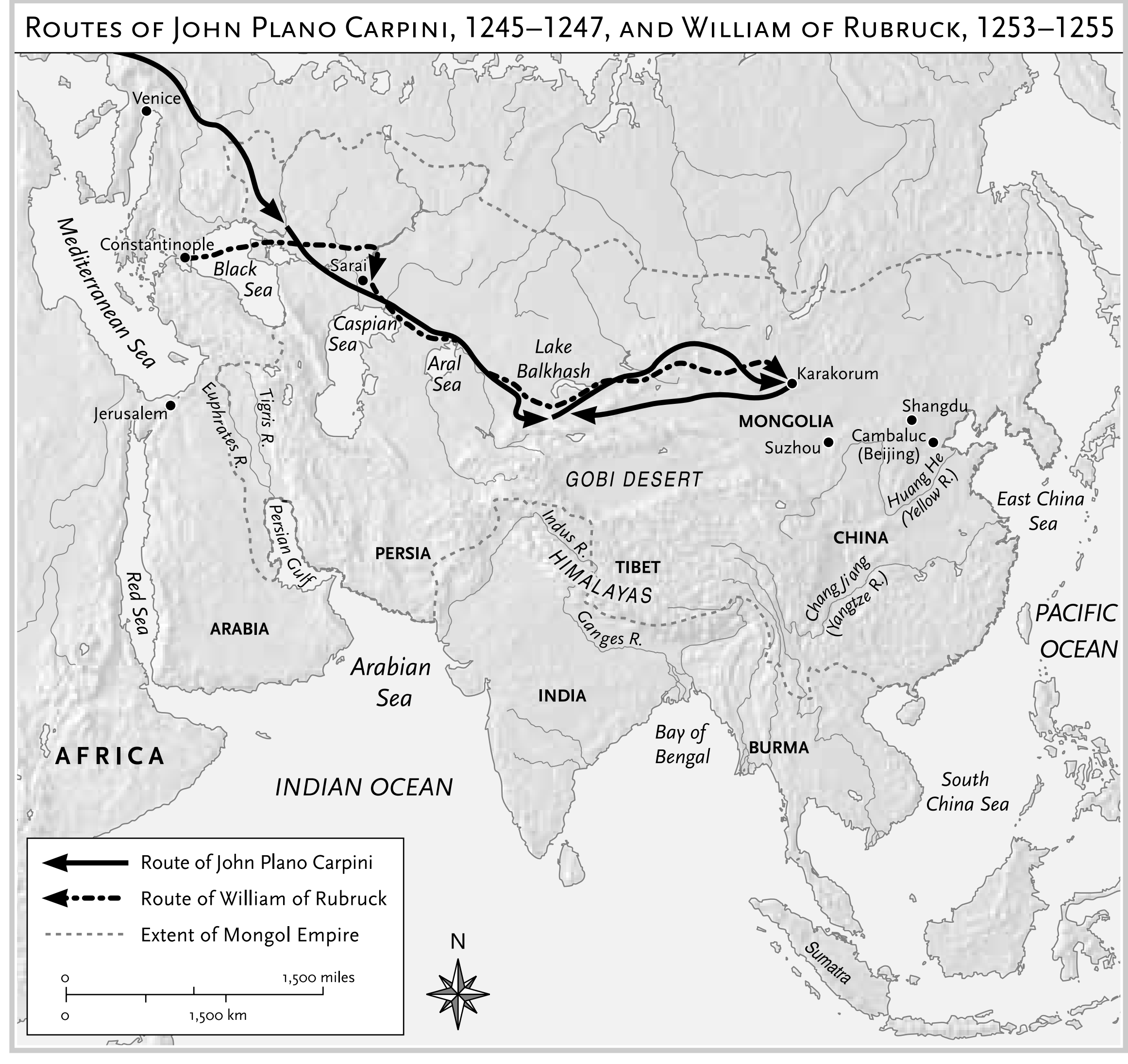
Finally permitted by the khan to depart, William left Karakorum on August 15, 1254, carrying a letter from the khan demanding

Louis's submission. His homeward journey took him back to Batu's camp on the Volga River, along the western side of the Caspian Sea, across the Caucasus Mountains, and westward through Asia Minor. He reached the Mediterranean coast in May 1255, having traveled more than 9,000 miles during his two-year absence.

WILLIAM OF RUBRUCK'S REPORT

On his return, William immediately wrote a lively and detailed account of his experience in the form of a letter to Louis IX, usually referred to as *The Journey of William of Rubruck to the Eastern Parts of the World.* In

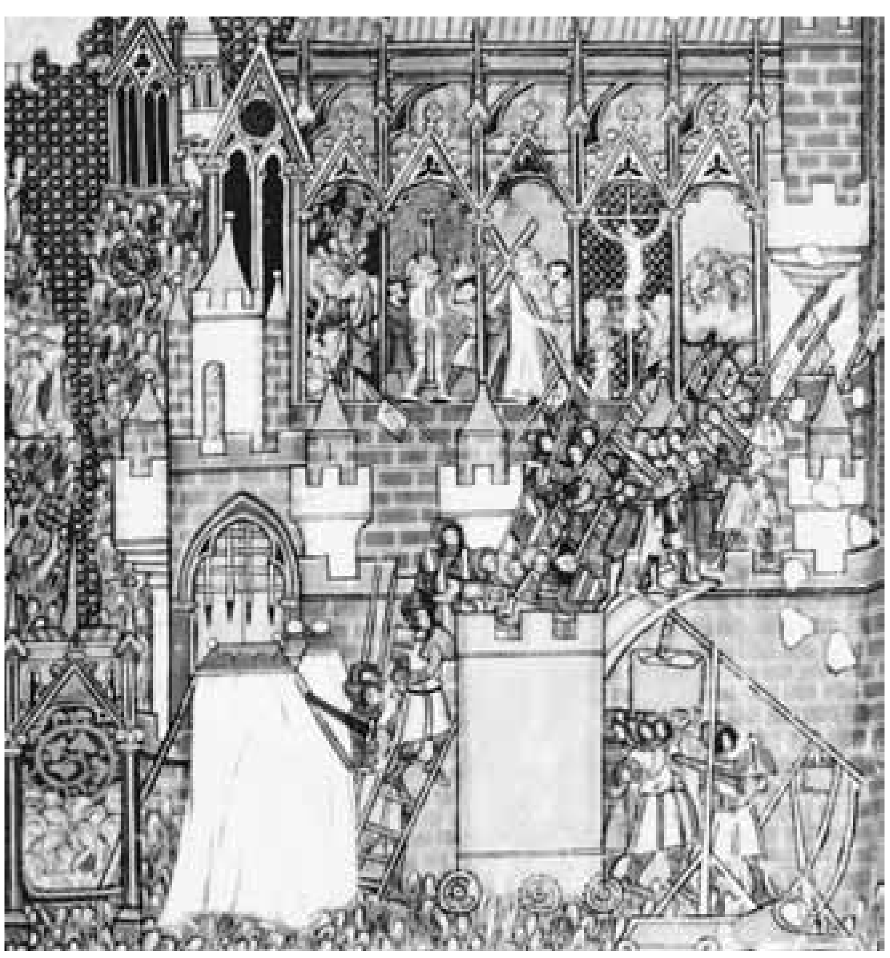
Routes of John Plano Carpini, 1245–1247, and William of Rubruck, 1253–1255



The Crusades

Between 1096 and 1270, many thousands of European Christians waged war against Muslims in the Holy Land and the Near East. These expeditions—historians identify eight major ones, in addition to many smaller—are known as the Crusades.

The European invasions were a response to several broad historical developments. The early 11th century was a period of increased prosperity, popula-



Christian forces captured Jerusalem in 1099 during the First Crusade, as shown in this 14th-century illuminated manuscript. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2152])*

One of the most significant events during the Third Crusade was the taking of the port city of Acre, which had been captured first by the crusaders and then by the sultan Saladin. The crusaders besieged Acre for almost two years before they succeeded in reclaiming the city. This 14th-century illuminated manuscript depicts the city's recapture in 1191 by, among others, King Richard I (the Lion-Hearted) of England and King Philip II of France. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2148])*

tion growth, and relative political stability in Europe; pilgrims took to the roads in record numbers, and mass pilgrimages to Jerusalem became common. In 1071, however, Jerusalem fell to hostile Muslims, the Seljuk Turks. The Byzantine Greek emperor Alexius I appealed to Pope Urban II as a fellow Christian for help in ousting the Seljuks, who had closed the overland routes to Jerusalem. Anxious to recapture Jerusalem, restore European access to the Holy Land, and protect Christian holy sites and the pilgrims who visited them, the pope came to the eastern emperor's aid. In fact, successive popes ordered the first five Crusades (1096–1221). European rulers—Louis VII of France, Frederick Barbarossa of the Holy Roman Empire, and Richard the Lion-Hearted of England—ordered the last three (1227–70). To the Europeans, these were holy wars.

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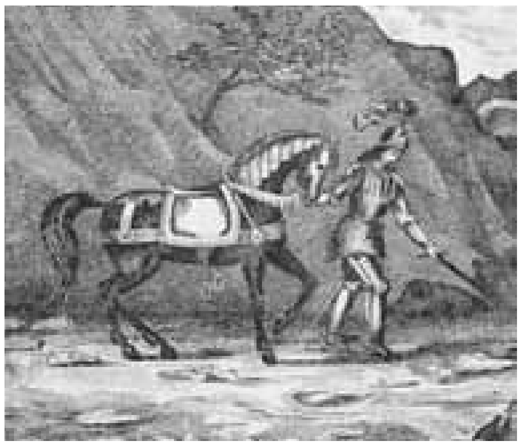

In this 1859 engraving, an armored crusader leads his horse toward a distant castle. Many similarly mounted knights fought in the Crusades. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2267])*

Tens of thousands of European mounted knights and infantrymen, together with support personnel, traveled to the Holy Land to oust the Muslims. An estimated 100,000 Europeans fought in the First Crusade. Informal groups went, too: The fighting attracted criminals and ruffians who were undisciplined and poorly equipped, such as the motley crowds who streamed eastward in the so-called People's Crusade in 1096.

During nearly two centuries of warfare, the fortunes of the Christian and Muslim armies and the holy places themselves rose and fell. Control of Jerusalem changed hands repeatedly; there were sacks of cities and massacres of people. In the end, the Egyptian sultan al-Ashraf expelled the Christians from Acre, their last stronghold in Palestine, in 1291.

In a number of important respects, the Crusades laid the groundwork for Europeans' exploration of lands to their east. The Crusades greatly extended the geographical knowledge of average Europeans. The Crusades spurred the Europeans to contact the Mongols to the east of the Islamic world. Crusaders established several states in the Holy Land and Constantinople that lasted for some 200 years, providing a secure eastern base of operations for Europeans; in particular, the Venetians' easternmost trading posts were to serve as starting points for Christian missionaries to China, and, later, for explorers such as Marco Polo and his uncles.

One final result of the Crusades was that after centuries of practicing religious tolerance, the Islamic states decisively closed ranks against Christendom. European travelers and merchants were permanently excluded from Muslim-controlled ports and overland routes in North Africa and southwest Asia. Henceforth they were forced to seek alternative routes to the Far East: a northerly overland route skirting Islamic territory and, later, direct sea routes from Europe. The success of both of these efforts was to have enormous consequences for European—and world—history.

addition to a delightfully honest portrait of a man under duress, his report contains a vivid record of the hardships of medieval travel and valuable geographical, historical, and ethnographical information about medieval central Asia. Its shrewdness, candor, and self-awareness make it perhaps the finest work of travel writing to survive from the Middle Ages. It was little known until the 16th century.

William's geographical discoveries were of considerable importance. He was the first European to correct the mistaken ancient belief that the Caspian Sea was an inlet of the ocean. He also described the size and course of the Volga River. The geographical information William brought back was incorporated by the English philosopher Roger Bacon in his encyclopedia *Opus majus* (Great work; 1266–68).

In addition, his *Journey* contains many valuable details of Mongol culture. William was particularly adept at analyzing the religious complexities of life at court. He noted the khan's devious practice of playing rival priests off each other, "for he believed in none . . . and they all follow his court as flies do honey, and he gives to all, and they all believe that they are his favorites, and they all prophesy blessings to him." This did not sound well for the Christian conversion effort.

While finding little to admire, he was deeply interested in the Mongols' languages and arts, their clothing and food ("they eat mice and all kinds of rats which have short tails"), and their yurts, large circular felt tents that were carried fully erect from place to place on 20-foot-wide ox-drawn carts. He reported on their judicial system, seasonal migrations, hunting techniques, division of men's and women's work, marriage customs ("no one among them has a wife unless he buys her"), treatment of the sick and the dead, feasts, manners ("quite disgusting"), and superstitions. He punctured their reputation as unconquerable: "I would, if permitted, preach war against them, to the best of my ability, throughout the world," the friar advised the French king.

In addition, his contact with Chinese residents of Karakorum allowed William to record valuable information about East Asia. He mentioned paper money 50 years before Marco Polo did and was the first European to refer to Chinese script and to fully describe the beliefs and rites of Buddhism, Lamaism (a Tibetan form of Buddhism led by the Dalai Lama), Shamanism, and Nestorian Christianity (a form of Christianity that had spread eastward from the Middle East).

OTHER TRAVELERS BETWEEN EUROPE AND ASIA

Two later missionaries also made important contributions to medieval Europeans' knowledge of Asia. John of Montecorvino (1247–1328), an Italian Franciscan friar and longtime missionary to the Middle East, undertook a mission to the great khan on behalf of Pope Nicholas IV in 1291. En route he founded the first Roman Catholic missions in southern India and sent back the first detailed account of that region by a European. In 1294, he arrived in Cambaluc, the European name for the Mongol capital of Khanbalik (modern-day Beijing, which the Chinese then called Ta-tu). John of Montecorvino would spend the rest of his life there, eventually being named the first Roman Catholic archbishop of China.

Friar Odoric of Pordenone (ca. 1286–1331), another Italian Franciscan, was sent as a missionary to Asia in about 1317–18. He traveled overland through Asia Minor and Persia and boarded a ship at the Persian Gulf port of Hormuz. He visited India, Sumatra, Java, Borneo, and Southeast Asia before reaching China in

SCOTLAND
NORWAY
SWEDEN
IRELAND
DENMARK
Newcastle
North Sea
Baltic Sea
York
Waterford
Wexford
ENGLAND
Hamburg
Bremen
Vistula R.
London
Canterbury
Oder R.
ATLANTIC OCEAN
Calais
Ghent
Bruges
Cologne
POLAND
Rouen
Chartres
Rennes
Seine R.
Paris
Mainz
Nuremberg
Prague
Metz
Orleans
Loire R.
Tours
Troyes
Vézelay
Danube R.
Regensburg
Vienna
Bay of Biscay
Poitiers
HOLY ROMAN EMPIRE
Pressburg
Buda
Pest
FRANCE
Bordeaux
Lyon
ALPS
LEON
Rhône R.
Vienne
Milan
Oporto
NAVARRE
Turin
Po R.
Venice
PORTUGAL
Duero R.
PYRENEES
Marseille
Genoa
Belgrade
Ravenna
CASTILE
Florence
Tajo R.
ARAGON
Corsica
Aegean Sea
Lisbon
Toledo
Barcelona
Rome
Valencia
DOMINIONS OF THE ALMORAVIDES
Seville
Naples
Bari
Córdóba
Sardinia
Brindisi
Cádiz
Granada
Almeria
Balearic Is.
NORMAN KINGDOM OF SICILY
Tangier
Corfu
Messina
Reggio
Sicily
Syracuse
AFRICA
Mediterranean
First Crusade, 1096–99
Second Crusade, 1147–49
Third Crusade, 1189–91
Fourth Crusade, 1202–04
0
500 miles
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The Four Major Crusades, 1096–1204

about 1323. He traveled extensively there and spent the years 1325–28 at the Cambaluc mission founded by John of Montecorvino; he failed to convert the great khan, Yuan emperor Tai Ding Di (Yesün-Temür), but baptized 20,000 others. On his overland journey home, Odoric became the first European to travel through Tibet, where he visited Buddhist monasteries. His *Itinerarium* (Itinerary), a memoir of his journey (1331), was the first European record of a number of Asian habits and customs, including the Chinese practice of binding girls' feet. Dictated in simple Latin, it was one of the most widely read travel books of the Middle Ages.

If 13th-century Asians traveled to Europe, they left little record of their activity. The notable exception was the renowned Nestorian Christian teacher Rabban Bar Sauma (ca. 1220–94), the first known Chinese-born traveler to Europe. Descended from Uigur Turks, he was living in Baghdad in 1287 when Arghun, the regional khan of Persia, appointed him ambassador to the Christian European monarchs. Arghun, who had Christian sympathies, was seeking a military alliance against the Muslims. Traveling in Italy and France, Bar Sauma met with Philip IV of France, Edward I of England, and Pope Nicholas IV before returning home. Bar Sauma's diary of his journey, written in Persian, is little known in the West but is an important source providing a rare outsider's view of medieval Europe.

IMPACT OF THESE CONTACTS

Though less well known than their close contemporary Marco Polo, the Christian missionaries who traveled to Mongol China in the 13th and early 14th centuries accomplished one of the greatest feats of medieval European exploration. They opened direct overland routes from Europe to Asia for the first time, bypassing foreign intermediaries and bringing the civilizations of the East and West literally face to face. At the same time, their written accounts of their journeys replaced age-old legends about Asia with a wealth of factual information. Within only 70 years of the first, failed papal embassy to Asia in 1177, a huge region previously unknown to Europeans—central Asia, South Asia, and East Asia—became a reality for Europeans as blanks on their maps were filled in and many Asian cultures described.

These travelers combined the functions of missionaries, diplomats, spies, and explorers; just as important as the geographical knowledge they brought back to Europe were the political and cultural ties they established. European traders such as the Venetians Niccolò and Maffeo Polo, Marco Polo's father and uncle, respectively, were able to travel right to the source of Chinese silks and spices. By the 14th century, works such as the world history *Jami'at-tawarikh* compiled by the Persian statesman Rashid ad-Din (1247–1318) were drawing on Western, Persian, and Mongol sources. Mongol embassies to the west were becoming routine.

In 1368, however, the Mongols were defeated and replaced by the isolationist Ming dynasty in China, while the hostile Islamic states that sprang up in central Asia closed overland routes. These developments would stimulate English, Spanish, Portuguese, and Dutch mariners to discover a sea route to the riches of the Far East, a goal that eluded them for more than 100 years.

7

Marco Polo and His Travels

Marco Polo (ca. 1254–1324) was certainly the most famous explorer of the Middle Ages and arguably one of the greatest explorers of all time. His name has become synonymous with traveling long distances through exotic regions. The broad outline of his trip to Mongol China (known as Cathay to medieval Europeans) is well known. At the age of 17, he accompanied his father and uncle, the Venetian merchants Niccolò and Maffeo Polo, to the court of the great Mongol emperor Kublai Khan. Traveling overland through central Asia, they arrived after a three-year journey at the imperial court in northern China. Young Marco Polo entered the khan's service, and during 17 years in China, he traveled extensively throughout the empire. He finally returned to Venice with the elder Polos in 1295, having been away for 24 years.

THE POLOS AND MARCO'S *TRAVELS*

When Marco Polo reached home at age 41, he was probably the best-traveled person in the world. He had spent years on the major roads, little-traveled tracks, and seas of Asia. He had been a privileged insider in a vast, rich eastern realm that few Europeans had ever heard of and fewer still had visited; his knowledge of the Mongolian and Persian languages allowed him to penetrate Asian cultures in a way no European before him had done. The closely observed written record of his experience, *The Description of the World* (popularly known as the *Travels*), provided Europeans with a wealth of new geographical knowledge about China, South Asia, Southeast Asia, Indonesia, Japan, and the lands of the Indian Ocean.

In all the attention deservedly given to Marco Polo, it is often overlooked that his father and uncle, Niccolò and Maffeo Polo, had traveled to China before. The Polo family had longstanding trading relationships in the Middle East; the two brothers were in Constantinople in 1260 when, prevented by war from returning to Venice, they decided to travel eastward instead. After a four-year overland journey, they reached the court of Kublai Khan, where they spent another four

In service to Kublai Khan, Marco, Niccolò, and Maffeo Polo traveled all over Asia. In this image after a 14th-century miniature, the great khan delivers a golden tablet to Niccolò and Maffeo; it guaranteed their safe passage within the Mongol Empire. *(The New York Public Library)*

years. When they did return home, it was in the service of the great khan as his ambassadors to the pope. Their failure to write about their experiences—or to tell their story to someone who would—was to deny them a prominent place in the history of exploration. Presumably, they observed some of the same things Marco did 20 years later, but no record survived them. Similarly, little is known about what the elder Polos did during their long second stay in China with Marco, although it is generally assumed that they served the great khan in some technical capacity and engaged in trade on their own behalf. Marco Polo's book gained him his starring role in history, while modestly fleshing out the supporting roles played by these otherwise obscure Venetian merchants.

THE ITINERARY

The *Description of the World,* or the *Travels,* telescopes Marco Polo's 24-year odyssey into several arbitrary itineraries concentrating on regions previously unknown to his European readers. Little attention is given the Middle East, Constantinople, and western Asia, all familiar in Europe from the written accounts of generations of Christian pilgrims, crusaders, and traders. Instead, it describes in detail the Polos' eastward journey along the ancient trading route of the Silk Roads through central Asia, traveled for centuries by the Arabs, Persians, Jews, and Chinese but still largely unknown to Europeans.

The Polos left Palestine in 1271, traveled through Asia Minor, and traversed the Per-

Sir John Mandeville's *Travels*

Far and away the most popular travel book of the Middle Ages was a traveler's account entitled *The Voyage and Travels of Sir John Mandeville, Knight,* written in French in about 1356–57. Its author claimed to be an English physician and traveler; the book, a firsthand account of his extensive travels between 1322 and 1356. Indeed, the book is packed with descriptions of people and places, marvels, monsters, and adventures from Constantinople through the Holy Land to Egypt, India, China, Persia, and Turkey. Mandeville achieved a reputation as the greatest traveler of his age.

The first half of the *Travels* is a straightforward narrative of a pilgrimage to Jerusalem. It describes innumerable routes, local customs and history, interesting incidents and marvels (including giants and dragons), and the sacred sites in the Holy Land. In the second half, Mandeville similarly blends fact and fancy in describing the Far East. The farther he gets from Europe, the stranger the phenomena: freakish animals and monstrous human races, Paradise, and the fountain of youth (from which he was lucky enough to drink). But there are accurate scientific observations, too, for example, that different stars are visible in the Northern and Southern Hemispheres. And he insists in a famous passage that the Earth is spherical and capable of being circumnavigated:

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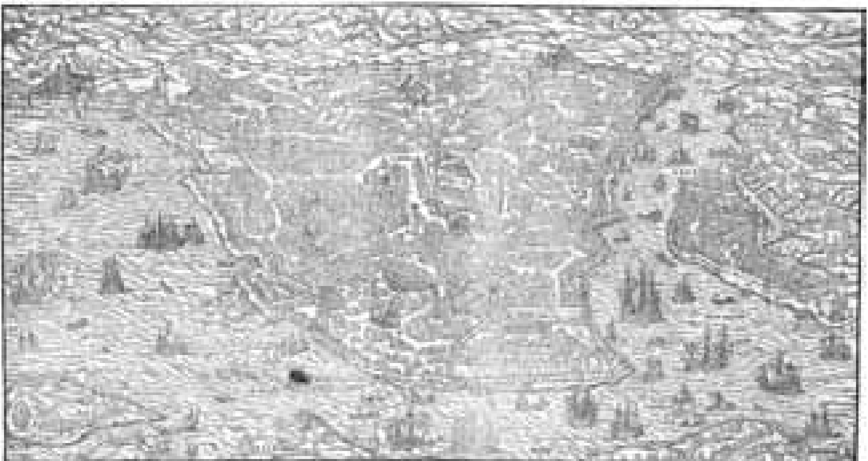


In *The Voyage and Travels of Sir John Mandeville, Knight,* the author included descriptions of the various people and places he claimed to have seen. This map published in 1550 shows Constantinople, one of the places Mandeville described. *(Library of Congress, Prints and Photographs Division [LC-USZ62-70968])*

(continued)

> *And men may well prove by experience . . . that if a man found passages by ships that would go to search the world, men might go by ship all about the world above and beneath . . . and turn again to his country . . . . And always he should find men, lands, and isles as well as in this country.*

Mandeville's *Travels* was a sensation. The book was read and interpreted variously as a work of pilgrimage, theology, geography, history, and romance (a literary narrative of heroic exploits). It was translated into every major European language, including Latin. The first of a number of different English translations appeared in about 1375, and it was one of the first books ever printed in England (1496). Not only pious Christians but merchants, aristocrats, explorers including Christopher Columbus, and the great 16th-century Belgian geographer Gerardus Mercator mined the book for information. Generations of Europeans relied on Mandeville for facts about regions that they knew something about from centuries of pilgrimage, Crusades, and trade but that hostile Islamic states had recently made inaccessible to them.

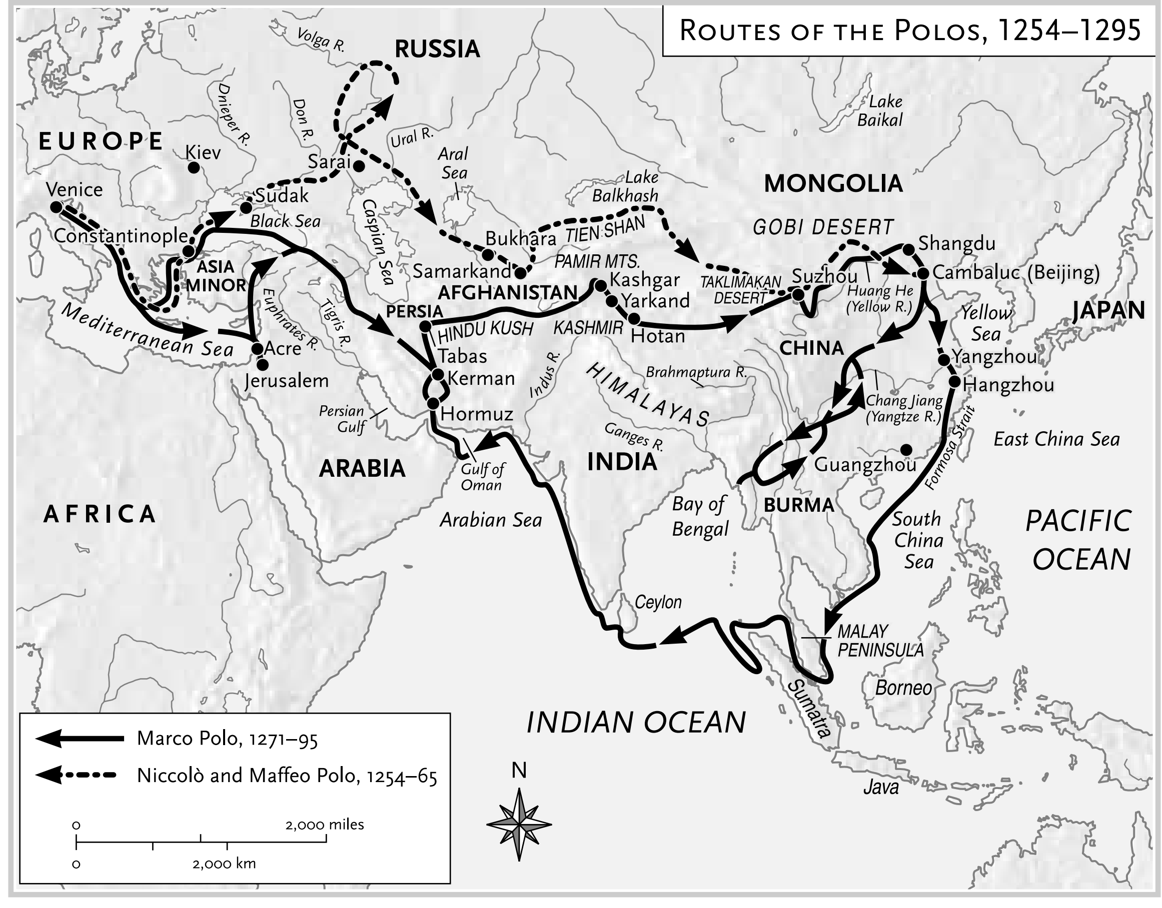
In fact, the *Travels* is completely plagiarized, and Mandeville may well never have traveled any farther than European libraries. The range of his sources is enormous: travel books, histories, letters, fables, and encyclopedias, the works of classical writers, Catholic priests, and chroniclers. Ironically, the fact that the *Travels* agreed with the best available sources seemed to prove its authenticity. Mandeville was regarded as more trustworthy than Marco Polo, who was widely viewed as a teller of tall tales. Mandeville himself bluffed, "Knights and other noble and worthy men . . . who have been beyond the sea should know and understand if I am telling the truth or not." Derivative as it may be, the *Travels* is a literary tour de force intended to make the information in learned sources accessible to the broadest possible audience.

No one has ever discovered who actually wrote *The Voyage and Travels of Sir John Mandeville, Knight* although the mystery still provides lively scholarly debate. Recent studies have suggested that the work was in fact written by an Englishman, perhaps even a well-traveled one. Whoever wrote *Travels,* it stands as a literary original, an imaginative, entertaining, engrossing, and informative blend of fact and fantasy that offers a fascinating window into what medieval Europeans knew and believed about the geography of the world.

sian deserts (in modern-day Iraq and Iran); they spent a year in Afghanistan recovering from illness, perhaps malaria. The *Travels* depicts the high, mountainous Pamir plateau, northern India, Tibet, and the punishing month-long crossing of the Gobi Desert. Three-and-a-half years after leaving Venice, the travelers at last reached the Mongols' summer capital of Shangdu (Shang-tu) in northern China in 1274. Little is known of

Marco's specific activities in China, but he clearly traveled to the southwestern and southeastern regions and the east coast of the country; all are described in the *Travels*.

The Polos requested permission to return home in about 1290: Kublai Khan was growing old, and they knew their position would be insecure after he died. They were allowed to accompany a Mongol princess who was being sent to become the wife of Arghun, the regional khan of Persia. Fourteen ships full of courtiers and crew members—also carrying, of course, the Polos and the princess—sailed from China to Persia, taking three years to complete the trip. The *Travels* describes places en route to Persia: Sumatra, Java, the Malay Peninsula, Ceylon, the west coast of India, and the great Persian port of Hormuz. It also describes the sophisticated network of Indian Ocean trade routes, then a monopoly of Arab and Hindu merchants. In the 13th century, European sea routes were mainly confined to the northern European coasts and the Mediterranean. European seafarers lacked the oceangoing ships, compasses, and advanced navigational skills that would have allowed them to master the Atlantic Ocean and round Africa to reach the rich maritime trade routes of Asia.



Cosmographia
breue introdu
ctoria enel libro
d Marco paulo

El libro del famoso Marco paulo
veneciano ólas cosas marauillosas
q̃ vido enlas partes oriẽtales. cõuie
ne saber enlas Indias. Armenia. A
rabia. Persia y Tartaria. E ól pode
rio ól grã Cã y otros reyes. Cõ otro
tratado de micer Pogio florẽtino q̃
trata delas mesmas tierras y yslas.

Published in 1503, this woodcut depicts Marco Polo and Gian Francesco Poggio Bracciolini, an Italian humanist scholar, above a scene of the bustling harbor at Calicut, India. Polo visited the west coast of India and described it in his *Travels*. *(Library of Congress, Prints and Photographs Division [LC-USZ62-68313])*

THE MONGOLS

During the Polos' stay, China was experiencing an extraordinary phase in its long history: for the first time, much of China was under foreign rule. The rulers were Mongols. Originally a loose confederation of more or less nomadic northern Asian tribes, the Mongols had been unified by Ghengis Khan during his reign from 1206 to 1227. Ghengis Khan dreamed of world conquest, and he led his huge armies southward, then westward, at lightning speed, conquering all before him and imposing his rule all the way from northern China to the Caspian Sea. After his death, this vast empire was divided among his descendants into four smaller and more manageable empires called khanates, each with a ruler called a khan. The khan of the largest empire, China, was to be recognized as the great khan, or supreme ruler.

By the time Niccolò and Maffeo Polo arrived in China on their first visit, about 1260, Ghengis Khan's grandson Kublai Khan controlled a vast empire stretching from Korea across northern China, Mongolia, Tibet, central Asia, Persia, and much of Russia. Most Europeans were terrified of the Mongols, and with good cause. In 1238, the Mongols had overrun Moscow, then after overpowering European armies in present-day Poland and Hungary, they had moved against Vienna. Only their sudden withdrawal to Mongolia to elect a new great khan in 1241 ended the immediate threat to western Europe of suffering the Mongols' murderous rampages. The Europeans, who called the Mongols Tartars, regarded these fearsome eastern pagans as savages. Medieval Christian teachings and maps reinforced this view by placing Jerusalem at the center of the world, and those who lived at the outermost fringes, as the Tartars certainly did, were officially classed as barbarians.

MARCO POLO AND THE GREAT KHAN

Marco Polo, however, was seduced by the power and splendor of the Mongol emperor and his court when he arrived there in 1274. He admired Kublai Khan, who reigned from 1260 to 1294 and was great khan beginning in

In April 1241, the Mongols defeated Henry, duke of Silesia, at the Battle of Wahlstatt (Legnickie Pole, in present-day Poland). Henry escaped from a trap they had set but was subsequently caught and beheaded. *(Library of Congress, Prints and Photographs Division [LC-USZ62-125569])*

1264; as Polo explained in his *Travels,* "in respect to number of subjects, extent of territory, and amount of revenue, he surpasses every sovereign that has heretofore been or that now is in the world." The *Travels* paid scant attention to the great khan's famous bloodthirstiness, only briefly acknowledging that his "whole delight consisted in thoughts of a warlike nature, of the conquest of countries, and of extending his renown." In general, Polo painted Kublai Khan as a benign ruler who distributed grain during famines and epidemics and gave alms to the poor.

In fact, the historical Kublai Khan was curious about the world and sought exchanges with Western rulers and religious leaders. The Mongols' unification of central Asia allowed Europeans for the first time to travel the overland routes to East Asia, and they could do so in safety. European traders, missionaries, and ambassadors developed a regular flow of communication with China in the 13th century. When they first reached China in the 1260s, Niccolò and Maffeo Polo were by no means the first Europeans to be made welcome at the Mongol court; Friars John Plano

Carpini and William of Rubruck are but two of the best known of other early visitors.

Kublai Khan employed large numbers of foreigners. Having attained his throne by conquest, he trusted outsiders more than the subjugated Chinese. On their second trip to China with Marco, the elder Polos served as ambassadors between Kublai Khan and Pope Gregory X. And although the terms of his employment are not known, Marco Polo also seems to have worked for the great khan, probably in some minor administrative capacity.

MARCO POLO'S MONGOL EMPIRE

The young Venetian was enchanted by the wealth, opulence, and technological and political sophistication of Cathay. The *Travels* lingers over details of the lavish banquets, decorations, costumes, and amusements of Kublai Khan's court. It cites the emperor's 12,000 barons and 12,000 mounted bodyguards, his four wives' 40,000 attendants, his 300,000-strong army, and his many thousands of horses, elephants, hunting dogs, falcons and falconers, astrologers, sorcerers, and physicians. The sheer (and certainly exaggerated) numbers and Marco Polo's undeniable hyperbole in many of his descriptions elicited an ironic contemporary nickname for his book: *Il Milione* (The million marvels). He describes Shangdu, with its marble palace and gilded halls, and the Mongols' winter capital at Cambaluc (Beijing), its royal warehouses filled with gold, silver, and jewels. Hangzhou (Hang-chou), the old Song dynastic capital, also merits an extended description; Polo calls it "the finest and most splendid city in the world." It was home to more than 1 million people and famous for its richly ornamented buildings, beautiful lake, gardens, canals, bridges, markets, fine artisans, and sensual courtesans. Hangzhou was indeed one of the wonders of the medieval world and one completely unknown to Europeans until Marco Polo described it to them.

China was so profoundly exotic that Polo was equally fascinated by everyday life there. Raised in one of the greatest maritime com-

mercial centers of Europe, he had a particularly keen eye for trade, economics, and the material world. The *Travels* reports carefully observed details of China's geography; currency; local manufactures, trades, and crops; resources such as gems, metals, and minerals; native flora and fauna; and methods of transportation, especially ships. Polo was primarily interested in recording Asia's differences from Europe, and these were stunning.

Thirteenth-century Europe was politically fragmented, its small states in perpetual conflict. Its people were uneducated, impoverished, and famished; the population was falling. By contrast, the China of Polo's time was a land of plenty, rich in silver and ruby

Providing a north-south link between China's four major rivers flowing east-west, the 1,000-mile-long Grand Canal provides a vital waterway between Beijing and Hangzhou. Kublai Khan reconstructed the canal in the 13th century, 700 years after it was created. *(Library of Congress, Prints and Photographs Division [W7-915])*

mines, jade, coal, and oil. It enjoyed a solid economic base of agriculture, manufacturing, fine craftsmanship, and trade. Its towns were bustling; its grand cities, such as Cambaluc, were designed, he says, like chessboards, "planned out with a degree of precision and beauty impossible to describe."

In the exceptionally well-organized Mongol Empire (the beneficiary of a 1,500-year-old centralized Chinese bureaucracy and enormous national wealth), the army, night watchmen, couriers, messengers, and prostitutes were all efficiently regulated by the government. Thousands of clean, comfortable post houses lined the well-paved and well-marked roads, providing accommodation to travelers and housing the 200,000 horses that carried official messages throughout the empire. China's roads and waterways, including the 1,000-mile-long Grand Canal, were filled with traffic. Of the great Chang Jiang (Yangtze River) the *Travels* reported, "the total volume of traffic exceeds all the rivers of the Christians put together and their seas into the bargain."

Mongol China was a vast and diverse empire, and Polo kept careful notes about its ethnic groups, languages, religions, diet, and marriage customs. The mundane details of Chinese life seemed strange in the extreme to Europeans. The *Travels* reported a custom among the people of one province:

> When one man has had a son, and another man a daughter, although both may have been dead for some years, they have a practice of contracting a marriage between their deceased children and of bestowing the girl upon the youth. They at the same time paint upon pieces of paper human figures to represent attendants with horses and other animals, clothing of all kinds, money, and every article of furniture; and all these, together with the marriage contract, which is regularly drawn up, they commit to flames, in order that through the medium of the smoke (as they believe) these things may be conveyed to their children in the other world and that they may become husband and wife in due form.

Polo's European readers learned precisely how crocodiles were caught, buffalo meat pickled, and tattoos applied; some Asians, they read, had gold-plated teeth. The Chinese people themselves, according to Polo, were cheerful, polite, intelligent, clean, hardworking, honest, and prosperous. They were sophisticated in ways that must have puzzled Europeans. Instead of metal coins, the Chinese used paper money, each square piece hand-signed and stamped by imperial officials. They burned coal for fuel. They told time by means of water clocks. Wonders abounded in the *Travels,* and yet the author insisted, "Not the twentieth part have I described."

THE CREATION AND IMPACT OF MARCO POLO'S BOOK

Marco Polo felt a responsibility to publicize such amazing discoveries after he returned home. "I believe it was God's pleasure," the *Travels* concludes, "that we should get back [to Venice] in order that people might learn about the things that the world contains. Thanks be to God! Amen! Amen!" He wrote the book in prison. There is some mystery, however, about exactly how it came to be written. Sometime after his return to Venice in 1295—the details are unclear, and sources contradictory—Polo was captured in a sea battle between the archrival city-states of Venice and Genoa, and he was imprisoned in

Prester John

The history of exploration is marked by many expeditions and pursuits of mythical, legendary, or nonexistent places or people—Atlantis, Antilia, the Seven Cities of Cíbola, El Dorado. One of the more intriguing such searches was for a figure once widely known to educated Westerners but now consigned to the footnotes of scholarly books—Prester John.

His very name, Prester, a version of "priest," hints at his reputation: He was said to be a Christian priest who ruled an isolated and fabulously wealthy kingdom far removed from the known Christian world. When the first written account of Prester John appeared in Europe in 1145, this kingdom was said to be somewhere at the far edges of central Asia. This information was based on a report sent earlier in the year to the papal court by Bishop Hugh of Syria, who described a great military victory over the Persians recently won by one Johannes Presbyter. The image of Prester John as a powerful ruler was reinforced in 1165, when a letter supposedly written by John to the Byzantine emperor Manuel I began circulating throughout Europe. Identifying himself as king of the Three Indies, John claimed his army consisted of 140,000 cavalrymen and 100,000 infantrymen. A literary hoax, the letter was believed to be genuine; it was translated into a number of languages and read throughout Europe with great excitement. European monarchs, embroiled in the Crusades, saw in Prester John a potentially valuable ally against the Muslims. In 1177, the Roman Catholic pope Alexander III sent an envoy out to look for him; the envoy was never heard of again. Medieval European travelers from about 1200 on, including Marco Polo, searched for and wrote about Prester John and his kingdom, only now the kingdom tended to be located in the northern India or Caucasus region of southwest Asia and southeast Europe. Although such claims were little more than rumors, they kept the story alive.

Then, by the 1300s, Prester John was assigned a new locale—in Africa—and the search was revived with a new intensity. In the 1400s, that search was largely conducted by Portuguese explorers sailing for Prince Henry the Navigator and then the king of Portugal, John (João) II. Some of these explorers sought Prester John's kingdom in Ethiopia, others along the coast of western Africa. No expedition ever found such a man or kingdom.

How then did such a legend arise? In one version, Prester John was said to have been a descendant of one of the Magi, the three "wise men from the East" who brought gifts to the infant Jesus. The Magi were not Christians, but Prester John would have been a convert; in fact, there were isolated communities of converts far removed from Christianity's birthplace in the Middle East. Ethiopians had converted to Christianity as early as the fourth century A.D., for

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example. Christianity had also spread across central Asia, and by 638 Christians were even allowed to erect a church in China.

So there was some basis for imagining—wishing for—a Christian kingdom in a remote part of the world. What marks it as a legend, though, is the willingness of the wishers to move that kingdom around and, moreover, to move it to locations that offered vast strategic and financial benefits to those who sponsored expeditions to discover it.

Genoa. Among his fellow prisoners was Rustichello from Pisa, a writer of popular romances. It is believed that Polo had access to a journal or notes that he had kept during his travels and that he dictated his account to Rustichello, who then translated it into a French-Italian dialect.

The work was completed in 1298, with the title *Divisament dou Monde* (Description of the World). As was the case for all books prior to the invention of the printing press, Polo's *Description of the World* circulated in manuscript copies. Astounding, entertaining, and richly informative, the book caused a sensation. By the time Polo died, it had already been translated into half a dozen other languages, achieving a widespread circulation that was unprecedented in the Middle Ages. (Polo was released from prison, apparently in 1299, and spent the rest of his life as a modestly successful merchant in his native Venice.)

Marco Polo's *Travels* introduced Europeans to the huge continent of Asia and a vast Eastern civilization almost entirely unknown to them, one far in advance of their own. Many found Polo's stories too fantastic to be plausible; his credibility was attacked as soon as he arrived back in Venice. How could the barbaric Tartar marauders possibly be thriving in safety, comfort, and luxury in a politically well-organized and stable society at the farthest edge of the world? According to one famous legend, family and friends skeptical of the Polos' claims were persuaded of their truth only after the returned travelers ripped open the seams of their tattered garments, releasing cascades of precious gems.

It is said that on his deathbed, when invited by friends to recant his extravagant Chinese tales, Marco Polo replied, "I did not write half of what I saw." His will made provision for such treasured mementos of his China years as the golden tablet Kublai Khan had given the Polos to ensure their safe homeward passage. In addition, it ordered that his Mongol slave be freed.

The *Travels* does contain historical and geographical inaccuracies, errors based on secondhand information, and a few travelers' legends—among others, an account of the mythical Christian Asian kingdom of Prester John, which Polo describes as a definite reality. In many passages Rustichello obviously exaggerated and embellished the facts for literary effect. There are glaring omissions: The book fails to mention chopsticks, the Chinese practice of foot-binding, or the striking ideographic (symbol-based) Chinese script. Many

commentators over the years have noted that he also omits mention of the Great Wall. The Chinese had originally started the wall to protect themselves from invasions by "barbarians" such as the Mongols, reason enough for a guest of the Mongols not to discuss it; in any case, the monumental scale of the Great Wall dates from the Ming dynasty, 1368–1644, long after Polo's time. Most of the information in the *Travels* has, however, been confirmed by documentary evidence; Polo, according to modern scholars, is usually a reliable reporter.

Among the many products traded along the Silk Roads were Chinese medicinal herbs, for the Chinese were noted for their advanced knowledge of such. This woodcut in the *Ben cao* (Book on herbal medicine), printed in China in 1249, features one such herb that medieval traders introduced to western Europe. *(Library of Congress, Prints and Photographs Division [LC-USZ62-75617])*

Polo's *Travels* was one of the most influential books of the Middle Ages. European contemporaries were excited by his account of the fabulous riches to be found in the Far East: rubies, sapphires, and pearls; pepper, nutmeg, cinnamon, ginger, and cloves; ambergris and musk; silks and porcelain. All of these were high-value, easily portable luxury items that could make traders' fortunes, and Polo's book outlined the routes that led to their source.

But the hostile Islamic kingdoms that succeeded the Mongol Empire along the Silk Roads in central Asia barred Westerners from retracing the Polos' footsteps along the overland routes. The old Silk Roads were once again closed to Europeans. Instead, innumerable Portuguese, Spanish, Dutch, and English navigators attempted to master the long maritime route around Africa to Asia, but they did not succeed until the late 15th century.

The Polos had journeyed to China during a brief window in which medieval Europeans and Asians enjoyed free contact. Because of the subsequent interruption in communications, Marco Polo's *Travels* stood as a definitive European reference to the Far East for 200 years. Its durability is attested by the fact that in the late 15th century Christopher Columbus carefully annotated his copy. The 16th-century English explorer Martin Frobisher read it, too. The *Travels* was an outstanding work of medieval geography and anthropology that is still regarded as the best contemporary source of information about Mongol court life. The marvels of medieval Chinese society that Marco Polo described more than 700 years ago still surprise and awe Western readers.

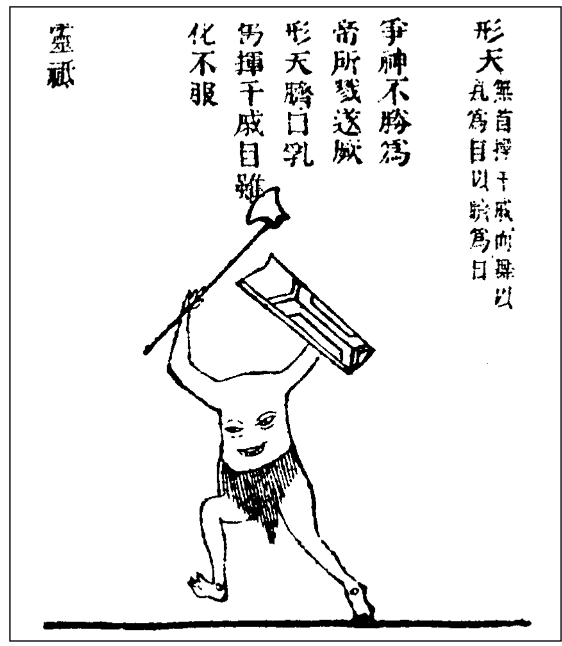
8

Mysteries, Legends, and Lies

Clearly, many individuals did travel extensively during the Middle Ages, but the fact remains that most people had neither the means, the opportunity, nor the courage to travel. Instead, they stayed close to home, forming an avid audience for the tales brought back by pilgrims, traders, soldiers, explorers, and wanderers—or fabricated by armchair travelers. Travelers' tales of wildly exotic humans, creatures, and places had circulated for centuries by the time of the Middle Ages. Medieval literature is rich in histories, geographies, itineraries, guidebooks, phrasebooks, real and fictional descriptions of journeys, and letters from travelers.

It is important in examining these accounts to remember that the medieval world was profoundly different from the modern world. The knowledge and writings of scholars were restricted to a small religious and political elite: Most people, including the explorers, were illiterate and largely or wholly uneducated. Factual information was scarce, and superstitions abounded.

Travelers and writers could, and did, lie about their experiences, but the false reports



This headless creature was first described in *Chan Haijing* (*Shan Hai Ching;* Classic of the mountains and rivers), a Chinese geography text dating from between 300 B.C. and A.D. 200. Scholars debate whether this imaginary creature was inspired by tales of similar creatures in earlier European accounts, such as those of Herodotus. *(From Shan Hai Ching, Antique géographie chinoise. Paris: J. Maisonneuve, 1891)*

of marvels could also arise from simple mistakes. Sometimes travelers' accounts were transmitted orally for centuries before being written down. In an age before the invention of printing, manuscripts of books were laboriously copied by hand, inevitably introducing errors.

The imaginative environment was fertile, and people filled in the blanks at the farthest reaches of the world with fantastic landscapes and monsters. Travelers regularly reported encountering humans with only one eye or one huge foot, or with tails, two heads, or no heads at all. Even Marco Polo's careful *Description of the World* reported the existence of people with dogs' heads, a mountain stream gushing diamonds, and a desert populated by ghouls. (To be fair to Polo, the man who wrote down his account, Rustichello, is sometimes blamed for these flights of fancy.) Commonly, travelers' accounts depicted unknown regions as paradises, in perfect and irresistible contrast to the daily reality of poverty, plagues, famines, and political turmoil. With no way to evaluate the truth, or even the reasonableness, of the stories they heard, most people had every reason to believe that monstrous races of people, cannibals, mermaids, and earthly paradises were real.

Another headless creature, similar to the previous image in an ancient Chinese text, was described in the work of the Roman geographer Gaius Julius Solinus, who lived in the third century A.D. Solinus was mainly a compiler of stories widely known throughout the Mediterranean, and it is possible that some of these tales got passed on via contacts in the Middle East to central Asians and then to the Chinese. Stories of such headless creatures persisted through the Middle Ages. *(From Polyhistor, The Worthie Work of Iulius Solinus. London: I. Charleswood for Thomas Hacket, 1587)*

Legendary and mythical places found their way onto maps—and stayed there. When an explorer claimed to have discovered a legendary island, for example, mapmakers would often add it in the "correct" spot but neglect to remove it from its previous hypothetical location. It is no wonder, therefore, that in 1443, the Portuguese regent Dom Pedro, brother of Prince Henry the Navigator, complained that unknown regions were depicted on maps "according to the pleasure of the men who made them" instead of being based on observation. Imaginative maps could inspire valuable expeditions, however: The 15th-century Portuguese explorers who mapped the West African coast were searching among other things for a mythical river of gold.

It is clear, then, that many false beliefs, popular claims, errors, misinterpretations, fictional representations, and outright lies emerged during the Middle Ages. Some have survived to the present day, and all who want to understand the true history of exploration must weigh the evidence and decide which claims have merit.

Medieval Monsters

Europeans of the early Middle Ages led quite restricted lives. Most knew little beyond their own locality; even the most educated had no reliable information about distant lands. The Earth's margins seemed vague and frightening. Dark and icy lands lay to the north; endless plains, home to barbarian hordes, to the east; torrid, barren deserts to the south; an unfathomable ocean to the west. These regions were thought to be mostly either uninhabitable or occupied by monsters. This ancient belief would take another 1,000 years to dispel.

Monsters took a number of forms, many of them handed down from antiquity or the Bible and imaginatively interpreted by medieval writers and artists. The world of exotic but real animals, such as serpents and monkeys, was augmented by mythical creatures such as dragons, unicorns, and griffins, which had a lion's body and claws and an eagle's wings and beak. Animal-human hybrids abounded: There were mermaids, human bodies with goats' feet or dogs' heads, and lions' or locusts' bodies with human heads. Humans became horribly deformed: Some had their faces on their chests, as they had no heads; others had a single large foot that they raised over their heads like umbrellas or huge flapping ears that served as pillows, blankets, or wings.

Throughout the European Middle Ages, thousands of monsters appeared in illuminated manuscripts (handwritten books lavishly illustrated with miniature paintings), church carvings and stained glass windows, maps, and travelers' tales—all feeding the imaginations of those who stayed at home. These monsters represented barbarians, non-Christians, or simply foreigners in popular books such as the Anglo-Saxon text known as *Wonders of the East* (ca. 970–1150) and the 14th-century *Voyage and Travels of Sir John Mandeville, Knight,* a supposed eyewitness travelogue. Medieval bestiaries were full of such monsters: These were illustrated encyclopedias of animals, including mythical and monstrous ones along with real animals, all accompanied by Christian moralizing. The monsters represented evil or moral corruption.

Some Christian clerics objected to the proliferation of monsters. The anonymous author of a 12th-century English treatise on painting decried the common depiction of "misshapen monstrosities" near church altars. In the 1120s, St. Bernard of Clairvaux attacked the widespread intrusion of monsters into monastic settings: "What excuse can there be for these ridiculous monstrosities in the cloisters where the monks do their reading, extraordinary things at once beautiful and ugly?" Bernard's complaint answered its

own question. Monsters were enjoyably scary in the Middle Ages. In different forms—such as aliens, predatory sharks, giant gorillas, and dinosaurs—they remain so today.

OF THE VNICORNE.

WE are now come to the historie of a beast, whereof diuers people in euery age of the worlde haue made great question, because of the rare Vertues thereof; therefore it behoueth vs to vse some diligence in comparing togither the seuerall testimonies that are spoken of this beast, for the better satisfaction of such as are now aliue, and clearing of the point for them that shall be borne heereafter, whether there bee a Vnicorne; for that is the maine question to be resolued.

Monsters and fantastical creatures had existed in people's imaginations prior to the Middle Ages and continued to do so, often appearing in illuminated manuscripts and church carvings, among other cultural artifacts. Although the unicorn has been attributed such features as a lion's tail or a goat's beard, the European version is most often described as a white horse with a large, golden horn attached to its head. This image of a unicorn was printed in the 1607 *History of Four-Footed Beasts;* much of the book's source material dated to the Middle Ages. *(Library of Congress, Prints and Photographs Division [LC-USZ62-67784])*

LEGENDARY ISLANDS IN THE ATLANTIC OCEAN, CA. 1425
IRELAND
ENGLAND
Brasil
Blasche
ATLANTIC OCEAN
Surlenge
Asent
FRANCE
Isola de Ventura
Saya
Santanzes
Finisterra
SPAIN
PORTUGAL
Corvi-Marini
Conigi
A z o r e s
Corvo
Flores
S. Jorge
Graciosa
Terceira
Faial
Pico
S. Miguel
S. Maria
Formigas
Antilia
San Zorzo
Ventura
Colombi
Brasil
Caprara
Lovo
Madeira
Porto Santo
Desertas
Selvagens
Canary Is.
Ferro
Tenerife
Cape Bojador
AFRICA
Conigi Imaginary island
Madeira Real island

ST. BRENDAN'S VOYAGE

One of the most popular travel stories of the European Middle Ages told of a seven-year voyage by the Irish Christian monk St. Brendan. Born in about A.D. 484, Brendan founded monasteries in Ireland and Scotland, and it is likely he traveled as far as Wales and the Brittany peninsula in northwestern France. But legends tell of two additional voyages Brendan made to the island known as the Land of Promise of the Saints (also called the Promised Land, or Promised Isles). This was the Christian Paradise.

The first voyage was unsuccessful, but on the second, allegedly lasting from 565 to 573, he is said to have reached the island. The *Voyage of St. Brendan,* written down in the ninth century, tells the story. As such works usually do, it claims to be based on Brendan's own telling of "everything he remembered of the voyage." Having received directions from the venerable abbot Barinth, who had already visited the Promised Land, Brendan and 14 companions built a coracle, or curragh, a small, lightweight vessel of wicker or light wood covered with animal hide and waterproofed with tallow. They stowed spare hides, tools, and food for 40 days, fitted a mast, hoisted the sail, and set off, heading "toward the summer solstice."

Most of the *Voyage* deals with Brendan's seven years at sea among myriad Atlantic islands trying to reach the Promised Land. He encounters devils, sea monsters, sheep as large as bulls, and huge white birds—fallen angels—that sing Christian psalms and speak to Brendan in perfect Latin. Having put ashore on a barren black island and made a cooking fire, the land disconcertingly slips under the water: The "island" is actually a whale, which tells them they are welcome to camp on him as long as they do not kindle any more fires on his back. Eventually Brendan and his companions come to an island covered with heavily laden apple trees and springs. There a young man greets them, saying,

St. Brendan, a sixth-century Irish monk, allegedly spent seven years at sea trying to find the Land of Promise of the Saints. According to the *Voyage of St. Brendan,* he encountered all types of sea monsters on his voyage. In this series of 1550s woodcuts, a monstrous whale that sailors have mistaken for an island sinks their ship, emphasizing the dangers faced by seafarers. *(Library of Congress, Prints and Photographs Division [LC-USZ62-95207])*

> Now, at last, you have found the land you have been seeking all these years. The Lord Jesus Christ did not allow you to find it immediately, because first He wished to show you the richness of His wonders in the deep.

They have reached the Promised Land.

Helped, perhaps, by its vivid and compelling details of life at sea, the *Voyage* was accepted as literal truth. Because of the tropical nature of Brendan's Paradise, his name became connected with many real and mythical Atlantic islands. "Brendan's Island" appeared on European maps for centuries in the Atlantic off northwestern Africa, sometimes near the Canary Islands or Madeira and often near the legendary island of Antilia. By the late 15th century, it was reported to have been sighted in the Azores (Christopher Columbus recorded in his diary that he had heard of its exact position). Some people have even suggested that Brendan voyaged as far as North America; a 16th-century map locates "San Brandan Island" off Newfoundland, Canada. Generations of European mariners searched the Atlantic Ocean for it, the last such expedition sailing in 1721. Not until 1759 was the Land of Promise of the Saints finally recognized as mythological. No evidence has ever supported the idea that Brendan sailed to the eastern Atlantic Ocean or to North America. Brendan was, however, a historical figure and a known traveler. Many scholars believe that the germ of the *Voyage to the Promised Land* was an actual voyage or voyages. The "curdled" sea he described was likely ice, and a North Atlantic itinerary encompassing the Shetlands, the Faeroe Islands, and Iceland could account for the islands full of birds and sheep and the active volcanoes, island waterfalls, and melting icebergs described in the story. Such a voyage was within the capability of sixth-century mariners and their vessels, but whether Brendan sailed so far cannot now be known.

MANY ATLANTIC ISLANDS

In 1558, the Venetian Nicolò Zeno published *The Discovery of the Ilands Frislanda . . . Estotilanda and Icaria, by Two Zeni Brothers*. Describing the exploration of the western Atlantic by Zeno's ancestors Nicolò and Antonio Zeno in about 1380, the book purports to be based on the explorers' own letters. First shipwrecked on an island called Frisland, the brothers once again set sail, accompanied by the Frislandian prince Zichmni. Together they visit the islands of Estotiland, whose inhabitants understand Latin, and Drogeo, where the people "feed upon man's flesh, as the sweetest meat in their judgment there is." At a third stop, rich with gold and dotted with castles, the people practice human sacrifice.

The book included a map showing all these islands, which duly made their way onto European maps, notably the great atlases of Gerardus Mercator (1569) and Abraham Ortelius (1570). Some writers have since identified Frisland with the Faeroe Islands. Other champions of the Zenos claim that they reached eastern Canada: Estotiland, described as more than 1,000 miles from Frisland, corresponds to Labrador, they say, and Drogeo to Newfoundland.

This legend was further complicated in the 18th century by the identification of Prince Zichmni as the historical Scot Henry Sinclair, earl of Orkney and Caithness, who died circa 1400. Some of Sinclair's descendants go further and claim that Sinclair himself landed on Nova Scotia, Canada, in 1398 and in Massachusetts in 1399. In any case, scholars have exposed the Zeno book as fiction: The Zeno brothers did not discover new islands, nor did

Gerardus Mercator's famous world map of 1569 depicted landmasses within a parallel grid showing lines of longitude and latitude, enabling navigators to plot their courses precisely. The detail shown here reveals that Mercator had a reasonable grasp of eastern North America, but his maps also incorporated mythical information, such as the location of Prester John's kingdom. *(Library of Congress, Prints and Photographs Division [LC-USZ62-92883])*

they reach North America. The text is pieced together from information about expeditions to the Americas from Christopher Columbus onward, while the map combines features of the Faeroe Islands and Iceland. Nicolò Zeno's motive in writing the fraudulent account seems to have been family pride and the desire to restore the reputation of Venice as a great maritime power.

During the later Middle Ages, the islands of the Atlantic Ocean took on a particular fascination for Mediterranean seafarers long locked into their inland sea by the treacherous Straits of Gibraltar between Spain and North Africa. The development of oceangoing vessels and navigational aids opened the Atlantic to these mariners, and real and imaginary voyages and islands multiplied.

The great 12th-century Arab geographer al-Idrisi told of eight Muslim sailors who took on the Atlantic, which they called "the Sea of Perpetual Gloom." For 37 grueling days they survived treacherous seas, dangerous shallows, human-eating monsters, and other terrors before landing on the "Island of Sheep" (most likely Madeira); they then sailed onward to the Canary Islands and eventually reached the coast of Morocco in North Africa. In the course of this voyage, they allegedly discovered 30,000 islands. Like St. Brendan's *Voyage,* this story seems to be based on an actual voyage, and it may point to the navigational capability of the Muslims of the period.

In 1424, the Venetian cartographer Zuane Pizzigano drew a nautical chart showing a new island called Antilia. A squarish island nearly as large as Ireland, it lay in the Atlantic to the west of Europe. The name probably derived from the Portuguese *ante* and *illa,* meaning "opposite island," as in across from Portugal. Antilia appeared on numerous later maps in a variety of locations, shown sometimes as a large island, sometimes as a continent or archipelago. Antilia quickly became associated with an old legend of the founding of seven Christian cities on an Atlantic island. The Spanish, Portuguese, and French-Breton traditions all had versions of this story. In one of them, an early eighth-century Christian archbishop, six bishops, and their followers flee before the advance of the Moors (North African Muslims) into the Iberian Peninsula

(Spain and Portugal), taking ship in Portugal and sailing westward far into the Atlantic. They eventually reach an island where they scuttle their ship, found seven cities, and live peacefully ever after. The island thus becomes known as the Island of the Seven Cities. The first terrestrial globe ever made, painted for the German merchant and mariner Martin Behaim in 1492, includes a note telling a similar story, stating that "in 1414 a ship from Spain got nearest to [Antilia] without danger."

Antilia joined a group of supposed islands that drew maritime explorers farther and farther westward into the Atlantic. A number of documented expeditions went in search of it, including voyages in 1452 and 1474. In the 16th century, the Spanish historian Bartolomé de Las Casas wrote in his *History of the Indies* of an accidental Portuguese landfall on Antilia 100 years earlier:

> A storm-driven ship landed at the Isle of Seven Cities in the time of the Infante D[om] Henrique [Prince Henry the Navigator]. The crew was welcomed by the natives in good Portuguese and urged to remain, but declined. On the way home they found grains of gold in the sand that they had taken in for their cook-box. When they reported this to the Infante, he scolded them for not procuring more information, and ordered them to return, which they refused to do.

If this Portuguese crew was frightened of the island's magic, others were not. On June 25, 1474, the Florentine scientist Paolo Toscanelli sent a map to Afonso V, king of Portugal, explaining in an accompanying letter why he thought it was possible to reach Asia by sailing west. He showed Antilia in the Atlantic Ocean halfway between Portugal and Japan, writing, "From the Island of Antilia, which you call the Seven Cities, to the most noble island of Cipangu [Japan] it is 50 degrees of longitude, in other words 2,500

miles." Christopher Columbus fully expected to find Antilia along 28° north latitude on his first transatlantic voyage (1492), and some of his crew members believed they had located it. Many others agreed, and the West Indies were thenceforth known as the Antilles.

As Christopher Columbus believed he had found Antilia when he first landed on islands in the Caribbean, the West Indies became known as the Antilles. In this 17th-century engraving, people in the West Indies are spear-fishing from a rowboat, surrounded by birds and turtles. *(Library of Congress, Prints and Photographs Division [LC-USZ62-71037])*

Antilia never existed, although it continued to appear on maps throughout the 16th century. The legend of the Seven Cities lived on in the Seven Golden Cities of Cíbola, legendary cities sought by the Spanish conquistadores in North America. It lives still in Sete Cidades, a volcano in the Azores.

Hy-Brasil was the most persistent of the mythical Atlantic islands. Belonging to Irish legend, in its earliest form perhaps from the pre-Christian era, it was influenced by several early medieval Irish seafaring myths. In *The Adventure of Bran Son of Febal,* first recorded in the seventh century, Bran travels to Hy-Brasil (from Gaelic, "isle of the blessed"), a paradise supported on golden pillars. No one is ever sad or ill there; they are always happy, continually playing games to musical accompaniment. As are many mythical islands, this is said to be constantly shrouded in mist and cloud, but every seven years the clouds part and the island becomes visible. By 1325, it appeared as a disk-shaped island on a nautical chart drawn by Angelo Dalorto. On later maps, it was often called "Brasil Rock," sometimes being shown as a pair or even a group of islands. Usually, it was located in the Atlantic, west of Ireland, although in later maps it drifted farther westward toward North America. Some charts show a second Brasil in the Azores.

In 1452, Portuguese prince Henry the Navigator sent Diogo de Tieve to find Hy-Brasil. De Tieve failed, although he discovered two islands in the Azores. In 1480, John Lloyd led the first of many expeditions sponsored by the merchants of Bristol, a major port in southwestern England, in the hope of locating Hy-Brasil and establishing a new fishing base there. He sailed in circles for nine weeks and came home empty-handed.

Hy-Brasil remained on British Admiralty charts until 1873. As recently as 1912, an antiquary named T. J. Westropp published an article in the reputable journal of the Royal Irish Academy claiming that he had seen this island three times. He described his last sighting in 1872, on "a clear evening, with a fine golden sunset, when just as the sun went down, a dark island suddenly appeared far out to sea, but not on the horizon. It had two hills, one wooded; between these, from a low plain, rose towers and curls of smoke." His companions, including his mother, saw it, too. Despite their claims, Hy-Brasil is purely mythical. There is no evidence at all for its existence, but its name survives in Brazil Rock, lying amid the deep fog and roiling tides off southwestern Nova Scotia.

ENCOUNTERING THE AMERICAS

Popular enthusiasm ensures a steady market for books "proving" ancient European, African, or Asian knowledge of the Americas; identifying supposed evidence of foreign influence on various Native American cultures; and generally debunking the historical importance of Christopher Columbus. Arguments have been put forward for pre-Columbian contacts with the Americas by everyone from ancient Phoenicians to the Welsh, Africans, and Chinese. No evidence exists to prove that any of them reached the Americas, but a few of the major contenders deserve attention.

Leif Eriksson is now widely accepted to have made the first European landfall in the Americas in about A.D. 1000, opening a very brief period of attempted colonization. Some people believe, however, that the Viking presence was more widespread and of much longer duration. More than 30 rocks with alleged runic inscriptions (runes are the script used in writing medieval Norse lan-

guages) have been put forward at different times to prove this claim. In 1898, an inscribed stone was dug up by a farmer near Kensington, Minnesota. The allegedly ancient inscriptions identified as runes were translated: "8 Goths [Swedes] and 22 Norwegians on a voyage of discovery from Vinland westward. We had our camp by 2 skerries [rocky islets] one day's journey north of this stone . . . . We have 10 men by the sea to look after our ships . . . . Year 1362." The so-called Kensington Stone was repeatedly cited as proof that the Vikings had penetrated the interior of North America, but most scholars believe it is a 19th-century fake.

Other inscriptions include a signature in runes that Leif Eriksson supposedly carved into a boulder at No Man's Island near Martha's Vineyard, Massachusetts, which has been demonstrated to be a 20th-century hoax. Inscriptions at Spirit Pond, Maine, and on the Dighton Rock in Berkley, Massachusetts, have similarly been attributed to the Norse. (The old inscriptions on Dighton Rock have also been credited to the Phoenicians, Mongolians, Japanese, and Portuguese, but serious scholars reject all these claims.) A stone in Heavener, Oklahoma, contains an alleged ancient runic inscription translated as "GNOMENDAL," supposedly a Viking's first initial and last name. Scholars reject all claims that these are genuine Norse artifacts.

A large amount of other "evidence" for a Norse presence in North America has also been dismissed by scholars, although local people and tourist authorities may understandably still point them out with pride. They include the "Viking fort" in Newport, Rhode Island, which was actually a tower built by English colonists in the 17th century, and a number of so-called Viking mooring holes found along the Atlantic coast and as far west as Minnesota, which were in fact

This stone tower in Newport, Rhode Island, once thought by some scholars to have been built by Vikings (and still believed so by some people) is now attributed to English colonists. *(Library of Congress, Prints and Photographs Division [HABS, RI,3-NEWP,3-1])*

drilled by much later mariners to receive iron eye-bolts for mooring boats or securing traps.

In the late eighth century, a few Irish monks established the first settlements in Iceland. The Norse saga of Erik the Red relates that after the Vikings began to settle Ireland in the ninth century, the Irish fled to Greenland or Newfoundland; however, no artifacts or other evidence has been found in North America: The case for a medieval Irish encounter with the New World remains unproven.

One of the most popular of the supposed pre-Columbian European encounters with the Americas is the story of Prince Madoc (Madog) of Wales and the fair-skinned, Welsh-speaking Native Americans. It was first published in England in 1583 as "a true report." Madoc was said to have put to sea in 1170 and found a promising site for settlement near present-day Mobile, Alabama, where he left 120 companions. He then returned to Wales and brought back 10 more ships carrying colonists. These Welsh immigrants allegedly disappeared up the Alabama River and became a Native American tribe. Over time, the Welsh were linked with 20 different Native American peoples, real and imaginary, including the Shawnee, Lenni Lenape (Delaware), and Comanche; finally, the story became consistently identified with the Mandan of North Dakota.

The languages of all these mentioned Native American peoples, it has been asserted, contained Welsh words. The Reverend Morgan Jones claimed to have preached in Welsh in 1669 to a Tuscaroran tribe in the Carolinas—and to have been understood. The story of the Welsh North American tribe was actually included as fact in U.S. history textbooks in the 19th century, and in 1953, the Daughters of the American Revolution erected a monument at Fort Morgan in Mobile Bay, Alabama, with the inscription, "In memory of Prince Madoc, a Welsh explorer, who landed on the shores of Mobile Bay in 1170, and left behind, with the Indians, the Welsh language." Despite the flowering of many offshoots of this myth, scholars point out that not only is there no linguistic evidence that any American Indian language is related to Welsh but Madoc himself existed only in legend.

Some scholars have made intriguing claims that sub-Saharan Africans were in contact with the Americas long before Columbus. One Arabic source records that between 1305 and 1312 Abu Bakari II, the "Voyager King" of the great empire of Mali in West Africa, sponsored two expeditions to South America. On the first voyage, 200 canoes called pirogues crossed the Atlantic, landing in Brazil; only three returned. Abu Bakari led the second expedition himself at the head of an armada of 2,000 vessels. Ivan Van Sertima, a Rutgers University professor who is one of the major proponents of the pre-Columbian African thesis, suggests that the 14th and 15th centuries formed a major contact period, citing evidence of religious parallels, artifacts such as boats and sculptures depicting Negroid people, botanical specimens including cotton and maize, and references by later European visitors, including Columbus. Claims for African encounters in the Americas are controversial, but this field continues to be a lively area of historical research.

The merchants of Bristol, England, also have their champions. Bristol mariners were certainly trading in Iceland in the early 1400s—their marine technology and navigational skill were second to none in Europe. During the winter of 1497–98, the English merchant John Day wrote a letter, almost certainly to Columbus, stating that Bristol navigators had already reached North America. Referring to the English explorer John Cabot's recent landfall in North America, he wrote: "It is considered certain that this same point of land at an earlier time had been found and discovered by those of Bristol." (In this letter, Day incidentally claims that mariners from Bristol had also discovered Hy-Brasil, and he gives the latitude of the Isle of the Seven Cities.) Although some accept the evidence of Day's letter, it is likely that he was passing on Bristol gossip that he had accepted as fact. No other evidence exists, and most scholars do not believe that the traders of Bristol reached North America earlier than Columbus.

Numerous other contenders are alleged to have made pre-Columbian contact. Celts from the Iberian Peninsula have been proposed as founders of the New England kingdom of Iargalon ("land beyond the sunset") in about 1000 B.C. Ancient Phoenicians have been identified with sites from New Hampshire to South America on the basis of "evidence" including an inscribed stone allegedly found in Brazil in 1872 but mysteriously never produced. Egyptian astronomer-priests have been put forward, too, as visitors in about 800 B.C., leaving traces in the form of pyramidal temple-mounds in Central America and hieroglyphic-based Algonquian Indian scripts. Islamic texts tell of Muslim seafarers sailing from Spain and West Africa to the Americas in the ninth, 10th, and 13th centuries; supporters of these claims point to Arabic words in rock inscriptions and Native American place-names. Serious scholarship has rejected all these claims as being based on faulty linguistic analysis, chance similarities between artifacts or cultural patterns, or fabricated or misinterpreted material evidence.

Many people of the Middle Ages understood that the known world was expanding, but they could not be sure of the details. The discoveries of real explorers on land and sea inevitably became garbled through oral transmission, conflated with myths, and exaggerated into legends. Firsthand accounts, oft-told tales, maps, exotic artifacts, perceived linguistic and cultural resemblances, hearsay, and wishful thinking all contributed to the mix to produce a rich imaginative travel literature. Even though most of the claims this literature contains can be either explained or dismissed, reading about them can still stimulate careful thought and provide great pleasure.

9

Portugal's Master Mariners

For thousands of years, Portugal played only a supporting role in history, subordinate to a series of foreigners—Romans, Visigoths (a Germanic people), Muslims, and eventually the Spanish. Portugal gained its independence from Spain in 1143, but it was not until 1385, after his victory over the Spanish at the Battle of Aljubarrota, that John I, the new king of Portugal, once and for all established Portugal's freedom from Spain. In the following year, he married Philippa of Lancaster, half sister of the future King Henry IV of England, and so established a valuable and lasting bond between the English and the Portuguese. Eventually to be known as King John the Great, he was the monarch who brought stability to the emerging Portuguese nation and started it on the way to become one of the most wealthy and most powerful states in Europe.

Great attention was lavished on education of John's five children; the four boys became serious students, skilled in various disciplines as well as in all the martial arts. Duarte, the eldest, was to succeed his father as king; all the other children developed special skills. The third-eldest son was Henry (Enrique); his special interests are indicated by the name history has given him: Henry the Navigator.

EXPLORING THE AFRICAN COAST

Prince Henry's first goal was to have the entire western coast of Africa explored and charted.

Portuguese prince Henry the Navigator wanted to find the sea route to India and the East via the southern tip of Africa, an achievement he did not accomplish. *(National Archives of Canada)*

Prince Henry's Role in Exploration

In 1415, King John I of Portugal successfully attacked and took the Moorish city of Ceuta, a major trading post in Morocco, across the strait from the Spanish city of Gibraltar. The three elder sons of John performed with distinction during the campaign for the city. Prince Henry was knighted by his father on the day of victory and was named governor of the territory of Algarve (southern Portugal); with his honors came a huge fortune. Henry retired to Sagres (on Cape St. Vincent, the southwest corner of Portugal) and there founded what best could be called an "institute of exploration," devoted to all aspects of nautical navigation and exploration. Prince Henry then summoned to his academy some of the most renowned mathematicians and astronomers in Europe. He set these men to work in his school of navigation, drawing up charts and maps and designing and refining all the existing tools of navigation. In addition, he collected the best boat builders he could find and put them to work on making improvements on the ships to be used for expeditions. He then brought to his side the best mariners in the kingdom and beyond.

Henry the Navigator's goal was to find the sea route to India and the Far East via the southern tip of Africa. Although he died in 1460 before such a route had been discovered, there was hardly an early 15th-century Portuguese mariner or an expedition that he did not sponsor or inspire. Rarely does an individual have the clarity of mind and purpose as well as the boldness, tenacity, far-reaching imagination, and simple good luck to put such a project as Henry's into operation. Even more extraordinary is the fact that a single visionary person could affect not only the fate and future of Portugal but that of Europe, Africa, and Asia.

Then, after the southern tip of Africa had been rounded, he planned to establish the sea route to India and eventually beyond. Henry well remembered the dazzling sights he had seen in Ceuta as he surveyed the markets and palaces of that fallen Moorish city. Ceuta, Morocco, was a terminus for the Arab caravans that crossed the Sahara Desert with goods from Asia and Africa bound for Europe and England, so for Henry the results of exploration would, he knew, include these tangible rewards as well as the thrill of discovery.

Henry began to send voyages of exploration south from Sagres to the northwest corner of Africa at a time when almost nothing was known by Europeans of the west coast of Africa. About 400 miles south of Ceuta was the city of Safi, known to the Portuguese because it was a port from which goods brought there by caravan could be picked up. Another 400 miles farther down the coast, still in Morocco, was Cape Não (No), beyond which no European had ever gone.

> If you round Cape No
> You may return or no.

Fearful mariners knew of and believed in this saying, but Henry was determined that his

Many of Portugal's 15th-century voyages of exploration were made in lightweight, maneuverable ships called caravels. This 1890s photograph shows a replica of Christopher Columbus's *Santa María* that was built and then sailed on the 400th anniversary of Columbus's voyage to the Americas. *(Library of Congress, Prints and Photographs Division [LC-D4-21178])*

mariners sail from cape to cape along the west coast of Africa until the shoreline swung away to the east, indicating that the continent of Africa had been rounded and India would be ahead. Sometime in 1417 or 1418, Henry sent a reluctant crew and captain to round Cape Não; they admitted finding neither sea monsters nor an ocean boiling with the deadly heat of the tropical sun, as had been predicted.

Beyond Cape Não, 200 miles farther south, was Cape Bojador (in modern-day Western Sahara), Henry's next objective. Year after year, he sent out expeditions of ships that made important discoveries along the long Moroccan coast but failed to reach that goal. When, in 1434, Gil Eannes rounded Cape Bojador, it seemed as though a psychological barrier had been crossed. In 1441, Nuño Tristão reached a bulge in northwest Africa at about 21° north latitude and named it Cape Branco. Tristão brought home captives from the voyage, and from this time began the lucrative African slave trade, in which the Portuguese were to engage for the remainder of the exploration period. Slavery had been practiced for centuries—Europeans enslaved other Europeans, Africans enslaved other Africans—and Henry and his expedition captains saw nothing wrong in capturing and selling African slaves to their fellow Portuguese and to other Europeans. As they saw it, they were not only obtaining cheap labor but were saving heathen souls.

By 1442, Portuguese voyages along the west coast of Africa had become routine. As the explorers began to encounter desert nomads and slaves and tribespeople from the African interior, a small trickle of gold dust began to return to Portugal in exchange for the brightly colored clothing, shiny utensils, and gaudy trinkets that the Portuguese had to trade with. By all accounts, the gold was coming from a place quite far to the south, a place called Guinea, a land of plentiful water and green forests. There was even some vague hope that a so-called river of gold might flow through Guinea and from fabled inland kingdom where, it was believed, lived the Christian king Prester John. So it was with great optimism that Henry, in 1442, set his sights on reaching Guinea, the promised land where no European had ever been.

In 1443, Tristão was sent south with a single ship to explore beyond Cape Branco. Seventy-five miles south of that cape (in present-day Mauretania) he found a calm and well-protected bay in which there were a number of small islands. Eventually, the bay, the largest island, and the Portuguese settlement that developed there (which was to become an important trading post) were given the name Arguin. Tristão captured as many native people as his caravel would hold and returned to Sagres.

In 1454, a well-born young captain from Venice named Alvise da Cadamosto sailed out of the Mediterranean Sea bound for Flanders (Belgium), in search of trading opportunities and adventure. Blown off course, he landed at Lagos, Portugal, the city near Sagres where Henry built his ships. Henry was impressed by the character and trading experience of the young man and agreed to provide him with a cargo for trading along the African coast, hoping that he would voyage as far as Guinea. In 1455, Cadamosto left Lagos, picking up provisions, as was customary, at Porto Santo (Madeira) and at the Canaries. North of Cape Verde, Cadamosto was joined by another caravel captained by Antoniotto Usodimare of Genoa. Cadamosto reached the Gambia River and sailed inland, hoping to find friendly native people with whom he could trade. Instead, four miles upriver, the exploring party was attacked by 15 boatloads

of warriors from whom the Europeans barely escaped with their lives. At the urging of the crew, Cadamosto and Usodimare returned to Portugal.

By this time, the great shoulder of West Africa had been rounded. Existing maps indicated that soon the southern tip of Africa should appear, and then India and the East would lie ahead. But in fact, the huge, unexplored mass of southern Africa still lay ahead, stretching another thousand miles toward the South Pole. Cadamosto had not even come close to reaching the equator. Had Prince Henry understood the difficulties of his quest he might not have persevered, but in 1456, he directed Cadamosto to proceed still farther south. Navigating south as far as Cape Branco, the expedition was blown off-course to the southwest by a violent storm. Far off shore opposite Cape Verde, the travelers were surprised to encounter a group of five islands, all uninhabited by humans but teeming with tame birds in a lush pleasant setting. Naming them the Cape Verde Islands, Cadamosto claimed them for Portugal and, although several Europeans had visited these islands before him, would continue to insist he had discovered them.

Beginning with the expeditions of Prince Henry the Navigator, the Portuguese explored the west coast of Africa. One of the peoples they established contact with were those of the kingdom of Benin, whom they began trading with in 1486. In this Benin relief plaque, probably created in the 17th century, a man carries a shield and holds a staff. *(Library of Congress, Prints and Photographs Division [LC-USZ62-36624])*

Cadamosto then sailed back east to the mainland and once again sailed up the Gambia River, this time encountering no hostility from the African peoples. A lively trade developed in the Gambian interior. In exchange for his goods, Cadamosto received a bit of gold dust but mostly items such as civet cats, baboons, marmots, and tropical fruit. The Europeans saw bizarre things they had never heard of or seen before: The horse-fish (hippopotamus) was described by Cadamosto in his account of his voyages. There were also giant bats, strange birds, and unusual varieties of fish. Wild elephants roamed about, hunted by the native peoples and killed with poison arrows for their meat and their ivory tusks. Cadamosto left the interior of Gambia and upon reaching the Atlantic Ocean, sailed southward, even though his crew were ill with fever, scurvy, and the terrible heat. The ships landed 150 miles south of the Gambia River at Bissagos (Bijágos) Island (in present-day Guinea-Bissau), where friendly native people eagerly welcomed the travelers but could not comprehend the concept of trade; explorers and residents could not come to understand

Europeans exploring Africa encountered many animals they had never seen before. One such animal was the hippopotamus, which Alvise da Cadamosto described as a horse-fish. *(PhotoDisc)*

a word of the others' language. Cadamosto returned to Portugal with his feverish crew. The expedition had not brought back much cargo, but it had claimed new territory for Portugal, sailed farther south than any previous explorers had, and brought back considerable information about the interior of Africa.

In 1457, Diogo Gomes, a good friend of Prince Henry, was ordered to lead an expedition of three caravels as far south as possible. Gomes reached Bissagos Island (about 11° north latitude) as had Cadamosto, but Gomes found the tides and currents so dangerous that, at the urging of the crew, he turned back. He then retreated to the Gambia River and sailed upstream as far as his big ship could go. He was entertained by a native king and from him he got much information about the caravans that crossed the desert from Egypt in pursuit of the gold to be found in the African interior. Further inquiry and search were prevented by the fever and sickness that were overcoming Gomes and his crew, so Gomes sailed for home.

THE PORTUGUESE PUSH ON

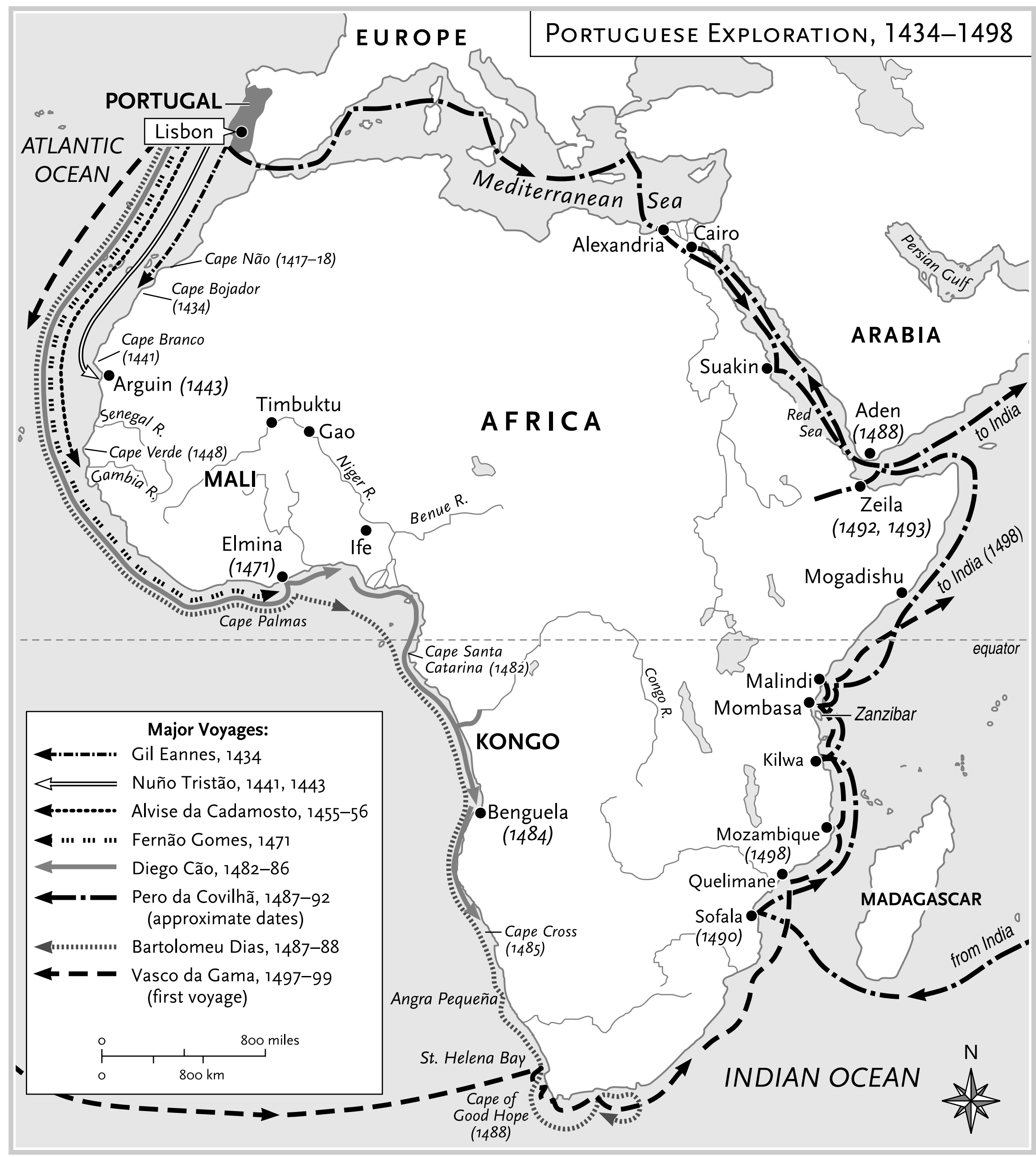
When Prince Henry died in 1460, his nephew King Afonso V of Portugal was much involved in wars against the Moors and the Spanish

that preoccupied him for the 43 years of his reign. The king did, however, take the time to delegate the West African trade to an entrepreneur and ship owner named Fernão Gomes (no relation to Diogo Gomes). Gomes was to have the monopoly only if he agreed to explore 300 miles of uncharted coast every year. In 1471, Gomes arrived along the coast of present-day Ghana and set up a trading post later to be known as the great gold-producing city of São Jorge de Mina (present-day Elmina). In the same year, in the Gulf of Guinea, he reached an island he named Fernando Po (now called Bioko) and discovered, to his great dismay, that the coastline turned sharply to the south. All the existing world maps were mistaken, and no one knew how much farther south he would have to sail before he could round the tip of Africa. In 1473, Gomes did sail a bit south of the equator, but the next year the king relieved him of his commission.

At this time, Afonso V had his hands full with his domestic and dynastic troubles. The futile wars he conducted took a toll on the king's health, and Afonso died in 1481. He was succeeded by his son, John II, a strong and resolute man cast in the mold of his grandfather John I. One of his first acts was to restore Portuguese sovereignty over the African trade. Heavily armed caravels were sent south to make sure that piracy and poaching within his territory were stopped; at home, he had the counting house for incoming cargo moved from Lagos to Lisbon so that he could literally look out his palace windows and watch and number the loads of gold, ivory, pepper, and other spices as they arrived.

King John II realized the post established by Fernão Gomes, Elmina, was of strategic geographical importance because of its proximity to the gold fields in the region the Portuguese called Guinea. So a fleet of warships and cargo ships was sent there to construct a fort, under the direction of Diogo de Azambuja. This expedition, aided by the skill of Bartolomeu Dias, one of the caravel captains, was highly successful. Soon an abundance of gold was flowing from Mina to the mint at Lisbon. John II was as determined as Henry the Navigator had been to expand the Portuguese kingdom through exploration and exploitation. Gone was the bustling hub of navigation Henry had sponsored in Sagres, but in its place was a functioning organization in Lisbon of pilots, navigators, cosmographers, geographers and mapmakers who were anxious to continue the work begun by Henry. John had little interest in seeking the western passage to India and the Far East that some were beginning to promote. In 1483, in fact, John would reject a brash young Italian named Christopher Columbus seeking sponsorship for a western voyage to Asia—his ideas were judged to be too fanciful.

In 1482, John appointed Diego Cão (Cam) to command the next of the West African expeditions. Cão left Portugal in April, rounded the bulge of West Africa, provisioned at Elmina, and, crossing the equator, landed at Cape Santa Catarina, at 2° south latitude (in present-day Gabon). Steering due south and overcoming powerful tides and adverse currents, Cão became the first European to reach the mighty Congo (Zaire) River. Following Portuguese custom, he erected, on the south bank of the river, a large stone marker, or *padrão,* recording his arrival. Cão pressed southward, reaching Cape Santa Maria Benguela, at 13°25' south latitude (in present-day Angola) before returning home in 1484, having navigated farther than any European before him. The greatest achievement of this expedition, however, was his



exploration of the Congo and establishment of a Portuguese trading relationship with the Bakongo kingdom there.

Cão was enlisted to lead a second African expedition in 1485. On this voyage he further explored the Congo River, apparently navi-

gating as far upriver as Yelala Falls. Once again, he extended Portugal's southward reach, this time by sailing as far as Cape Cross, at 20°50' south latitude (in present-day Namibia). Here, too, he erected a commemorative marker. Eight feet tall and weighing half a ton, it read:

> In the year of the World 6681, and the year 1482 after the birth of the Lord Jesus Christ, at the command of the glorious, most powerful and excellent King John II of Portugal, this country was discovered and this cross erected by Diego Cão, a knight at his court.

It is possible that Cão's second expedition reached Caba da Volta, at 22° south latitude; the evidence is unclear. Uncertain, too, is the fate of Cão himself, although scholars believe that he probably died on his return voyage in 1486. Whether he lived to savor his accomplishment or not, he had succeeded in opening up the West African coast from the equator to 20°50' south latitude, putting Portuguese navigators within striking distance of the southern tip of Africa and, beyond it, the Indian Ocean trade.

In 1487, King John II made plans for an expedition that would, without fail, round the tip of Africa. Two 50-ton caravels would make the voyage, accompanied by a smaller supply ship that would wait somewhere along the coast and furnish provisions to the caravels as they returned. John put a capable and experienced captain in charge, Bartolomeu Dias. The expedition left Lisbon in August 1487. As they proceeded south, the explorers set up stone crosses at important points and gave names to rivers and other geographical features. Just below the Tropic of Capricorn, at Angra dos Voltas ("bay of turns"), they encountered fierce winds that forced them to tack back and forth for five days. Then the caravels were struck by a horrific storm that lasted for weeks and blew the expedition off-course. Only when they at last found themselves in calm seas and sailing east with the coast line to the north did the mariners realize that they had rounded Africa's southernmost tip. The ships followed the coast northward as far as the Rio do Iffante (Great Fish River): They were now off the southeast coast of present-day South Africa. At this point the crew had had enough and insisted on returning to Portugal. On the return voyage, the explorers identified and landed on the cape, which Dias dubbed Cabo Tormentoso, meaning "cape of storms." It was soon to be named the Cape of Good Hope. Dias met the provision ship at Angra dos Voltas and stopped off at São Jorge de Mina to take on a shipment of gold. Dias returned to Lisbon having sailed some 1,500 miles farther south than any other European explorer and rounded the southern tip of Africa. The route to India was now open.

John II did not react immediately to the promising report brought back by Dias; however, in 1494, John had special timbers brought to Lagos for the construction of a number of stout ships to make the voyage to India. This expedition would open up a direct trade route between India and Portugal. Bartolomeu Dias was to oversee the building of the ships, because he knew what was needed for the arduous voyage.

But in October 1495, John II died and was succeeded by his queen's brother, crowned Manuel I. The new monarch was even more determined than John to break the stranglehold Genoa, Venice, and Alexandria had on the lucrative trade with India. He was prepared to do this by force if necessary, and if a few Muslims were killed in the process, so be it. Manuel hoped that some contact might be made with the Christians who were somewhere in the East; but, without doubt, trade

Another Expedition Seeking Prester John

King John II, although pleased with the successes of Diego Cão, was certainly disappointed to find out that the African coast stretched out much farther to the south than anyone had imagined. In 1483, the Portuguese king decided to send out an expedition that had two purposes. First, he wanted to establish communications with Prester John, at the time alleged to be the Christian ruler of Abyssinia (present-day Ethiopia), who would surely be his ally in defeating the Muslims and spreading Christianity. Second, ever in quest of the source of spices and riches of the East, he wanted to reach India and in the meantime explore the eastern coast of Africa and thus pave the way for Portuguese trading parties once the tip of Africa was doubled by his never-ending west coast African expeditions. Pero de Covilhão (Covilham), an officer in the royal guard, was chosen, along with Afonso de Paiva, to undertake a secret mission.

Posing as a merchant, Covilhão, who was fluent in Spanish and Arabic and knowledgeable about business matters, left Lisbon in 1487, eventually arriving at the island of Rhodes in the eastern Mediterranean Sea. Picking up a cargo of honey there in his role of merchant, Covilhão took a cargo ship to Alexandria, Egypt, where he fell seriously ill and was almost robbed of his merchandise. After his recovery, he was able to travel on to Aden (just east of the supposed great kingdom of Prester John). Covilhão had only begun to carry out his objectives; finding where the riches were was more important at the moment than trying to find Prester John. The explorer sailed across the Indian Ocean to Cannanore, on the Malabar (west) coast of India, where he was told that the richest city in India lay a few hundred miles to the south. He accordingly sailed onward to the great port of Calicut where he found large ships loaded up with riches: nutmeg, cinnamon, cloves, pepper, precious stones, porcelain, gold, and fine woven goods. All these valuables had come from India and the Far East and were bound for Europe.

Eventually Covilhão made his way to Cairo, where he was met by messengers from King John. He had been away for almost three years. The messages from the king instructed Covilhão to go and find Prester John in Abyssinia. After some further travels (which Covilhão seemed to have come to enjoy), he finally went to Abyssinia in 1493 and was there welcomed—but detained—by the emperor. He never returned. It was reported in 1520 by a Portuguese ambassador that the great explorer was living well in the court of Prester John, had an Ethiopian wife, and was esteemed and respected by all. Thus Covilhão joined the ranks of travelers whose lives were profoundly changed by the search for the kingdom of Prester John.

was the first priority. Manuel's intention was to divert the spice trade, which brought invaluable products from the Far East to Europe, from the overland-and-Mediterranean route to the Portuguese sea route around Africa.

During his first voyage from 1497 to 1499, Vasco da Gama sailed from Lisbon, Portugal, to Calicut, on the southwest coast of India, and back by rounding the newly named Cape of Good Hope. In this 19th-century watercolor, da Gama stands in the prow of a rowboat with his crew. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2069])*

VASCO DA GAMA SAILS FOR THE EAST

As the first step in this takeover, Manuel chose Vasco da Gama to lead an expedition to India that would be the start of direct trading between Lisbon and the East. Da Gama was known to be an excellent sailor and a man of uncompromising determination. His armada consisted of four ships: two three-masted, 100-ton vessels and one large and one small caravel. With the latter two ships serving as supply tenders, three years' worth of provisions and goods were taken along. All the ships were well armed; navigational instruments and the best and latest maps were also aboard. In the evening of July 8, 1497, all the officers and crews were taken by da Gama to the chapel at Belém (Lisbon) to pray and be given absolution from all sins, in case they died on the voyage.

The ships sailed to the Canary Islands and then to the Cape Verde Islands, following the usual route, and then swung west for a while before heading southeast so that they did not see the coast of Africa until early November 1497 at St. Helena Bay, just short of the Cape of Good Hope. At this anchorage, the mariners made repairs to their ships and took on water and food. Relations with the few native people there began well but soon ended with a battle that saw da Gama take an arrow through the leg. This event was a forecast of the many future occasions on which da Gama's quick temper and impatience would result in friendly beginnings devolving into hostility. The Portuguese rounded the cape and sailed north, keeping to the east coast while fighting bad currents and adverse winds. The expedition had arrived at Mozambique along Africa's southeast coast by February, a favorable time because soon the monsoon winds would be blowing east from Africa to India—creating perfect sailing conditions. Da Gama made contact with a number of Arab sheiks and Muslim traders, but encounters invariably ended badly because of his treatment of all those who did not accede immediately to his demands. By extortion and torture of informants, da Gama obtained the services of an excellent pilot (Ahmad ibn Majid) to take his party across the Indian Ocean to the Malabar coast of India. Within one year of leaving Portugal, da Gama arrived at Calicut, reputed to be the richest of all the cities in India.

The job assigned to da Gama was to establish a foundation for peaceful commercial relations; he was unable to do this, although the ruler of Calicut did send a letter to the king of Portugal urging trade between their two kingdoms. Da Gama had much information about the East that would be valuable later, but his character and his methods had instilled fear and anger, not respect, in all those whom he had encountered. Nevertheless, a triumphant celebration was held for da Gama when he reached Lisbon in September 1499. He demanded and received extravagant rewards. The celebrated explorer married and settled comfortably into retirement, but he was very soon summoned to reenter the fray.

PORTUGAL SOLIDIFIES ITS POSITION

In 1500, everything was in place for the enrichment of Portugal: King Manuel I knew where the riches were and how to get there, and he did not waste time. In March of that year, a 13-ship armada left Lisbon under the command of a Portuguese nobleman, Pedro Álvars Cabral; the destination was Calicut, India, and the purpose was commerce. The ships sailed south as usual via the Canary and Cape Verde Islands. After Cape Verde, the party took a wide swing to the west to avoid the equatorial doldrums, a region in the mid-Atlantic in which flat, windless seas are sub-

A potent reminder of Portugal's age of discovery, the Tower of Belém was built between about 1515 and 1520 to commemorate Vasco da Gama and to defend Lisbon and its harbor. The last sight of departing Portuguese explorers and the first when they returned, the tower is now a UNESCO World Heritage Site. *(PhotoDisc)*

ject to sudden, violent storms. To their amazement on April 22, they sighted land—a massive land—to the west. Cabral had accidentally come upon Brazil. It is likely that Brazil had been seen earlier by other European sailors, but Cabral had the presence of mind to claim the new land and to send word of its discovery back to King Manuel I. Upon landing, the Portuguese found, as he reported, the inhabitants to exhibit a gentle nature and be receptive to conversion. A mariner on the voyage kept a diary recording the events of the entire mission, which survives today as the *Anonymous Narrative.* In it, the sailor describes the exotic appearance of the Tupi Indians, telling how they painted their eyelids and above the eyebrows "figures of white and black and blue and red" and how they cut scars into their bodies and rubbed black pigment into them, each scar recording an enemy slain, so brave warriors were covered with scars. Cabral held a religious service and placed tin crucifixes around the necks of 60 new converts to Christianity. The next day, the armada continued on its way, leaving behind, ironically, a land bigger than all of Europe and containing more potential riches than those of the East Indies for which Cabral was so eagerly bound.

At first the ships sped along on the prevailing winds, heading for the Cape of Good Hope; a violent storm came up, however, and after 20 days of furious winds and seas, only seven ships remained; the others had sunk with all hands. Another storm struck when the party was rounding the cape; one ship under Diogo Diaz was blown off course to the east and came upon a gigantic, hitherto-unknown island. Thus by accident, like Brazil, Madagascar was "discovered." The six remaining ships went to Malindi, in present-day Kenya. It was the one city whose residents da Gama had not managed to alienate, and the Portuguese were graciously welcomed there.

From Malindi, Cabral sailed to India and Calicut, where for a while friendly commerce took place, but soon hostility erupted and a large number of Cabral's shore party were ambushed and killed. The author of the *Anonymous Narrative* recounted the terrible revenge exacted by Cabral. Ten Moorish ships in port were taken, their cargo stolen, the vessels burned, and 500 or 600 men killed. Nine unloaded ships were burned, and three ele-

phants were killed and eaten. The next day, the Portuguese ships drew up to the city and bombarded it, killing "an endless number of people" and partially destroying the city. The six ships then sailed 100 miles south to the city of Cochin, where, under the circumstances, the merchants were inclined to accommodate Cabral. Two weeks later the fleet, heavily loaded with treasure, sailed for home, reaching Lisbon in July 1501. Of the original 13 ships, only six returned, but the wealth they contained more than made up for the losses.

Manuel's next move was designed to hold on to what he had gained. Da Gama came out of retirement to lead the next major expedition to India. He was seething at the attack on Cabral's men at Calicut, and he still remembered what he regarded as his own disrespectful treatment by the ruler of Calicut. The exploits of da Gama on his 1502 voyage cannot be counted as exploration—they were revenge and conquest. Any city that had not been willing to trade with Portugal was in danger of being destroyed. As da Gama prepared to return to Lisbon, loaded with traded or looted goods, he was satisfied that he had laid the groundwork for Portuguese domination of a large region of the East.

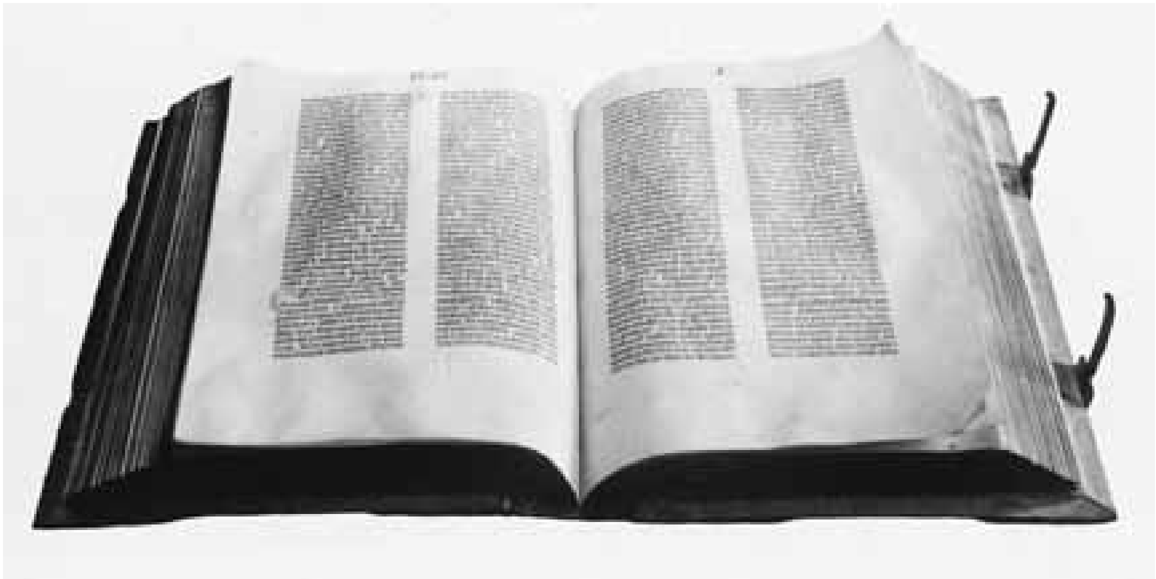
As the 16th century began, it could be said that the goals of King John I had been achieved and that the visions for the future of Henry the Navigator had been realized. But gone were the motivation of religious fervor and the quest to find, know, and map the unknown portions of the world. Exploration had become a means to commerce and conquest. The wealth and riches that had somehow become the goal of exploration worked a political transformation as Portugal advanced from its centuries of obscurity to become one of the wealthiest nations in the world.

10

The Dawning of the Age of Discovery

By the late 15th century, the most dynamic of the world's civilizations were the Islamic world and western Europe. The rise of Islam and its adoption throughout a huge region from northwestern India to the western Mediterranean instigated the most striking political change in the medieval world. In the late Middle Ages, this broad, integrated Islamic civilization led the world in learning and technology. The tradition of scholarship and propensity for travel combined to give Islamic scholars a more comprehensive and accurate understanding of world geography than any of their contemporaries had.

During the Middle Ages, western Europe had weathered devastating invasions, wars, famines, and epidemics. The early medieval period was a time of decline in broad geographical knowledge in Europe despite the extensive travels of Christian pilgrims and missionaries and the Vikings; in fact, the term *geography* actually fell out of use in the Middle Ages. By the late 15th century, however, Europe's population had begun to recover, and its fortunes were improving: The rise of nation-states provided political stability, trade created prosperity, and the revival of classical learning was forging a class of well-educated, inquiring people. The arts were flourishing. A handful of European states had become wealthy. Travel accounts such as those of Marco Polo and Sir John Mandeville circulated widely and broadened Europeans' geographical understanding, intellectual horizons, and ambitions. The invention of the printing press in Europe in the late 15th century allowed many people access to information previously restricted to monastic scholars and others rich enough to afford laboriously handwritten manuscripts. The *Geography* written by the ancient Greek-Egyptian scholar Ptolemy, largely unknown in Europe from its composition in the second century A.D. until its reemergence and publication in the 15th century, introduced key concepts: His system of longitude and latitude, for example, offered a way to organize



Johannes Gutenberg is given credit as the first person to print a book, the Bible, with movable type in 1455. One of the approximately 2,000 Bibles he printed at that time is shown in this photograph. *(Library of Congress, Prints and Photographs Division [LC-USZ62-87341])*

geographical information and opened the possibility of long-distance navigation.

THE ROLE OF MAPS

After a long period of decline, European mapmaking finally began to improve in the late medieval period. The first scientifically prepared maps, accurate coastal charts called *portolans,* were developed in Italy and Spain in the 13th century for navigators. The coastal seas they depicted were overlaid with a network of lines representing the principal compass directions and used for laying out accurate compass courses. The crude diagrams of the old T-O maps (in which the three known great landmasses were separated by T-shaped bodies of water) gave way to the large, circular, more detailed religious maps called *mappae mundi* (world maps). The largest and most detailed map that survives from the Middle Ages is the Hereford Mappamundi (ca. 1300), drawn by Richard of Haldingham or Lafford, an obscure English priest. It shows numerous real towns alongside biblical scenes and the Garden of Eden.

Scientifically based world maps gradually replaced these religious models. Their compilers made a serious attempt to incorporate recent discoveries by navigators and travelers, even though they continued to include some distortions based on mythology, literature, and Christian teachings. The Catalan Atlas (1375) is widely regarded as the finest map produced during the European Middle Ages. Attributed to Cresques Abraham of Majorca, it included information from *portolans* and showed the West African coast beyond the point thus far reached by European mariners. It was the first map anywhere to show an accurate outline of peninsular India and Ceylon (present-day Sri Lanka).

During the Middle Ages, European mapmaking became more based in reality as explorers located new places and cartographers incorporated the details into their maps. In this 1650s engraving, a Christian priest examines a map that includes China and India, vast regions that were virtually unknown to Europeans until the 14th century. *(Library of Congress, Prints and Photographs Division [LC-USZ62-71632])*

By the end of the Middle Ages, Europeans knew very accurately and in great detail their own continent, the entire Mediterranean, and the Black Sea. Recent Portuguese voyages had added the eastern Atlantic islands—Madeira, Majorca, the Canaries, and the Azores—to the known world. The coastline of West Africa had been filled in as far south as the Cape of Good Hope. The Europeans also understood the relative positions of East Africa, Arabia, and eastern lands through central and southern Asia to China and the East Indies. They lacked accurate maps of distant regions, however; throughout the Middle Ages, mapmakers relied on Marco Polo's *Travels* for their information about East Asia and Southeast Asia. Further, many were hampered by their belief, ancient yet still firmly held, that the Earth's torrid zones were uninhabitable.

THE LIMITATIONS OF OTHER PEOPLES

What had happened to China and India, both of which had seemed at the beginning of the Middle Ages to be poised for exploration, if not expansion, beyond their own borders? China was still a rich and advanced empire. In the early 1400s, the Chinese admiral Zheng He's voyages to India, the Persian Gulf, and East Africa had demonstrated China's superb shipbuilding, navigational, and seafaring skills. But after Zheng's final voyage in 1433, the Ming emperor had destroyed the imperial fleet; navigating the open seas even became a crime in China in the early 16th century. China yielded the rich East Indies trade to Arabs and Indians. This deliberate annihilation of an outstanding maritime tradition was based on China's cultural isolation, a sense of the superiority and thus self-sufficiency of Chinese civilization, the empire's rich resources and vast wealth, and the constant threat of invasion from the north.

As for India, by the end of the Middle Ages it had exerted such a strong cultural influence regionally that a huge area encompassing India, Southeast Asia, and the East Indies was commonly referred to as "Greater India." Despite their extensive maritime links from the Red Sea to Sumatra, however, the Indians restricted themselves to trade. They showed

no apparent interest in exploration for its own sake. Contributing factors included chronic political turmoil in South Asia, whose innumerable small states were perpetually at war, and tradition-bound Hindu scholarship, which, unlike the Islamic intellectual enterprise, did not readily absorb innovation, discoveries, or foreign influences.

Like many peoples around the world in this era, most Native Americans were familiar only with their own tribal regions. Even the great Aztec and Inca Empires, at their height in the 14th and 15th centuries, were essentially self-contained, although the Aztec had mapped a large territory extending from present-day central Mexico to Honduras and knew of virtually all of Central America. The Aztec Empire had an extensive network of well-developed roads, but the absence of pack animals to carry food and water prevented them from undertaking long-distance travel. The Inca, occupying a 2,500-mile-long region in South America from present-day Colombia to Chile, had thousands of miles of paved roads linking religious sites and settlements. Having no written language or maps, they memorized routes and sight lines and transmitted this knowledge orally, but they rarely strayed beyond the shrines and settlements in the high Andes that dominated the interior of their empire. Both empires were confined to some extent by their challenging interior terrain, and limited technology—their open boats, for example, were no match for the adverse winds and currents of their oceans—prevented their undertaking maritime exploration.

THE ACCOMPLISHMENTS OF MEDIEVAL EXPLORERS

What had medieval explorers actually discovered? Most of the outstanding achievements belonged to the seafarers. The Norse had pushed all the way across the Atlantic to visit North America, although their attempts to settle there had failed. Along the way they had reached and settled the major North Atlantic islands, from the Shetlands and Faeroes across to Iceland and Greenland. The Portuguese had discovered the islands of the East Atlantic, and Portuguese and Spanish colonists had settled them. Portuguese mariners also navigated the entire western African coast all the way to the Cape of Good Hope. Not only Arabs and Indians, but Chinese mariners reached East Africa.

Control of cities and empires changed hands often during the Middle Ages as civilizations clashed and struggled to gain or maintain control. This image from a 15th-century illuminated manuscript depicts the last hours of Constantinople before its capture by Ottoman (Turkish) sultan Muhammad II from the Byzantine (eastern Greek) emperor in 1453. *(Library of Congress, Prints and Photographs Division [LC-USZC4-2149])*

Settling the Pacific

Australia had been long settled by A.D. 500; New Guinea, Melanesia, Samoa, Fiji, the Marquesas, and many other Pacific islands were also already settled. Over the next 1,000 years, the extraordinarily skilled and resourceful Polynesian mariners explored a sizable part of the Pacific Ocean and visited a large number of island groups. In a significant expansion, they explored and colonized the so-called Polynesian Triangle, a 15-million-square-mile area of the world's largest ocean whose points are formed by Hawaii to the north (settled in about A.D. 400), remote Easter Island to the southeast (settled at about the same time), and the large islands of New Zealand to the west (probably settled in the eighth or ninth century). Thousands of miles to the west, Polynesian navigators found their way to East Africa and went on to settle Madagascar, probably in about 700. All these dates are speculative, based on archaeological and linguistic analysis; very little evidence survives.

Pacific voyaging and navigation is a lively field of ongoing research, much of it involving experimental voyages to test boat designs and methods of navigation. The Polynesians' primary vessels were dugout canoes. During the European Middle Ages, Pacific boatbuilders had no tools other than those made from stones, shells, bones, and coral. Among many regional types, the most common vessels were single canoes with outriggers and longer double-hulled canoes; both were fast and maneuverable. The larger boats, with covered decks and woven lateen (triangular) sails, were capable of carrying 300 people plus cargo. In them, whole families with their provisions, crops, and livestock

In the Pacific, Polynesian mariners explored and settled a huge region reaching from Hawaii to New Zealand. Medieval explorers had no means of reaching either of the polar regions, although in about 1050, the Norseman Harald Hardrada sailed all the way around the northern coast of Scandinavia, through the Arctic Ocean and into the White Sea, which he aptly named the "Ice Sea." These may seem like modest results for 1,000 years' worth of seafaring, but such long voyages into unknown and uncharted waters were enormous achievements requiring advanced ships, sophisticated navigation, and sheer courage.

The world was still a patchwork of civilizations, but permanent cross-cultural contacts had been established across vast distances by overland travelers as well. Those primarily responsible were generations of Arabic, Indian, and European merchants trading along integrated overland and maritime routes linking Europe, Africa, and Asia. At the same time, many thousands of Christian and Islamic pilgrims had traveled to the Middle East, and Christian missionaries and ambassadors had reached central Asia, India, and China. Arab traders had reached the East Indies, North African merchants had crossed the formidable Sahara Desert into the African interior, and Chinese fleets had called at the ports of India, Persia, Arabia, and East Africa. Isolated peoples had been visited for the first time by foreigners,

crossed thousands of miles of open ocean. In 1976, a modern reconstruction of a 60-foot double-hulled vessel named *Hokule'a* ("star of joy") sailed from Hawaii to Tahiti—3,000 nautical miles—in 35 days.

Polynesian seafarers are known to have navigated primarily by the stars, but their methods and routes are not fully understood. They certainly had no instruments; instead, they memorized the rising points and paths of several dozen prominent stars, organizing them into mental compasses. They then steered by a succession of known stars. Extremely sophisticated mariners, the Polynesians knew a huge amount about landmark islands and mountains; reefs and sandbanks; variations in the colors, flora, and fauna of the sea; and Pacific currents and wave and wind patterns. The dwindling band of present-day Polynesian mariners familiar with this lore remember these many subtle details by organizing the specifics of individual routes into mythlike stories; their ancient forebears may well have followed the same practice. Medieval Polynesians certainly knew the narrow navigable routes of their vast ocean; they were the only Pacific people—and one of very few peoples in the world at that time—capable of navigating in open seas. Scholars believe that the Polynesians also sometimes deliberately drifted, allowing themselves to be carried along on ocean currents, and that many of their landfalls were the result of chance rather than design. Both methods took them many thousands of miles. One legend from the Pacific island of Rarotonga suggests that the Polynesians may have sailed as far as frozen southern oceans in the seventh century. With or without the Antarctic to their credit, the Polynesians rank among the greatest explorers and discoverers of the Middle Ages.

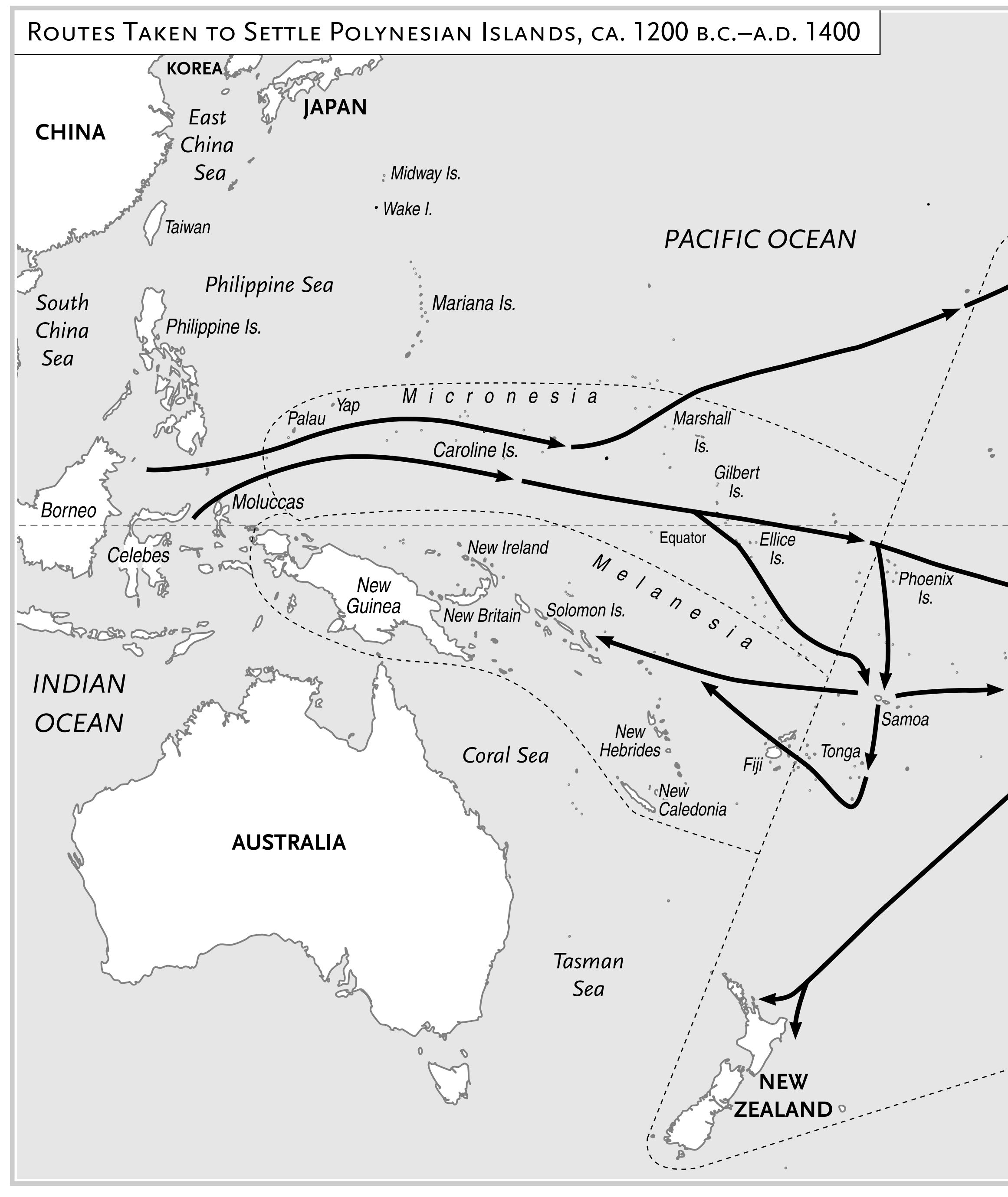
some of whom settled. It would be misleading to overemphasize the extent of these cultural exchanges, yet all these routes and contacts were channels for a slow but steady flow of information about geography, history, customs, religion, learning, technology, and innovation.

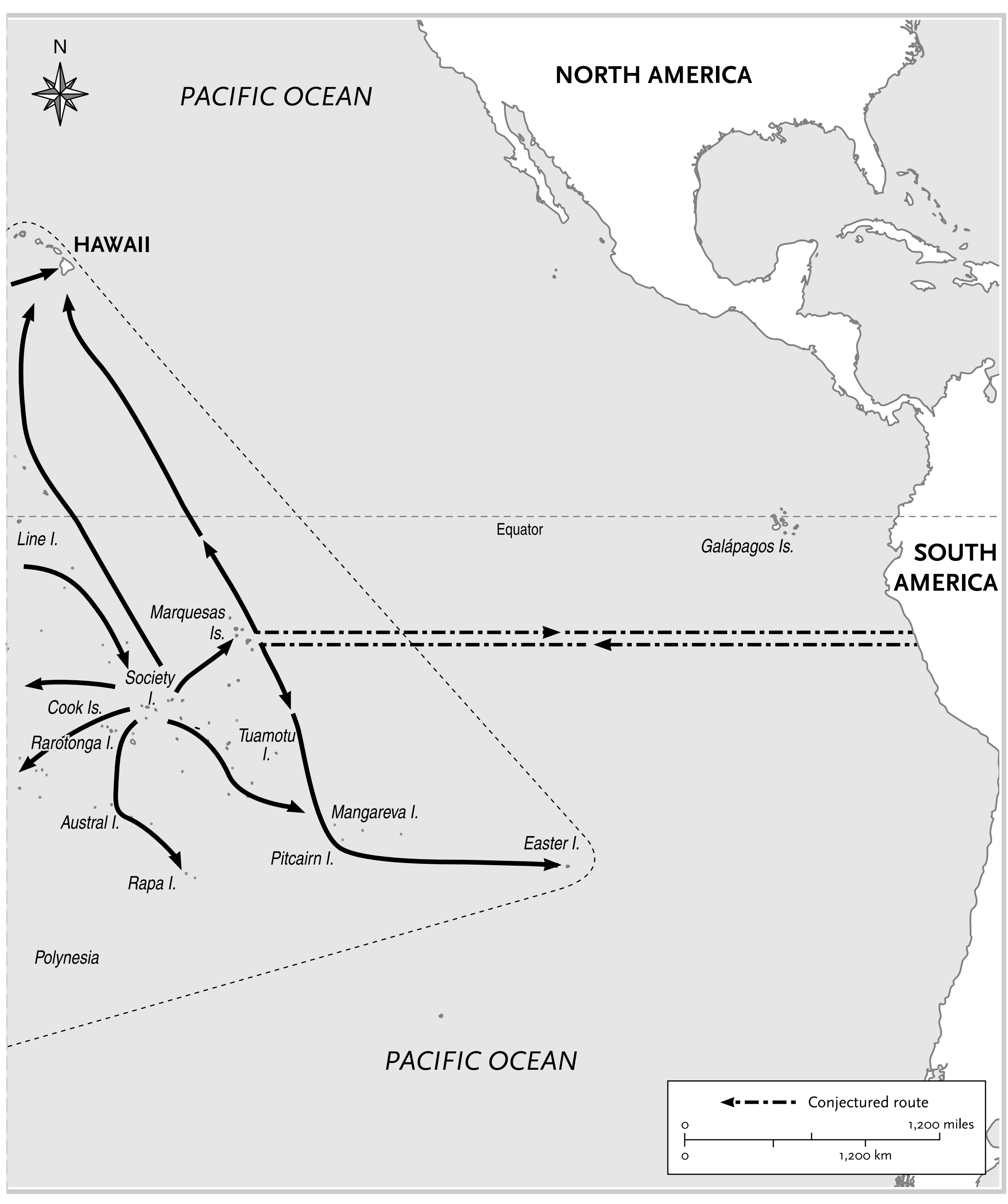
Fulcher (Foucher) of Chartres, France, an eyewitness to the First Crusade in the 11th century, was aware of a historic shift in consciousness. "In our time," he wrote in one of the earliest chronicles of the Crusades,

> God has transformed the Occident [West] into the Orient [East]. For we who were Occidentals have now become Orientals. . . . We have already forgotten the places of our birth; already these are unknown to many of us or not mentioned any more. . . . He who was born a stranger is now as one born here; he who was born an alien has become a native.

NEW CHALLENGES FOR EXPLORERS

As the end of the 15th century approached, several challenges for exploration loomed large. The enormous interior expanses of Asia and Africa were virtually unknown by outsiders. Their remoteness and the difficulty of the terrain kept these continents from being


ROUTES TAKEN TO SETTLE POLYNESIAN ISLANDS, CA. 1200 B.C.–A.D. 1400
KOREA
JAPAN
CHINA
East China Sea
Midway Is.
Wake I.
Taiwan
PACIFIC OCEAN
Philippine Sea
South China Sea
Mariana Is.
Philippine Is.
Micronesia
Palau
Yap
Marshall Is.
Caroline Is.
Gilbert Is.
Borneo
Moluccas
Equator
Ellice Is.
Celebes
New Ireland
Melanesia
Phoenix Is.
New Guinea
New Britain
Solomon Is.
INDIAN OCEAN
Samoa
New Hebrides
Tonga
Fiji
Coral Sea
New Caledonia
AUSTRALIA
Tasman Sea
NEW ZEALAND



N
PACIFIC OCEAN
NORTH AMERICA
HAWAII
Equator
Line I.
Galápagos Is.
SOUTH AMERICA
Marquesas Is.
Society I.
Cook Is.
Rarotonga I.
Tuamotu I.
Mangareva I.
Austral I.
Easter I.
Pitcairn I.
Rapa I.
Polynesia
PACIFIC OCEAN
Conjectured route
0
1,200 miles
0
1,200 km

fully explored until the 19th century and in some parts until the 20th century. Most of the immediate challenges to explorers in the late 15th century, however, required mastery of the world's seas. People of the Eastern and Western Hemispheres knew nothing of one another, insulated by impassable oceans. The exact size of the Earth and the disposition of its continents were uncertain. During the Middle Ages, the Earth was generally agreed to be a sphere. The precise circumference of the Earth was in dispute, however, as was the size of the Eurasian and African landmasses. What lay on the other side of the world and whether the Atlantic and Pacific Oceans were fully navigable were mysteries, although a growing number of Europeans suspected that circumnavigation was possible.

Rapid advances in shipbuilding technology enabled the Europeans to push farther and farther into the open sea. The round-hulled, clinker-built ships of northern Europe became broader and deeper. Two new types of ship were developed. The cog, with its high sides, deep draft, and sternpost rudder, was sturdy, maneuverable, and cheap to build; it had a flat bottom, so it could conveniently be beached for loading and unloading. Italian and Catalan shipbuilders eventually adopted this strong and seaworthy design. In the 14th and 15th centuries, the hulk replaced the cog in northern Europe. Hulks were broad and rounded, with high bows and sterns; they were extremely strong and held a great deal of cargo. In the 15th century, Portuguese shipbuilders combined elements of these northern designs with traditional features of Mediterranean vessels to create the fast, oceangoing ship that ushered in the age of discovery: the caravel. Caravels were small, clinker-built ships, which, as their design evolved, carried three masts that could be flexibly rigged with a combination of square (northern) and triangular, or lateen (Mediterranean) sails.

This astrolabe, an instrument used to determine latitude, dates to the 17th century. *(National Archives of Canada)*

At the same time, navigational aids improved dramatically. Starting in the late 12th century, European mariners began to use magnetic compasses, enabling them to locate directions accurately. (Such compasses had been available to Chinese navigators since about the ninth century.) It was the magnetic compass, with its northerly orientation, that led to the convention of drawing maps with north at the top. Early magnetized compass needles simply floated in bowls of water; by the 15th century they were being mounted on cards that were marked with the principal directions and their subdivisions, essential for mariners navigating in open seas. Two other

important instruments, the astrolabe and the quadrant, also became available in the 15th century. Both were used for determining latitude. By the late Middle Ages, accurate hourglasses allowed navigators to measure time precisely. This helped improve the accuracy of dead reckoning, a traditional method of navigation then still in use. Accurate time measurements led to the designation of a new measure of nautical distance, the league,

The Search for Spices

One of the recurrent themes throughout the long history of exploration and discovery in the Middle Ages has been the search for and trade in spices, but perhaps the true significance of spices needs to be spelled out. Since at least classical Greek times, spices were what might be termed essential luxuries in western Europe for use in cooking and for medicinal purposes. In the Middle Ages, black pepper was the seasoning most commonly used in Europe after salt. Medieval cookbooks and recipes testify to its use throughout England, France, Italy, Germany, Russia, and as far afield as Iceland. Pepper was widely used in preparing meat and fish, stews, soups, and sauces; it was often combined with cinnamon, cloves, nutmeg, and ginger in cookies, gingerbread, and spiced wine. Food historians have traditionally proposed that pepper was primarily valued not only for its pungency but as a preservative and to disguise the flavors of rotting food in a time in which techniques of food storage were primitive at best.

Recent scholars have pointed out that pepper was also an important medicinal ingredient. Pepper was especially valued as an aid to digestion: The 12th-century German nun Hildegard von Bingen (St. Hildegard) wrote out a recipe for peppery cakes to treat nausea. It was used for other ailments as well. Hildegard's Byzantine Greek contemporary Anna Comnena wrote an account of the death of her father, Emperor Alexis I, describing how, as he lay suffocating, he was treated with a remedy made from pepper.

Black pepper, native to Java and cultivated along the southwestern coast of India, numbered among the most precious spices. As was the case for other East Indian spices, pepper's scarcity and the long distances over which it had to be carried made it extremely expensive. Peppercorns were valued equal to their own weight in gold, and medieval kings and emperors exchanged them as gifts. Marco Polo emphasized the wealth of a certain Chinese city by declaring that "for one shipload of pepper that goes to Alexandria [in Egypt] or elsewhere to be taken to Christian lands, there are a hundred to this port of Zaitun."

The disruption to European trade caused by the Crusades was made worse in 1429, when the Egyptian sultan declared a monopoly on the spice trade. The trade routes to Europe from the Spice Islands came through Egypt, via the Red Sea and the Nile, and thence across the Mediterranean Sea to Venice. The Venetian merchants, who imported 2,500 tons of pepper and ginger a year in the 15th century, were particularly hard hit by the royal monopoly. It was this threat that stimulated the European search for direct sea routes to India and the East Indies.

Venice served as the western terminus of the spice route across the Mediterranean Sea, and the city developed into a wealthy and ambitious naval power. The Arsenal in Venice, shown in this photograph, was founded in 1104 as a dockyard and with repeated medieval expansions grew into a sophisticated mass-production shipyard. *(Library of Congress, Prints and Photographs Division [LC-DIG-ppmsc-06712])*

defined as the distance an average ship could sail in one hour in good conditions.

The first fruits of these technical developments were to be seen in a number of expeditions by a new generation of European navigators at the end of the 15th century. And in the centuries to come, it was the great European voyages of discovery that were to produce trade-based wealth, overseas discoveries, settlement, and colonization. Why Europe? There is no simple answer to this question, but it is possible to pinpoint some factors that contributed to the Europeans' success. The most striking has already been identified: No other advanced maritime civilizations seemed interested in exploring. Beyond that, Europeans had a strong incentive to seek distant parts: From the time of their conversion to Christianity, Europeans had a strong eastern orientation, strengthened over more than 1,000 years by the travels of many thousands of pilgrims, missionaries, and crusaders to the Holy Land and, eventually, eastward to China.

Another critical incentive was commerce. European merchants had extensive, long-standing contacts in the Middle East, and Venetian merchants were permanently established along the Black Sea by the 13th century. Increased exposure to exotic goods whetted the Europeans' appetite for direct access to the spices and other luxuries of the Far East and the gold of Africa. Europeans were eager to profit from trading directly at the source of these goods, and the Islamic Turks' barring of the land routes through Asia led the Europeans to seek sea routes to the East Indies in the late Middle Ages. The tremendous program of Portuguese exploration in the 14th and 15th centuries aimed specifically to discover these maritime routes.

The Atlantic also drew Europeans onward. As the Middle Ages drew to a close, it seemed more and more likely that Asia lay on the other side of the Atlantic Ocean. The accumulation of trade-based wealth, the Italians' developing role as international bankers, and advances in shipbuilding, mapping, and navigational technology all gave European explorers the resources they needed. Their long seafaring traditions in extreme Atlantic conditions from Iceland to the Canaries enabled them to take full advantage of their opportunities.

This is the rich background of the European age of discovery. The great maritime explorers of the late-15th and 16th centuries who reached and explored the Americas, discovered the long sea routes to India, and circumnavigated the globe did not spring fully fledged from some dark age. They were instead the beneficiaries of hundreds of years of incremental discoveries by generations of earlier seafarers, shipbuilders, navigators, scholars, mapmakers, and ordinary travelers—not only European but Muslim, Indian, and Chinese as well.

Glossary

armada A fleet of ships, usually heavily-armed warships, sailing together.

astrolabe A navigational instrument that shows the position and altitude of the Sun and the stars. It consists of a disk with a sighting tube. Improvements to astrolabes in the 15th century allowed mariners to determine their latitude more accurately.

basilica A large Christian church having a long main central section (nave) with an aisle along each side and a semicircular projection (apse) at the end where the altar is located.

caravan A group of travelers journeying together for safety. Usually it refers more specifically to a group of traders traveling through a desert on camels, particularly in Asia or Africa.

caravel A small ship developed by the Portuguese in the 14th and 15th centuries for oceangoing voyages. Combining elements of European and Arab ships and of shallow draft, they were extremely fast and responsive to changes in the direction and strength of the wind.

cartography The science or skill of making maps. During the Middle Ages, cartographers (mapmakers) made accurate maps of increasingly large regions of the world as explorers and other travelers supplied them with firsthand geographical information.

carvel-built Describing ships in which the frame of the boat is built first and then covered with planks fitted tightly next to each other. See also **clinker-built.**

clinker-built Describing ships' hulls, or bodies, built from overlapping planks, nailed or strongly tied together, and then filled in with a supporting frame. See also **carvel-built.**

cog A sailing ship with its straight bow (front) and stern (back) sharply angled upward; it had a flat bottom, making it easier to unload cargo in shallow tidal areas.

coracle A small, round boat made of woven wicker covered with animal hides. Irish monks used them on their solitary voyages around the British Isles in the early Middle Ages.

cosmography The study and description of the world or the universe.

curragh From *currach* in the Celtic language, a larger coracle used in Ireland.

Dar-ul-Islam The Arabic term for those parts of the world where the Islamic religion is practiced.

dead reckoning A simple method of navigation at sea in which a voyage is broken

down into segments, each of a known direction and a specific length of time.

dhow A ship made of timbers lashed together, with low sides and one or two masts and lateen (triangular) sails, used by Arab seafarers and merchants in the Red Sea, Persian Gulf, and Indian Ocean.

double To sail around a point of land.

draft The minimum depth of water needed to float a given boat or ship.

dugout A simple canoe made by hollowing out a log or the trunk of a tree.

estuary The wide mouth of a river at a seacoast, in which tidal flows create a shallow mixture of freshwater and salt water.

ethnology The study of human cultures.

eunuch A boy or man whose testicles have been removed. In some medieval cultures, including China and some Islamic kingdoms, eunuchs were employed as high-level servants, often on confidential business or as attendants or guards for women.

Far East Eastern and southeastern Asia, as regarded collectively from a European point of view. For the Middle Ages, this term refers primarily to China and the territory occupied by the Mongols.

ghoul In legends and myths, an evil spirit. For Muslims, ghouls referred specifically to those who ate the dead in graves.

hajj The pilgrimage to Mecca that all Muslims are required by Islamic law to make once in their lifetime.

hajji A Muslim who has made a pilgrimage to Mecca.

Holy Land Jerusalem and the surrounding region, which includes numerous sites connected with the life and ministry of Jesus Christ and incidents related in the Bible.

hostel An inexpensive lodging that provides basic accommodations for travelers.

hulk A large, broad ship developed in northern Europe in the 14th century, usually with a single mast. Their rounded shape made hulks slow but gave them a large cargo capacity.

infrastructure The large-scale, permanent systems, structures, and services that allow a complex society to function economically. It usually refers to roads, communications networks such as messenger and mail services, and the distribution of commodities such as water.

itinerary From the Latin *iter,* meaning "journey" or "way," an itinerary can be the route itself, a simple list of places to be visited on a specific journey, a written account of a journey, or a guidebook. In the Middle Ages, the term was used for all these meanings.

junk A strong, oceangoing ship developed in China. Extremely stable with a flat bottom, multiple masts and sails, and a large sternpost rudder (mounted on the back end), junks were the most advanced ships in the medieval world.

keel The long structural piece of a ship that extends along the center line of the bottom, between the bow (front end) and the stern (back end).

kiln An oven designed to bake pottery at high, controlled temperatures.

knarr A broad, heavy ship with a single sail, used by the Vikings in the open seas. Knarrs were partly covered by decks to protect the passengers, livestock, and cargo.

lateen A triangular sail, developed by the Arabs, that can catch wind coming from either side.

longship (longboat) A long, light ship with high prows (projections at the front). Used by the Vikings, they were among the most treasured possessions of the Norse warriors, who were often buried or cremated in them.

magnetic compass A navigational instrument that contains a magnetized needle that points to the North Magnetic Pole, the

region near the North Pole where the Earth's magnetism is most intense.

mandate An official instruction or order from some higher authority.

mappa mundi A type of large, round map of the world made in Europe in the 12th and 13th centuries that represented a Christian point of view. *Mappae mundi* (plural) emphasized important Christian cities and sites and often ignored others, but they sometimes incorporated recent geographical discoveries.

monsoon A wind system that reverses direction seasonally. In the Indian Ocean, from April to September, the wind blows constantly from west to east and then reverses for the next six months.

outrigger A long float attached parallel to a boat, usually a canoe, by a framework extending outward from the side of the vessel. Commonly used on Polynesian canoes, they provided stability in the open ocean.

pilot A sea officer who is experienced and practiced in particular waters and is therefore engaged to guide unfamiliar ships in or through dangerous passages.

pirogue A dugout canoe.

planisphere A map representing the world as a sphere on a flat surface.

Pole Star (North Star) The star Polaris, a very bright star in the northern constellation the Little Dipper. From any vantage point, it indicates due north, so it has been an important guide for navigators for thousands of years.

portolan A chart of the seacoast accurately showing the outline of coastlines and harbors, landmarks, cities, and compass directions.

quadrant A navigational instrument that shows the altitude of the Sun and the stars. It consists of a wood or metal quarter-circle, its curved side marked with degrees, and a plumb line. Quadrants were used by mariners from the 15th century onward to determine latitude.

rihla An Arabic book recounting a religious pilgrimage or other travels.

saga A long prose story of heroes and their deeds. Norse sagas were handed down orally for centuries before being written down. They contain a great deal of information about the Norse exploration and settlement of the North Atlantic.

sternpost rudder A rudder, or blade for steering, that is mounted on the stern, or rear, of a ship. It gives better control than a rudder mounted on the side.

stupa A Buddhist shrine or temple, often containing a sacred relic.

sutra A sacred Buddhist text. The originals were written in Sanskrit, the ancient language of India.

T-O map A type of map made in Europe in the early Middle Ages that represented the world as it was described in the Bible. T-O maps were circular diagrams inside of which a large T represented the world's major waterways. Asia lay above the top of the T, Europe at the lower left-hand side, and Africa at the lower right-hand side; Jerusalem was positioned directly in the center.

topography The detailed description of a region's physical characteristics.

trade winds Winds blowing toward the equator from 30° north latitude and 30° south latitude but deflected toward the east by the rotation of the Earth. These winds were valued by mariners because they were consistent and quite predictable.

tribute Money or other valuables paid by one ruler to another, stronger ruler or by a person or group to someone who has authority over them.

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