

Doubling the World

Enough for us that the hidden half of the globe is brought to light, and the Portuguese daily go farther and farther beyond the equator. Thus shores unknown will soon become accessible; for one in emulation of another sets forth in labors and mighty perils.
—PETER MARTYR (1493)

The 1400s in a Nutshell: Discovering the Unknown

In the West:

- Ptolemy (geography) is revived
- The Portuguese begin the first state sponsored continuous exploration
- Spain Responds (via efforts of Christopher Columbus)
- A new continent is discovered

In the Middle East:

- The Arabs stagnate; maintain their roles as middle men traders

In the East:

- The Chinese explore one-third of the planet; then stop cold

THE blocking of the land paths proved a godsend. Driven by new incentives to go to sea, Europeans would discover waterways to everywhere.

To reach Asia by water from the Mediterranean countries **meant leaving the closed for the open sea.** Mediterranean voyages were mostly coastwise sailing, which meant relying on personal experience of those particular places—local winds and currents, familiar landmarks, well-known offshore islands and the distinctive silhouette of a neighboring mountain.

When Portuguese sailors advanced southward down the coast of Africa, they left behind all familiar landmarks. The farther down they went, the farther away they were from the anything known to them.

There was no accumulated experience and there were no handy guides.

Unlike we have for solar system exploration, there were no “robot” missions that had gone before.

Ptolemy's World Map 1467

Here entered—or, rather, reentered—the great Ptolemy. It was just about this time, when the land curtain thudded down across the European land paths to the East, that the geography of Ptolemy was revived to refresh and reform the thinking of European Christians.



Note no passage around Africa - No America - short direct passage to Asia

The African Blockade

Before European seafarers could respond to the challenge offered them by the closing of the land passages to Asia, the south African part of Ptolemy's world map would have to be revised.

In fact, the very meaning of "Ocean" would have to be changed. Until that time Europeans made a sharp distinction between the Ocean and a sea (mare).

Fra Mauro's Planisphere – last great Medieval Map (p 154)

These openings of the mind and of the map occurred decades before we know of any European actually rounding the Cape into the newfound Indian Ocean.

Example: the famous "planisphere" (1459) of **Fra Mauro** (the last of great medieval maps).

Fra Mauro's planisphere is also one of the first modern maps. For **he now shows the ocean no longer as the forbidden road to nowhere, but as a sea highway to the Indies.**

Fra Mauro pays his respects to Ptolemy, but explains that to follow the Master's scheme of latitude and longitude, one must change some of Ptolemy's maps.



Fra Mauro's planisphere (1459) is perhaps the result of the stories of Nicolo de 'Conti, who upon his return from his travels, brought back rumors that water surrounded all of Africa (p 155)

Portuguese Sea Pioneers (pp156-159)



Portugal had no window on the Mediterranean—the "Sea-in-the-Midst-of-the-Land"—but was blessed by long navigable rivers and deep harbors opening ocean ward. Cities grew up on the shores of waters that flowed into the Atlantic.

The Portuguese people, then, naturally faced outward, away from the classic centers of European civilization, westward toward the unfathomed ocean, and southward toward a continent that for other Europeans was also unfathomed.

Europe and Portugal in the 1400s: Ripe conditions

Hundred Years War and Wars of the Roses:

For most countries of Western Europe the fifteenth century—the epoch of the Hundred Years War and the Wars of the Roses—was a time of civil strife and/or fears of invasion.

Byzantine Empire Falls:

The Turks captured Constantinople in 1453, menaced the whole corridor between Eastern Europe and the Balkans. They established a firm grip and walled Europe off from the East.

Spain:

the only country that shared some of Portugal's peninsular advantage (though diluted by the competition of her prosperous Mediterranean ports), was torn by civil strife and religious persecutions that for most of the century kept her near anarchy.

Portugal:

in sharp contrast to all these others, was a united kingdom for the whole of the fifteenth century and was hardly touched by civil disturbance. There was no religious persecution. Muslims, Jews, and Christian flourished; intellectuals abounded.

There ALWAYS has to be a great leader to inspire Prince Henry of Portugal



King John I had six sons, the third of whom was Henry (b. 1394), who had no chance at becoming King.

After leading a sea armada in an invasion of cities in Morocco, he learned about the trade coming across Africa: gold, silver, spices, and an abundance of other exotic various riches.

When the Portuguese took over, the trade to the area dried up. So Henry researched the trade routes and found they came from the East of Africa.

The father of continuous discovery

Embarrassed by King John I, he “stayed clear” of the court and moved to Promontorium Sacrum (“Sacred Promontory”)- Sagres. At this sacred location in Portugal, with resources from the crown, he began something that had never been done in the history of humanity.

Cape Sagres: NASA's Houston to the Sea Race (pp 159-164)

In the first modern enterprise of exploring, he sent out an unbroken series of voyages into the unknown.

Henry created the first Research and Development Laboratory, where he brought together, for the first time, the essential ingredients for continuous discovery: books and the charts, sea captains, pilots, mariners, mapmakers, instrument and compass-makers, ship builders and carpenters, and other craftsmen.

He planned voyages, assessed the findings, and prepared expeditions successively farther into the unknown.

He set up a system of incremental knowledge recording.

The work Prince Henry started would never end.

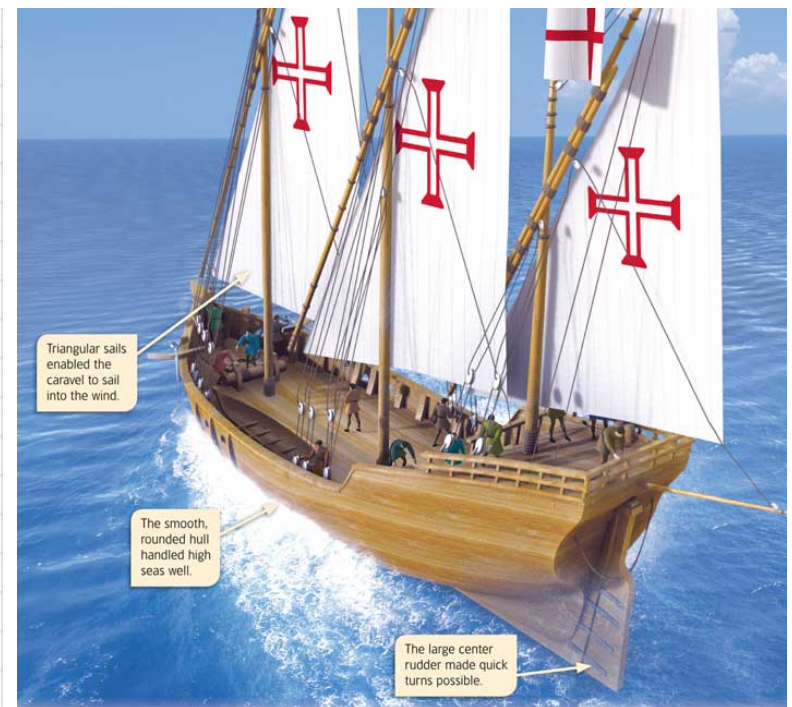


Cape Sagres



The Technology Breakthrough: The caravel

The **caravel** was one of the most **important** ships in the history of the world. In the 15th and 16th centuries, this ship was used to traverse the immense barrier to the New World. **It's biggest attribute was that it could sail up wind and return to home.**



Cape Bajador - The Cape of Fear



From 1433 to 1460 it was **SLOW GOING**.

Expeditions in 1433, 1434, 1435, 1436, ..
By 1441, they had gone only 250 miles
beyond the Cape!

In 1444, the first African slaves were
brought back to Portugal.

At the time of Prince Henry's death in 1460
the discovery of the west African coast had
only begun, but it was well begun.

Prince Henry therefore is properly
celebrated as the founder of
continuous discovery.



Prince Henry
(under King John I)



King Alfonso V
(PH's nephew)
1469-1481



King John II
1481-1495



King Manuel I
“The Fortunate”
1495-1521

Four generations carried on the exploration!

- Under **Alfonso**, exploration made profitable.
- Under **John II**, India was reached.
- Under **Manuel I**, exploitation was refined, cold war with Spain started, and Portugal was a world power.

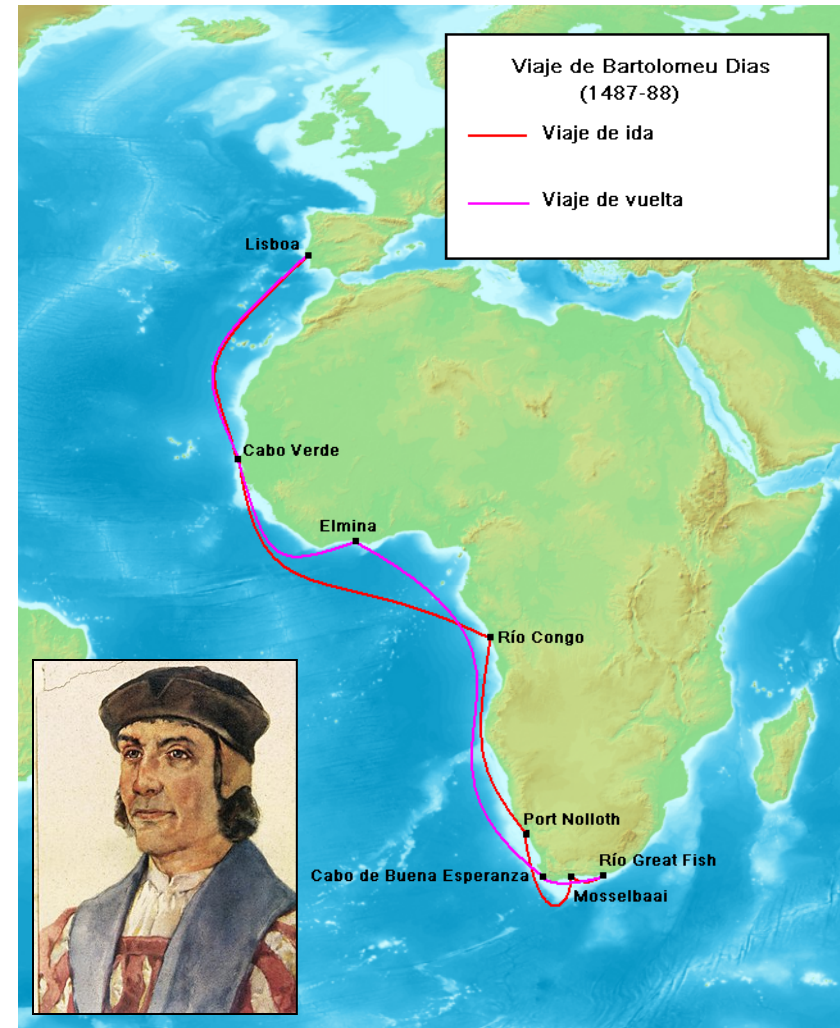
10 year hiatus due to “cold war” with Spain after India passage discovered!

Bartholomeu Dias

Under King John II

On February 3, **1488**, he anchored in Mossel Bay, about two hundred thirty miles east of what is now Cape Town.

A storm had driven him around the southern tip of Africa.. He followed the coast, which now plainly ran to the northeast, another three hundred miles to the mouth of the Great Fish River and into Algoa Bay.



The path of Bartholomue Dias, who accidentally discovered the route around southern Africa, and then was forced to turn back by his crew, thus robbing him of fulfilling his dream of being the first European to sail to India.

After a meeting of his captains, who all signed a sworn document declaring their decision to turn back, Dias agreed.

HISTORICAL MOMENT OF IRONY

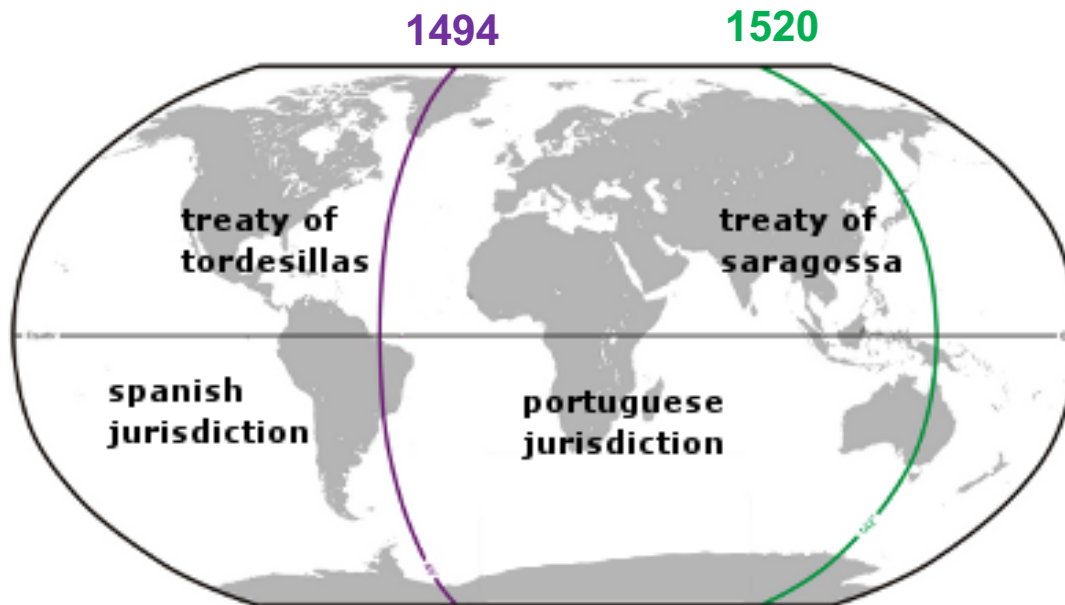
When Dias' weather beaten caravels came sailing into Lisbon harbor, there awaiting them was the still-obscure Christopher Columbus. The outcome of Dias' voyage was of immediate personal interest to him. For Columbus was then in Lisbon making another effort to persuade King John II to support his own seaborne expedition to the Indies by sailing westward across the Atlantic. Four years earlier, in 1484, when Columbus had first come for that purpose, the King had referred the project to a commission of experts, who turned him down, probably because they thought he had grossly underestimated the sea distance westward to the Indies. But Columbus had then impressed the King with his "industry and good talent" and now had come back to renew his request.

Dias' moment of triumph was a season of disappointment for Columbus. For the eastward sea route to the Indies around Africa was now feasible and Columbus' project was superfluous.

A quick follow-up to Dias' discovery might have been expected. But the next step was delayed—by domestic problems in Portugal, by a disrupted succession to the crown, and especially **by the running dispute that kept Portugal on the brink of war with Spain.**

Ironically, **the discoveries of Columbus** himself proved to be the **principal cause of these troubles**, which postponed for a full decade the sequel to Dias' rounding of the Cape. **When King John II received word of Columbus' discovery of new islands in the Atlantic, he announced, in March 1493, that these new lands rightly belonged to Portugal.** The ensuing disputes between King John of Portugal and King Ferdinand of Castile, and their rivalry for the support of the Pope, who had the power to assign to Catholic kings the worldly governance of all newly discovered parts of the earth, resulted in the famous **Treaty of Tordesillas (June 7, 1494).**

Spain and Portugal both acquiesced in **a papal line which was to run north and south at 370 leagues (about 1,200 nautical miles) west of the Cape Verde Islands. Lands to the west of the line would belong to Spain, those eastward to Portugal.** This agreement did evade war for the moment, and remains one of the most celebrated treaties in European History. In addition to securing Portugal's claim to Brazil, the treaty affirmed Portugal's right to the eastward sea path to the Indies.



Tensions continued to flare and in 1520, both Portugal and Spain claimed the same territories in the east Pacific. In 1529, resulting in **The Treaty of Zaragoza.** The two lines divided the Earth into unequal portions, with Portugal getting the larger portion.

Vasco da Gama

Under King Manuel I (The Fortunate)

Five years after Columbus' voyages, and following two years of preparation, Gama's fleet of four vessels sailed out of Lisbon harbor on July 8, 1497. The ships carried provisions for three years for some 170 men.

He arrived at Calicut, his intended destination on the southwestern coast of the Indian peninsula on May 22, 1498. Until then, there had been no seafaring achievement of equal scope.



Not many heroes of discovery have the good luck themselves to enjoy the fruits of their discovery. Vasco da Gama was one. His voyage, which finally proved a feasible sea route between West and East, changed the course of both Western and Eastern history.

Da Gama left Calicut in August 1498. His expedition beat all expectations after he brought in cargo that was worth 60 times more than the cost of the expedition.



And that was just the beginning...

In February 1502 he set out again from Lisbon, this time with a Portuguese squadron to make Calicut into a Portuguese colony.

"We took a Mecca ship on board of which were 380 men and many women and children, and we took from it fully 12,000 ducats, and goods worth at least another 10,000. And we burned the ship and all the people on board with gunpowder, on the first day of October."



On October 30 1502, Gama, now off Calicut, ordered the Samuri to surrender, and demanded the expulsion of every Muslim from the city.

He seized a number of traders and fishermen whom he picked up casually in the harbor. He hanged them at once, then cut up their bodies, and tossed hands, feet, and heads into a boat, which he sent ashore with a message in Arabic suggesting that the Samuri use these pieces of his people to make himself a curry.

When Gama departed for Lisbon with his cargo of treasure, he left behind in Indian waters five ships commanded by his uncle, **the first permanent naval force stationed by Europeans in Asiatic waters.**

The first Portuguese destroyed the Muslim fleet in 1509.

They then conquered Ormuz, the gateway to the Persian Gulf, in 1507, made Goa capital of the Portuguese possessions in 1510, took Malacca in 1511, and then opened sea trade with Siam, the Spice Islands, and China.

The Portuguese now ruled the Indian Ocean.

The consequences reached around the world. Much Italian splendor had been based on the wealth of the East pouring through Venice and Genoa. **Now the traffic in Asiatic treasure—spices, drugs, gems, and silks would no longer come through the Persian Gulf, the Red Sea and the Levant, but on Portuguese ships around the Cape of Good Hope to Atlantic-facing Europe.**

So quickly was the effect of the Portuguese sea route felt that by 1503 the price of pepper in Lisbon was only one-fifth of what it was in Venice. **The Egyptian-Venetian trade was destroyed. The wealth of Asia, the fabled treasures of the Orient, were flowing west.**

The new Age of the Sea moved the trading posts and ports of commerce and civilization from the coasts of the closed Mediterranean to the shores of the open Atlantic and the boundless world-reaching Oceans.