

## Unit objectives

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Upon completing this unit, students will be able to:

1. Identify reasons why mariners undertook long-distance oceanic voyages both east and west during the fifteenth and early sixteenth centuries, and compare the Chinese, Portuguese, and Spanish ventures.
2. Evaluate what promoted, and what hindered, the novel sea voyages and their achievements during the period 1400 to 1550.
3. Explain how, and with what results, Spain and Portugal turned the search for new sea routes into a grasp for empire in the sixteenth century.
4. Analyze ways in which each side viewed the other in the encounters of Africans, Native Americans, and Asians with Iberians (Spanish and Portuguese) during and after the latter's maritime expeditions of 1400 to 1550.
5. Develop a toolkit for assessing the reliability of historical documents as evidence, and gain practice in its use.

## Author

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## The historical context

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### **Early modern beginnings: Thriving trade links connected various parts of Afroeurasia.**

About 1400 and for a considerable time thereafter, India and China were the hub and driving force of the **Afroeurasian** economy. They had the largest populations, the greatest wealth, and by far the largest volume of exchanges. A many-stranded commercial network linked them to Southeast and Inner Eurasia, the Islamic world, parts of sub-Saharan Africa, the Mediterranean, and Europe.

Long distance maritime trade from Asia to Europe was at this time largely in the hands of Muslim merchants, though people of many faiths and origins participated. They brought goods by ship from China, Indonesia, the Indian Ocean rim lands, and, on the final leg, from the Red Sea and the Persian Gulf overland to ports on the eastern shores of the Mediterranean and to Egypt. From there ships from Venice, the leading southern European seaport, typically picked up the merchandise and distributed it to consumers in the rest of Europe.

More than just merchandise was passed along the routes. In addition to trade goods, political, cultural, economic, religious, technological information, and sometimes infectious microorganisms traveled as well. The flow of information favored **collective learning** among human communities and sparked innovation. Also, the exchange of diseases between densely-settled areas eventually increased the overall immunities of people in those areas.

**The groundwork was laid slowly for growth of European dominance and for an expanded and integrated world.**

Shifts in this long-established system took place as a result of the deliberate series of European long-distance sea voyages started in the fifteenth century by peoples of the Iberian Peninsula. They were not the only people to undertake such voyages. Imperially-sponsored Chinese navigators took part in a series of marine expeditions in the first third of the century. These voyages crossed the Indian Ocean and reached ports as far as Arabia and the East African coast. However, these destinations were not new to them, and their short-lived visits were not intended to establish permanent colonies or achieve conquests.

Iberian mariners' voyages, on the other hand, resulted in finding new sea routes, lands previously unknown to Europe, and a shift from a search for profits to a grasp for domination. The consequences that followed, both intentional and unintentional, gradually brought Europe from the edges to the center of the world's trade. Over some 300 years, the opening of the oceanic passages contributed to the growth of European power on the world scene economically, politically, and culturally. They also helped promote:

- Intensification of every kind of exchange worldwide.
- Increased volume and speed of the movement of goods, peoples, information, and ideas.
- That entanglement of diverse economies and societies, which we now call globalization.

As a result of these developments, both diversity within groups and uniformity across groups have increased. So have inequality between and within groups, as well as environmental costs. From the sixteenth century on, deforestation became a bigger problem than earlier owing to over-use of timber to meet the increasing demands for ships and for smelting ores, such as gold, silver, and iron. The trend of moving more people and more goods for longer distances was given a mighty push in the fifteenth and sixteenth centuries. Since then it has accelerated, accompanied, from the later eighteenth century, by the steep rise in use of the fossil fuels, which has contributed to growing pollution and **global warming** in our own time.

The beginnings were small steps. For nearly a century, Iberian seafarers explored the Atlantic islands close to Africa, and the Portuguese crept down the west coast of that continent. Then, during a third of a century starting in 1492, mariners sponsored by Spanish and Portuguese rulers set out on long-distance voyages. They did not set off into the unknown. They thought they knew their destinations, but they were looking for previously unknown routes to reach them. Spaniards went looking for an alternative and more direct route to the spices and other treasures of the Indies. Instead, they came across huge amounts of gold, silver, and land in the Americas, which they proceeded to conquer, subdue, and exploit, using unfree labor. The Portuguese first looked for gold in West Africa. Their search led them gradually to the carriers and sources of the spice

trade. They used their cannon-equipped ships, based at forts and trading stations along the edges of the Indian Ocean, to intimidate or eliminate competitors. Their aim was to establish a monopoly over the distribution of spices and, more generally, of sea-borne trade in the region.

In the course of their search, between them the mariners sailing from Iberia made a series of revolutionary discoveries. They found:

- An unexpected continent, first an obstacle in the way of reaching Asia from Europe by a western sea route, then a major contributor to the rise of European power.
- Proof that routinely crossing the Atlantic Ocean both ways was possible, thereby linking Europe and the American continent.
- Proof that there was open sea below the southern tip of Africa and that an entirely water-borne crossing from the Atlantic into the Indian Ocean was possible.
- A sea-passage that allowed bypassing America, proving the possibility of an uninterrupted passage by sea from the Atlantic into the Pacific, which was at that time barely glimpsed by Europeans.
- The path across the Pacific to Indonesia, proof of Columbus' idea that reaching the East by sailing west was possible, though a return voyage east across the Pacific was not managed until after 1550.
- The possibility of circumnavigating the globe. Having crossed the Atlantic, Pacific, and Indian oceans, and rounded Africa's southern tip, European mariners were able to home in on the Spanish port where their westward voyage had begun. This proved that the seas were all connected and could serve as an uninterrupted highway linking the world's landmasses with each other.

### **The driving forces that underlay early modern Iberian maritime enterprises were varied and complex.**

Insofar as we can now reconstruct motivations for the so-called voyages of discovery by Europeans in the fifteenth and sixteenth centuries, primary among them were the following:

- Continued rivalry with Muslim powers in the Mediterranean region. In the fifteenth and sixteenth centuries, the Ottoman Turkish empire conquered the Byzantine state, the Balkan Peninsula in southeastern Europe, and the eastern and southern shores of the Mediterranean.
- Intensified search for Christian rulers in Africa or Asia, who might be enlisted as allies against Muslims. Legends about these rulers may have been based on the existence of a Christian kingdom in Ethiopia.
- Increased zeal among Roman Catholics for conversion of unbelievers to Christianity, an enthusiasm that emerged partly from the Protestant Reformation and the ensuing loss of the Roman Church's Christian monopoly in western and central Europe.
- Increasing demand in the West for luxury goods such as spices, silks, porcelain, and other products of Asia, stimulated by the significant growth of population after the **Black Death** and the rise in incomes that came about after death rates had made labor scarce.

- Increasing need for gold to pay for the Asian goods that Europeans desired. Europeans had few other exports of significant interest to Asian markets.
- Search for new ways to access sources of gold on the one hand and of goods from China, India, and Indonesia on the other. The aim here was twofold. One was to stop profits from going to Muslim middlemen, then the primary carriers of trade between East and West. The other was to gain all profits for Christian merchants and countries.
- Achievement of individual fame and honor in services to God, Church, and ruler.

**Several different conditions favored the undertaking and continuation of long-distance European ocean voyages in the fifteenth and sixteenth centuries.**

The success of long-distance maritime exploration of regions new to Europeans was promoted, to varying degrees, by

- The existence of wind systems in the Atlantic and Pacific as well as in the Indian oceans that could be counted on to blow consistently in a known direction at known times of the year at known latitudes.
- Gradual technological changes from the Middle Ages onward that upgraded the sailing qualities and sturdiness of Iberian ships, by combining existing features of Atlantic, Mediterranean, and Indian Ocean ship designs.
- Western mariners' learning to use the altitude of the Pole Star or the sun to establish latitude and thereby a ship's position when out of sight of land. The development of instruments to help measure latitude.
- Translations of Greek and Arabic texts, which allowed recovery by Renaissance humanists of classical geographical information and access to more recent Islamic cartography and geographical scholarship.
- The Renaissance values of interest in the natural and physical world.
- The printing press, which made news of discoveries, travel accounts, and sailing manuals available to more people faster and more cheaply, thereby both whetting appetites for further exploration and aiding in carrying it out.
- The strong financial interest of rulers in the fruits of overseas ventures, and their resulting enthusiastic support for it.
- The institution in Iberia of formal instruction, examinations, and licensing of pilots to improve navigation in the early sixteenth century.
- The use of cannon on board Iberian ships and the lack of comparably-armed competition in the Indian Ocean until the 1530s or so.
- The land-orientation at the time of major political units such as Ming China, the Delhi Sultanate, the Vijayanagar empire in South India, and the Aztec and Inca empires in the Americas. Also, their lack of vital interests in either overseas trade or possession of large navies.

**Overseas discoveries, and their consequences, played themselves out against a background of complicated cultural and religious changes and political power plays in Europe and the wider world.**

The Spanish and Portuguese oceanic voyages of the fifteenth century, and the possibilities they opened, were soon followed by other voyages sponsored by other European nations as well.

In the 1400 to 1550 period, Iberian mariners' expeditions, and those of their imitators, took place in a context that in Europe included:

- The European Renaissance, an intellectual and aesthetic movement to resurrect ancient learning and to experiment with new modes of literary and artistic expression.
- The rapid spread of ideas owing to the technology of moveable-type printing and other improved communications.
- The “gunpowder revolution,” resulting in widespread adoption of cannon, muskets and bigger armies.
- The Protestant and Catholic Reformations.
- Christian states' attempts to organize resistance against the advancing Ottomans, with whom they warred intermittently throughout the fifteenth and sixteenth centuries.
- The series of wars between the huge Habsburg empire of Charles V on the one hand, and France, sometimes allied with the Ottoman empire, on the other.
- The consolidation and centralization of territorial states with bureaucracies and police that more vigorously collected taxes from their subjects.
- The beginnings of the [scientific revolution](#).

In a world context, the Iberian maritime expeditions were contemporaneous with:

- A rise in population in most areas of Afroeurasia, though not in the Americas. Afroeurasia's population surged in the sixteenth century from about 418 million to 545 million. At the same time, the native populations of the Americas plunged. In 1600, therefore, something close to 98 percent of all human beings lived in Afroeurasia.
- Expansion of the Ottoman empire into Europe from the late fourteenth to the late seventeenth century.
- The conversion to Christianity in 1491 of the king of Kongo and many of his people, the greatest success of Portuguese missionary effort in Africa.
- The flowering of Songhay, one of the largest African empires in history, under King Askia Mohammed (1493-1529). He took control of western trans-Saharan caravan routes and made his expanded and consolidated empire a center of Islamic scholarship.
- Foundation of the native Iranian Safavid dynasty in Persia, which established Shi'a Islam as the official religion of its empire.
- Expansion of the Muslim sultanate of Aceh in Sumatra. After 1511 its rulers began deliberately to compete with the Portuguese for the area's spice-trade, successfully attracting Muslim merchants to their own territory at the expense of Portuguese-occupied Malacca.
- Decimation of Indian populations in the Americas by disease and European exploitation.

- Accelerated export of slaves from Africa to the Americas.
- Beginnings of large-scale changes in American ecosystems, owing to agricultural practices that favored monoculture, and the introduction of new plant and animal species.
- Routing by Baber, descendant of Tamerlane and Chingis Khan, of the Delhi Sultanate in 1526 and the subsequent establishment of the Mughal empire in North India.
- Introduction of firearms to Japan in 1543 and subsequently growth of a gun manufacturing industry there.

**In spite of the revolutionary nature of the long-distance oceanic voyages' discoveries, their immediate consequences on a world-scale were limited.**

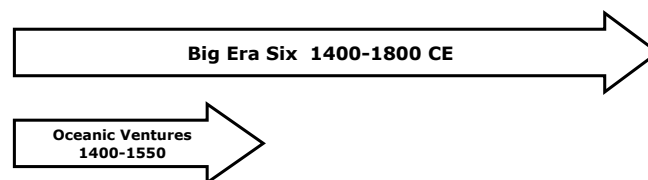
In the short run, say by 1550, their impact was felt most by governments, and mostly in some of the countries bordering seas; by those involved in commerce and finance; by some among the educated and literate in some countries, virtually all of them men. Much less or not at all affected worldwide were the rural and agricultural populations, urban laborers, and still-isolated tribal societies that, between them, made up the vast majority of the world's inhabitants.

The long run was a different story. While the "trickle-down" effects came gradually and took centuries to fully unfold, the repercussions of the 1400 to 1550 oceanic ventures left hardly anyone in the world untouched by the nineteenth century.

Though it was not obvious at the time, with hindsight this period has proved to be one of the turning points in world history.

## **This unit in the Big Era timeline**

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## Lesson 1

### *Student Handout 1.1—Needed: Ships, Winds, Maps, Stars, Guns—and Guts?*

#### **Ships: Keeping afloat, carrying cargo, and moving across seas**

In the twentieth century, the Atlantic was crossed on an open balsa raft and in a rowboat. But both were unsuitable for reliable, regular crossings, especially with cargo.

In the fifteenth century, Europe had two main kinds of ships in general use. The northern tradition developed in the countries bordering the Baltic and the North seas, the southern in countries bordering the Mediterranean. Within these two traditions, there were many different designs tailored for particular purposes.

- The northern design's hull (the body of the ship) was clinker built. That meant the planks making up the outer "skin" of the ship overlapped each other, and they were nailed so that each nail passed through both planks and into the internal frame as well. This made for strength and reasonable water tightness without much caulking. The narrow Viking ships with side-mounted steering oars, no decks, and little cargo-capacity that occasionally crossed the Atlantic to America around 1000 CE were clinker-built. In the early thirteenth century, the more efficient rudder, mounted at the center of the stern, replaced the steering oar.
- One version of clinker-built ships developed in the north by the early fourteenth century was broad-beamed (wide from one side to the other at the mid-point of the ship), stable, and equipped with a massive keel. (The keel is a structural part of a ship in the center of the hull bottom and extending from stem to stern, sometimes protruding from the hull to provide stability.) It could carry heavy cargos. When used in warfare, temporary "castles" were raised on this type of ship front and back to make boarding enemy ships easier and to give archers and musketeers an elevated position to shoot from. But the design limited the ship's size, since planks had to be rounded at front and back, and joining them became too difficult over 100 feet. Their rigidity was a disadvantage if the ship ran aground.
- Northern ships' sails were square and fixed to horizontal yards mounted on each of the masts. This allowed a large area of canvas to be carried safely and with ease of handling. But unless the wind came from dead astern (from behind the ship), or nearly so, these ships made excess leeway, that is, a sideways movement that resulted in getting off course. A headwind simply kept them in harbor.
- The southern design's hull was carvel-built. Its planks were fitted edge to edge rather than overlapping, each plank fastened with pegs of nails only to the permanent skeleton or frame, which was built first. It took considerable caulking of the joins, regularly repeated, to keep the ship watertight. But these ships could be built to any length and had more flexibility than clinker-built vessels. Early examples, carvel-built ships called

caravels, had low sides and a shallow draft so that they could be used close inshore. At the start of the fourteenth century, they adopted the center-mounted stern rudder of the northern design. By the late fourteenth century, sides and stern were raised to prevent swamping, the beam was broadened, and the hull often covered with a deck. By the mid-fifteenth century, caravels usually had a quarterdeck (an additional deck, like a second story, raised over that part of the deck behind the mainmast), and a small permanent stern castle. Sometime in that century, the tiller that moved the rudder was made to project inboard, giving better leverage.



### **A European caravel**

Picture source unknown

The caravels built to this design carried sails influenced by the lateen sails of the dhows, which Muslim mariners sailed across the Indian Ocean as far as China. These vessels were carvel-built, their planks fastened together with coir ropes passed through holes drilled at close intervals. Spun from coconut fibers, coir was highly durable, unaffected by seawater and rot. Its use made the dhow flexible, resistant to break-up on reefs or shoals, and easy to repair. Dhows were typically without decks.



### **A model of a two-masted dhow of a type that sailed in the Persian Gulf**

Photo by R. Dunn



Lateen sails appeared in the Mediterranean about the thirteenth century. They were triangular, or nearly so, and the wooden yards that held them stiff to the wind were fixed more or less vertically to the longest edge of the triangle. They allowed sailing with maximum efficiency against a headwind, and they were simple to adjust to various wind conditions. However, the length of the main yard was tailored to the length of the ship. This limited the ship's size, since with increased length the yard became too heavy and hard to handle. By the fourteenth century, lateen and square sails were combined on caravels in the Mediterranean.

Around the start of the sixteenth century, carracks developed from the caravels. They were bigger, bulkier, more rounded, and had more complicated rigging. Some had four masts and carried two or three square sails above each other on the foremast. They had lateen sails on the main and mizzen masts, though the distribution of sails on them varied. The result was increased speed, the ability to sail under different wind conditions, and easier steering. Late in the century, a topsail was added above the main sail. Carracks had permanent castles both fore and after that had room for a large crew and lots of provisions. That structure, however, made them prone to topple in strong winds. Their decks were stable and served as gun platforms.



**A European carrack**

Picture source unknown

The Chinese voyages in the fifteenth century took place in ships, or “junks” that represented an altogether different design tradition, some of which were adapted to European ships. The most outstanding among these vessels were the “treasure ships,” which were some 300 to 400 feet long and plied the Indian Ocean in the fifteenth century and earlier. They had multiple decks, a hull with watertight compartments to minimize flooding in case of damage, and pumps to get rid of any water or to fight fires. They also had a stern-mounted rudder that could be adjusted to the depth of the water. They were mounted with multiple masts spread with slightly curved sails with horizontal bamboo battens to stiffen and strengthen them. These sails were easy to handle,

needed few ropes, and could be adjusted to winds from different directions. The crew of a large Chinese “junk” ran to the hundreds, and naval artillery was sometimes placed on the decks.



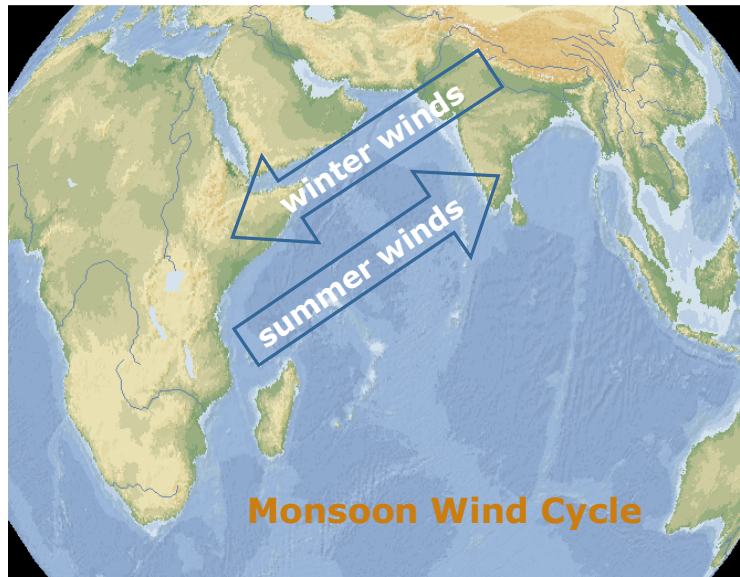
**A seventeenth-century Chinese woodblock print that may represent fifteenth-century Chinese treasure ships**

Wikipedia

[http://en.wikipedia.org/wiki/Zheng\\_he](http://en.wikipedia.org/wiki/Zheng_he)

### **Winds: Getting from here to there**

- Sailing ships depended on wind to make them move.
- Fastest and easiest to handle on ships with square sails were winds that blew from directly behind when the vessel pointed in the direction it needed to go. But for a return trip, those winds could pose problems because a square sail might be “taken aback.” That is, the wind might push the sail back against the mast. If the ship had one or more fore-and-aft sails, it could sail closer to the wind. That is, the ship could advance even if the wind were coming across the beam (the side of the vessel). By tacking, or following a zigzag steering pattern, along with proper adjustment of sails, the ship could progress against a contrary wind.
- Knowledge of the global wind systems gave mariners greater confidence to sail out of sight of land. The **monsoon** blows in the Indian Ocean and China Seas region. In the Atlantic and Pacific oceans the trade winds, westerlies, and easterlies blow.
- Monsoons are winds that reverse direction seasonally. In Asia, the winter monsoon blows reliably (though the exact dates on which it starts and ends vary year to year and in different locations) from the southwest from April to October, and from the northeast from November to March. In summer, monsoons bring torrential rains; in winter they bring sunny and dry weather.



- The trade winds blow very steadily, almost continuously at about 11 to 13 miles per hour in both the Atlantic and Pacific oceans. They occur in two wide bands: one from about 5 to 30 degrees north of the equator, and the other from 5 to 30 south of it. The trade winds have a tendency to curl in towards the equator, blowing from the east to the west/southwest in the northern hemisphere and to the west/northwest in the southern hemisphere.
- Winds called the westerlies blow from the southwest in the northern hemisphere and from the northwest in the southern hemisphere towards the east, between the latitudes of about 35 and 60 degrees. These have bursts of especially strong winds and storms, particularly in the latitudes called “the roaring forties.” Their speed is quite variable in both the north Atlantic and the north Pacific and less so in the southern hemisphere.
- In the region of about 30 degrees both north and south of the equator, often called the horse latitudes, there are generally weak winds, with hot and dry weather.
- Close to and slightly north of the equator, between the two bands of the trades, is the region of the dreaded doldrums. Sailing ships can get becalmed here for days or weeks. Any winds there are variable and include thunderstorms and sudden squalls.
- A band of weak and irregular winds blow from the poles east to southwest in the northern hemisphere and east to northwest in the southern hemisphere, curling towards latitude 60 degrees.

### Maps: Knowing where you are relative to the rest of the world

- In the fifteenth century, educated people regarded a round earth as common knowledge, despite popular tales about a flat earth.
- Venetian, Florentine, and Genoese mariners had since the Middle Ages sailed regularly across the Mediterranean, Black, and Baltic seas, as well as the coastal waters of the northeastern Atlantic. The most frequented coastlines of these seas, including natural features and ports, were mapped in detail and quite accurately on charts, each one

showing a limited area. These portolan charts, as they were known, represented the cumulative experience of mariners, summarized for the benefit of other seafarers. They could be relied on for navigating fairly short passages but were no use for fixing the position of a ship out of sight of land.

- From the Mediterranean region, many Muslims and some Christian Europeans (mostly Italians) made their way in the thirteenth and fourteenth centuries overland to Inner Eurasia, India, Indonesia, and China. Many were merchants in search of products such as spices and silk unavailable at home. Other travelers included diplomats, scholars, and missionaries. Ibn Battuta and Marco Polo were only the best known among many other journeyers. The Mongol empires ensured safe routes. Some travelers left descriptions, not always accurate or full, of their routes and the places they visited.
- European world maps at this time began to pay attention to contemporary experience but often relied at least partly on the Bible to depict the earth's geographical features. They were far less accurate than the map of the Muslim Arab geographer Idrisi, who had worked at the court of a Christian Norman king in Sicily in the twelfth century.
- In about 1410, two geographical works appeared that heavily influenced European views of the world. One, called *Image of the World*, was written by a cardinal of the Roman Catholic Church. It drew on the Bible, legends, travelers' accounts, and classical writers, on whose authority the cardinal affirmed the possibility of reaching the Indies by sailing west. He exaggerated the east-west stretch of Asia and the proportion of land to sea in the area of the globe. Columbus is known to have studied this book. His own calculations made the distance from Europe to Japan less than 3,000 nautical miles. The actual great circle distance is 10,600.

The other work was a Latin translation of the *Geography* by the second-century CE author Ptolemy. It described the world of Ptolemy's time. It gave a fairly accurate picture of the Roman empire and its neighboring countries. But beyond the area of his knowledge, Ptolemy used guesswork instead of evidence. He described a huge southern continent, attached at one end to Africa and the other to China, making the Indian Ocean a land-locked sea. He stated that navigation was impossible anywhere in the southern hemisphere because of the excessive heat there. And he contradicted the near-to-accurate estimate of the earth's circumference by an earlier classical author, his own being an underestimate by as much as one-sixth, thus shrinking the size of oceans. Ptolemy continued to have influence on geographical writing into early modern times.

- European **cartographers** from about 1400 to 1550 usually underestimated the circumference of the earth by about 6,000 miles. Until the late sixteenth century, some of them continued to believe that America was just an extension of Asia. Others thought that Asia lay just barely beyond the lands they had so newly found and that the westward route was therefore much shorter than the one around Africa.
- By the fourteenth century, Chinese maps gave a generally accurate view of the relationships and main features, though not the relative sizes, of the entire area from Korea to the Atlantic edge of Europe. At least two Chinese world maps from the 1300s are known but have not survived except as sources for the Korean world map of 1402. The Kangnido Korean map, drawing on two earlier Chinese maps, shows India at the center combined with a heavily swollen China. Correctly positioned are Korea, Arabia, and the Red Sea. Korea is depicted as about the same size as Africa with an open sea at

its tip. Europe is somewhat squashed on the left but shows the Mediterranean and Black seas and names many European countries, including “Alumangia,” an attempt at Alemania, the Latin name for Germany. To view the Kangnido map, go to the Parliamentary Millennium Project (Parliament of South Africa), <http://www.pmpsa.gov.za/kangnido.html>.

- Pilot guides and navigational literature by Muslim writers describing features of seas and shores from the Persian Gulf and the Red Sea to the Asian edges of the Pacific circulated in the fifteenth and sixteenth centuries.
- A Javanese chart of 1512 delineated Portugal, Brazil, the southern tip of Africa, the Red Sea and Persian Gulf, Sumatra, Siam, Java, and the Spice Islands. The first European sailing directions for the region east of India to the Spice Islands, compiled in 1514, were based on Javanese charts.
- European seafarers both East and West in the fifteenth and sixteenth centuries tried hard to find and persuade local pilots to help them navigate.

### **Navigation: Finding your way from here to there**

- A map showed the location of starting place and intended destination. Knowing the location of one’s ship when between the two and out of sight of land could be a big problem. Two methods helped:
  - Experience, based on knowledge by observation of wind and wave patterns, currents, depth of water, color of the sea, kinds of seaweeds, types of fish, clouds, the flight and kinds of birds, and, as often as possible, sightings of known landmarks. In unknown waters and very far from land, these methods were less than satisfactory.
  - Fixing location by finding the latitude (the east-west line giving the distance north or south of the equator) based on measuring the altitude (height above the horizon) of the Pole Star, or North Star. At the North Pole, the star is directly overhead at an altitude of 90 degrees, and the location on earth is at ninety degrees latitude. At the equator, the star is right at the horizon, at 0 degrees latitude. In between, the angle of the star above the horizon gives altitude and latitude. For navigation, a pilot would measure the star’s angle before leaving the home port. On the return voyage, the ship would sail north or south until the Pole Star appeared at the same angle as at the home port, then “sail down the latitude” keeping the star at a constant angle. Other stars could be used similarly.
- In the 1480s, when Portuguese mariners first approached and then crossed the equator, they found that the Pole Star disappeared below the horizon. A conference called by the king recommended using the sun’s altitude as replacement, and scholars translated from the Hebrew information about the sun’s seasonal movements that made this possible.
- Arab mariners had long sailed open seas by the stars and knew how to observe heavenly bodies to help fix their position. Their knowledge and instruments of observation had filtered into Western Europe, often through Jewish intermediaries. The compass, invented in China and passed westward through the Muslim lands, was also quickly adopted. By the mid-fifteenth century, celestial observation was still not commonplace, though fairly widely known.

- The problem of how to reckon longitude was not solved until the later eighteenth century.

### **Guns: Protection and aggression**

- With its shot weighing ounces rather than pounds, the cannons mounted on Iberian ships in the fifteenth-century were more useful for killing people than sinking vessels. Placed on deck along the railing or on the castles, ships' guns could be mounted without major design changes. They had efficient uses against unarmed craft that Iberian mariners met in African and South Asian waters.

Large, heavy cannons were already used on land. By the end of the 1400s, naval technicians attempted to adapt these to ships and use them to breach fortifications on shore. These experts solved several problems. They cut down cannon length, tapering the barrels, and casting them from bronze or brass instead of forging them from separate pieces of iron. This saved weight, but the guns retained enough strength to throw stone, iron, or lead balls weighing from five to sixty pounds. Because of their formidable recoil, these guns could not be perched on ship castles. Therefore, they were moved down to the waist of the ship and fired through round holes cut in the gunwales, their recoil controlled with ropes.

- Europeans who went overseas often had to fight. The Portuguese set up fortified commercial bases protected with cannon. In the Indian Ocean region, trained soldiers transported from Portugal served alongside men who were recruited locally. Auxiliaries from the armies of friendly rulers were also used. In preparing for his third expedition to America, Columbus asked the Spanish government for 100 muskets and 100 crossbows for 1200 soldiers, sailors, and settlers, whom he hoped to take with him. Cortés took a few light ship cannons with him when he invaded Mexico. He had thirteen muskets for his several hundred men, and he found swords, dogs, and horses the most effective weapons. He and other conquistadors also relied heavily on native allies.
- In both the Americas and the Indian Ocean, the Iberians had a chronic problem of maintaining sufficient numbers of troops. Their own populations were small: about a million in Portugal, and eight times that in Spain. In Asia and America, Iberian forces were almost always overwhelmingly outnumbered. In addition, mortality among Europeans who went overseas was consistently high. During long voyages, they died from hunger, cold, unsanitary conditions, shipwreck, and deficiency diseases like scurvy. On shore, they faced fighting and tropical diseases.

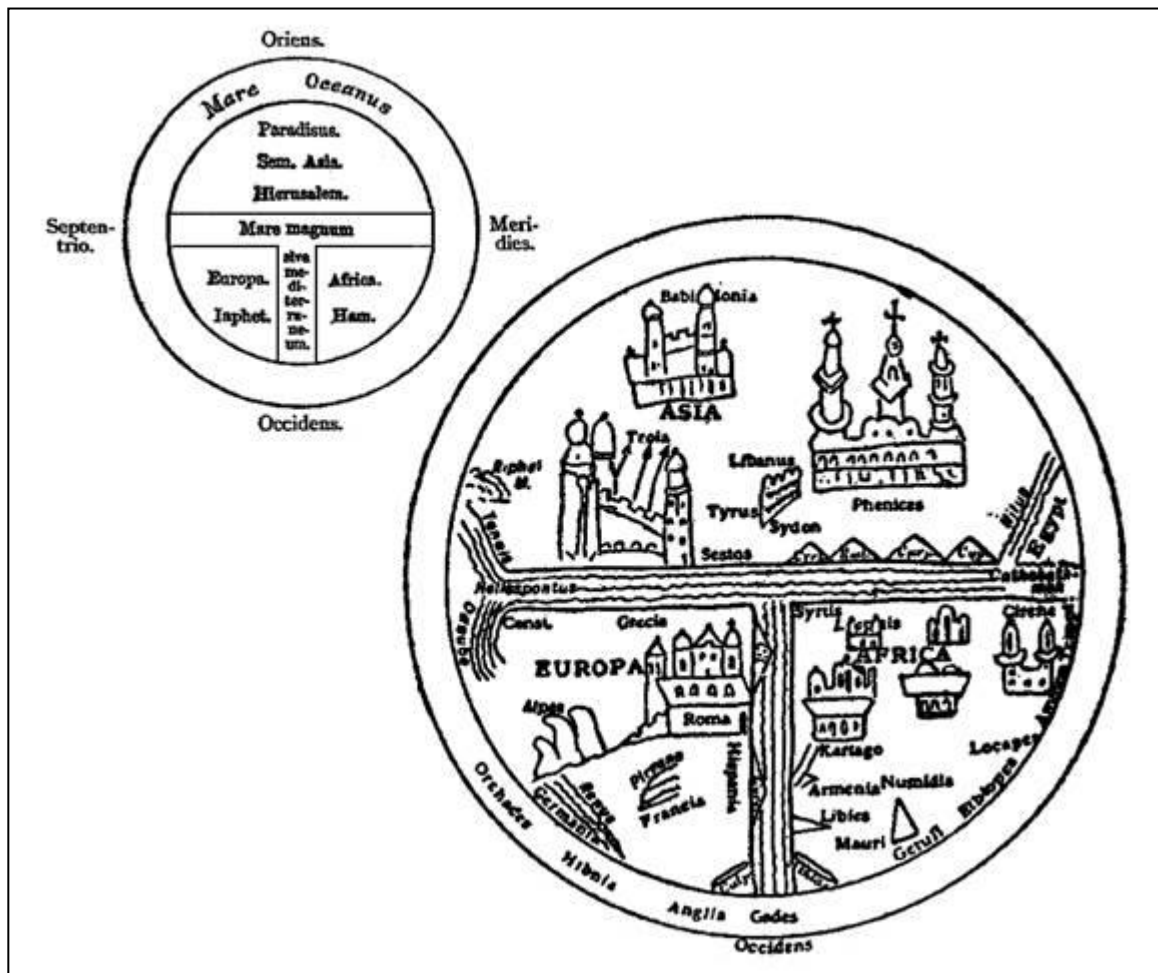
## Lesson 1

### *Student Handout 1.2—How Did Ideas about What the World Looked Like Change?*

#### Document A

#### Early Medieval European world maps

#### The T/O pattern



A common arrangement on medieval world maps, the T within the O of the Ocean Sea divides Asia at the top with the horizontal spread of the rivers Don on the left and Nile on the right from Europe and Africa at the bottom. Europe and Africa are divided from each other by the vertical line representing the Mediterranean Sea. At top left is a 630 CE world map from one of the works of Isidore de Seville, a Spanish archbishop and author of an encyclopedia intended to summarize all knowledge. The sons of Noah, who, according to the Bible, peopled each of the three continents, are named (Sem, Iaphet, and Ham). At the bottom is an eleventh-century German world map illustrating a classical author's book. On both maps, east is at the top.

Source: E. G. Ravenstein, "Map," *Encyclopedia Britannica*, 11th ed., vol. 17 (Cambridge: Cambridge UP, 1911), 638.

## Document B

“The going out of a curious man to explore the regions of the globe”

World map by Muslim scholar and geographer Abu Abdallah al-Idrisi, 1154

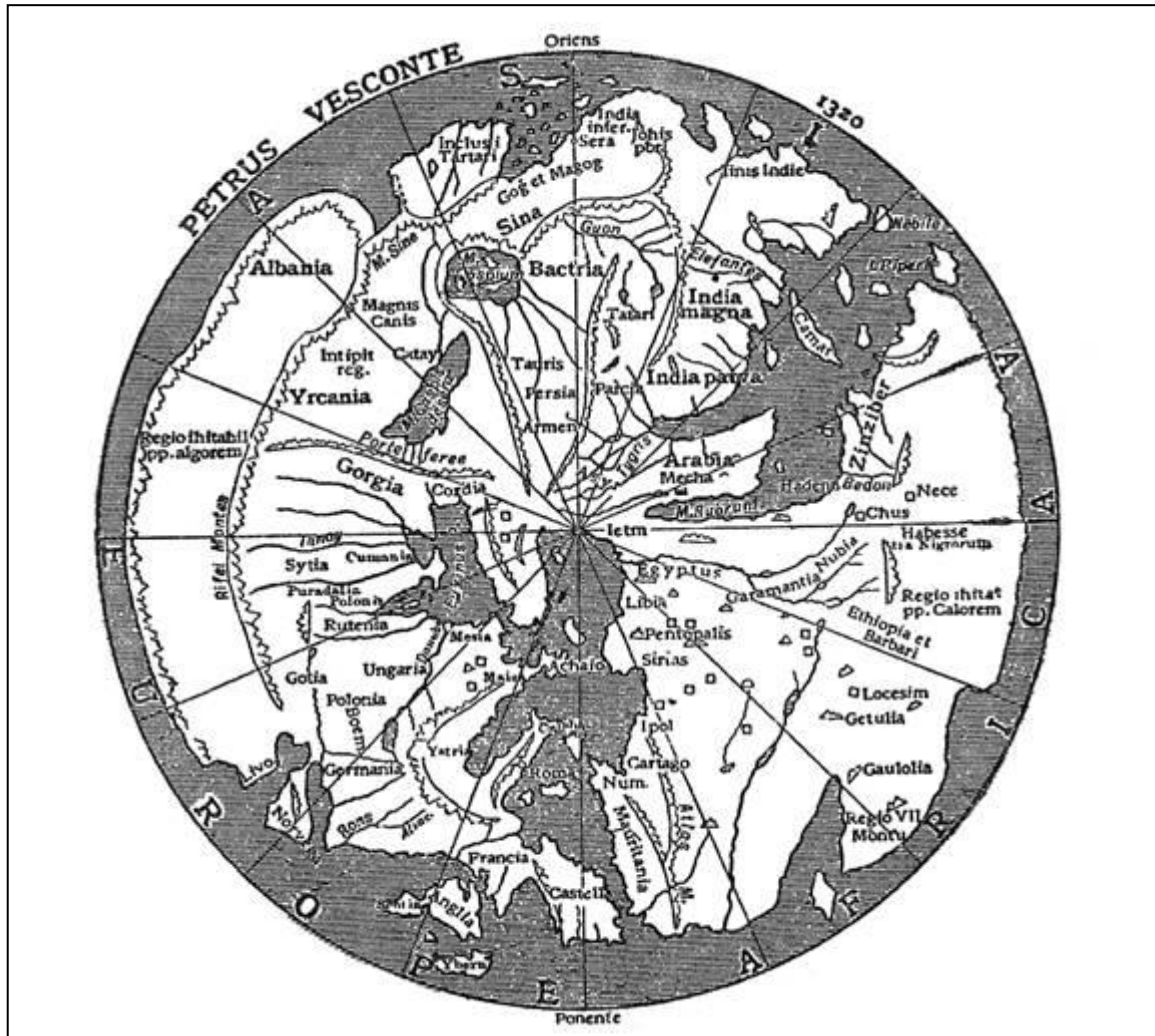


In the twelfth century, Roger II, the Christian Norman king of Sicily, showed tolerance of people of all faiths and ethnicities, and he attracted scholars of diverse backgrounds to his court. He invited Abu Abdallah al-Idrisi, an Arab Muslim scholar of wide interests, to produce an atlas of the “inhabited earth” that would be based on observation, not just on other maps and books. Al-Idrisi had traveled widely himself, certainly in Asia Minor, North Africa, and Iberia, perhaps as well as in France and England. Al-Idrisi then used travel information, as well as the works of earlier Muslim and classical scholars, to put together his atlas named *The Book of Roger*. His map is purely geographical, with no cultural or religious features, and no pictures of humans, animals, or architecture. The atlas continued to be used and adapted for some 200 years. The version of his world map shown here has been modified to change the Arabic writing on the original into English. The title of the document is a quotation from al-Idrisi’s text. South is at the top of the map.

Source: E. G. Ravenstein, “Map,” *Encyclopedia Britannica*, 11th ed., vol. 17 (Cambridge: Cambridge UP, 1911), 640.



**Document C**  
**World map of 1320**  
**Rhumb lines, Prester John, Gog, and Magog**



Petrus Vesconte of Genoa produced many sea-charts, among them the earliest signed and dated navigational chart in 1311. His map of the Holy Land was used in an appeal to European kings to mount a new crusade against the Ottoman Turks. He was one of the first to use the rhumb lines radiating from a center that show the compass-bearings along which to move from place to place on the coastal maps known as portolans. His world map shows their influence. The Biblical nations Gog and Magog were considered by many in Europe at that time to be a current threat and their invasion dreaded. Prester John (Johis pbr, for Johannes Presbiter in shorthand on the map, top center) was thought to be ruler of a legendary Christian kingdom full of riches and wonders, variously located in Asia or Africa. The editors of the source have omitted from this version of the map the crowns and buildings at sites of cities that decorate the original. East is at the top of the map.

Source: E. G. Ravenstein, "Map," *Encyclopedia Britannica*, 11th ed., vol. 17 (Cambridge: Cambridge UP, 1911), 642.

**Document D****Ancient innovations****Fifteenth-century world maps backed by a second-century CE authority**

Ptolemy's innovative grid system of latitudes running east-west and longitudes north-south, his instructions on how to project a globe onto a flat surface, and his establishment of the convention of placing north at the top of maps were among the roots of modern cartography. A Hellenized Egyptian scholar, he wrote his eight-volume *Guide to Geography* in the mid-second century CE. Neglected for over a millennium, it came into use by Byzantine and Arab scholars in the early fourteenth century. Translated into Latin in 1410, the *Geography* circulated in hundreds of manuscript copies in Europe, went through over forty printed editions before the end of the sixteenth century, and remained immensely influential for some 200 years. No maps from Ptolemy's original work have survived, but various scholars in the fifteenth century used his text to recreate his world map. Their many versions were alike in major features, such as the land-locked Indian Ocean, but they differed considerably in the shape of landmasses and details of coasts. Also, not all of them show the latitudes and longitudes. The above example, printed in Germany in 1493, does not. For one that does, [www.newberry.org/k12maps/module\\_01/map/core.html](http://www.newberry.org/k12maps/module_01/map/core.html).

Adapted from Margaret Aston, *The Fifteenth Century: The Prospect of Europe* (New York: Norton, 1968), 8.

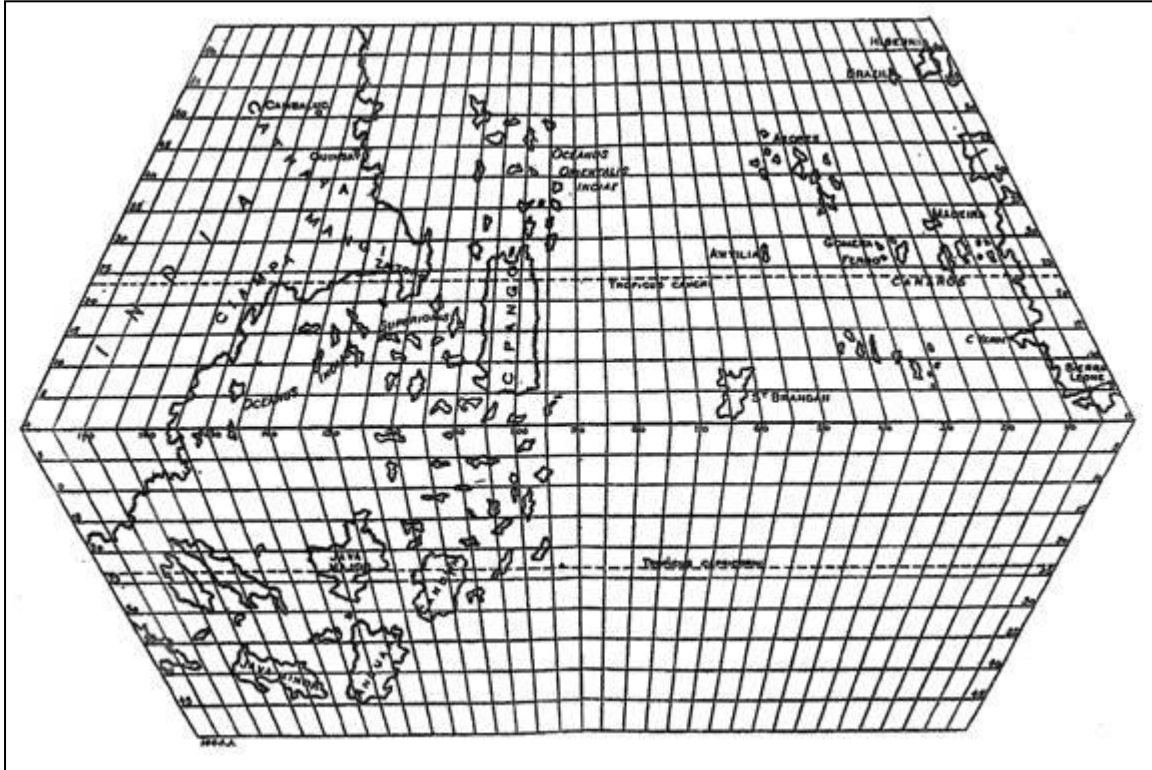
## Document E

“Our knowledge of the world is now [1457] so much greater than was Ptolemy’s...”



Fra Mauro, a Venetian monk and well-known cartographer, was commissioned by the Portuguese king to draw the world map above. He explicitly discussed his sources: the latest available Portuguese sea-charts from the king, the book of Marco Polo, and the Ptolemaic model, which he chose not to follow fully because new information allowed him to correct Ptolemy. He also seems to have drawn on Arab and Indian sources. His map has south on the top—standard on Muslim maps, but unknown on any other western one. It shows (if somewhat inaccurately-spaced) Indian locations significant for regional trade: Diu, Chalecut (Calicut), Goga (Goa), and Guzirai (Gujarat). There is no Biblical history depicted, excepting “Acha Noe,” that is, Noah’s Ark, located at the head of the Tigris river. South is at the top of the map.

Source: E. G. Ravenstein, “Map,” *Encyclopedia Britannica*, 11<sup>th</sup> ed., vol. 17 (Cambridge: Cambridge UP, 1911), 642.

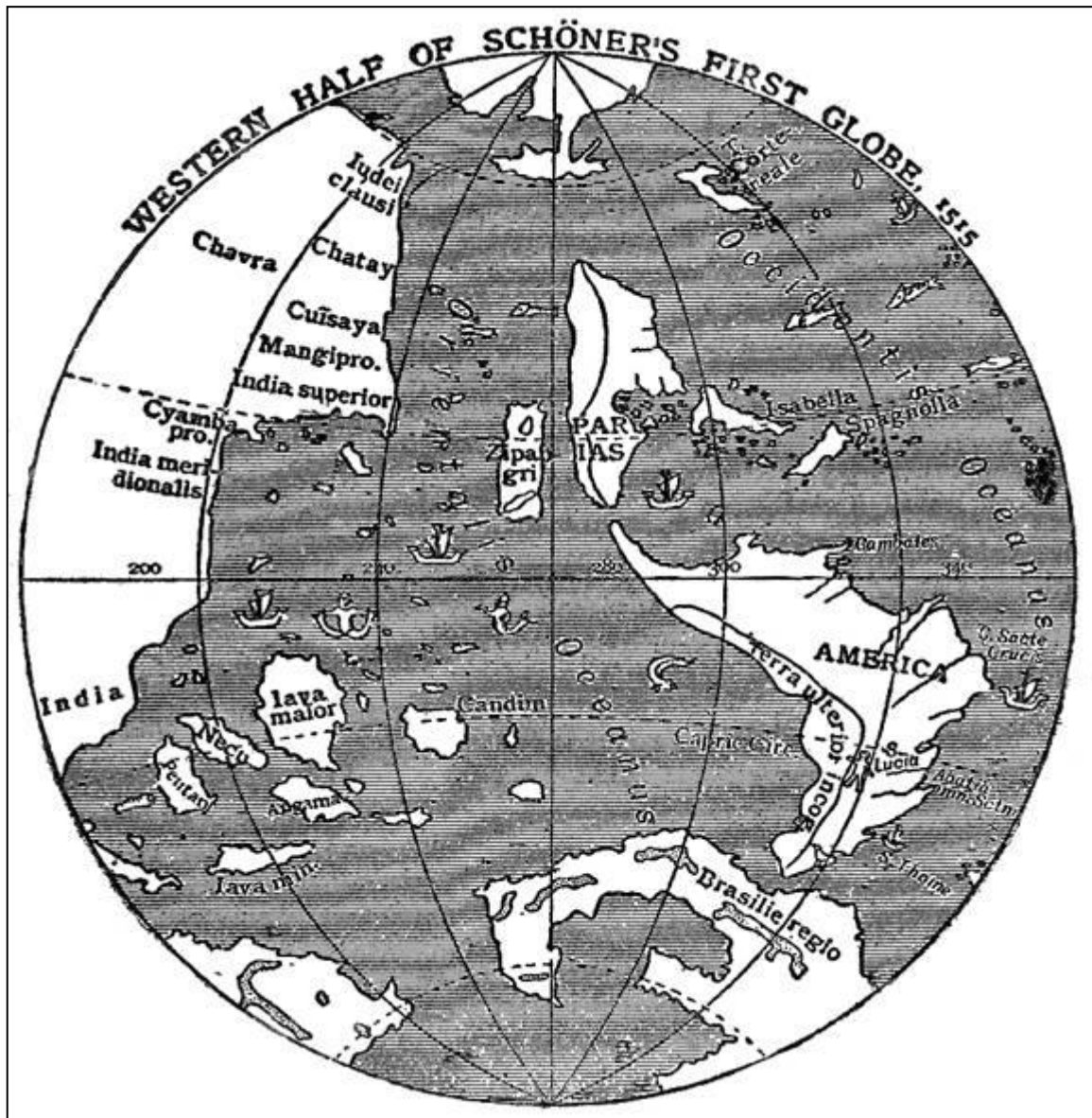
**Document F****The proposed western route to the East pictured  
Reconstruction of Toscanelli's 1474 map showing the Atlantic Ocean**

Florentine physician, mathematician, astronomer, and geographer Paulo Toscanelli (1397-1482) studied the writings of Marco Polo and of Ptolemy. He also collected personal information from merchants, mariners, and travelers such as Conti. He concluded that the East to West stretch of Europe and Asia covered nearly two-thirds of the entire earth. In 1474, Toscanelli proposed a way of reaching the Spice Islands by sailing west, thereby avoiding the long voyage around the tip of Africa. He wrote the Portuguese king a letter giving directions for doing so, and he enclosed a map. Copies of both were sent to Columbus, who took them with him on his first voyage. The map no longer exists, but it has been reconstructed based on the letter and on two other maps of Toscanelli's time that embodied his ideas.

Source: Clements R. Markham, trans. and ed., *The Journal of Christopher Columbus (During His First Voyage, 1492-93)* (London: Hakluyt Society, 1893), after liv.

## Document G

The results of sailing the western route to the East pictured  
Changes in the view of the world in 1515.



Johannes Schöner (1477-1547) produced the globe above. He was a German astronomer, mathematician, and noted cartographer. He patterned it on a map published in 1507, the first printed map to show any part of the new world and the first to name it "America." That map gave the Western Hemisphere its name only four years after the publication of an account of the voyage of Amerigo Vespucci, from whom the word "America" derives. The map here shows ocean on the far side of the American continent before Magellan's voyage of 1519. Also, the size of Japan [Zipagri] and its distance from the Asian mainland are exaggerated.

Source: Clements R. Markham, trans. and ed., *The Journal of Christopher Columbus (During His First Voyage, 1492-93)* (London: Hakluyt Society, 1893), 646.

## Lesson 2

### *Student Handout 2.2—What Did Mariners Find on Long-Distance Voyages in the Fifteenth and Early Sixteenth Centuries?*

#### Document A

#### **Treasure fleets of the Dragon Throne The Middle Kingdom reaches out**

Zheng He, Muslim eunuch and confidant of the Chinese emperor, organized six long-distance naval expeditions to the south and west of China from 1403 to 1433. Each involved thousands of men, including professional negotiators, diplomats, interpreters, scribes, signalers, doctors, soldiers, mechanics, and other specialists. The fleet consisted of over one hundred auxiliary ships, including troop and supply carriers and forty to sixty “treasure ships.” These were estimated to weigh some 1,500 tons and range up to 400 feet in length, with three decks, nine masts, twelve sails, and watertight compartments to keep them afloat even when damaged. Besides ample supplies, they carried Chinese trade goods.

Their destinations, ports in India, Arabia, and East Africa, were not unknown. There is evidence that Chinese in earlier centuries sailed regularly to India and occasionally to the Persian Gulf, and they knew about East Africa at least from hearsay. Zheng He himself had made the pilgrimage to Mecca.

Having generally followed a contemporary’s advice to “treat the barbarian kings like harmless seagulls,” the expeditions traveled over 30,000 miles and returned with “wonderful precious things,” among them a giraffe. With no need for ongoing supplies from abroad, no desire for conquest at a distance, and no cultural tradition of proselytizing, they built no forts and left neither garrisons nor naval patrols.

Some Confucian government officials opposed the long-distance voyages as a waste of money, especially since deforestation at this time raised the costs of shipbuilding. They felt the government would do better to invest in containment of belligerent Mongols and other pastoral peoples who lived along China’s northwestern frontier. In fact, nomad raids were not uncommon, so these officials had good reason for concern. Confucian bureaucrats also feared that the court eunuchs, a powerful political faction, were threatening their power and influence. Consequently, the Ming government banned further large-scale maritime expeditions to the Indian Ocean after 1433, though Chinese trade in the East and South China seas continued.

The following account of Zheng He’s voyages is from an inscription on a stone he ordered erected in the winter of 1431-32. The last paragraph is from a different inscription.

The Imperial Ming Dynasty, in unifying seas and continents, surpasses [earlier] dynasties. The countries beyond the horizon and at the ends of the earth have all become subjects and to the most western of the western, or the most northern of the northern countries, however far they may be, the distances and the routes may [now] be calculated. Thus the barbarians from beyond the seas, though their countries are truly distant ... have come to audience bearing precious objects and presents.

The Emperor, approving their loyalty and sincerity, has ordered us [Zheng He] and others at the head of several thousands of officers and troops to [board] more than a hundred large ships to go and confer presents on them, in order to [make clear] the transforming power of the imperial virtue, and to treat distant people with kindness. From [1405] until now, we have several times been appointed ambassadors to the Western Ocean. The barbarian countries we have visited are [among others, Java, Siam, Ceylon, Calicut in India, Aden on the Red Sea, and Mogadishu in East Africa], all together more than thirty countries large and small.

We have crossed more than one hundred thousand *li* of immense water spaces, and have seen in the ocean huge waves like mountains rising sky-high, and we have set eyes on barbarian regions far away hidden in the blue transparency of light vapors, while our sails, loftily unfurled like clouds, day and night continued their course, crossing those savage waves as if we were treading a public thoroughfare.

Those among foreigners who were resisting the transforming influence of Chinese culture and were disrespectful, we captured alive, and brigands who indulged in violence and plunder, we exterminated. Consequently the sea route was purified and tranquillized and the natives were enabled to pursue their vocations.

Source: Qtd. in Joseph R. Levenson, *European Expansion and the Counter-Example of Asia, 1300-1600* (Englewood Cliffs, N.J.: Prentice-Hall, 1967), 14-5; last paragraph qtd. in Michael Pearson, *The Indian Ocean* (New York: Routledge, 2003), 90.

**Document B****Sailing, raiding, and trading on the Guinea Coast  
Portugal's Prince Henry orders ships to explore the African shore**

Starting about 1415, Prince Henry, often called The Navigator, consistently sent out two or three ships a year to sail as far south along the western shore of Africa as they could. Captained typically by courtier “gentlemen of his household,” they averaged about fifty tons, and needed crews of only twenty-five sailors. He financed the enterprise from the king’s grant to him of a 20 percent share in all profits from any voyages to West Africa, from the sale of licenses to do so, and from his income from sugar plantations on the island of Madeira. In spite of these resources, he was in debt, owing his bastard half-brother 35,478 crowns of gold, an obligation not paid off until after his death in 1460.

By this time, some fifty ships had passed south of Cape Bojador on the coast of the western Sahara Desert. Twenty years later, a dozen or so Portuguese ships a year made the voyage to West Africa’s Gold Coast, cutting into the profits of the Muslim merchants who had monopolized the traditional trans-Saharan gold routes to the Mediterranean coast. Each ship carried some 700 kilos of gold to Portugal, as well as slaves, ivory, a spice similar to pepper, and other merchandise. For these, the Portuguese traded textiles, iron, brass, glass, and hardware.

The gold was sorely needed in Europe to pay for Asian luxuries in high demand there. By contrast, demand in India and China for European goods was sluggish at best, so payment had mostly to be made in gold.

From about 1460 on, the Portuguese cultivated friendly relations with the powerful rulers of West African kingdoms as a matter of policy. Their lively trade with the locals, which during the second half of the fifteenth century seemed to have been satisfactory to both parties, centered on the forts of Arguin and Elmina that they had built on the coast. To protect the West African trade and its profits, the king decreed in 1481 that any foreign ship visiting the Guinea coast without his license could be sunk or captured, no questions asked, and the crew thrown to the sharks.

The Portuguese historian Azuarara was charged by his king to write a record of the discovery and conquest of Guinea (West Africa). The events he describes all took place before 1450, when he finished the account from which the following excerpts are taken. Note that the Portuguese called all Muslims “Moors.”

After the taking of Ceuta [in Muslim North Africa, 1415] he always kept ships well armed against the Infidel, both for war, and because he had a wish to know the land that lay beyond Cape Bojador, for up to his time [nothing] was known with any certainty about the land beyond that Cape. [Muslim knowledge extended little further, nowhere near Africa’s southern tip.] ... Since it seemed to him that without knowledge no mariners or merchants would ever. . . sail to a place where there is not a sure . . . hope of profit, he sent out his own ships.



If there chanced ... to be havens into which it would be possible to sail without peril ... the products of this realm might be taken there, which traffic would bring great profit to our countrymen.

[Also] he sought to know if there were in those parts any Christian princes, [who] would aid him against the enemies of the faith. [Moreover, it] was his great desire to make increase in the faith of our Lord Jesus Christ and to bring to him all the souls that should be saved.

But over and above these reasons [is] the root from which all others proceeded: ... the inclination of the heavenly bodies. ... Because his ascendant was Aries, which is in the house of Mars ... [which] was in Aquarius ... and in the mansion of hope, it signified that this Lord should toil at high and mighty conquests.

So the Prince began to make ready his ships and his people ... but although he sent out many times ... there was not one who dared to pass that Cape of Bojador and learn about the land beyond it. ... [They believed] hindrance to the passage into these lands consisted of very strong currents ... on account of which it was impossible for any ship to navigate those seas; ... that the lands were all sandy and without any inhabitants ... [and] that the shores were so shallow that [ships would not] have sufficient depth for their management. ... Being satisfied of the peril, and seeing no hope of honor or profit, they left off the attempt.

[It was not until 1434 that, having gradually crept south along the West African coast by sending out yearly regular exploring ventures of two or three ships of 20 to 50 feet in length, a Portuguese ship managed to get past Cape Bojador into territory until then unknown to Europeans].

All the land from the Mediterranean Sea as far as the land of the Negroes [is] peopled by shepherd folk. ... They make war with the Negroes more by thieving than by force, for they have not so great strength as these last. And to their land come some Moors and they sell them of those Negroes whom they have kidnapped, or else they take them ... beyond the kingdom of Tunis [in North Africa] to sell to the Christian merchants who go there ... in exchange for bread and some other things. ... The men of rank possess abundant gold which they bring from the land where the Negroes live. ... [Their wives] wear rings of gold in their nostrils and ears, as well as other jewels.

[In 1441, one of Prince Henry's nobles] armed a very fine caravel [to sail past Cape Bojador. The Prince] ordered him to have regard to no other profit, save only to see and know any new thing that he could. And he was not to [make] raids in the land of the Moors, but to take his way straight to the land of the Negroes and thenceforward to lengthen his voyage as much as he could. [Another purpose of the voyage was] to ship a cargo of the skins and oil of sea-wolves [seals]. [When they had loaded this, the captain called together the 21 men on the ship, and said:] "We have already got our cargo ... and may well turn back, ... but O how fair a thing it would be if we, come to this land for a cargo of such petty merchandise, were ... to bring the first captives before the face of our Prince ... getting knowledge by that means. And as to our reward, you can

estimate what that will be by the great expense and toil he has undertaken in years past, only for this end. [This captain made several voyages to the “land of the Negroes,” also known to the Portuguese as “Guinea,” and was the first to bring back both captives and gold dust from West Africa to Portugal. Traffic in slaves accelerated from then on.]

[In 1446, having been granted a license by Prince Henry to travel to West Africa, a Portuguese] made him ready two caravels, one decked and the other a fishing-boat, in which were twenty men. “Let us go” [he said] “to the ... river where I promised the Moors the year before that I would come and traffic.” ... After three days were passed, the Moors began to arrive, and [he] began to speak with them by means of his interpreters, asking them to have some Guineans brought there, in exchange for whom he would give them cloth.

[The same year, pitched battles were fought between the natives and Portuguese seamen. The latter’s captains addressed their men before the battle.] “It is for war, and war alone, that we are come to this land; and this being so, we must not be timid, for if we fight our battle by day it will be much more to our honor than if we fight by night, attacking the Moors ... and expelling them by sheer force of arms rather than by any cunning or stratagem.” ... The Christians, besides the desire they had to get at them, when they saw their behavior, which was that of enemies who despised them, felt doubly eager to fight. ... The enemy ... boldly trusting in their multitude, [thought] that victory would hasten to them as it had come the other day when they slew the seven men from the other [Portuguese] caravels. ... The Christians, in order to gain the land, and the Moors in order to prevent them, began their fight, plying their lances, by which there could well be seen the hatred there was between them. But the fight on the part of the Moors was not so much from enmity as in defense of their women and children, and still more for the salvation of their own lives. Our men wondered greatly at the courage they perceived in their enemies. . . Yet, God being willing to aid His own, they slew out of hand sixteen and the others were routed. ... [We] took fifty-seven of them, and with them returned to the caravels.

[It remains for me to fix the certain number of souls of infidels who have come from those lands to this, through the virtues and talents of our glorious Prince. And I counted these souls and found they were nine hundred twenty and seven, of whom ... the greater part were turned into the true path of salvation. ... After this year [1448] the affairs of these parts [West Africa] were henceforth treated more by trafficking and bargaining of merchants than by bravery and toil in arms.

Source: Charles Raymond Beazley and Edgar Prestage, trans. and eds., *The Chronicle of the Discovery and Conquest of Guinea*, by Gomes Eannes de Azuarara (London: Hakluyt Society, vol. 1, 1896, vol. 2, 1899), Vol. 1: 27-30, 40-1, 109; Vol. 2: 163-70, 225, 230-5, 267-8, 288-9.

## Document D

### **Breaking into the Eastern spice trade: an all-sea route to India becomes possible**

That India was on the other side of Africa and washed by a sea was known. That this sea connected to the Atlantic was in doubt until 1488. That year, the Portuguese mariner Dias, with his two fifty-ton ships, was unknowingly blown past the Cape to the east coast of Africa by a storm. A near-mutiny of his crew caused him to turn back soon after, but he had proved that the eastern end of the Atlantic was not land-locked. Leaving Portugal nearly ten years later, Vasco da Gama dealt with a mutiny near the same place by putting the ringleaders in chains and continued on to sail all the way to India.

Da Gama had learned navigation serving in the navy, and he was an experienced seaman. His voyage was financed in part with the confiscated property of the Jews and Moors expelled by the king in 1495. At first, his mandate from the king was to find direct access to spice suppliers. He had four ships, the largest 300 tons with twenty cannon, and 170 men, Dias among them. Of these, only two ships and fifty-five men returned in 1499.

In 1502, the Portuguese king named da Gama “Admiral of India ... throughout the territories which shall be placed under [our] rule.” On his voyage that year, two Franciscan friars accompanied him as missionaries. His mandate this time was to “show the flag” in the East with a display of military might, strike against Muslim fleets and centers of trade, and gain a monopoly of Indian Ocean trade. This led him to attack Muslim ships whenever he could and to intimidate rulers around the Indian Ocean with threats and violence. He raided and killed inhabitants of fishing villages, locked pilgrim passengers into the hold before setting their ship on fire, and bombarded the towns of those resisting his demands.

Of his twenty-three ships, ten belonged to the king, and thirteen to wealthy merchant investors. By a royal decree of 1500, the latter owed the crown one-fourth of the value of the cargo they brought back, but they could still more than double their investment. Soon, the spice trade became a royal monopoly. Da Gama’s share of profits on this voyage was ten hundredweights of pepper worth 800 ducats (a ducat was worth about sixty grams of gold) and each sailor’s, half a hundredweight. He left half his fleet in India to protect the coastal trading posts he had set up, and to patrol Indian waters. The intent was to enforce a policy whereby any non-Portuguese ships in the Indian Ocean had to buy a Portuguese license to operate there, or be liable to losing their cargo, ship, and lives.

The following selections are from the journal of a crewmember, who described da Gama’s first Europe-to-India all-sea voyage. It involved sailing about 27,000 miles, some ninety days and 4,000 miles of it out of sight of land.

We left [Portugal] on Saturday, 8<sup>th</sup> July 1497. May God our Lord permit us to accomplish this voyage in his service. Amen!

On Thursday, 3<sup>rd</sup> August [1497] we left [the Cape Verde islands. On November 4<sup>th</sup>] we tacked so as to come close to land, but as we failed to identify it, we again stood out to sea. [Some days later] we landed with the captain-major, and made captive one of the natives, [then] had him well dressed and sent ashore. On the following day fourteen or fifteen natives came to where our ships lay. ... [We] showed them a variety of merchandise, with a view of finding out whether such things were to be found in their country. This merchandise included cinnamon, cloves, seed-pearls, gold, and many other things, but it was evident that they had no knowledge whatever of such articles. ... Having careened our ships and taken in wood, we set sail.

At that time we did not know how far we might be [from] the Cape of Good Hope. ... We therefore stood out towards the south-south-west, and late on Saturday [18<sup>th</sup> November] we beheld the Cape. [Contrary winds prevented their rounding the Cape until the 22<sup>nd</sup> November]. ... By Christmas Day ... we had discovered seventy leagues of coast [beyond the furthest northeast that Dias had got to in 1488]. ... Drinking water began to fail us, and our food had to be cooked with salt water. Our daily ration of water was reduced to [a cup-and-a-half].

11<sup>th</sup> January [1498] ... we went close to shore, and saw a crowd of negroes. ... The Captain-major [da Gama] ordered Martin Afonso, who had been a long time in Manicongo [kingdom about 1000 miles by sea south of Guinea] to land. ... The chief [there] said that we were welcome to anything in his country of which we stood in need: at least, this is how Martin Afonso understood him. ... Two gentlemen of the country came to see us. They were very haughty, and valued nothing which we gave them. ... A young man in their company—so we understood from their signs—came from a distant country, and had already seen ships like ours.

The people of this country [near Mozambique] are Mohammedans. ... They are merchants, and have transactions with white Moors [Arabs] four of whose vessels were at this time in port, laden with gold, silver, cloves, pepper, ginger [and precious stones]. ... We understood them to say that ... where we were going ... there was no need to purchase them as they could be collected in baskets. All this we learned through a sailor ... who, having formerly been a prisoner among the Moors, understood their language.

The captain-general [presented the Sultan of Mozambique with] hats, [gowns], corals, and many other articles. He was, however, so proud that he treated all we gave him with contempt, and asked for scarlet cloth, of which we had none. ... The captain-major ... begged him for two pilots to go with us. He at once granted this request.

The lord of the place [a close-by port] sent many things to the captain-major. All this happened at the time when he took us for Turks or Moors from some foreign land. ... But when they learnt that we were Christians they arranged to seize and kill us by treachery. ... We forthwith armed our boats, placing bombards in their prows, and started for the village. ... Our bombards soon made it so hot for them that they fled. ... On 29<sup>th</sup> March we left.

[On April 7th] ... we cast anchor off Mombasa. ... [The pilots from Mozambique had misled the Portuguese, promising them a friendly welcome in Mombasa.] At midnight there approached us a [boat] with about a hundred men, all armed with cutlasses. ... They attempted to board ... but this was not permitted. ... It seemed to us [they just wanted] to find out whether they might not capture one or the other of our vessels. [The two pilots jumped into the water, and were picked up by the native boat.] At night the captain-major 'questioned' two Moors whom we had on board, by dropping boiling oil upon their skin, so that they might confess any treachery intended against us. They said that orders had been given to capture us ... to avenge what we had done at Mozambique. And when this torture was applied the second time, one of the Moors, although his hands were tied, threw himself into the sea whilst the other did so during the morning watch. About midnight two [boats] with many men in them approached. [Some swam to our ships and] began to cut the cable, [and] got hold of the rigging. [Being discovered,] they fled.

[After we left,] we saw two boats ... in the open sea, and at once gave chase, with the intention of capturing them, for we wanted to secure a pilot who would guide us to where we wanted to go. [They captured seventeen men, gold, silver, provisions, and the young wife of "an old Moor of distinction." All tried to escape by jumping into the water but were recaptured. Thirty leagues from Mombasa, they anchored in Malindi.]

The Moors whom we had taken in the boat told us that there were at this city ... four vessels belonging to Christians from India, and if it pleased us to take them there, they would provide us, instead of them, Christian pilots. ... The captain-major ... having discussed the matter with his Moorish prisoners, cast anchor off the town. ... [In return for freeing the Moorish prisoners, the text says that Malindi's king provided a Christian pilot with whom the Portuguese were "much pleased." Use by Portuguese mariners of Muslim and later Hindu and Malay pilots is well documented, as is their frequent confusion about others' religion. They long persisted in mistaking Hindus for a kind of Christian.] We remained in front of this town during nine days, and all this time we had [feasts], sham fights, and musical performances.

We left Malindi on the 24<sup>th</sup> [of April], for a city called [Calicut, in India] with the pilot whom the king had given us. ... After having seen no land for twenty-three days, we sighted lofty mountains ... and when we were near enough for the pilot to recognize them he told us they were above Calecut, and that this was the country we desired to go to.

The captain-major sent [a messenger] to Calecut, and those with whom he went took him to two Moors from Tunis who could speak Castilian and Genoese. The first greeting that he received was in these words: "May the devil take thee! What brought you hither?" They asked what he sought so far away from home, and he told them he came in search of Christians and of spices.

Source: E. G. Ravenstein, trans. and ed., *A Journal of the First Voyage of Vasco da Gama, 1497-1499*. (London: Hakluyt Society, 1898), 1, 3, 5-9, 16-7, 20-1, 23-5, 28, 30-1, 35-7, 39-40, 45-8.