Introduction:
Why Columbus Sailed South to the Indies

Latitudes, however, are more significant for the diversity of lands than longitudes.

Averroës, on Aristotle's *Meteorologica*

A centuries-old tradition on the discovery of the Americas maintains that Columbus sailed *west* across the Atlantic Ocean to lands that Europeans initially identified as part of Asia. This habit of mind concerning the geographical direction of the most celebrated navigational feat in recorded memory is by no means unjustified: Columbus himself foresaw, even as he poised himself to cross the ocean, that his fame would come to rest with having sought to reach the East "by way of the West."[1] His plan rested—so reads the classic account derived from the biography of Columbus attributed to his son Ferdinand and from Columbus's own writings—on the equivocal claim that the ocean was narrow between the westernmost and easternmost ends of the known inhabited world. And, insofar as Columbus would have relied on scientific and technical arguments, he arrived at this claim by underestimating the equatorial circumference of the globe and by overestimating the horizontal length of the known inhabited world.[2] These are certainly not the sole cosmographical praecognita traditionally ascribed to the Discoverer, but they do constitute the defining assumptions without which our reading of the documentary corpus today associated with the discovery would seem suddenly rendered meaningless. Terrestrial longitude—the east-west separation in degrees between any given point on the globe and a prime meridian, such as is Greenwich today—has long shaped our grasp of this most consequential transatlantic event. Nevertheless, the notion that Columbus's goal was to reach the East "by way of the West" has significantly skewed our understanding of the plan he developed preceding the discovery, of his subsequent achievements and mistakes, and of the general orientation of the age of European expansion he helped to forge.

Columbus did not merely sail west across the Atlantic. Had he only wested from the Atlantic coast of Spain to the Americas (an insurmountable physical challenge for sails, given the slant of the trade winds in the North Atlantic), the residents of today's Virginia and North Carolina in the United States—not Cubans or Dominicans—might have traced their European heritage to the Spain of the *reconquista*. Readers of Columbus who have paused to consider his choice to cross the ocean from the Canary Islands instead, or his half-baked attempts in Cuba to locate the legendary ruler of the Mongols once depicted by the Venetian merchant Marco Polo, or the puzzling latitude measurements recorded in the only surviving sample of his *Diario*, or his keen intuition that the huge torrent of the Orinoco River in modern-day Venezuela issued from a southern continent unbeknownst to Europe, will surely have noticed that Columbus also sailed a long way *south* to lands and waters that he and his contemporaries would variously identify as "India," "the parts of India," or "the Indies."

Indeed, Columbus also sailed *south* to the Indies. But this aspect of Columbus's geography continues to play a negligible role in standard treatments of his celebrated enterprise. A blind spot of this magnitude in the Columbian tradition is all the more perplexing when one considers that Columbus's biographers since the late fifteenth century (not to mention Americanists who have studied the discovery since the Enlightenment) have not failed to notice that Columbus's exploration took place both to the west *and* to the south of Mediterranean Europe. Testimonies of Columbus's southing date back to the earliest days of European presence in the Americas, beginning with the first known chronicler and geographer of the so-called New World, the Italian humanist Peter Martyr d'Anghiera, who knew Columbus personally and who wrote his famous epistolary "decades" on the very heels of the discovery (first collected as *De orbe novo* in 1530). Peter Martyr, who claimed to have extracted his information from original documents facilitated by Columbus, carefully recorded that on his first three voyages, Columbus had followed ever-steeper routes to the south. On his first voyage, Columbus navigated westward from the Canaries "always following the sun, though slightly to the left."[3] On his second voyage, he steered "far more to the left than on the first voyage." And on his third voyage, "he pursued a journey toward the southern region, seeking the equatorial line."

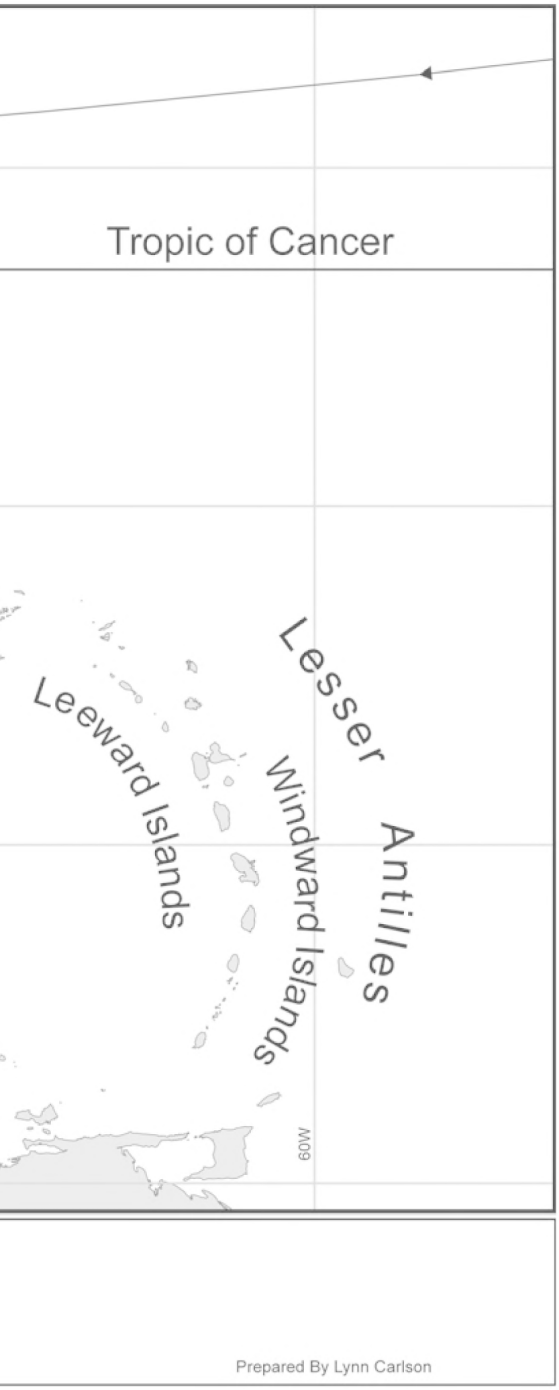
So too the crucial sixteenth- and early-seventeenth-century histories that recounted the discovery indicate in one way or another that Columbus had labored westward *and* southward in pursuit of the Indies.[4] Among these foundational works are *Historia de los*

Reyes Católicos Don Fernando y Doña Isabel (completed 1513), by the palace curate Andrés Bernáldez, who hosted Columbus upon his return from the second voyage; *Historia de la inuencion de las yndias* (completed 1528), by the rector of the University of Salamanca Hernán Pérez de Oliva, who relied almost exclusively on Peter Martyr's first "decade"; the first part of *Historia general y natural de las Indias* (1535), by the first known official "chronicler of the Indies," Gonzalo Fernández de Oviedo y Valdés; the so-called life of Christopher Columbus attributed to his son Ferdinand, which was completed around 1539 and is known to us only in an Italian translation as *Historie del S. D. Fernando Colombo* (1571); *Historia general de las Indias y conquista de México* (1552), by Hernán Cortés's so-called chaplain Francisco López de Gómara; *Historia de las Indias* (completed about 1561), by the humanitarian friar Bartolomé de las Casas; and the voluminous *Historia general de los hechos de los castellanos en las islas y tierrafirme del mar océano* (1601–1615), by the "chronicler general of the Indies" Antonio de Herrera y Tordesillas.

Columbus's southing was not just known to the early chroniclers and historians who retold the story of his voyages. The fact that the inhabited lands he found lay not only to the west but also *to the south* of Mediterranean Europe was acknowledged by the most diverse (and crucial) documents drafted in the wake of his discoveries—from the papal bulls immediately issued by Alexander VI granting the Crowns of Aragon and Castile exclusive right of access to the lands and peoples newly discovered by Columbus *versus occidentem et meridiem* (literally "to the west and to the south"), to the works of various cartographers and cosmographers who since the turn of the sixteenth century celebrated the fact that Portuguese and Spanish explorers had discovered vast inhabited territories within the seemingly forbidden domain of the "torrid zone," or the belt of the tropics,[5] and to the philosophical arguments wielded by learned scholars who in the course of the same century set out to establish or to contest Spain's legal titles to its occupation of the tropical Americas, foremost among them the jurist Juan Ginés de Sepúlveda and, of course, Sepúlveda's sworn enemy, the justly famous humanitarian friar Bartolomé de las Casas.

On his first voyage (1492–1493), so reads the abstract of Columbus's *Diario* rendered by Las Casas, Columbus sailed mostly "to the south by southwest" (*al sur quarta del sudueste*) from the port of Palos de la Frontera in Spain's Atlantic coast to the Canary Islands off of Saharan Africa's western shoreline (**fig. I.1**).[6] Peter Martyr, explaining that Columbus had stopped at the Canaries to gather water and careen his ships, mindfully notes that these islands already stood at significantly lower, and therefore warmer,

I.1 Columbus's first voyage, 1492–1493. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.



I.2 Detail of Columbus's first voyage, 1492–1493. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Rhode Island.

latitudes than continental Europe. In Peter Martyr's words, the Canaries were "outside of every European climate, to the south," although, as he and other authors since antiquity tended to qualify with admiration, local conditions had spared the so-called Fortunate Isles from the excessive heat that was known to desolate the nearby African mainland around those latitudes.[7] Since the opening decades of the fifteenth century, when the Portuguese prince Henry the Navigator began sending exploration parties to Atlantic Africa, the Canaries and the mainland African cape then known as Bojador (Cape Juby, modern 28° N) had marked for Christian Europeans the very threshold to the hotter, and seemingly more perilous, latitudes of the tropics.[8] (Not in vain has Columbus's biographer Paolo Emilio Taviani observed, referring to the intensely formative role that traveling to the equatorial coast of Guinea played for Columbus, that Henry the Navigator's greatest achievement had been "the discovery of fertile lands beyond the desert, [into] the torrid zone.")[9] Now in 1492 the Canarian archipelago—specifically, the southernmost island of El Hierro (27° 44′ N)—was to serve Columbus as a crucial reference point, both for westing across the Atlantic and for proceeding to south his way through the Bahamas toward the Caribbean basin.

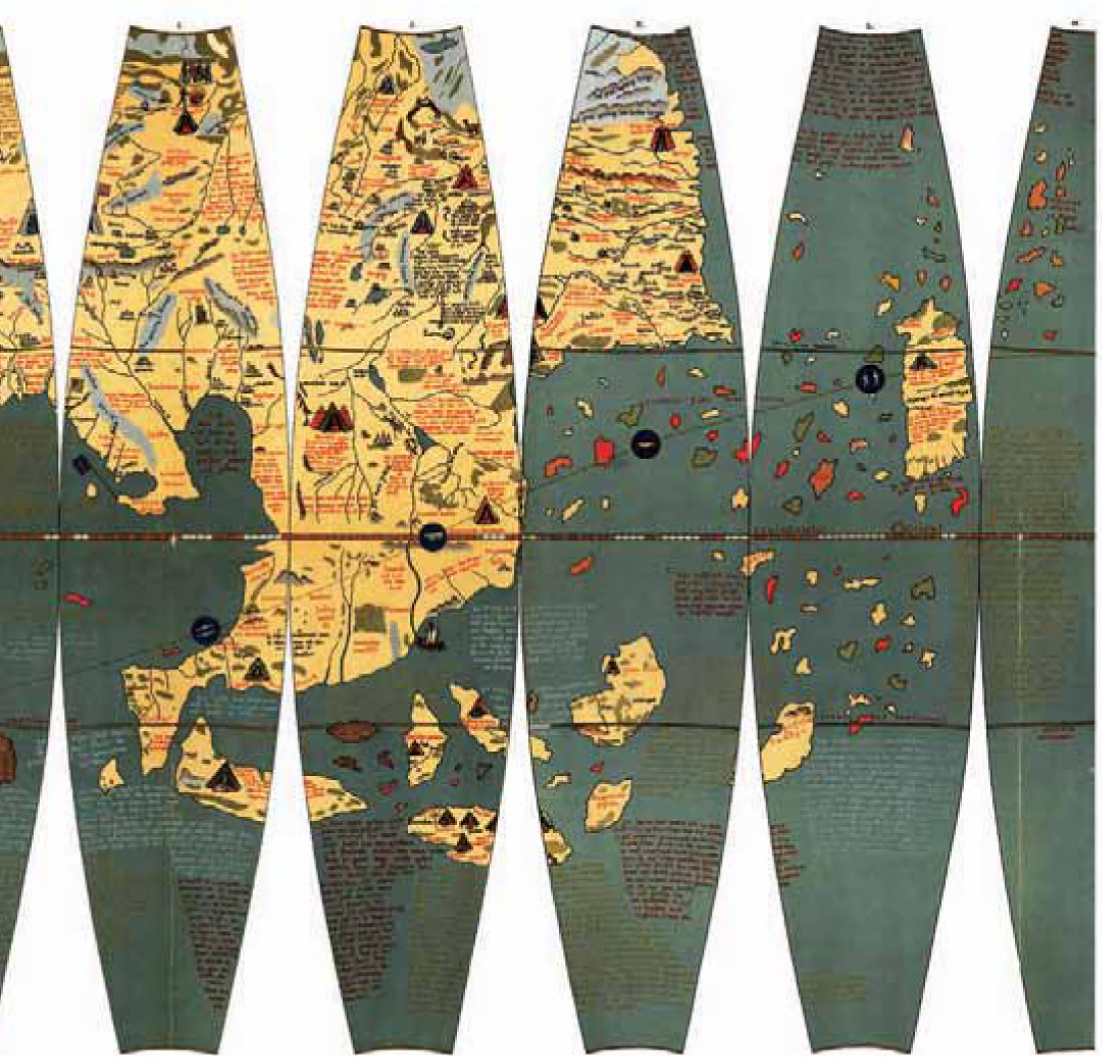
In preparation for this voyage, Columbus had been strictly forbidden by King Fernando of Aragon and Queen Isabel of Castile from treading below the Canaries and toward Atlantic Africa. In a peace accord signed years before between Castile and Portugal, known as the Treaty of Alcáçovas (Toledo, 1479–1480), Castile had recognized Portugal's sovereignty over that meridional expanse in exchange for Portugal's recognition of Castilian sovereignty over the Canaries.[10] It may well have been evident to Columbus and his royal patrons, even before Columbus put out to sea, that King Dom João II was poised to interpret the terms of that pact to mean that *everything* below the parallel of the Canaries belonged to Portugal, not just what extended below the Canaries and toward Atlantic Africa. Setting aside the much-debated question of Columbus's technical competence at establishing accurate latitudes, Columbus's fear of Portugal's Atlantic agenda certainly serves to explain his later reluctance to admit that the lands he had discovered on the first voyage—the Bahamas, Cuba, and Hispaniola—were anything but directly across from the Canarian archipelago.

On this first voyage, Columbus appears to have followed an old custom with dead-reckoning sailors—first to reach the approximate latitude on which one expected to meet one's goal and then to set course along this latitude toward that goal.[11] On the authority of the extant *Diario,* Columbus tried to pursue a largely westerly course across

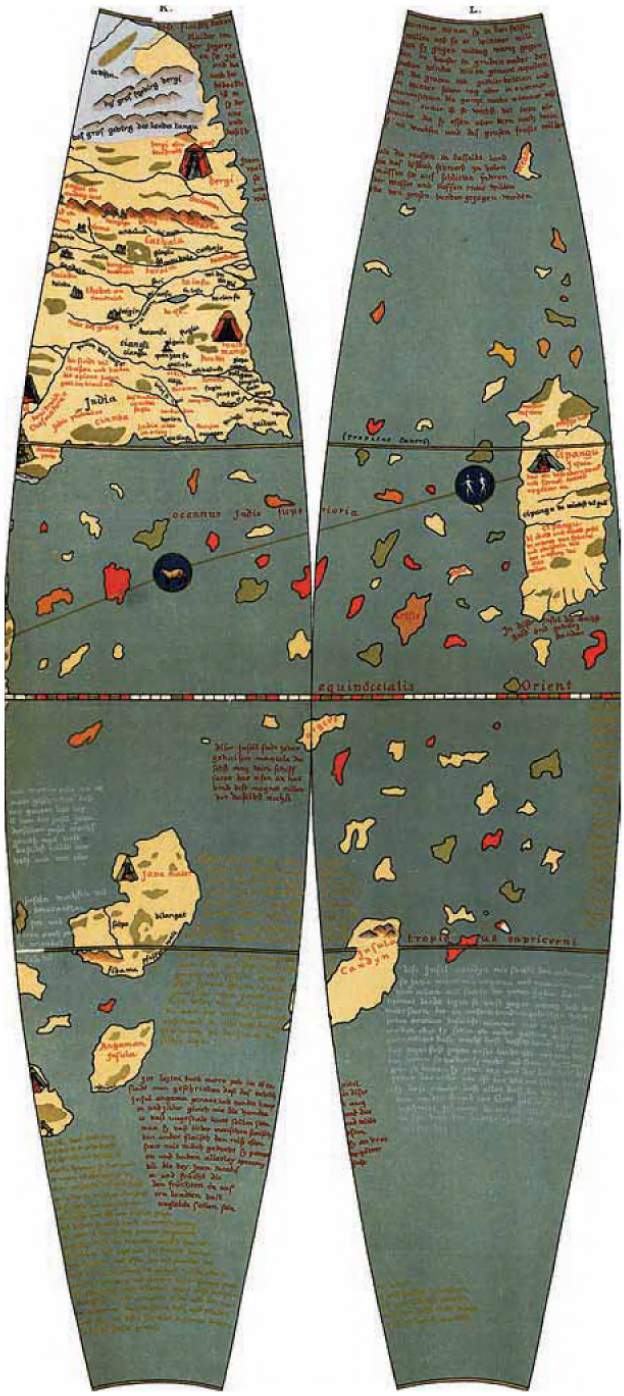
the Atlantic, briefly distracted from this goal by the need to skirt mid-ocean calms, by variable winds, by false alarms of land, and even, as the great navigator complains, by the clumsy steering of his own pilots, who failed properly to compensate for lateral drag on his ships.[12] But, as Peter Martyr was already reporting just months after Columbus's return to Europe, the Discoverer had in fact declined slightly toward the south across the Atlantic ("slightly to the left"). The *Diario* further records that in the final moments of the outward passage (7 October 1492), Columbus decided to steer due "west by southwest" (*guesudueste*) in pursuit of a bird flock that he thought was seeking dry shelter before sunset. This new rhumb soon led his fleet to an island in the Bahamas presumably known to its inhabitants as Guanahaní. Columbus renamed this island San Salvador, and it is often identified today as Watling Island (**fig. I.2**).[13]

Upon landing on San Salvador on 12 October, the Discoverer appears to have believed that he had reached the uppermost and easternmost reaches of legendary India—a vast geographical system that he and his European contemporaries, largely following Marco Polo's cues, imagined to be organized around the distinctly tropical accident still known today as the Indian Ocean. For Marco Polo and his followers, the Indian Ocean covered an even broader area than what we think of today as its basin proper—pouring eastward well beyond what would be the Bay of Bengal today, to include not only Indochina and the Malaysian Peninsula but even the continental shores and islands of the South China Sea and Indonesia. Perhaps the most complex surviving depiction of this vast geographical system as it was understood on the eve of the discovery is the famous "earth apple," or globe, that Martin Behaim presented to the town of Nuremberg in 1492 (**fig. I.3**). Like Columbus, Behaim was familiar with the cartographic tradition flourishing in Portugal at the time, and his globe provides our best approximation of Columbus's picture of the Far East. By Columbus's calculations, the island of San Salvador would have stood in the midst of the "Indian" mega-archipelago Marco Polo had described off of the mainland province of Mangi that today would be southern China (**fig. I.4**).

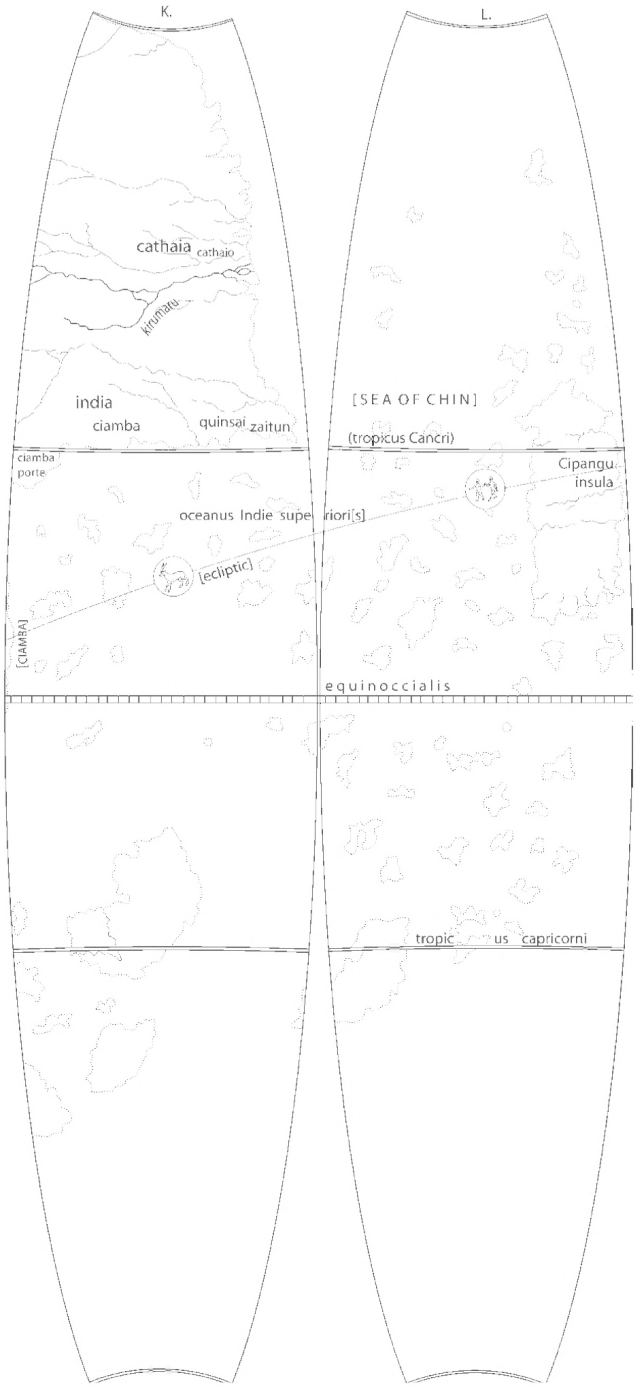
Columbus evidently meant to reassure his royal patrons that he had never steered below the Canarian latitudes on the outward passage: as an explanation for his claim that the "Indians" he had just found displayed the same skin color as the inhabitants of the Canaries, "neither black nor white," Columbus underscored that the island of San Salvador stood on the very same parallel as the Canarian island of El Hierro, that is, somewhere above the twenty-seventh parallel. (In today's terms, Watling Island stands



I.3 Martin Behaim's globe, 1492. From E. G. Ravenstein, FRGS, *Martin Behaim: His Life and His Globe* (London, 1908). Courtesy of the John Carter Brown Library at Brown University. Original globe at the Germanisches Nationalmuseum, Nuremberg, Germany.



I.4 Detail of Martin Behaim's globe, 1492, and outline prepared by the author. From E. G. Ravenstein, FRGS, *Martin Behaim: His Life and His Globe* (London, 1908). Courtesy of the John Carter Brown Library at Brown University, Providence, Rhode Island. Original globe at the Germanisches Nationalmuseum, Nuremberg, Germany.



at a latitude of 24° N and El Hierro at 27° 44′ N.)[14] Columbus must have known that he had ended up declining slightly to the south across the Atlantic, for this fact would even be reported by Peter Martyr on the basis of Columbus's documents as early as November 1493. But caution must have played some role in Columbus's official stance that the lands discovered on this first voyage—the Bahamas, Cuba, and Hispaniola—were not south of the Canaries. Yet experts on Columbus's navigation might reasonably argue that Columbus possessed neither the expertise nor the means to measure latitudes across the ocean to such an accurate degree. Indeed, it would have been difficult for Columbus to estimate the extent to which leeway had put him off course or to account for the effects of magnetic variation on the reading of the compass.[15] Therefore, with these reservations in mind, one should also be content to state that Columbus simply overestimated by nearly four degrees the latitude of the island he reached on 12 October, and that in the early moments of the first voyage he did truly believe that San Salvador stood neck to neck with El Hierro.

The fact is that, having situated San Salvador on the parallel of El Hierro, Columbus now deliberately steered an itinerary generally to the south of the latitude he had tried to follow out of the Canaries—perhaps from today's Watling Island to Rum Cay, to Long Island, and to Crooked Island (successively named by Columbus San Salvador, Santa María de la Concepción, Fernandina, and Isabela). This generally southbound course led Columbus from the Bahamas to the outer shores of the Caribbean basin, where he proceeded to explore the northeastern coast of Cuba (Juana) and the northern coast of Hispaniola, that is, Haiti and the Dominican Republic. He had thus descended from San Salvador, which stands on the twenty-fourth parallel, crossing the Tropic of Cancer as he coasted the Bahamian Long Island, and southing all the way to the Bay of Samaná, or Cabo de las Flechas, on northern Haiti, which stands at a latitude of merely 19° N. This implies a drop of over seventeen degrees from the Atlantic port of Palos de Moguer on his first voyage alone.

Columbus may well not have known exactly how far he had southed from Palos, and indeed the *Diario* and other documents by him underestimate the extent of his southing from the twenty-seventh parallel he assigned to San Salvador and El Hierro. But he sure was explicit about having generally southed his way from the site of the landfall through the Bahamas and along the outer shores of the Caribbean basin. And to judge from the *Diario*, by the end of the first voyage, Columbus seems to have believed that somewhere along the coasts of Cuba and Hispaniola, he had approached, maybe

even crossed, the Tropic of Cancer, which he and other sources of the period tended to place at 24° N. On the *Diario*'s authority, Cuba, which Columbus at first had identified as Marco Polo's fabulously wealthy "Indian" island of Çipango, or Japan, was now the mainland province of Mangi, in today's southern China. His coasting due southwest toward Cuba's easternmost point, Cape Maisi, which he baptized Alpha et Omega, had allegedly brought him to the very end of mainland Asia, within a stone's throw of the "Indian" port city of Zaiton, in Marco Polo's mainland province of Mangi. And the island of Hispaniola, which Columbus had heard the "Indians" call Çibao, now appeared to be nothing less than the legendary Çipango.

Early chroniclers of the discovery, namely, Hernán Pérez de Oliva and Francisco López de Gómara, claim that Columbus was drawing nautical charts from the moment he arrived in Portugal.[16] No independent evidence exists to confirm this claim. Nevertheless, prior to crossing the Atlantic, Columbus must have at the very least come across world maps reflecting Portuguese discoveries in Atlantic Africa and such influential "new" works as Ptolemy's second-century *Geography* and Marco Polo's thirteenth-century *Il milione,* and he could not have failed to notice that modern cartography plotted the toponyms he was now using for Cuba and Hispaniola—Mangi, Zaiton, and Çipango—along the Tropic of Cancer. But fear that the Portuguese or other foreigners to Castile should lay hands on Columbus's precious *Diario,* may have led the Discoverer, or the royal chancellery in charge of duplicating his *Diario* back in Castile, to inflate the latitudes recorded in this document beyond recognition: 42° N for Puerto Gibara (Columbus's Río de Mares) in northeastern Cuba, placing Columbus's fleet directly to the west of Portugal and Castile; and 34° N for Moustique Bay (Columbus's Puerto de la Concepción) on northern Haiti, placing his fleet on the approximate latitude of the Portuguese Madeiras—well above the latitude of the Canary Islands.[17]

Whatever the cause for such exaggerated readings, Columbus's official stance also was to prove disorienting vis-à-vis the location of the lands discovered on the first voyage. Such is the case with the instantly famous letter to Luis de Santángel of 15 February 1493, which the Crown ordered to be printed upon Columbus's victorious return in order to spread the news of the discovery. In a letter that in every other way extolled the lush tropicality of the lands newly discovered in the high Atlantic, Columbus (or perhaps other hands in charge of editing this letter) declared not that Cuba was part of the province of Mangi in southern mainland China but rather that it was the mainland province of Catayo, where Marco Polo and other travelers to the Far East had located

the seat of the Mongols, in northern China. Maps of the period, including Behaim's globe, distinctly located Cathay to the north of Mangi, across from Mediterranean Europe rather than verging on the Tropic of Cancer. Unfortunately, this geographical distinction between the two Far Eastern provinces has eluded many an Americanist who has wrestled with the question of why the Columbus of the *Diario* so easily gives up the explicit quest for the Great Khān of the Mongols. But the distinction between a Cathay in the cooler latitudes of the globe and a Mangi verging on the hotter latitudes of Marco Polo's India had long been established in the cartographic tradition informed by his *Il milione* and other sources; and to an attentive reader of the famous letter to Luis de Santángel, Columbus would have been sending the signal that he had not dared venture into the coveted tropics so jealously guarded by Portugal in the latitudes below the Canaries.

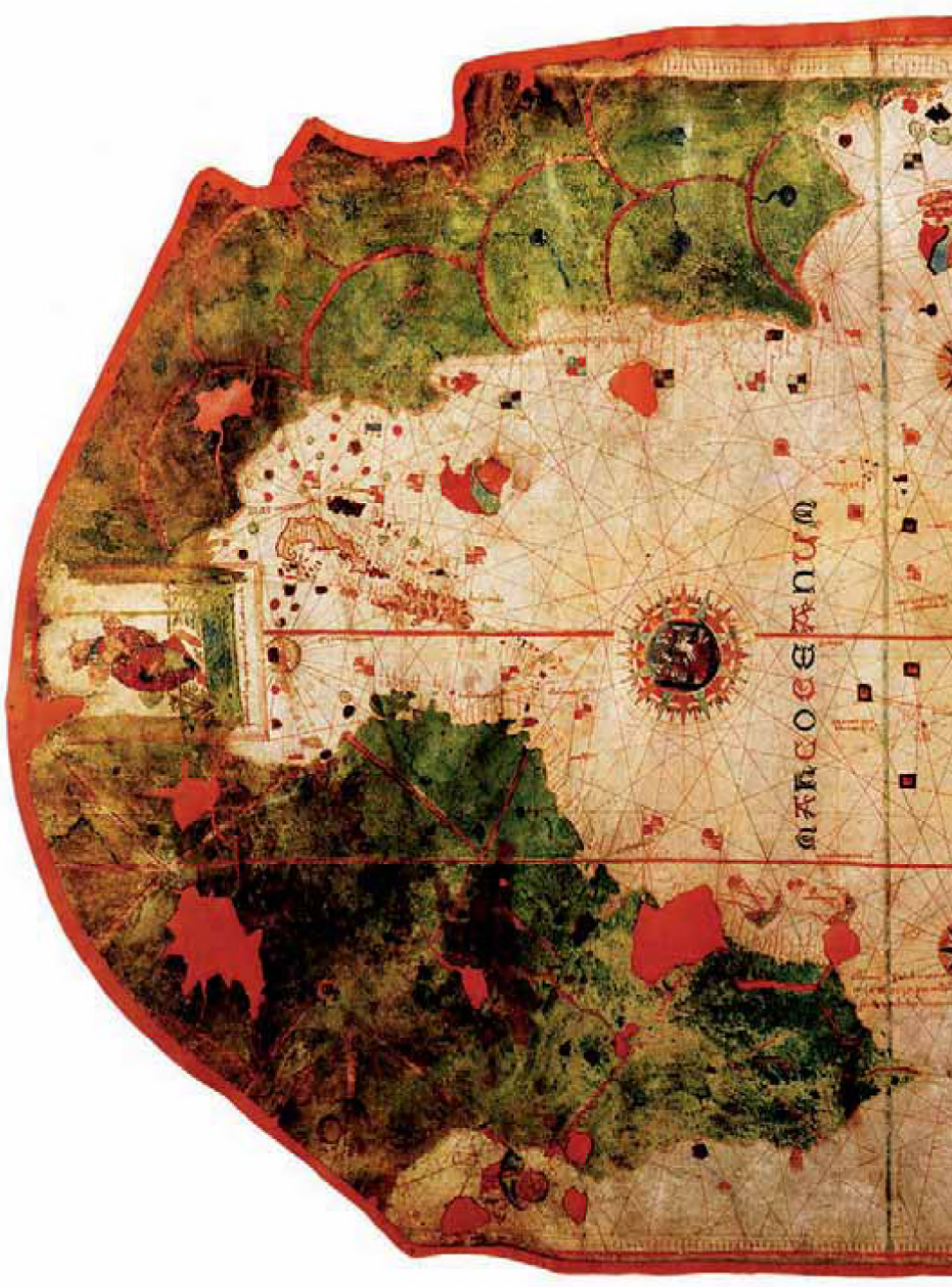
Elsewhere in the same letter announcing the discovery, Columbus underscored the fact that the lands he had just discovered stood directly across from the Canaries, by linking latitude, as he had in the *Diario*, with the skin color of local people. As Columbus put it, his "Indians" were not "monstrous men," as many believed were to be found in the farthest reaches of the inhabited world; nor were they "black as in Guinea"; nor did they seem to be born "where the aspect of the solar rays is too strong," *although,* the author readily admits, "it is true that the sun is very strong there, as [those lands] stand twenty-six degrees from the equinoctial line."[18] The figure of 26° N for the lands discovered on the first voyage was probably wrought up not by Castile's royal chancellery to fool foreign powers but by Columbus himself. Admittedly, Columbus could have simply been in error, but out of fear of Portugal or of his present royal patrons, he also must have hesitated to disclose how far he had southed below the parallel of the Canaries. Indeed, in a letter written to the Catholic Monarchs only a year later (20 January 1494) from the newly founded town of La Ysabela, on the northern coast of today's Dominican Republic, Columbus pointed his addressees to a Ptolemaic map he was supposed to have drafted locating their new overseas possessions by latitude and longitude. He insisted that La Ysabela itself was twenty-six degrees from the equator, and that it all was parallel with the Canaries "save for thirty minutes" (*salvo treinta minutos*).[19] Taking La Ysabela to approximate the lowest boundary for the lands discovered on the first voyage, we can see that Columbus had by 1494 pushed the Bahamas, Cuba, and Hispaniola even farther to the north of the position he had initially assigned to them: whereas upon landing on San Salvador, he had set the upper limit for his exploration on

the twenty-seventh parallel corresponding to El Hierro, now in La Ysabela, which would have stood nearly five degrees due south of San Salvador, Columbus was setting the lower limit of the first voyage barely thirty minutes to the south of the same parallel.

We may never know whether Columbus's insistence in placing the newfound lands directly across from the Canaries was due to cartographic imprecision or political expediency. But this official stance did have a tangible effect on the early cartography of the Bahamas and the Caribbean. Consider the justly celebrated portolan supposed to have been drawn around 1500 by Juan de la Cosa, Columbus's trusted cartographer on the first and second voyages (**fig. I.5**). On this world map attesting to the transatlantic exploration conducted by Columbus and others, including Juan de la Cosa himself, Cuba and Hispaniola appear to the north of the Tropic of Cancer, stretching all the way to the approximate latitude of the Strait of Gibraltar, whereas modern cartography depicts them inside the belt of the tropics.[20]

Whatever we make of Columbus's latitudes, even by the official figure divulged in the letter to Santángel, Columbus was known to have dropped from the Atlantic port of Palos in Spain to Cabo de las Flechas in Hispaniola more than ten degrees in latitude, enough to have taken him to a place whose nature was tangibly different from Mediterranean Europe's. This was a place where the sun's rays were "very strong" because they tended to strike at steeper angles than they did in the higher latitudes of the globe from which Columbus had come. Indeed, Columbus understood that in the course of his first voyage he had, at the very least, come to knock at the doors of the tropics, and this is the story followed in the present book.

Columbus's southing proved even bolder on the three voyages he carried out between 1493 and 1504 to the Caribbean basin. Upon Columbus's first return to Europe, Fernando and Isabel had persuaded Alexander VI to issue a series of papal bulls granting Castile exclusive right of access to the newly discovered lands. One of these bulls, known as *Inter cetera* [II] (antedated 4 May 1493), drew a vertical line of demarcation 100 leagues due west of the Portuguese Azores and Cape Verde Islands, dividing the entire Atlantic into an eastern half for Portugal and a western half for Castile. (This demarcation line was of course the predecessor to the line drawn a year later by the Treaty of Tordesillas [7 June 1494] 370 leagues to the west of the Cape Verde Islands.) Columbus was no longer officially bound to pursue a largely westerly course out of the Canaries to the newly discovered lands in the high Atlantic. Moreover, in a letter to Columbus of 5 September 1495 Fernando and Isabel urged their "Admiral of the Ocean Sea" not to



I.5 Map attributed to Juan de la Cosa, 1500. Courtesy of Museo Naval de Madrid, Spain.

delay his second departure for the Indies for fear that Portugal might be on the warpath over the newly discovered territories. The Catholic Monarchs noted that during their conversations with the Portuguese ambassadors sent to negotiate with Castile the possibility had been mentioned that the Atlantic space now divided between Portugal and Castile might harbor numerous islands—or even a continent—all of which might be richer and more profitable than the ones Columbus had discovered on the first voyage, precisely *because* they were "in the part of the sun" (*en la parte del sol*).[21] Naturally, Fernando and Isabel were referring to the tropical belt. Columbus needed little encouragement to south his way even deeper across the Atlantic, and this letter from his royal patrons must have read like a direct order to do so.

Thus on the second voyage (1493–1496) Columbus descended from the Canary Islands to the Windward island of Dominica in today's Lesser Antilles (15° 20′ N) (**fig. I.6**). For centuries to come, the itinerary Columbus followed out of the Canaries to the Lesser Antilles ("west by southwest") would be fairly standard with Spanish vessels taking part in what was known as the *carrera de Indias*. By later calculation of Crown historian Gonzalo Fernández de Oviedo in the first part of his *Historia general y natural de las Indias* (1535), the route from the Canaries to the Lesser Antilles, specifically to the tiny Leeward island of Deseada, today's La Désirade off of Guadeloupe, entailed a drop in latitude from 27° N to 14° N.[22] The historian rightly deemed this route to be the "straighter and narrower . . . route" (*más derecha y justa . . . derrota*) to the Indies.[23] It is by this route that Columbus dropped across the Atlantic on his second voyage in search of lands "in the part of the sun," reaching the southeastern quarter of the Caribbean basin. The previous year's "Indian" informants along northeastern Cuba and northern Hispaniola had indicated that in this quarter of the Caribbean, Columbus was bound to find the islands of the "monstrous" *caniba* or *caribe*—an allegedly warlike people who raided the islands of the Indies, feeding on the flesh of the islanders they took as captives. The Caribes, as they are still called today, perfectly seemed to match the profile of the "monstrous men" Columbus and his contemporaries had expected to chance upon in the farthest reaches of the inhabited world, namely, in the colder and hotter latitudes of the globe. Columbus had not just dropped across the Atlantic in search of lands "in the part of the sun." He appears to have been poised to descend toward these lower latitudes in order to harvest his first slaves on the "Indian" side of the tropical Atlantic.

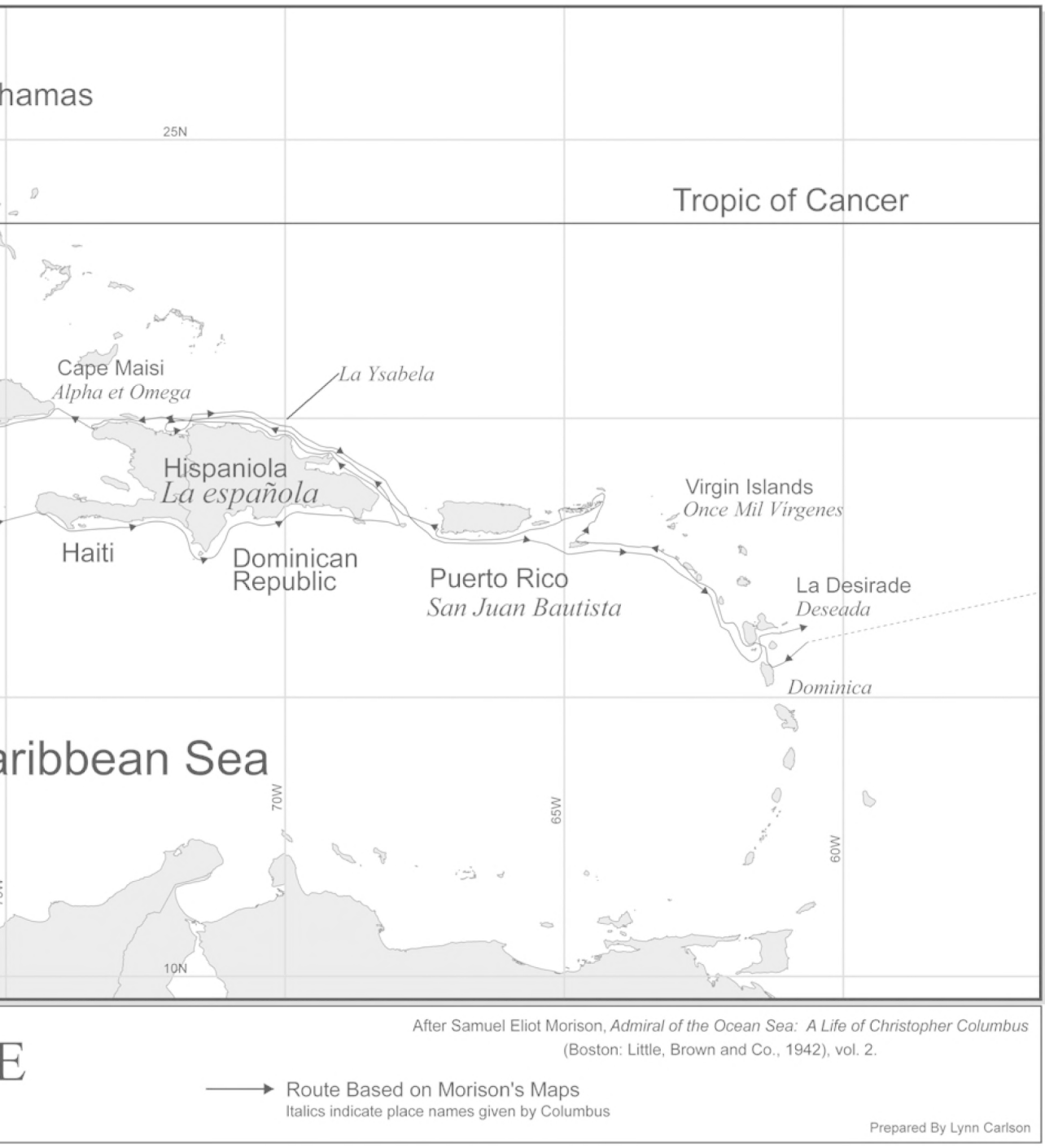
From Dominica, Columbus was to follow the rosary of the Antilles toward the northwest—from the Leeward Islands, to the Virgin Islands, and to the southern coast

of Puerto Rico, which he named San Juan Bautista, on his way back to Navidad, the fort he had built the previous Christmas on northern Hispaniola following the shipwreck of the caravel *Santa María* (**fig. I.7**). Columbus would return to find that the natives of Hispaniola, outraged by the looting, extortion, and rapes committed by the garrison of men Columbus had left in charge of Navidad, had massacred all thirty-nine of the colonists and leveled the fort to the ground. As we know, this was only the beginning of Columbus's disastrously short career as a colonial ruler and administrator for the Crown. Months later, probably eager to take a rest from the rising discontent among his colonists, Columbus launched the second stage of this voyage. Setting out from the recently founded town of La Ysabela on northern Hispaniola, he was to survey the inner shores of the Greater Antilles beyond Cape Maisi, his Alpha et Omega—the cape on the tip of eastern Cuba that he believed marked the eastern end of continental Asia. Rounding Cape Maisi by south, Columbus coasted all of the Oriente Province in southern Cuba, and from there he southed his way to Jamaica. He then returned to Cape Cruz in southern Cuba, from where he proceeded to coast Cuba's southwestern shores all the way to today's Bahía Cortés. On his way back to La Ysabela, Columbus would round Jamaica by south and then survey the southern and eastern shores of Hispaniola.

Columbus's exploration of Cuba's southwestern coast may strike us today as a Quixotic attempt to prove to those back in Castile who already doubted that Columbus had wested far enough to reach Asia that this was Marco Polo's mainland province of Mangi, where he would have expected to find the port city of Zaiton and the great inland city of Quinsay. Having reached the southward trending coast of today's Bahía Cortés, which he believed led to the continental province of Ciamba in what today would be Indochina, Columbus drafted an official report on 12 June 1494, in which he forced his men to declare—under threat of having their tongues sliced out if they were ever to state otherwise—that Cuba was not an island.[24] The *carta-relación* Columbus wrote to Fernando and Isabel reporting his exploration of the inner shores of the Caribbean basin (26 February 1495) tells us that, as Columbus had coasted southern Cuba, he had imagined himself cruising along *Cancro,* or the Tropic of Cancer, and looking south onto a vast oceanic expanse he imagined to be dotted with islands that reached all the way to the *trópico del Capricornio.*[25] By Columbus's account, had he thought of carrying enough provisions on this voyage and had he continued to follow Cuba's southward trending coast, he could have attempted "to reach Spain by way of the East, coming to the Ganges, from there to the Arabic Gulf, and then by way of Ethiopia [i.e., sub-Saharan Africa]."[26]

I.6 Columbus's second voyage, 1493–1496. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.

I.7 Detail of Columbus's second voyage, 1493–1496. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.



On Cuba's southern coast, Columbus had found himself contemplating a herculean landscape extending all around the globe under the belt of the tropics.

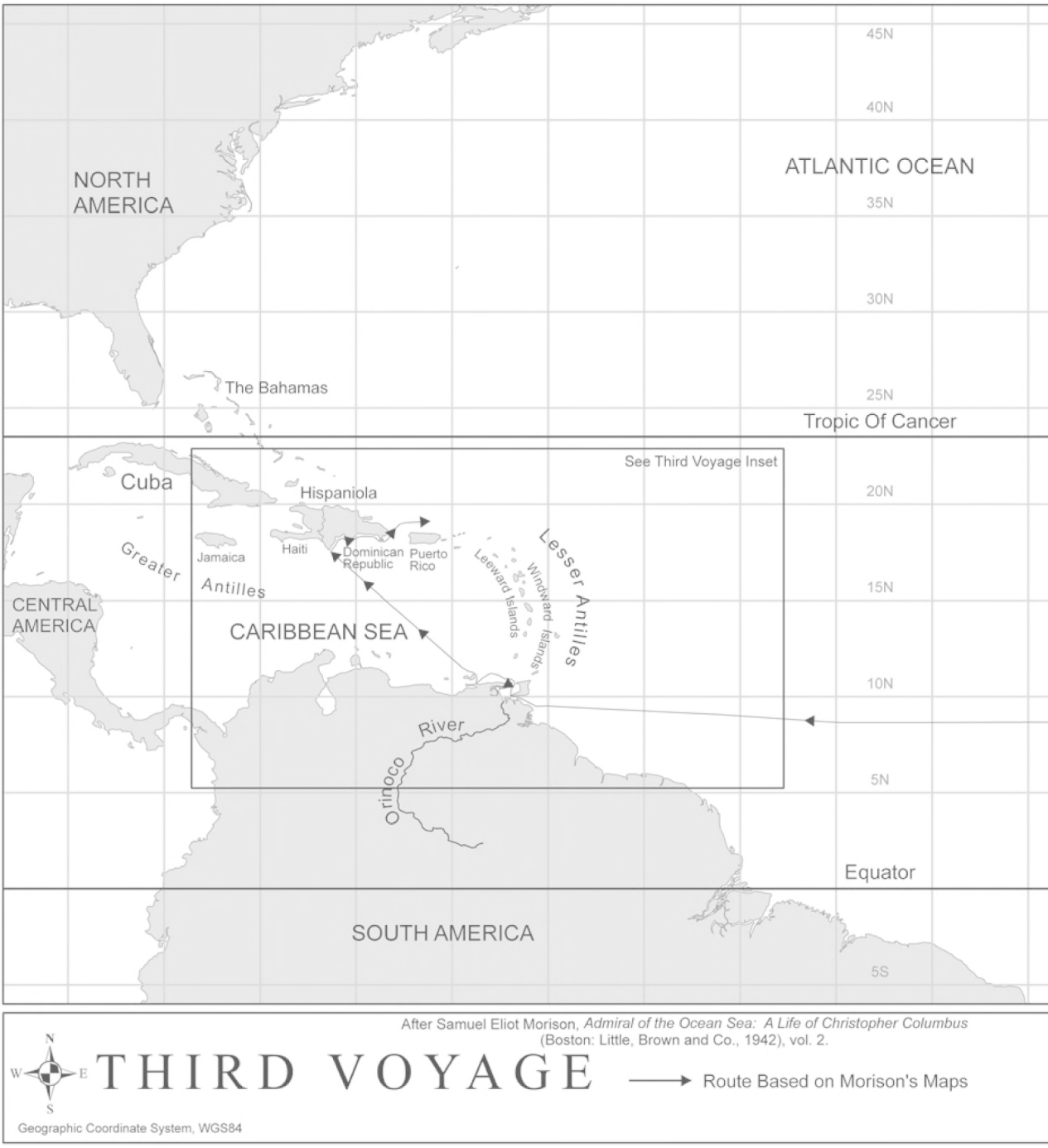
On his third voyage (1498–1500), Columbus once again found himself scouting out the hypothetical islands and continent that the Crown had previously urged him to find "in the part of the sun," so he dipped his way from the Canaries to the Cape Verde Islands, which stand off of West Africa's coast at a latitude of 16° N (**fig. I.8**). His intention was "to reach the equinoctial line and from there head to the west until I had the island of Hispaniola to the north."[27] Thus from the Cape Verdean island of São Tiago, Columbus sailed "due southwest" until he calculated that he had "the North Star at five degrees." But hitting the Doldrums between the North and South Atlantic, he and his men found themselves suffering such unbearable heat, that Columbus, invoking the scorching temperatures that had long earned the belt of the tropics its epithet as "torrid zone," came to fear "that my vessels and crew would burst into flames."[28] Columbus dared not tread farther south toward the equator; instead, he stayed the course along the fifth parallel, calculating that he was directly to the west of *sierra lioa* in Guinea (Sierra Leone, today 9° N). Past the Doldrums, Columbus soon began to pick up evidence of nearby land, but failing to sight any, and finding himself short of fresh water, he steered north by northwest, making for where he thought he would meet the islands of the "man-eating" Caribes in the Lesser Antilles.[29] This rhumb almost instantly brought his fleet within sight of the island of Trinidad, across from the Orinoco River in today's Venezuela (like Sierra Leone, approximately 9° N) (**fig. I.9**).

Bartolomé de las Casas, who had at his disposal the documents kept by the Columbus family, tells us in *Historia de las Indias* that in the now-lost diary of the third voyage Columbus declared that it was "a miracle that so close to the equinoctial line—at about six degrees north—the monarchs of Castile [should have come to possess] lands, considering that La Ysabela measured twenty-four degrees from the said line."[30] Setting aside the fact that Columbus had by now subtracted two degrees from his original official measurement of 26° N for the latitude of La Ysabela on northern Hispaniola, we should note that Columbus, like other geographers before him, including Ptolemy, equated the twenty-fourth parallel with the Tropic of Cancer. It may be no coincidence that, by this late reckoning, the first town Columbus had founded in the Indies, La Ysabela, should have stood precisely at the threshold of the tropics. In any case, Columbus was telling his royal patrons nothing less than that his explorations across the Atlantic had already won

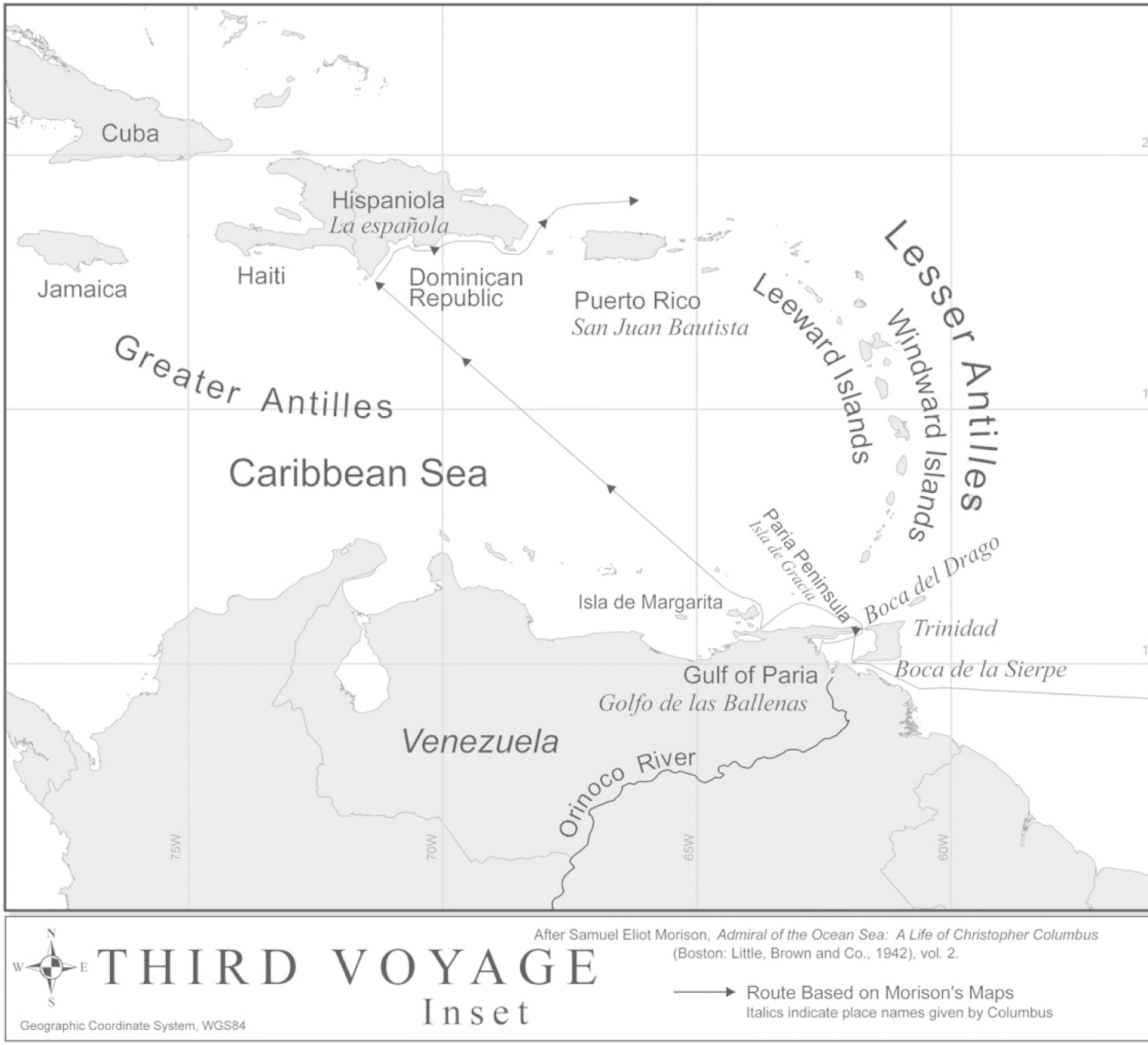
for the Crown a vast territory that extended into the belt of the tropics almost all the way to the equator.[31]

From the sound between Trinidad and the Orinoco delta, Columbus entered the Gulf of Paria (his Golfo de las Ballenas) through what he called Mouth of the Serpent (Boca de la Sierpe). Having explored the Gulf of Paria, Columbus exited through, as he called it, the Mouth of the Dragon (Boca del Drago), rounding the Paria Peninsula, which he thought was an island (Isla de Gracia), and he followed the Venezuelan coastline to the island of Margarita, from where he set course across the Caribbean for Hispaniola. On this voyage to the equatorial region, Columbus had spawned an intuition that, if anything, ought to have earned *him,* rather than his friend Amerigo Vespucci, the honor of having the lands Columbus had discovered bear his name. Marveling at the voluminous torrent of fresh water that issued from the mouth of the Orinoco River, Columbus inferred that he had discovered "infinite land that is to the south" (*tierra infinita q'es al austro*) and that the waters of the Orinoco River flowed from no less noble a place than "earthly Paradise" itself (*parayso terrenal*).[32] It is precisely the pronounced verticality of this voyage to the equatorial region that Columbus was to index upon his return to Castile in 1500, when he wrote a now-famous letter to the former nanny of the young Prince Don Juan, the heir to the thrones of Aragon and Castile who had met a premature death in 1497. Alluding to the change in the configuration of the skies that accompanies changes in latitude, Columbus explained that the glorious third voyage, which he claimed he had launched in part to distract Queen Isabel from the sorrow she felt for the death of her son, had been carried out "to the new heaven and earth that had until then remained hidden" (*al nuevo çielo y mundo que fasta entonces estaua oculto*).[33]

Finally, on the haphazard fourth voyage (1502–1504), Columbus, who had been forbidden by the crown from setting foot on Hispaniola on account of his disastrous colonial policies, made his way across the Atlantic once again to the Windward Islands and followed the inner shores of the Antilles all the way to southeastern Cuba (**fig. I.10**). He wished to continue the exploration beyond the Cuban coastline he had surveyed on his second voyage, this time with the aim of finding a passage into the basin proper of the Indian Ocean. He reasoned that this passage must lie somewhere between the Asian "terra firma" he still believed Cuba to be and the southern continent he had discovered on his third voyage. The letter of 14 March 1502 written to Columbus by the Catholic Monarchs, forbidding him from visiting Hispaniola on the outward passage, suggests that Columbus may have contemplated satisfying his fancy of rounding the globe by



I.8 Columbus's third voyage, 1498–1500. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.



I.9 Detail of Columbus's third voyage, 1498–1500. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.

I.10 Columbus's fourth voyage, 1502–1504. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.

crossing the Indian Ocean and circumnavigating Africa all the way back to Spain. Fernando and Isabel explained in this letter to Columbus that they had honored his wish to have the Portuguese navigator Vasco da Gama, who was readying his second armada to the actual India, alerted to the fact that he might come across Columbus and that, should their paths cross, they should treat each other "as friends."[34] Thus, from Cuban waters, Columbus set course to the southwest for what he clearly wanted to believe was the province of Ciamba in today's Indochina. This rhumb led him to Cape Honduras (his Punta Caxinas), from where he proceeded to follow the Central American coastline, along Nicaragua, Costa Rica, and Panamá, all the way to a cape he named Marmoro, which could be anywhere from Punta de Mosquito in today's Panama to Cape Tiburón on the western tip of Colombia's Gulf of Urabá (**fig. I.11**).[35] By Columbus's estimates, his coasting along the province of Mangi had brought him within a "ten day's journey" to the mouth of the Ganges River.[36]

Columbus's failure to find a passage to the Indian Ocean must have been the most vexing disappointment of his long career at sea. And, as we know, the honor of returning to Spain by way of the West, was reserved for Juan Sebastián del Cano of the galleon *Victoria* in 1522, whose circumnavigation of the globe, Francisco López de Gómara insists in *Historia general de las Indias,* had been carried out "under the equinoctial line."[37] Yet, no matter how much doubt the failure to find a passage to the "Indian" ocean that his contemporaries were to call Mar del Sur, or Southern Sea, may have instilled in Columbus regarding the "true" identity of the lands he had discovered, the Discoverer was never to admit anything other than that he had wested across the Atlantic and also southed his way to a tropical expanse he paradoxically called "west Yndies unbeknownst to all the world" (*Yndias oçidentales a todo el mundo ignotas*).[38]

Numerous practical explanations have been forwarded in the course of five centuries to explain the Discoverer's southing.[39] Considering Columbus's first voyage, for instance, everyone knows that the Canary Islands were Spain's outermost territories in the Atlantic on the eve of the discovery, and this location made them a most suitable stop for repairing and restocking ships for an ocean crossing. However, overwrought emphasis on the horizontality of the early transatlantic encounter has all too often prevented Americanists from noticing that the Canaries were not just Spain's farthest territories to the west, but also its farthest territories to the south—meaning that these islands also represented an ideal launching pad for descending into the tropics, and

this is indeed the role they had been meant to play in the history of Atlantic Africa's exploration by the Portuguese.

It is also known that wind patterns and water currents in the Atlantic were crucial factors for launching an outward passage from the Canaries: Columbus understood that his chance of crossing the ocean was significantly greater just beyond the Canary calms, where he expected to catch the northeastern trade winds—although, as some authors have pointed out, simply "westing" from the Canaries, instead of dipping farther south, was hardly an optimal sailing choice, since Columbus's fleet was bound to lose, as soon it did, the northeasterlies in the mid-Atlantic.[40]

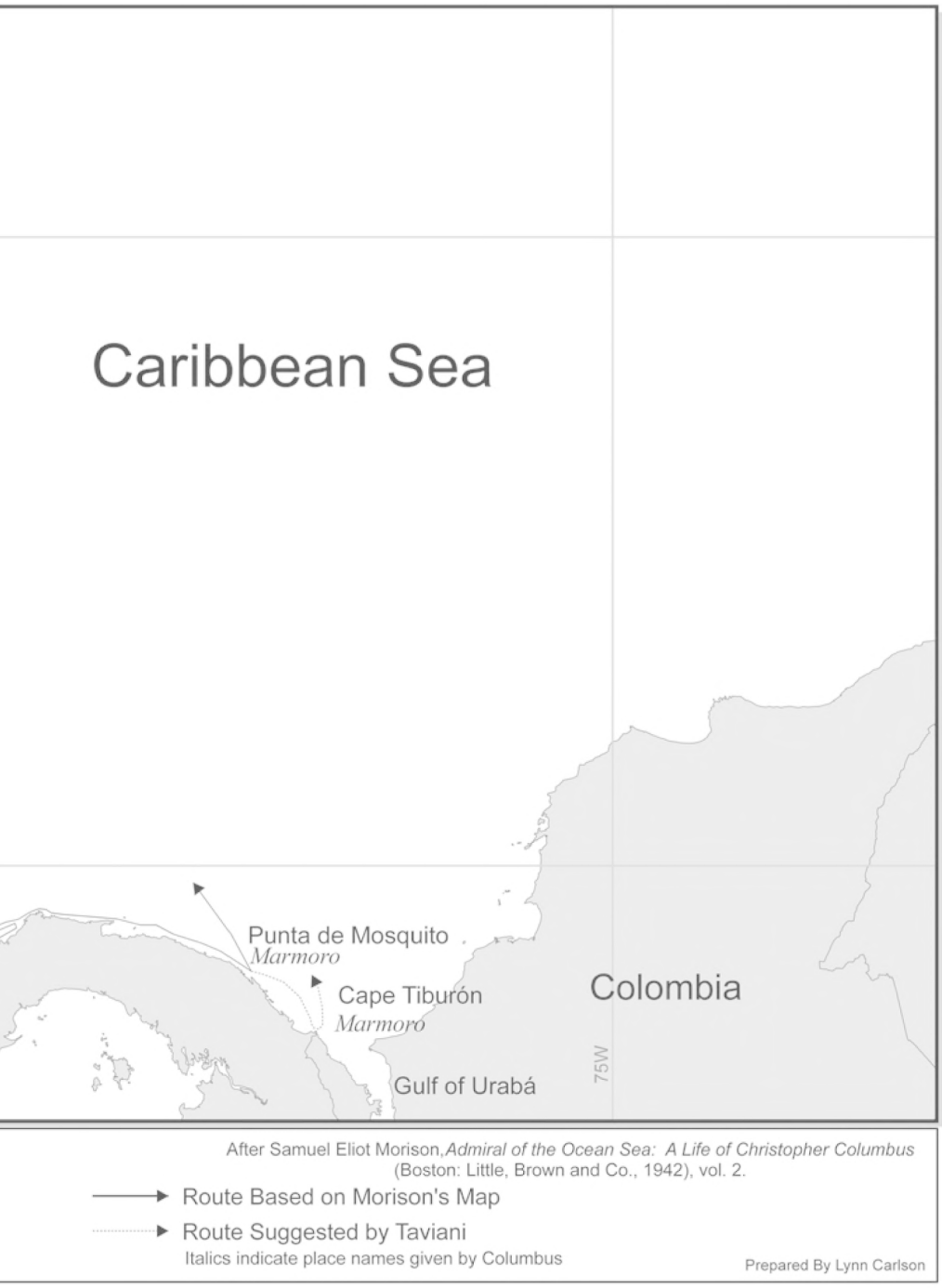
As we now know, political factors also determined Columbus's choice to launch his first voyage from the Canaries: he was under strict orders not to venture below the Canaries and toward Atlantic Africa, so it made sense for him to first descend to the archipelago and from there to try his luck across the ocean along the latitude of the boundary recognized by Castile and Portugal in the peace treaty of Alcáçovas.

And of course there is the dream of Asia traditionally imputed to Columbus: following Marco Polo's account of India in *Il milione,* cartography of the period plotted the huge gilded island of Çipango, or Japan, along the same general parallel as the Canaries, and it would have made sense for Columbus to aim for the largest island in the mega-archipelago that presumably extended to the east of the mainland province of Mangi.[41]

As for Columbus's last-minute turn due "southwest" on the outward passage, we know that Columbus also counted on years of experience at sea reading nature's slightest symptoms, and he had learned that one could often detect approaching land by watching the direction of bird flocks at sundown. Columbus also meant to shy away from higher latitudes, given that winter was approaching in the northern hemisphere. And, finally, the topography of the Bahamas and the Antilles presents rosaries and clusters of islands often within close range of one another, a factor that played no minor role in the general routes Columbus would follow south of San Salvador and in the course of his subsequent surveys of the Caribbean basin.

But the Discoverer's southing involved more than geographical accidents such as the location and conditions of the Canaries, Bahamas, and Caribbean, or political contingencies such as Castile's success in wresting the Canaries away from Portugal, or cartographic conventions such as Çipango's being placed across from the Canaries. Columbus tended to state very explicitly his reasons for wanting to steer south, and

I.11 Detail of Columbus's fourth voyage, 1502–1504. After Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus,* 2 vols. (Boston, 1942). Prepared by Lynn Carlson, Geological Sciences, Brown University, Providence, Rhode Island.



he acted on these reasons rather consistently. Many such instances in his writings afford us a snapshot of the beliefs that informed his southing. Readers of his famous *Diario* will surely have noticed Columbus's attempt to explain the medium skin color of the inhabitants of San Salvador by noting that the island of the landfall stood on the same parallel as the Canaries. Readers may have also noticed Columbus's understated perplexity, as he ventured beyond San Salvador, at finding that the pigmentation of Bahamian and Caribbean peoples failed to darken to the "blackness" he had sighted in sub-Saharan Africans, and his expectation that, farther down, on the southeastern end of the coasts he was surveying, he was also bound to encounter nations of physically deformed humans who regularly practiced the most abject cruelties and depravities. Readers may also have wondered how the Discoverer would have gathered from the speech and gestures of the islanders he found along the way from the Bahamas to Cuba—with whom he must have shared few if any linguistic or gestural codes at all—the whereabouts of precious minerals like gold and coveted spices like cinnamon. As the *Diario* insists, "informants" from different islands invariably pointed Columbus in directions that entailed displacing himself due generally south—"south," "southwest," or "southeast"—of wherever he happened to find himself interrogating locals.

But a casual assertion in an entry of the *Diario* recounting the instance in which Columbus is supposed to have used his quadrant to establish the latitude of Puerto Gibara in northeastern Cuba (21 November 1492) suggests that his interpretation of the "directions" provided by locals on the way from San Salvador obeyed a deeply held preconception: Columbus believed that he was bound to find ever-greater quantities of coveted resources as he sailed farther south. Disputing the gross misreading shown by his quadrant (42° N), Columbus reasoned that the great "heat" he was suffering here proved that he could not be as far from the equator as the instrument read.[42] From this heat, he also concluded that he was venturing into one of the richest gold-bearing regions of the globe. As Las Casas reports in *Historia de las Indias*, Columbus, upon striking the Doldrums near the equator on his third voyage, and suffering the heat that he thought was in danger of setting his crew and ships ablaze, observed about the equator in his now-lost diary that "under that parallel of the world more gold and things of value are found."[43] And as Columbus reasoned years later, in his *carta-relación* of the fourth voyage (7 July 1503), "gold is generated in sterile lands *and wherever the sun is strong*."[44]

Geographical certainties of this sort pervade Columbus's writings, and the fact that he should have seen many treasured certainties shattered in the course of his voyages (not to mention the fact that he never did reach Asia's periphery) should not lead us to conclude that Columbus's expectations obeyed, as sometimes claimed, the fancies of a feverish mind or the devious tendency to indulge in hyperbole. It is not surprising that five additional centuries of discovery and invention by individuals as bent on transforming human thought as Columbus was on redrawing the face of the globe should have rendered his logic flawed or recondite for us.

Since the early nineteenth century, when crucial documents from the early decades of Spanish exploration were first edited and published by Martín Fernández de Navarrete in his *Colección de los viages y descubrimientos, que hicieron por mar los españoles desde fines del siglo XV* (1825), Columbus's biographers and other scholars have often noted that the steep course that led Columbus to discover South America on his third voyage was urged on the Discoverer by one of Spain's foremost cosmographers at the time, the Catalan Jaume Ferrer de Blanes.[45] Ferrer is known today for having suggested to the Spanish Crown an ingenious method for establishing the longitude of the meridian that the famous Treaty of Tordesillas (1494) drew in mid-ocean to settle Castile and Portugal's dispute over the Atlantic. Incidentally, one of the few early tributes on record paid to Columbus as a navigator comes from Ferrer himself, who declared in his report to the Catholic Monarchs (1495) that he was more than willing to stand corrected in his calculation of the site of the line of demarcation "by those who know and understand more than myself, especially by the Admiral of the Indies, who is more learned in these matters than anyone in our time, for he is a great theoretician and an admirable practitioner, as his memorable achievements manifest."[46]

But Ferrer also happened to be an expert on precious stones (he wrote a brief treatise on mineralogy posthumously printed in Barcelona in 1545), and he had successfully engaged in the gem trade on the eastern shores of the Mediterranean.[47] In 1495, as Columbus labored to establish a colony in Haiti, the Crown was evidently growing anxious to realize the elusive profits of a dubious enterprise, and by request of Queen Isabel, Ferrer addressed a letter to Columbus in which he explained how the Discoverer might find those things which he had glaringly failed to find so far. In this most curious letter (5 August 1495), Ferrer expressed his opinion that it was "at the turn of the equator" that one was sure to find "great and valuable things like precious

stones and gold and spices and medicines."[48] Ferrer assured Columbus that, while conducting business in the Levant, Ferrer had taken care to determine the climates and regions from which goods were brought. And what Ferrer had been able to gather in the course of many conversations with "Indians and Arabs and Ethiopians" was that "all good things come from very hot regions whose inhabitants are black or dark brown; and therefore, in my judgment, until Your Lordship meets such peoples, You shall fail to find an abundance of such things." Ferrer's advice to Columbus was written at a time when Mediterranean Europe was only just beginning to set eyes again on the vast world that extended beyond the forbidding deserts and semideserts of Saharan Africa and Arabia Deserta now largely controlled by Muslims. Ferrer's letter speaks to the profound ambivalence with which Mediterranean geographers reaching back to classical antiquity had regarded the regions of Africa and Asia that extended into the lower—and, by some accounts, intolerably hot, sterile, and inhospitable—latitudes of the globe.

Naturally, Columbus's most noted biographers in the last two centuries—among them, Washington Irving, Alexander von Humboldt, Samuel Eliot Morison, Antonio Ballesteros Beretta, Paolo Emilio Taviani, and Felipe Fernández-Armesto—have credited the cosmographer and lapidarian Ferrer with planting in Columbus's mind the goal of overtaking the equator in 1498.[49] Taviani, one of Columbus's most accomplished biographers in the twentieth century, in *I viaggi di Colombo: La grande scoperta* (1984) justly calls attention to Ferrer's larger role in the events unfolding from the discovery, not just in the steep exploration conducted by Columbus on the third voyage.[50] It is also hardly a surprise that the indelible connection that Ferrer seemed to establish in his letter to Columbus between heat, an abundance of precious goods, and the complexion of peoples in equatorial regions should have elicited different remarks from Columbus's post-Enlightenment biographers. In *A History of the Life and Voyages of Christopher Columbus* (1828), the romantic Irving already regarded such logic as little more than a historical curiosity. Much more recently, other Americanists have also taken note of the logic communicated by Ferrer's letter to Columbus: the distinguished editors of the recent *Colección documental del Descubrimiento (1470–1506)* (1994)—one of the most valuable compendia of Columbiana to have appeared since the publication of the massive *Raccolta* (1892–1896)—venture to say that the "meridional inflexion" presented by Columbus's itinerary on his third voyage appears to obey an ancient commonplace they term a "cosmography of riches."[51] And in some cases Ferrer's letter has played a role in developing important insights concerning Columbus's enterprise: thus Emiliano Jos

in his succinct studies of Columbian cosmography, collected as *El plan y la génesis del descubrimiento colombino* (1979–1980), argues that Columbus's choice of the Canaries as a point of departure across the Atlantic had less to do with wind patterns out of the archipelago than with the fact that the Canaries stood on the way to the lower latitudes of the globe, for "to travel south was to approach the hottest regions of the globe and, thus, the richest in gold, as Columbus believed, and as was generally believed in his time."[52] And yet this important insight into Columbus's way of thinking, remains ancillary to Jos's general definition of the enterprise Columbus had in mind to undertake—as is the case with most references to Columbus's southing in the literature on the discovery.

Indeed, references to Columbus's southing are relatively common in the vast corpus on the discovery—in the documents drafted by Columbus himself, in the invaluable testimonies by his contemporaries and quasi contemporaries, and in subsequent studies of the period. But it is remarkable that no one in the last two centuries should appear to have taken Ferrer's advice to Columbus as an open invitation to explore the *systemic* role that terrestrial latitude may have played in both the planning and the execution of the Indies enterprise. As I argue here, our understanding of Columbus's enterprise can be greatly enhanced by according *latitude*—the north-south separation in degrees between any given place on the globe and the equator—the same importance we have accorded his idea of reaching the East "by way of the West." This is not to say that Americanists have failed to examine the concept of latitude itself in Columbus's works. On the contrary, numerous works on the protocols he followed to establish his location at sea and on land have touched upon this specific problem.[53] Did Columbus really know how to "shoot" the heavens? This was once suggested by Fernández de Oviedo, who claimed that Columbus was the first to teach Spanish pilots how to sail by the "altitudes" of the north pole and the sun. Or did Columbus only really know how to "chart" his way at sea, as the great nautical biographer Samuel Eliot Morison tried to show, concluding in his *Admiral of the Ocean Sea* (1942) that Columbus was a very poor celestial navigator but a great dead-reckoning sailor?[54] To be sure, studies of Columbus's latitudes have meticulously considered problems ranging from the egregious readings recorded in the extant *Diario* to Columbus's understanding of the relation of temperature to latitude in his later elaboration of the peculiar claim, following his exploration of the South American mainland, that the terraqueous globe was not really spherical but rather a pear-shaped spheroid. But precious little has been done to relate Columbus's latitudes to the whole of his thought or of his actions.

The problem, to my mind, is in part that we tend to construe the problem of Columbus's latitudes as a technical one involving the *art* of navigation rather than as a philosophical problem involving the *sciences* that came to surround the concept of latitude during the late medieval and early modern periods. This philosophical approach to the question of Columbus's southing is extremely rare in the literature on the discovery. For obvious reasons, those of Columbus's contemporaries and quasi contemporaries who documented the discovery tended to take for granted the theoretical knowledge behind Columbus's certainties. In fact, the only early historian to have made explicit this theoretical knowledge was the humanitarian friar Bartolomé de las Casas, whose monumental *Historia de las Indias* contains not only one of the fullest and ablest intellectual portraits we have of the Discoverer, but also the most thoroughly devastating indictment on record of European colonialism in the African and American tropics. Fully aware of the *verticality* of the early transatlantic encounter, Las Casas may be counted as the only biographer of Columbus in five centuries to have fully grasped the urgency of understanding both the deep assumptions behind Columbus's southing and the strong implications that his southing carried for the world order that followed in his wake. To my knowledge, the only post-Enlightenment author to have studied Columbus's southing from a philosophical perspective is the eminent cosmologist and explorer Alexander von Humboldt, whose *Examen critique de l'histoire de la géographie du nouveau continent et des progrès de l'astronomie nautique aux 15me et 16me siècles* (1836–1839) also offers one of the most lucid accounts of the intellectual origins of the discovery. A careful observer of the phenomena that accompanied latitudinal changes, Humboldt justly saw a systematic mind at work in everything Columbus cared to observe in his exploration of the Bahamas and Caribbean basin: "Nothing escaped Columbus's sagacity upon his arrival to a new heaven and a new world . . . neither the configuration of lands, nor the aspect of vegetation, nor the habits of animals, nor the distribution of heat along different longitudes, nor the island currents, nor magnetic variation. . . . Columbus did not content himself with just collecting isolated facts: he weighed them against each other, he looked for the connections between them, he applied himself, sometimes audaciously, to the discovery of the general laws governing the physical world."[55]

Some Americanists have seen in Columbus's southing reason to doubt the objectives traditionally ascribed to his enterprise. They have interpreted that element of his exploration as a distraction from the alleged goal of reaching the East "by way of the West"—in some cases as evidence that Columbus intended not to reach Asia at all but

lands whose existence had been disclosed to him by means that remain at present only conjectural. Such is the role implicitly or explicitly assigned to latitude since the turn of the twentieth century by authors such as Henry Vignaud, Juan Ulloa, Rómulo D. Carbia, Cecil Jane, Juan Manzano Manzano, and Juan Pérez de Tudela y Bueso, most of whom favor arguments that a "pre-discovery" of one sort or another, whether by Columbus himself or by someone else who eventually confided in Columbus, inspired him to undertake his first voyage.[56] The unsuspecting instigator of this modern thesis—which tends to deny Columbus any true intellectual merit in the conception of his enterprise—was Fernández de Oviedo himself, who recorded in 1535 the rumor that a dying pilot in Columbus's care had confided to him a chance landfall in mid-ocean.[57] Fernández de Oviedo himself lent no credit to this rumor, but the notion that Columbus was the bearer of a "secret" has proved irresistible to a number of scholars since the turn of the twentieth century.

Henry Vignaud, the bad cop of Columbus studies, responsible for creating what has been dubbed "the schism among Americanists," famously revived the legend of the anonymous pilot in the course of three major studies, *Toscanelli and Columbus* (1902), *Études critiques sur la vie de Colomb avant ses découvertes* (1905), *Histoire critique de la grande entreprise de Christophe Colomb* (1911). He applied himself vigorously to demonstrating that those documents suggesting Asia as Columbus's original goal (particularly the famous correspondence attributed to the Florentine Paolo dal Pozzo Toscanelli) were either spurious or adulterated early on by a party interested in representing the Indies enterprise as the result of erudite reading on Columbus's part. (Vignaud's suspects included Columbus's seminal biographers, his son Ferdinand Columbus and Bartolomé de las Casas as well as Columbus's bon vivant grandson Luis Colón.) In Columbus's choice of the Canaries as a point of departure across the Atlantic—and in Columbus's famous supposition that the inhabited world extended into the arctic and tropical regions previously thought to be uninhabitable—Vignaud read a secret design that undermined the classical thesis established by Ferdinand and Las Casas (and followed by influential nineteenth-century historians like Henry Harrisse [1871] and Cesare de Lollis [1892]) that Columbus intended to reach the region once described by Marco Polo. If Columbus had really intended to sail "to the Indies or to Cathay," Vignaud argues, he would have simply wested from Spain's Atlantic coast across the ocean rather than venture out along the Canarian parallel.[58] Ignoring the fact

that Columbus had been under strict orders not to sail directly south of the Canarian archipelago into Portuguese waters, Vignaud even claimed that had Columbus really wished to reach the Spice Islands, he would have chosen an even lower parallel for the outward passage. Vignaud's attempt to demolish the documentary edifice of the discovery prompted outraged rebuttals from a number of his contemporaries, and his thesis that Columbus was solely looking for the mid-ocean shores described by the unknown pilot has been judged by many a respected Americanist since as a highly erudite aberration. Vignaud's argument, however, is still important to understand for this reason: Vignaud tended to use interchangeably the toponyms *Cathay* and *India* mentioned in primary sources, an error one tends to find in the works of many an Americanist to this day. Vignaud failed to grasp that Cathay, the northern Chinese province once identified by Marco Polo as the seat of the Mongols on the Asian mainland, was not at all the India that Marco Polo had distinctly associated with those territories south of Cathay. Marco Polo's India faced *south* toward a vast geographical system that included the basin of the Indian Ocean, Indochina, and the islands of Indonesia (so did the Chinese port city of Zaiton and the island of Çipango). Failing to make this crucial geographical distinction between continental and maritime Asia, Vignaud also failed to understand the extent to which, in the eyes of Columbus and his contemporaries, sailing across the ocean "to the parts of India" (*ad partes Indie*) would have entailed sailing to the west *and* to the south of Mediterranean Europe. In other words, sailing "to the parts of India" also meant sailing south *away* from the higher latitudes of Cathay. And Vignaud mistakenly read this north-south opposition between Cathay and India in Columbus's writing as an east-west opposition between Asia and an embryonic America.

Some Americanists, including Vignaud and his heirs, have tended to underestimate Columbus's theoretical knowledge as a fundamental component of his enterprise. Consider the crucial insight forwarded in the 1920s by Cecil Jane, one of Columbus's best-known translators and editors in the English-speaking world today. In his *Select Documents Illustrating the Four Voyages of Christopher Columbus,* published by the Hakluyt Society between 1930 and 1933 and reprinted in 1988 on occasion of the recent quincentenary, Jane argued emphatically that Columbus's most pressing goal may have been to sail south in search of considerable landmasses, peoples, and resources previously unknown to Europeans and that this goal may even have been motivated by a generalized view that the richest lands lay to the south.[59] But this was a goal that

in Jane's view disenfranchised the prevailing thesis that Columbus had meant to reach Asia, or even the mid-Atlantic islands depicted on *mappaemundi* like Behaim's; moreover, Jane thought, this was also a goal whose unorthodox geography Columbus would have guarded most jealously, even from his royal benefactors, for fear that he should never see it realized. Jane, however, refused to identify the means, intellectual or otherwise, that Columbus might have had at his disposal to conclude that he would find considerable lands unrelated to mainland Asia or its immediate periphery. We are left to assume that Columbus arrived at this conviction by means other than intellectual, since Jane stubbornly maintains that Columbus lacked significant scientific and technical information prior to crossing the ocean, and that he only came to dabble in pseudo-learned theories when he was later forced to defend himself from those who doubted the merits of his accomplishments.[60] In deference to Jane's claims about Columbus's learning, we do know that Columbus was hardly the erudite figure that he and his early biographers Ferdinand and Las Casas wished to portray. Columbus himself was painfully aware that he had always been scorned in learned circles as someone "not learned in letters, an ignorant sailor, a vulgar man."[61] But Jane's view of Columbus as a crass, superstitious sailor on a lucky streak is demonstrably wrong. This position on Columbus's learning prevented Jane from bringing to fruition the wonderful, raw insight that Columbus desperately wished to sail south: Jane failed to appreciate the degree to which Columbus's southing had obeyed a coherent, intricate worldview—a view that hardly obligated Columbus or his contemporaries to instantly recognize that the lands and peoples found in the Caribbean basin were geographically or, even more important, *ontologically* unrelated to those of legendary India.

The present book argues that latitude was an integral and explicit organizing principle in the Indies enterprise. The great Strabo, whose *Geography* has taught us nearly everything we know about Greek theoretical geography and cartography into the first century before the common era, mentions two different methods for observing differences in latitude. The first method, used for calculating greater differences in latitude, relied "on the evidence of the eye itself, or of the crops or of the temperature of the atmosphere."[62] The second method, used for calculating lesser differences in latitude, relied on measurements afforded by sundials and dioptrical instruments. This book does not delve into Columbus's aptitude at measuring latitude by technical means—an issue that has caused much ink to be spilled among Americanists. Instead,

it focuses attention on Columbus's ability to correlate, by means of his bare senses, latitude, temperature, and the nature of places on the globe.

Columbus's geographical certainties obeyed a complex set of assumptions that were shared, no matter how imperfectly, with the most learned minds in the Latin West concerning what one may properly call the nature of places. Place was a crucial cosmological concept in the intellectual tradition that witnessed the encounter between Europeans and the native peoples of the Americas. In their involved discussions of the structure and workings of the cosmos, the "schooled" heirs of Plato's and Aristotle's physics considered place to be one of the principles of the universe. The elements and their compounds tended to occupy places in the geocentric cosmos in accordance with their own particular natures. Heavenly bodies in this cosmos were God's intermediaries, responsible for generating and destroying all physical creatures—whether humans, beasts, plants, or minerals. And place was the key for understanding the celestial causes that acted upon bodies as well as for predicting much of their behavior. This cosmological tradition, primarily rooted in classical antiquity, had come of age in the Latin West with the momentous translation of Greek and Arabic works in the twelfth and thirteenth centuries. Writers in this tradition, who pictured a relation of cause and effect that bound the heavenly and elemental regions, often referred to this cosmos as a working artifact, or *machina*. And in a universe so conceived, any consideration of place stood at the intersection of a broad, logical array of knowledge domains, many of which no longer bear to each other the connections that were once obvious to schoolmen or even to informally educated individuals like the Discoverer.

Not surprisingly, geography was hardly just a tool for locating, describing, or reaching the various parts of the inhabited world. As an art concerned with places, geography fully participated in the philosophical quest to apprehend the nature of all things placed; and as a discipline geography was closely tied to a range of other fields whose connections to one another were thought to obey the structure and functioning of an artifactual universe. Briefly stated, geography also deeply concerned the nature of places. And only by considering the epistemic system underlying the practice of geography in the late medieval cosmological tradition can we more fully explain crucial aspects of Columbus's thought—from his concept of the ratio and distribution of earth and water at the center of the cosmos to his notion of the extent to which the globe was habitable, his ideas concerning the nature of the lands and peoples he was setting out to find, and even what he believed he ought to accomplish in the course of his wanderings.

Columbus shared with the great geographers before him—especially theoretical thinkers like Eratosthenes, Strabo, and Ptolemy—the fundamental premises that every place had its own unique nature, that similar places gave way to similar natures, and that different places gave way to different natures. And when it came to describing the similarities and differences between places on the surface of the globe, it was *latitude,* not longitude, that geographers had most closely associated with the nature of places. In the words of one of Aristotle's most able and influential commentators, the Cordoban philosopher Averroës (Ibn Rushd, 1126–1198), "Latitudes . . . are more significant for the diversity of lands than longitudes."[63] We need only recall Ptolemy's famous sentence in his own influential *Geography* (2nd century CE) that "all animals and plants that are on the same parallels or [parallels] equidistant from either pole ought to exist in similar combinations in accordance with the similarity of their environments."[64] It was with latitude in mind that Mediterranean geographers had long established meaningful connections between sub-Saharan Africa, or "Ethiopia," and the extended basin of the Indian Ocean, or "India." Latitude explains why, for instance, geographers thought it natural that gold, cinnamon, crocodiles, elephants, and dragons should flourish in both Ethiopia and India, and why they marveled at the fact that the Ganges River should not have had hippopotamuses, like the Nile. Latitude also explains why Ptolemy, the most influential geographer of antiquity, should have assumed that "black" peoples equally flourished in sub-Saharan Africa, the Arabian Peninsula, and the very confines of the Indian Ocean, and why many centuries later Columbus should have been perturbed not to find them in the Caribbean basin. In short, while longitude may have initially represented for Columbus the nightmare of crossing an unknown ocean, it was latitude that would tell Columbus again and again—when he admired the gold ornaments on indigenous bodies and when he gazed overhead at parrot flocks so dense they obscured the sun—that he had indeed arrived in the Indies, or at least in a place that shared the same nature with the old Ethiopia and India.

Most unfortunately, while longitude may speak to a technical feat that many of Columbus's contemporaries deemed impossible, latitude speaks to a geopolitical process that Bartolomé de las Casas called the "destruction of the Indies" (*destruyçion delas yndias*).[65] The history of Columbus's westing has been, and will remain, largely a chapter in the history of the technical challenges that long involved attempts to measure longitude. As such, Columbus's ideas concerning the value of an equatorial degree, the horizontal extension of the inhabited world, and the narrowness of an intervening ocean

will continue to be cited as idiosyncratic precepts that gave way to what Europeans only gradually realized was a "mistake"—what Taviani aptly calls a "productive error."[66]

Columbus's southing is another matter. His conscious distinction between the higher and traditionally "cooler" latitudes of Mediterranean Europe and the lower and traditionally hotter latitudes of the Indies irrefragably points to an intellectual and material culture that in the course of a little more than a century—from Portugal's taking control of the North African port of Ceuta in 1415 to Elcano's completing the first circumnavigation of the globe in 1522—reached the problematic realization that Europe was only the northern neighbor to a vast and immensely rich and populous world to the south. The fact is that the bulk of discoveries carried out by European explorers in this early phase of exploration and colonization—first in Atlantic Africa, then in the Americas and the greater basin of the Indian Ocean, and finally in the Pacific Ocean—took place within the region of the globe we know today as the belt of the tropics. And, as Ferrer's memorable letter to Columbus seems to suggest, this process was fraught with changing certainties concerning the nature of that belt and of its peoples.

Indeed, Columbus's project was conceived and executed between two antithetical perceptions of the tropics. One need only browse Pierre d'Ailly's *Ymago mundi* (1410), one of Columbus's favorite treatises, to come across the view that had long prevailed in the Latin West concerning the distribution of land and life around the globe: the three known continents—Europe, Africa, and Asia—were supposed to configure a single landmass stranded on an upper quarter of a globe otherwise covered by water, and the inhabited world itself was supposed to form a narrow "temperate" and, thereby, "civilized" corridor of this geographical system, besieged to the north and to the south by the extreme cold and heat of the "wild" arctic and tropics.[67] Sub-Saharan Africa, or "Ethiopia," and the lands that verged on the extended basin of the Indian Ocean, or "India," were thus imagined as the hot, infertile, and uninhabitable fringes of the world, where a merciless heat forged the precious metals and stones so coveted in Europe, and where only geographical accidents such as the Nile or the Ganges occasionally invited nature to come back with a vengeance, spawning the myriad living "marvels" and "monsters" that had gripped the imagination of Mediterranean geographers since antiquity. This narrow definition of the "normal" limits of habitation had its ground in a cosmological paradigm today attributed to the Eleatic philosopher Parmenides (early 5th century BCE)—the theory of the five zones. This theory had gained great acceptance in the Latin West thanks to works as diverse as Virgil's *Georgica* (1st century BCE), Ovid's

Metamorphoses (1st century CE), Pomponius Mela's *De chorographia* (1st century CE), Pliny's *Naturalis historia* (1st century CE), and Lucan's *De bello civili* (1st century CE).[68]

But a rather different view of the geographical extent of life on the globe contended that the tropics were *not* the desolate fringes of the inhabited world. The great modern proponents of this view—Henry the Navigator and Columbus himself—had met fierce opposition for their willingness to breach the forbidding gates of the torrid zone. In the opening decades of the fifteenth century, Prince Henry had literally wasted years attempting to persuade the sailors in his service on the coast of Morocco to cross the threshold of the Canaries and Cape Bojador into what even the learned in Portugal expected to be a hellish wasteland from which no one would return alive. Columbus and his supporters in Castile, for their part, would fail to persuade the council in charge of evaluating his project that he could find any land, much less productive or inhabited land, in the tropical latitudes of the high Atlantic.

Nevertheless, in the wake of Columbus's momentous discovery, the view appears to have gained some ground that the belt of the tropics might harbor a truly vast geographical system, and that it might constitute a hugely productive and populous region of the globe. Indeed, this is the tenor of the letter that the Catholic Monarchs had already written to Columbus in 1493, urging him to return to the high Atlantic in search of possible lands that would be even wealthier than those he had discovered on his first voyage, precisely because they stood "in the part of the sun." The Savonese Michele Cuneo, who wrote a famous letter (15 and 18 October 1495) to his compatriot Girolamo Annari describing the events of the second voyage, recounted that his great friend Columbus had sailed from the recently founded town of La Ysabela on northern Hispaniola back to Alpha et Omega, on Cuba's eastern tip, with the intention of resuming his exploration of the Indies. According to Cuneo, Columbus had held council with his men at Cape Maisi in order to determine whether they should now retrace last year's footsteps along northeastern Cuba in the direction of the northwest (where Columbus would have expected eventually to run into Cathay), or whether they should explore Cuba's inner coasts to the south (further into Columbus's India), and "all agreed that it was better to take the route of the south, because if something good was to be found, it would more likely be toward the south than toward the north."[69]

By the time of Columbus's death, the tide appears to have turned on the traditional theory of the five zones. Thus in 1507 the renowned cosmographer Martin Waldseemüller had slightly revised its tenets. In his *Cosmographiae introductio,*

Waldseemüller dared to claim that the so-called "torrid zone" was not absolutely desolate; rather, it was "habitable with difficulty."[70] And in the main caption of the extraordinary *mappamundi* that accompanied the *Cosmographiae introductio,* the map that gave America its name, Waldseemüller even celebrated the fact that the "land discovered by great and exceedingly worthy men, Columbus, Captain of the King of Castile, and Amerigo Vespucci," stood squarely "under the circuit and path of the sun between the tropics" (**fig. I.12**).[71] Indeed, the America known to Waldseemüller was nothing less, and nothing more, than the southern landmass discovered by Columbus and later explored by his friend Amerigo. And in Waldseemüller's mind this landmass now formed part of a vast and almost equally novel geographical system comprehended by the belt of the tropics—the newly explored sub-Saharan Africa and extended basin of the Indian Ocean.

In 1519 the Spanish explorer and colonial officer Martín Fernández de Enciso, celebrating the recent exploration of a tropical expanse Columbus had insisted on calling the "West Indies," marveled in his *Suma de geographia* at the fact that the ancients should have ever thought that the lands Enciso's contemporaries had by now reached in "Ethiopia," "Arabia Felix," "Calicut," and "Melacca" were uninhabitable.[72] In *De orbe novo* (1530) Peter Martyr would even scorn the attempts of a certain *oidor* of Hispaniola by the name of Lucas Vázquez de Ayllón to explore the continental mass to the north of Greater Antilles then known as "Florida" (1521). What need was there, Martyr asked, to return to the higher latitudes where one was sure to find similar products to those already found in Europe? "To the south, to the south!" he urged his reader, for it was in that direction that anyone with any sense whatsoever could have expected to harvest the treasures of the globe.[73]

By 1552 Hernán Cortés's "chaplain," Francisco López de Gómara, frankly celebrated in his *Historia general de las Indias* the exploits of imperial Spain in the belt of the tropics, referring to his fellow Spaniards as the "scarecrows of the ancients."[74] And by the turn of the seventeenth century, in *Historia general de los hechos de los castellanos en las islas y tierrafirme del mar océano* (1600–1615), the official historian and cosmographer Antonio de Herrera y Tordesillas had defined once and for all Columbus's place in the "glorious" history of territorial expansion begun by the Spanish nation by stating that the Discoverer had never let himself be "shooed away by the equinoctial line, or by the torrid zone."[75] In sum, without an understanding that Columbus's Indies enterprise actively contributed to a colonial awakening that fundamentally involved the "invention"

of the tropics, the geographical history of the discovery will, to my mind, remain sorely incomplete.[76]

The transition from a view of the tropics as forbidding inferno to one of the tropics as prodigal paradise was slow to dawn on the Age of Exploration. In fact, the work of scholars who in recent years have sought to examine the cultural syndrome aptly called "tropicality" is showing again and again that both perceptions have remained paradoxically ensconced in the Western imagination.[77] Indeed, Columbus's exploration of the Bahamas and Caribbean basin simultaneously invoked these inimical views of the tropics. Columbus was keenly aware that all lands and waters he proceeded to explore beyond San Salvador (the island he mindfully located on the same parallel as the Canaries) fell toward or south of the Tropic of Cancer. And he seems to have been bent on proving that, contrary to the conventional wisdom about the torrid zone, the territories he had found in the high Atlantic were not only admirably productive and populous but also more generally temperate than even *he* had dared anticipate—not at all the desolate hinterlands predicted by the theory of the five zones. Yet, even as he marveled at the ever more sublime temperateness, fertility, and inhabitability of the Indies, Columbus also refused to relinquish the view that its peoples were the barbarians whom Mediterranean antiquity had tended to locate in the freezing and scorching regions of the arctic and the tropics. Indeed, while Columbus's India was proving to be a superlatively temperate, fertile, and inhabitable Eden, Columbus's Indians remained, by his testimony, childish or monstrous creatures of the globe's infernal fringes whose liminal nature seemed to justify rendering them Europe's subjects or slaves. In effect, even as the belt of the tropics seemed to be gradually displacing Mediterranean Europe as the uniquely temperate and, thereby, civilized center of the inhabited world, Columbus and his ideological heirs would insist on construing tropical peoples as Europe's moral periphery. This, to my mind, was and remains a fundamental paradox of imperial geopolitics.

The geographical distinction between the higher latitudes of Mediterranean Europe and the lower latitudes of the Bahamas and Caribbean basin was to prove of enormous political consequence for the peoples Columbus invented. Columbus certainly regarded this distinction as crucial grounds for subjecting and enslaving the peoples of the Indies. Such a distinction also crucially anticipated imperial Spain's efforts to establish the lawfulness to its occupation of the Americas. One needs only read the work of eminent historians like Lewis Hanke and Anthony Pagden to realize that Columbus's inaugural

I.12 Martin Waldseemüller's *mappamundi*, 1507. Courtesy of the Map Collection at the Library of Congress, Washington, D.C.

geopolitics soon found a "learned" voice in the seminal philosophical debate in the sixteenth century between the apologists of empire who sought to establish Spain's legal titles to its overseas colonies, and humanitarian figures like Bartolomé de las Casas, who sought to discredit every title Spain had claimed to its lording rights in the Indies. While apologists like Juan Ginés de Sepúlveda continued to construe Spain's Indians as the natural subjects or slaves whom Aristotle and his cohorts had believed to be generated in the hot margins of the inhabited world, Las Casas's strategy to deprive the conquest of all legitimacy was precisely to subvert the geopolitical paradigm that he saw at work in Columbus's life and works: if Columbus's exploits in the Bahamas and Caribbean basin had proved that the Indies formed an unimaginably vast and unbeatably fertile, populous, and, of all things, *temperate* part of the globe, how could anyone in good conscience continue to identify Indians with barbarians on the scorched edges of a narrow world? As Las Casas ultimately argued, if experience had shown that nature was even more "perfect" in the American tropics than anywhere else on the globe—not excepting Mediterranean Europe—why should Indians be treated as Europe's "natural" subordinates? Indeed, it is largely Las Casas's attack on the contradiction attendant to Columbian geopolitics that lends significance to his monumental *Historia de las Indias,* undoubtedly the most conscientious and fearless treatment ever written of early modern Europe's devastation of the tropics.

The distinction that accompanied Columbus's southing between the higher latitudes of Mediterranean Europe and the lower latitudes of the Indies carries broader implications. To mention only a few of relevance to the intellectual and literary history of the Americas, it was in conversation with this geopolitics that such masterpieces of American ethnology as Las Casas's own *Apologética historia sumaria* (completed around 1561), Jesuit cleric Joseph de Acosta's *Historia natural y moral de las Indias* (1590), and "mestizo" historian Garcilaso de la Vega's *Comentarios reales de los incas* (1609) sought to forge a "place" for the Indians within the "natural" and "moral" orders acknowledged by European theologians and philosophers across the Atlantic.[78] And, as recent work on "creole" thought in the Americas by a younger generation of distinguished scholars like Jorge Cañizares Esguerra is beginning to suggest, "novel" interpretations of the very geopolitics inaugurated by Columbus between Europe and the American tropics were conceptually significant to emerging local elites who began to imagine themselves politically autonomous from the Old World.[79] It is no coincidence that we should later find independence hero Simón Bolívar portraying himself in his best-known manifesto,

Carta de Jamaica (1815), as the future guardian of his beloved *América meridional,* by which Bolívar meant everything from Mexico and the Caribbean to Patagonia; nor that his illustrious contemporary, the influential lawyer and philologist Andrés Bello, should have bequeathed to later generations of Latin Americans a patriotic ode we know as "Silva a la agricultura en la zona tórrida" (1826).[80]

I would go so far as to insist that the geopolitical paradigm that Columbus and his contemporaries inherited from classical antiquity remains alive and well in the West. To the extent that five hundred years after Columbus's death we continue to wrestle with the divide between the "developed" nations of the north and the "developing" nations of the south, we too are heirs to an intellectual tradition whose ancient notions of place paved the way for recent colonialism.

1

Machina Mundi

THE MORAL AUTHORITY OF PLACE IN THE EARLY TRANSATLANTIC ENCOUNTER