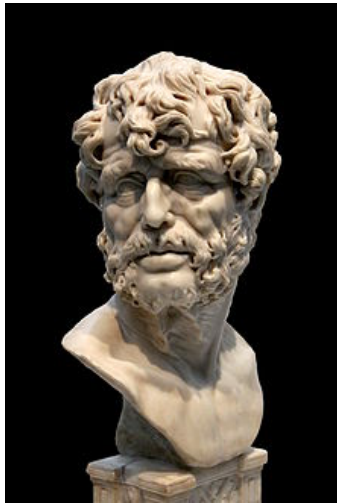


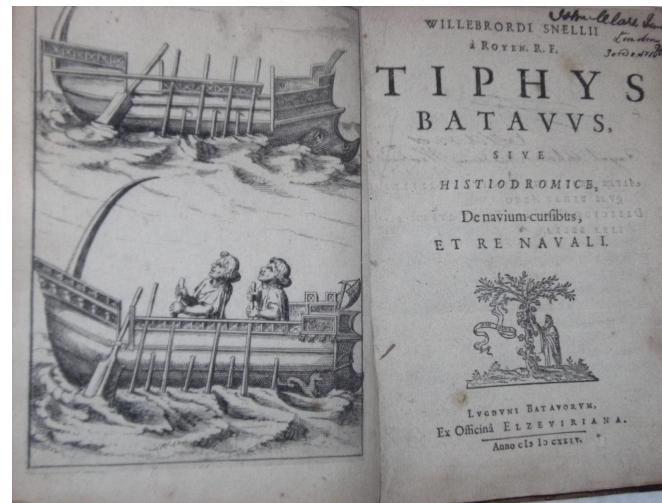
The Power of the Winds

Columbus may have been persuaded by an axiom attributed to Aristotle, that “one could cross from Spain to the Indies in a few days.”

Or by the oft-repeated prophecy of Seneca, "An age will come after many years when the Ocean will loose the chain of things, and a huge land lie revealed; when Tiphys will disclose new worlds and Thule no more be the Ultimate."



Seneca,
Roman Statesman,
Philosopher,
Playwriter



Tiphys, legendary leader of the Argonauts



Thule (Tile on the map), the most northern known extent, thought to be an island by the Romans. Thule was likely Scandinavia.

Mistakes by Ptolemy that motivated Christopher Columbus

- Asia stretched 180 degrees around the globe, where as its actual extent is 130 degrees
- The size of Ptolemy's nautical mile was 57 miles per degree of longitude, where as the real number is 69
- Didn't know about the American continent
- Africa's southern extent was landlocked with a great southern continent, making an eastward passage impossible

Columbus also thought that, as stated in the Bible, the earth was $\frac{6}{7}$ (86%) land.

The first two led Columbus to conclude the eastern extent of Asia was a lot closer (and on the order of the actual distance to the American Continent it turns out).

Not all scholars adopted Columbus' numbers however.

ERDKARTE NACH CLAUDIUS PTOLEMAEUS (c. 160 n. Chr.)



APART from the directions of the rising and setting of the sun, which, of course, varied with place and season, the most noticeable directions that could help a sailor were those of the winds. But they were known only on more localized routes.

After the Great Interruption, Christian Europe used the magnetic compass to open a new world of direction naming and direction finding. No longer were the directions only local and relative, marked by the breezes in a particular place.

The magnetic compass suddenly enabled the sailor to find an absolute direction anywhere on the globe without complicated astronomical calculations.

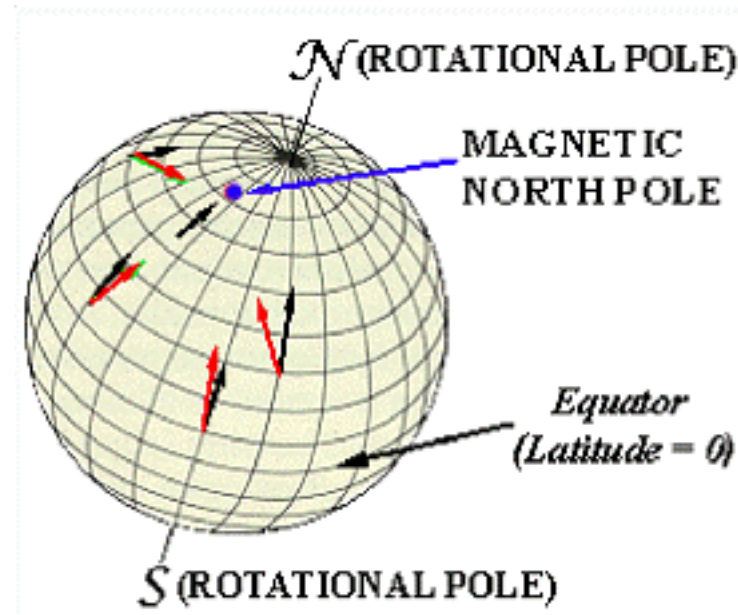
Hipparcus and Ptolemy had set the stage

Locating yourself on the whole planet meant finding your place on the grid of Hipparcus' latitudes and longitudes. Ptolemy had made a beginning, but then came the thousand years of obscurantist Christian geography in the European Middle Ages. For a new era of exploration the magnetic compass was needed.

The wonderfully simple and inexpensive magnetic compass gave sailors a new confidence that they would be able to find their way back.

By Columbus' time, the magnetic compass had become so indispensable that, for security, the **captain himself would carry extra magnetized needles**. Magellan took thirty-five needles on his flagship to replace the one under the circular compass card if it lost north. Sometimes weak needles were re-magnetized by a precious piece of lodestone **guarded by the captain**.

The compass became the essential instrument of navigation. **Without the compass, Columbus might never have had the one instrument he needed to get him to "the Indies" and back.** The "north-pointing" needle, an obstinate Europe eventually learned, was really pointing to unimagined new worlds.



The Enterprise of the Indies

Genoa, where Columbus spent the first 22 years of his life, had struggled against Venice for maritime dominance of the Mediterranean. In Columbus' youth, Genoa was a flourishing center of shipbuilding and seafaring. **After a ship wreck at sea, he ended up in Portugal, where he spend most of his adult life.**

To follow his dream, Columbus, who had no formal education, taught himself Portuguese, Italian, Spanish, and Latin so he could read, study and then write proposals to Kings about navigation.



Columbus' successful enterprise would be almost as much a feat of salesmanship as of seamanship, as **he spent seven years peddling his “Enterprise of the Indies” in the courts of western Europe.**

In late 1484, when Columbus offered what he called his "Enterprise of the Indies" to King John II of Portugal, it still seemed that a westward sea passage might be not only the shorter but perhaps the only maritime route to the Indies. The King's committee of experts estimated a distance from the Canaries to Japan of about ten thousand nautical miles. They dared not encourage their king to invest in so speculative an enterprise.

In 1485, Columbus' wife died, and with his five-year-old son, Diego, he left the Portugal, where he had spent most of his adult life. **He moved on to Spain.**

In Spain, King Ferdinand and Queen Isabella let a year pass before they would receive Columbus in audience. Then Isabella, too, appointed a commission to assess Columbus' proposal in detail, and to make recommendations.

As the Spanish negotiations dragged on he recalled that King John II of Portugal had been personally friendly to him back in 1484-85, and so **Columbus decided to go back to Lisbon and try again.** Columbus could not have chosen a worse time. For, **when he arrived in 1488**, he was just in to witness Bartholomeu Dias and his three caravels triumphantly sail into Lisbon with the good word that he had rounded the Cape of Good Hope and found that an open eastward sea passage to India existed.

Dias' success and all that it promised naturally killed King John's interest in Columbus.

Columbus returned from Lisbon to Seville, where he found Ferdinand and Isabella still vacillating. In disgust, **he was actually en route to take ship for France persuade King Charles VIII when Queen Isabella**, urged on by her keeper of the privy purse, suddenly **decided to support Columbus**. Columbus' advocate had pointed out that support of **this enterprise would cost no more than a week's royal entertainment** of a visiting dignitary.

Perhaps Isabella was persuaded by the fact that Columbus had shown his intention to offer the bargain enterprise to her rival sovereign next-door (France).

She even pledged her crown jewels if needed to finance the trip.



[Christopher Columbus at the Court of the Catholic Monarchs by Juan Cordero, 1850.](#)

Fair Winds, Soft Words, and Luck... Paradise Lost and Found

The "discovery" of America has overshadowed Columbus' other discoveries, which the passing of the Age of Sail has made it hard for us to appreciate.

On his first voyage, Columbus really made three momentous discoveries:

- (1) finding land that Europeans had not found before
- (2) the best westward sea passage from Europe to North America
- (3) and the best eastward passage back.

Not the least remarkable, though the least celebrated, of Columbus' achievements was his ability on his later voyages to return to the lands he had first so accidentally and unwittingly encountered. Doubly remarkable, too, because Columbus' navigating techniques were so rudimentary. In Columbus' time, celestial navigation was quite undeveloped

Northern Europe only slowly received news of Columbus' exploit. The famous Nuremberg Chronicle, an illustrated world history from the Creation to the present (printed on July 12, 1493), made no mention of Columbus' voyage. Not until late March 1496 do we find word of Columbus in England, and the first German translation of Columbus' written report to Isabella was printed at Strasbourg in 1497.

Tobacco (yet another unforeseen globe altering outcome of the explorations...

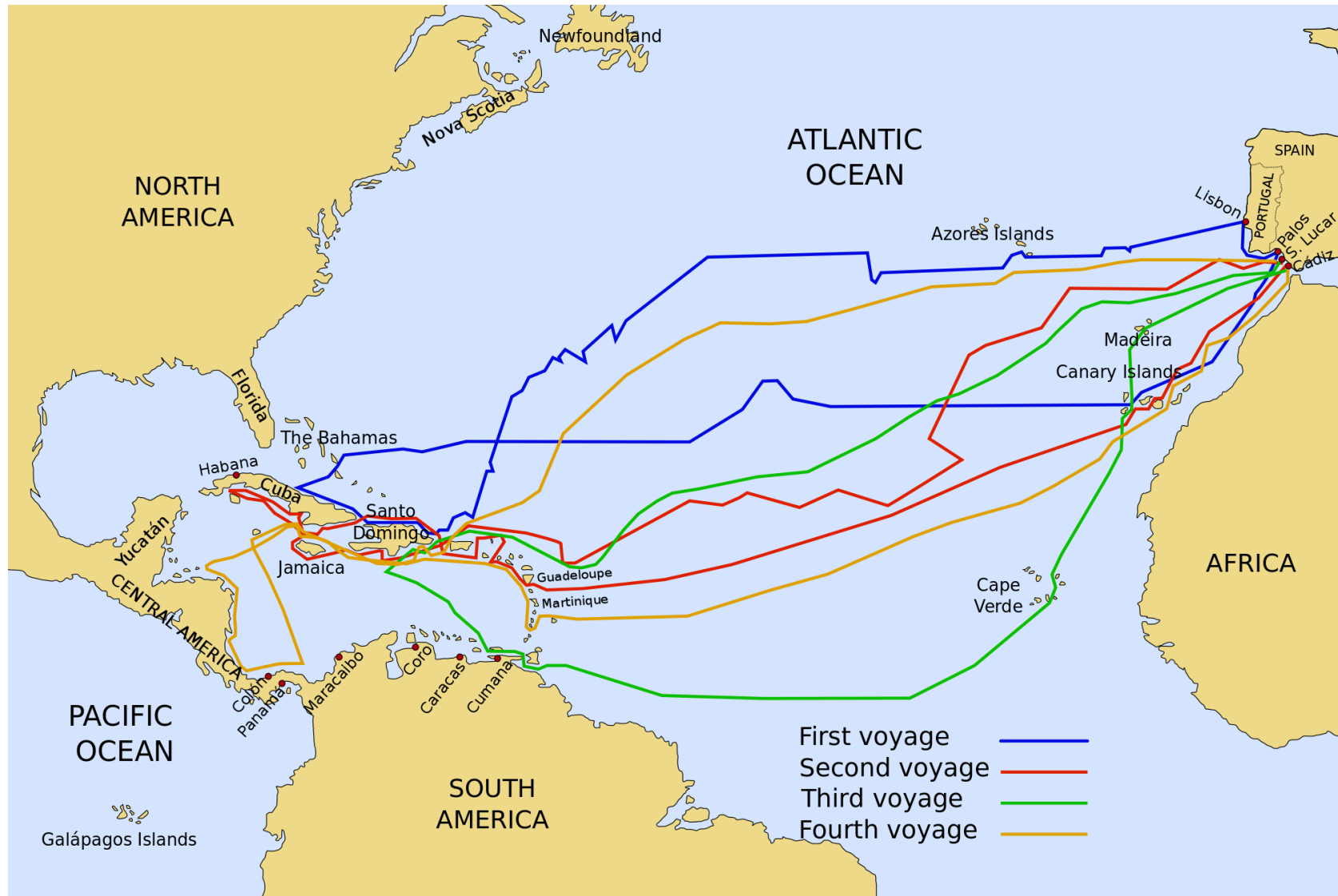
On his first voyage...

On the trail back to the harbor, Columbus' two ambassadors did have one epochal encounter. They met a walking party of Taino Indians—"many people who were going to their villages, with a firebrand in the hand, and herbs to drink the smoke thereof, as they are accustomed." The long cigar that they carried would be relighted at every stop by small boys carrying along firebrands, then passed around for each member of the party to take a few drags through his nostrils. After the relaxing interval the Tainos resumed their journey.

This was the first recorded European encounter with tobacco.

Obsessed by visions of China's gold, Columbus' embassy saw only a primitive custom. Some years later, when the Spaniards had colonized the New World and learned to enjoy tobacco themselves, they introduced it to Europe, Asia, and Africa, where it was to become a source of wealth, delight, and dismay.

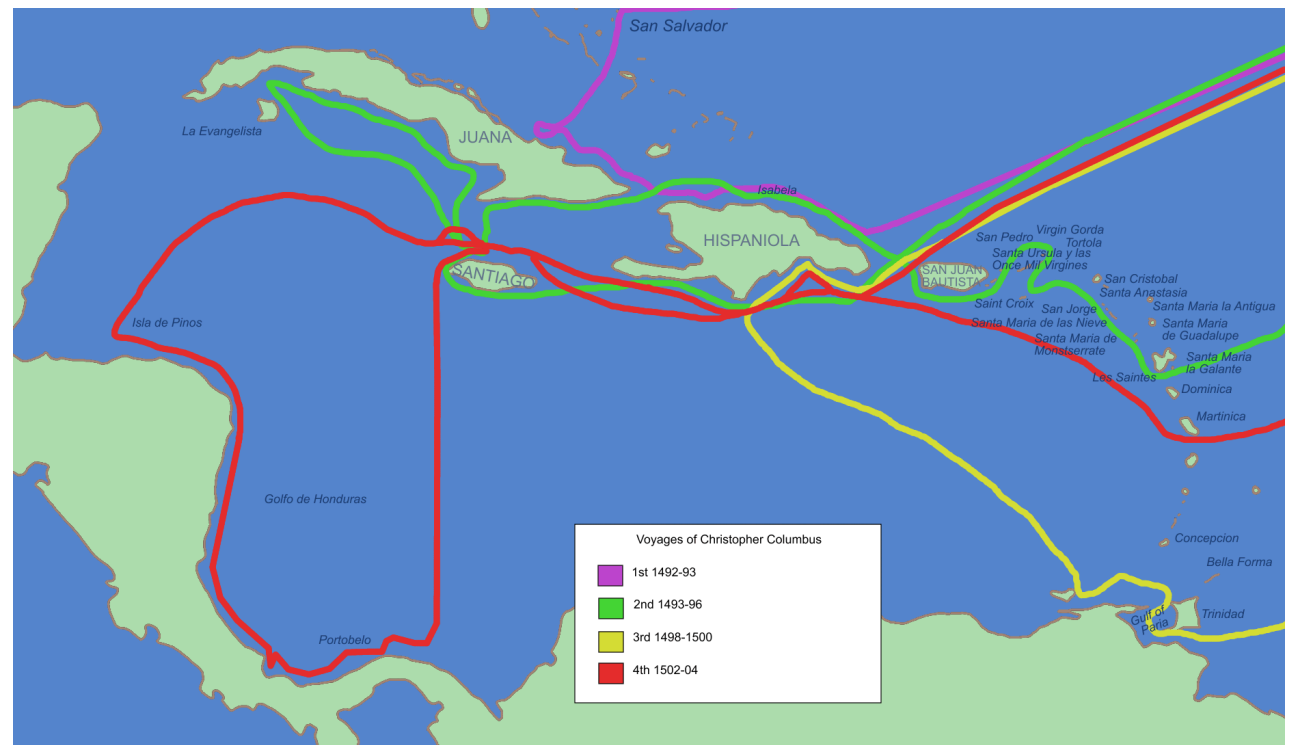
Columbus' Four Voyages



During the next twelve years Columbus undertook three more voyages to "the Indies." They were called voyages of discovery, but more precisely they should have been called voyages of confirmation. For someone less committed they might have produced tantalizing puzzles, planting seeds of doubt.

When these successive voyages still failed to connect with the Great Khan or to discover Oriental splendors, it became harder to persuade others back home.

Although Columbus was ingenious at inventing new strategies of explanation, as his explanations became more farfetched he once again became a butt of ridicule, a casualty of his own faith.



The return of Columbus' ships to Spain in March 1496 was anything but a triumph. He was warmly received at court, but the discovery of islands of the Indies in the Western Ocean no longer created a sensation. He did not bring back the promised riches or clear contact the east.

Like a second moon landing, Columbus' feat had somehow been minimized by showing that it could be repeated. Except among a few men of learning, word of this voyage was received with indifference.

After four voyages, Columbus died believing that while he had incidentally found some Asiatic islands and peninsulas that had not yet appeared on the maps, all along he had been following the east coast of Asia.

Naming the Unknown

IT was appropriate that the name America should be affixed on the New World in a manner casual and accidental, since the European encounter with this new world had been so unintentional.

While the name and the person of Christopher Columbus were to be celebrated throughout the Americas, and his birthday would become a holiday, **Amerigo Vespucci** has been scarcely recognized and surely has not become a folk hero.

Amerigo Vespucci was born of an influential family in Florence in 1454 in the heart of the Italian Renaissance. There he spent the first 38 years of his life, there he acquired the voracious curiosity and intellectual ambitions which governed his life.

By 1499 Vespucci's commercial and geographic interests had combined to draw him decisively into this new calling. It was obvious by then that the future of Spanish trade to the Orient would have to lie through the Western Ocean. The Portuguese had preempted the route around Africa, but Columbus had shown that lands could be reached by sailing west. **Vespucci would try to fulfill Columbus' hopes of reaching Asia.**

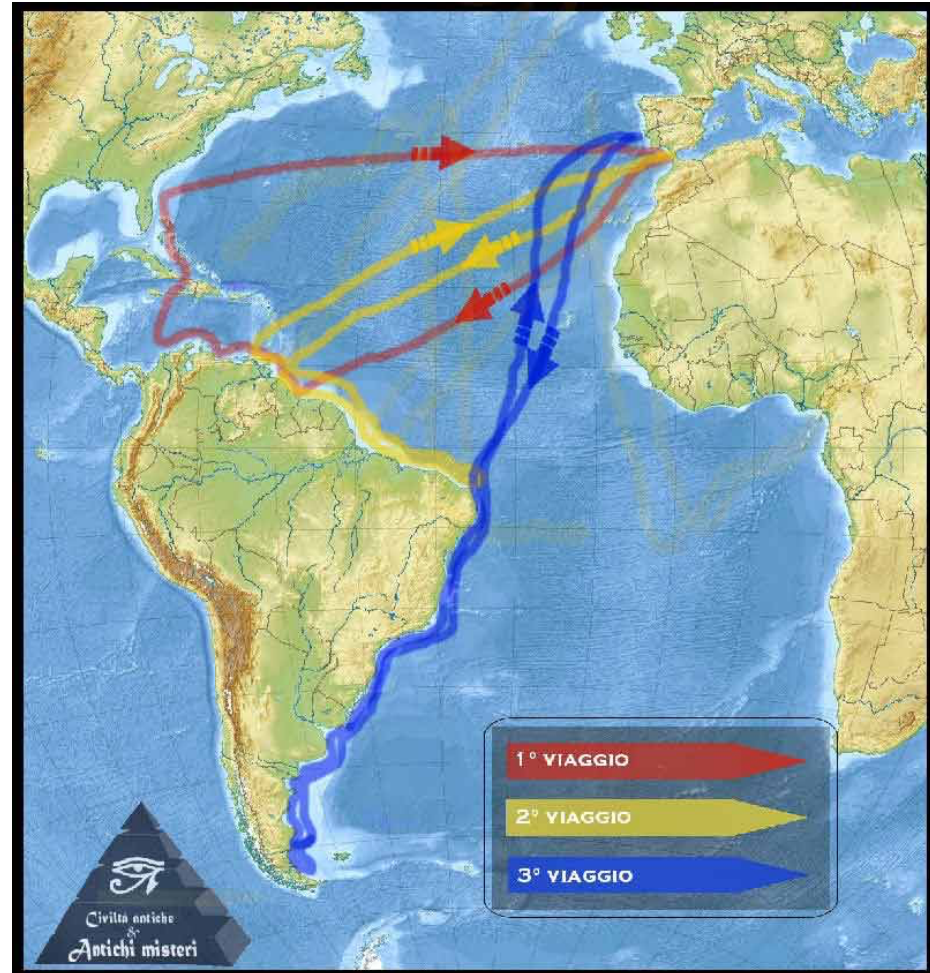


Vespucci made four voyages

"After we had sailed about four hundred leagues continually along one coast, we concluded that this was mainland; that the said mainland is at the extreme limits of Asia to the eastward and at its beginning to the westward."

"Sailing along the coast, we discovered each day an endless number of people with various languages."

"Very desirous of being the author who should identify the polar star of the other hemisphere, I lost many a night's sleep in contemplation of the motion of the stars around the South Pole, in order to record which of them had the least motion and was nearest to the pole."



When Vespucci set out on his next voyage, which would offer him the occasion to announce his doubts about Ptolemy, to break with the hallowed traditions of cosmography and declare a new world, he went under another flag. **Now he sailed not for Ferdinand and Isabella of Spain but for King Manuel I of Portugal.**

Portugal and Spain: Cold War Sea Race?

Vespucci's easy change of flags recalls the remarkable collaboration and mutual restraint between the two great competing seafaring powers, Spain and Portugal, in this pioneer age of seafaring discoveries. **For more than a quarter-century after the first voyage of Columbus, Spain and Portugal remained peaceful and even cooperative in their separate efforts to discover the new world in the Western Ocean.** The intermarriages of the heirs and sovereigns of Portugal with those of Castile and of Aragon were not the whole story.

Competitors, they somehow became fellow seekers. **In advance they made rules for sharing a new world of unknown dimensions and unknowable resources. In advance Spain and Portugal divided the whole un-Christian world between them.**

What made that agreement possible and gave force to their agreement was their common acceptance of an outside authority, the pope, who, without an army or navy, exercised enormous spiritual power.

Busting out of the Middle Ages.... Carving out a New Age

Vespucci's 2nd passage "across the ocean wastes in search of new land" required sixty-four days. "We arrived at a new land which, for many reasons that are enumerated in what follows, we observed to be a continent."

Vespucci had followed the South American coast for about eight hundred leagues, about twenty-four hundred English miles, "always in the direction of southwest one-quarter west,

" We navigated in the Southern Hemisphere for nine months and twenty-seven days never seeing the Arctic Pole or even Ursa Major and Minor. I was on the side of the antipodes; my navigation extended through one-quarter of the world. . . . **The inhabitants there were numerous**, yet the infinite variety of trees, the sweet-smelling fruits and flowers and display of brilliantly plumed birds stimulated "fancies" of the Terrestrial Paradise. "What should I tell of the multitude of wild animals, the abundance of pumas, of panthers, of wild cats, not like those of Spain, but of the antipodes; of so many wolves, red deer, monkeys, and felines, marmosets of many kinds, and many large snakes?"

Vespucci was led to the **heretical conclusion** that "so many species could not have entered Noah's ark."

It is not surprising that the newness of the New World, with all its unimagined opportunities, did not take Europe by storm.

In 1507 (Vespucci dies in 1512), The Saint-Dié group dropped their grand plan for yet another edition of Ptolemy's Geography. Instead, they produced a little volume of 103 pages called **Cosmographiae Introductio**, which offered something sensationally new, an account of a fourth part of the world revealed in the voyages of Amerigo Vespucci.

In a summary chapter Martin Waldseemuller casually observed:

Now, these parts of the earth [Europe, Africa, Asia] have been more extensively explored and a fourth part has been discovered by Amerigo Vespucci (as will be described in what follows). Inasmuch as both Europe and Asia received their names from women, I see no reason why any one should justly object to calling this part Amerige [from Greek "ge" meaning "land of], i.e., the land of Amerigo, or America, after Amerigo, its discoverer, a man of great ability.

The part of the page of the 1507 (September) edition of the *Cosmographiae Introductio* in which the name of America is proposed for the New World.

Nunc vero & hee partes sunt latius illustratae & alia quarta pars per Americū Vesputium (vt in sequentibus audietur) inuenta est: quā non video cur quis iure vetet ab Americo inuentore sagacis ingenij viro Amerigen quasi Americi terram / sive Americam dicendam: cum & Europa & Asia a mulieribus sua sortita sint nomina. Eius sitū & gentis mores ex his binis Americi nauigationibus quę sequuntur liquide intelligi datur.

Cosmographiae Introductio 1507



When Gerardus Mercator published his large map of the world in 1538, he doubled its application. Mercator's map showed both a "North America" (Americae pars septentrionalis) and a "South America" (Americae pars meridionalis).



Publications about Vespucci's travels exceeded those of Columbus threefold. In those years, of all the works we can find printed in Europe describing the New World discoveries, about one-half dealt with Amerigo Vespucci. Vast audiences were now being equipped to receive messages of new worlds.