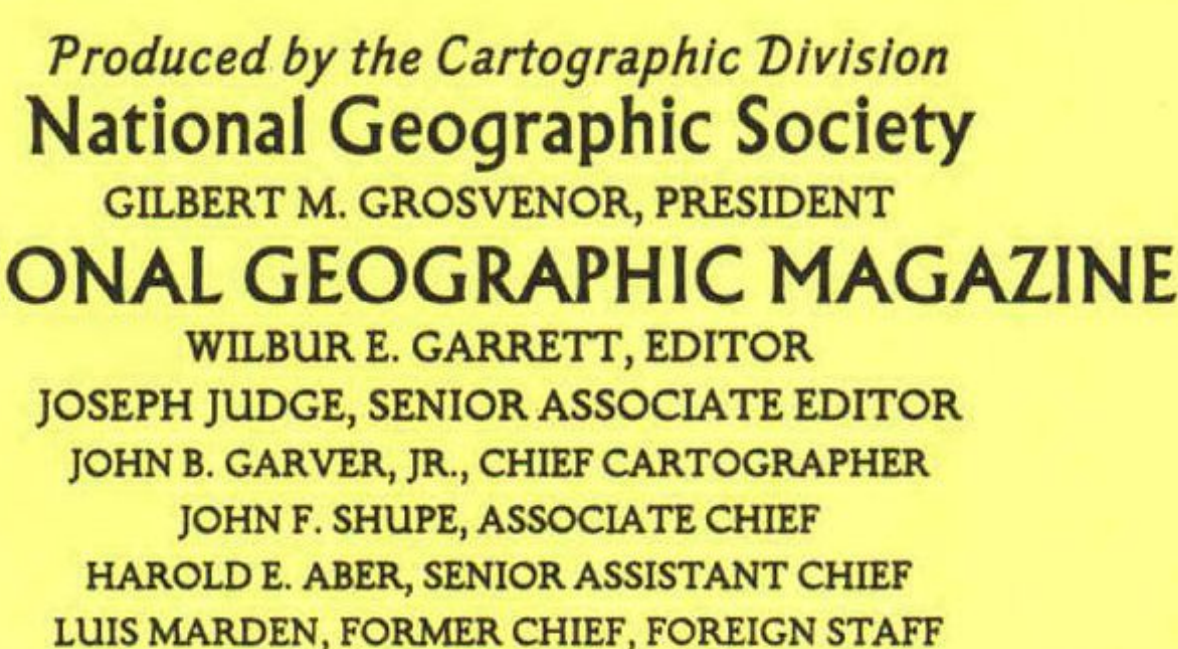


## NEW EVIDENCE MARKS LANDFALL AT SAMANA CAY

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WASHINGTON, D. C., NOVEMBER 1986

But it is impossible for anything floating in the sea—a bottle, the *Santa María*, or the *Queen*

fixes for each day's run. Beginning at Columbus's starting point off Gomera in the

Columbus logged his distances from dawn to dawn in leagues, but what does that mean in modern measure? Most scholars have used 3.18 nautical miles for the Spanish sea league, but navigation authority Dale Dunlap found a 16th-century manual that unequivocally defines the Spanish marine league as 2.82 nautical miles. Later the Mardens found an identical definition in an even earlier manual, published within

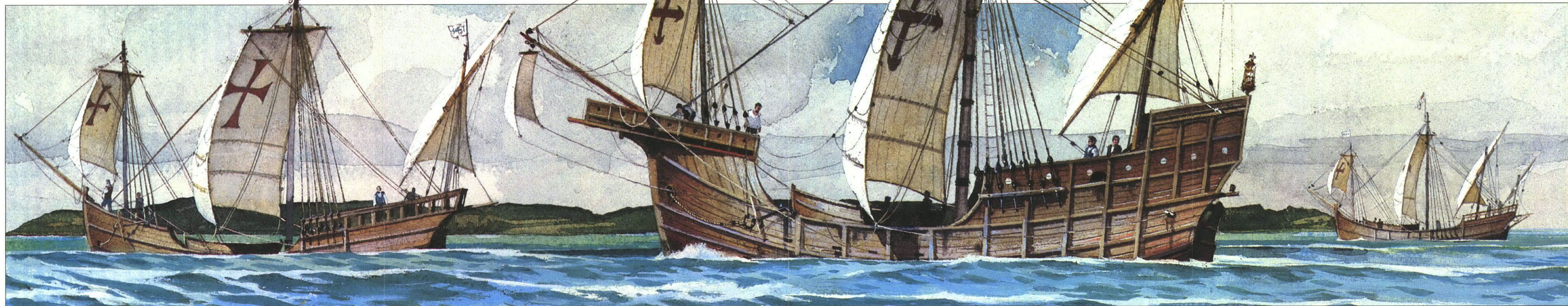
Currents of 1492 are unknown, but the earth's physiography has changed little in 500 years, an eye blink of geologic time. Currents shown are taken from monthly United States pilot charts, based on data collected for 150 years. Given the ships' course and distance, with the current set (direction of flow) and drift (speed), a vector

Naval architect Alan Pape estimates that Columbus's shallow-draft ships would make 1.5° of leeway on a westward course in the northeast trades, where the

Probable compass variation for 1500 is based on a Dutch study published years ago but still the best

Columbus estimated his speed through the water with a seaman's

Pinta, Santa María, and Niña sail into the New World in October 1492.







**CORONADO**

Cities studded with gold and silver—or reports of them—lured Francisco Vázquez de Coronado northward in 1540. He and his men penetrated the Great Plains, gazing at the herds of wild "cows" (actually bison). The expedition found no gold, but a smaller party eventually reached the Grand Canyon—the first Europeans to do so.

The European discoverer of California, Juan Rodríguez Cabrillo, a Portuguese in the service of Spain, perished during the voyage. His pilot, Bartolomé Ferrel, took command and sailed as far north as Oregon.

Sponsored by Hernán Cortés, Francisco de Lillo explored the Gulf of California in 1539-1540, learning that Baja California was a peninsula—not, as had been believed, an island.

Old World illustrations, as in a 1505 edition of Amerigo Vesputi's *Nuovo Mondo*, often depicted Indians as wild Europeans, not as a distinct people.

The Aztec ruled a tribute empire that stretched from central Mexico to present-day Guatemala. Following the Spanish conquest, their ways blended with those of Renaissance Europe, creating a new cultural mix. Roman Catholicism's archangel Michael, for example, gradually took the place of Huítzilopochtli, the Aztec war god.

Martin Waldseemüller's 1507 map, including this one designed to be pasted onto a globe (detail, above), were the first to bear the name America—applied only to South America. The extent of the Americas was far clearer by 1554, when Juan Beltrami published his map (left).

Indians pan for gold in a scene from *Fernández de Oviedo's* 1535 history of the Indies.

Produced by the Cartographic Division  
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WILLIAM GRAVES, EDITOR  
JOHN F. SHUPE, CHIEF CARTOGRAPHER

WASHINGTON, D. C. FEBRUARY 1992

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**DE SOTO**

Landing in Florida in 1539, Hernando de Soto fought his way north, kidnapping Indian leaders to ensure safe passage. He and his men explored far inland, reaching the Mississippi River, where de Soto died of fever in 1542. His haggard party, led by Luis de Moscoso, limped back to Mexico.



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**PONCE DE LEÓN**

Juan Ponce de León (left) colonized Puerto Rico and governed it until 1511. Chosen by the crown to probe northward, he set sail in 1513. His fleet found Florida—mistaken for an island—and encountered the Gulf Stream. Returning to "La Florida" eight years later, he was mortally wounded in battle.



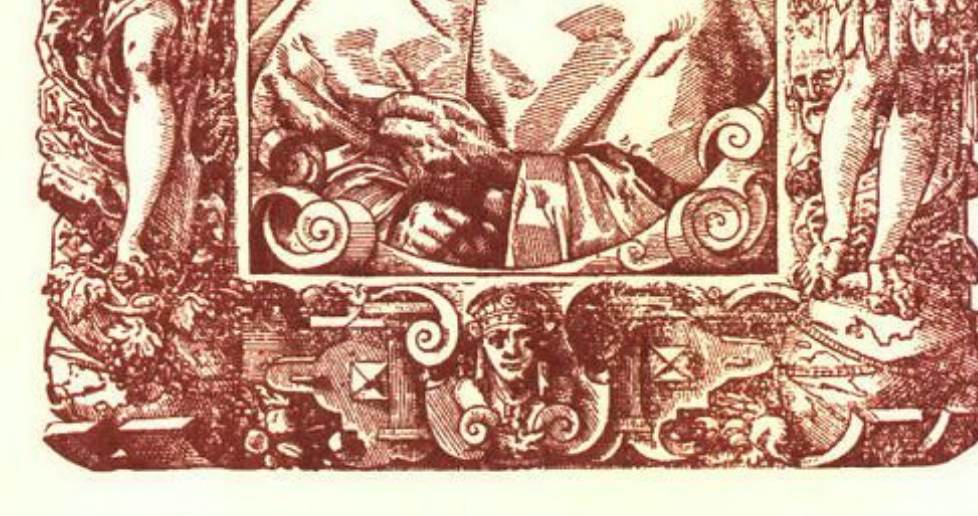
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**STRANDED ON JAMAICA** in 1503 and prepared to die, Christopher Columbus drafted a letter to the Spanish crown. Defending his career, he wrote: "Everyone to whom the enterprise was mentioned treated it as ridiculous; but now there is not a man, down to the very tailors, who does not beg to be allowed to become a discoverer." Columbus's enterprise, and the empire it spawned, rested upon stout pillars of Spanish power: military strength, maritime ability, a strong crown, vigorous national pride, religious zeal. These assets—galvanized by the triumphant climax in January 1492 of an 800-year crusade to oust the Moors—enabled Spain to master a new hemisphere. No other European ruler could compete with Ferdinand and Isabella. England and France suffered from internal struggles, while Portugal, Spain's only viable rival, concentrated on its eastern route to Asia. Thus the New World lay open to Spain, and by 1509 some 10,000 Spaniards lived on Hispaniola alone. Those begging to go discovering—or plundering—constituted an onslaught that changed both hemispheres forever.

**COLUMBUS**  
Even after four voyages Christopher Columbus (right) was sure he had reached Asia. Brilliant at sea, he was inept on land, losing his post as viceroy and governor of the Indies in 1500.



ROYAL COLLECTION, LONDON, BY PERMISSION OF HER MAJESTY THE QUEEN



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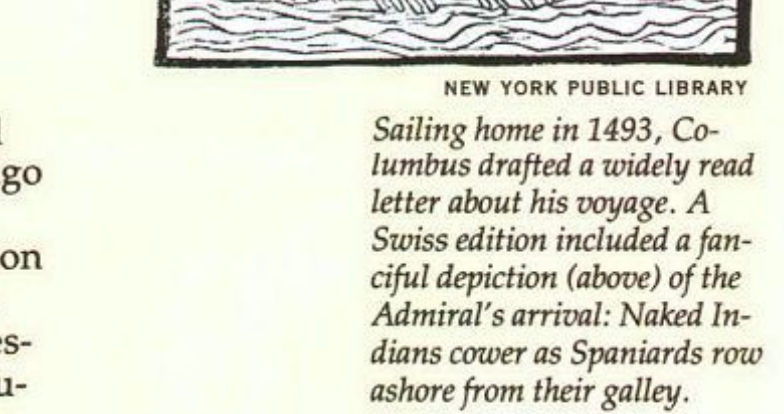
**FERDINAND AND ISABELLA**  
Two kingdoms wed in 1469, when Ferdinand of Aragon married Isabella of Castile. Determined, astute, and pious, the pair unified Spain and wrested Granada from the Moors in 1492. That same year they approved Columbus's audacious plan.



ROYAL COLLECTION, LONDON, BY PERMISSION OF HER MAJESTY THE QUEEN

**VESPUCCI**

Europeans devoured Niño Mando, Amerigo Vesputi's 1503 account of his exploration of the coast of Brazil. Modern scholars question his claims and authority, but there is no doubt he was a masterly publicist who made clear that the Americas were indeed a new world.



NEW YORK PUBLIC LIBRARY

Sailing home in 1493, Columbus drafted a widely read letter about his voyage. A Swiss edition included a fanciful depiction (above) of the Admiral's arrival. Naked Indians cover as Spaniards row ashore from their galley.

NEW YORK PUBLIC LIBRARY

Francisco de Orellana and some 60 companions were the first Europeans to navigate the Amazon. Searching for food after their expedition in Peru had run out of provisions, they sailed down the Napo River in 1542. They reached the Amazon and explored it for six months. Orellana led his party safely to the Atlantic.

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They hungered like pigs for that gold," sneered an Aztec recalling the Spaniards' first glimpse of treasure. Europeans fed happily on Aztec and Inca wealth, but not even the mines of Potosí could satiate them. Discovered in 1545, this mine in present-day Bolivia, seen in a 15th-century woodcut, yielded some 45 million pounds of silver. Yet Spain grew poorer, as rising prices and military debts drained the treasury.

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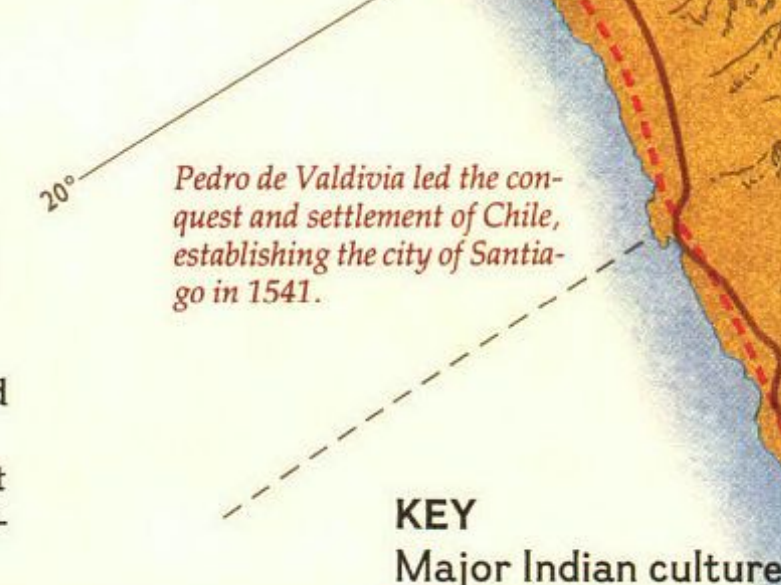
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**LAS CASAS**

Bartolomé de Las Casas, a Dominican friar and bishop, spent five decades championing native rights. Named Protector of the Indians, Las Casas enraged settlers by ordering them to free slaves, yet he could not effect lasting change.



MANRELL COLLECTION, LONDON

At Spain's request, Pope Alexander VI in 1493 affirmed Spain's rights to its newfound territories in the west. A year later the Treaty of Tordesillas moved the line farther west. The meridian shown here is an approximation, since its location was not precisely determined.

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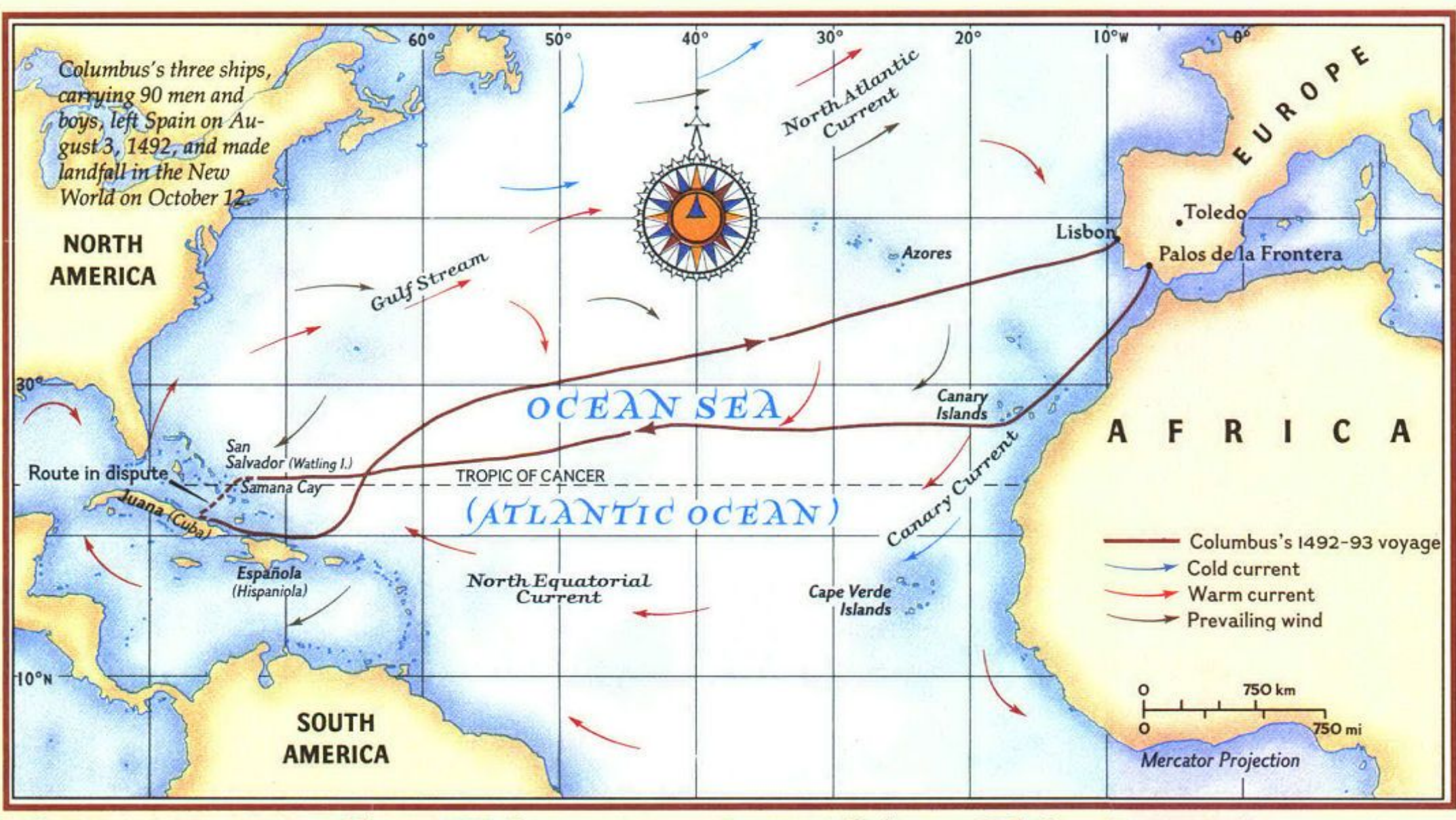
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COLUMBUS'S THREE SHIPS

Columbus first sailed the Ocean Sea with two misconceptions. From Greek and Arab texts, he reckoned the circumference of the earth to be 25 percent smaller than it actually is. He also assumed that no large landmass lay between Europe and Asia. Consequently, he was certain that his landfall (two possible sites are shown at left) must be in the Indies of Asia. Yet as a practical matter, Columbus had no betters. In voyaging back to Spain, he discovered the full extent of the great gyre of ocean currents and prevailing winds—thus opening the Atlantic to routine passage.

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KEY  
Major Indian culture  
Artec  
Maya  
Inca

ARAWAK Indian ethnolinguistic group  
Occupied settlement  
Chusquisaca Indian  
La Plata European  
Present-day  
Abandoned settlement

Bipolar Oblique Conic Conformal Projection  
SCALE 1:15,040,000  
1 CENTIMETER = 150 KILOMETERS OR 1 INCH = 238 MILES

0 100 200 300 400 mi

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