

# ARCHAEOLOGIA :

OR,

## MISCELLANEOUS TRACTS,

&c.

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- I. *Memoir on a Mappemonde by Leonardo da Vinci, being the earliest Map hitherto known containing the name of America; now in the Royal Collections at Windsor: in a Letter addressed to AUGUSTUS WOLLASTON FRANKS, Esq., Director, by RICHARD HENRY MAJOR, Esq., F.S.A.*

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Read May 26th, 1864.

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MY DEAR FRANKS,

I HAVE had placed in my hands by B. B. Woodward, Esq., F.S.A., the Queen's Librarian, a Map of the World, which he has found in Her Majesty's Library at Windsor, in the collection of papers in the handwriting of Leonardo da Vinci. Mr. Woodward's object in sending it to me was that I might ascertain as nearly as possible the date of its construction, from the nature of the geographical information which it contained. It was evident at a glance that, apart from the value attaching to it from its connection with so illustrious a name as that of Leonardo da Vinci, the map possessed an intrinsic interest in connection with the history of geography and cartography, inasmuch as it not only belonged to a period fertile in geographical discoveries, though scantily represented by maps which have come to our knowledge, but contained delineations of a stage in those discoveries not represented at all in any map with which I am acquainted. Independently of this, it happens to possess some special points of priority of information, which have led me to think it desirable to submit it, with the following notice of its contents, to the attention of the Society of Antiquaries.

The points of distinct priority which I shall hope to establish are—1st. That it is the earliest map yet made known to the world on which the name of America stands inscribed; 2ndly. That it is the earliest known map on which the severance of the western coasts of America from their previously supposed

continuity with Asia is recognised ; 3rdly. That it is the only map, as yet known, which contains an indication of the early fancied existence of a great southern continent anterior to the discovery of Magellan's Straits, after which, though at some distance of time, that supposition was assumed to be a reality, and laid down upon maps as an indefinite continuation of the then discovered land of Tierra del Fuego. In order that I may commend my own belief on these three points to the acceptance of the Society, my duty will manifestly be to show the date which I assign to the map, and the geographical grounds upon which I assign it. But, first, let me describe the map itself.<sup>a</sup> It is drawn in eight equal parts ; each part being the eighth of a supposed globe represented in a plane ; the lines of separation being the equator, and two equi-distant meridian circles. These parts, of course, thus form equilateral triangles, each side of which is an arc of a circle, of which the opposite point is the centre. The diameter of these triangles is exactly five inches. The usually adopted form of orientation is used, as shown by the word "Cima" being placed between the four converging points at the north, and the words "La Bassa" between the corresponding points at the south. It will be seen that the scale is very small ; but, though the insertion of names of places is consequently by no means abundant, a certain amount of care has been given to the delineation of the outline of the then known parts of the world. It has no meridians or parallels of latitude ; but that is not to be wondered at, for numerous manuscript maps were made at that time, which have now disappeared ; but which were drawn up, like the one before me, with the object of giving the picture of the discoveries without supplying navigators with any information as to the dangers or courses by the routes. The date which I assign to the map is 1513-1514.

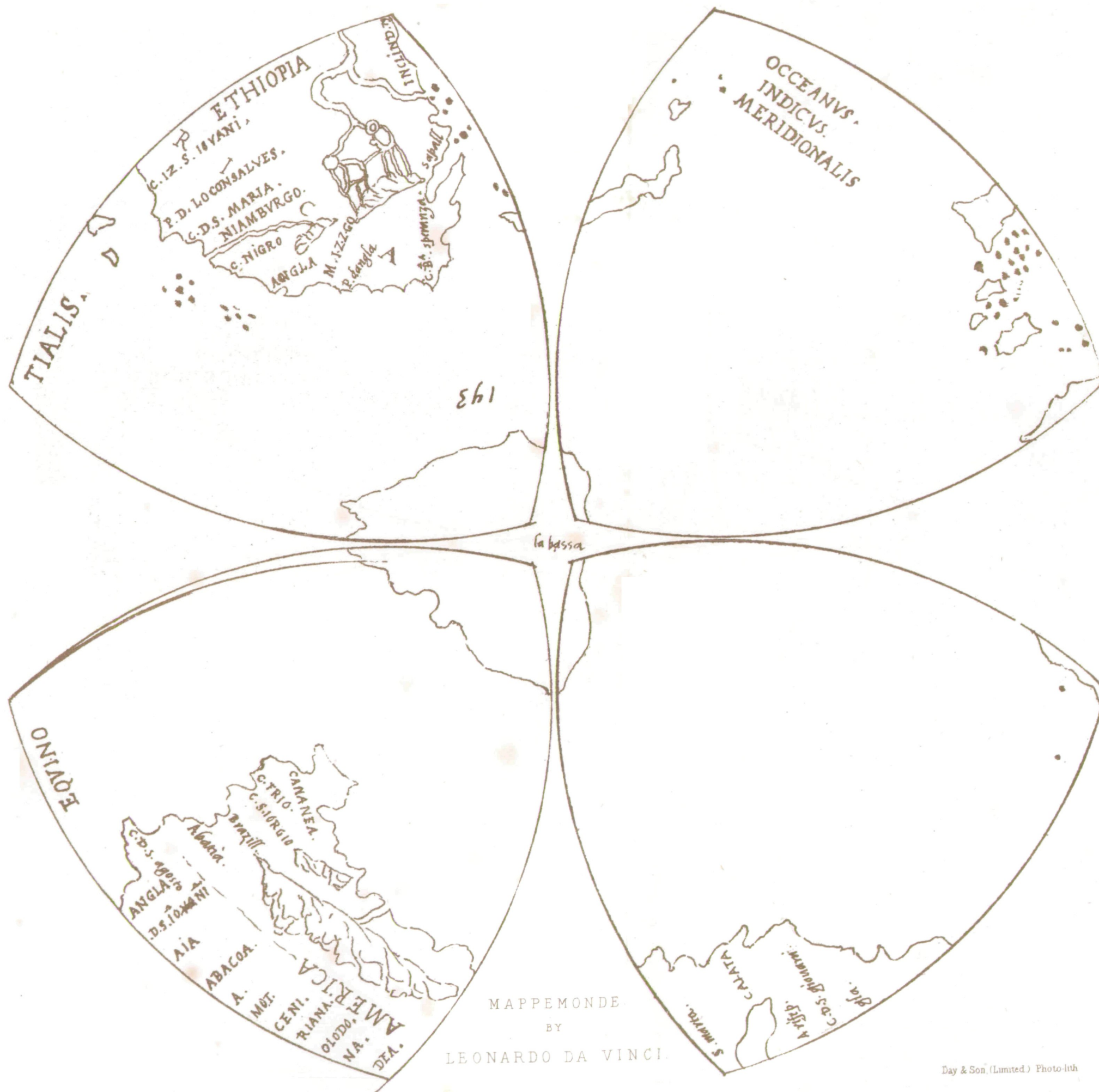
It is obvious that on a map of so small a scale we cannot hope to find any points of minute interest in the delineation of those parts of the world which were at that time comparatively well known. In the easternmost parts of Asia we see the Cathay and Mangi of Marco Polo, on what is freely described as the *Sinarum Situs*, and also Marco Polo's Zipangu, here mis-spelt Zipugna, intended to represent Japan. In the South Seas we have an indication, but without names, of Sumatra and the Sunda Isles, which may have been gathered from Marco Polo, but which islands we also know from Barros and Galvão to have been visited, at the close of 1511, by the Portuguese captains Antonio de Breu and Francisco Serrão, who were sent out to Banda and Malacca by Albuquerque, and who passed along the east side of Sumatra to Java, and thence by Madura,

<sup>a</sup> See Plates I. and II., executed by photo-lithography, and of the same size as the originals.



MAPPEMONDE  
BY  
LEONARDO DA VINCI.





Bali, Sumbava, Solor, &c. to Papua or New Guinea. Thence they went to the Moluccas and to Amboyna. (See Barros, d. 3, L. 5, c. 6, p. 583; and Galvão, translated by Hakluyt, p. 378.)

The peninsula of Hindustán is laid down with tolerable correctness, not differing much, although with far fewer insertions of names, from its representation in the map of Bernardus Sylvanus of Eboli (Eboliensis) in the kingdom of Naples, of the date of 1511, when the discoveries of the Portuguese had already made them acquainted with the outline of that country. In Africa we find, as might be expected, the west coast delineated with tolerable accuracy, but with comparative emptiness of description on the eastern side; the only internal feature being the river Nile, with the river and two lakes from which it was supposed to take its source, laid down as in Ptolemy and the Portuguese maps of the time, in a latitude much nearer to the Cape of Good Hope than to the equator. But as, at the time that this map was made, the passage of the Portuguese to India by the Cape of Good Hope had become a beaten track, it is not upon the delineations either of Asia or the west coast of Africa that we need rest for evidence as to the period of its construction, unless indeed we should find amongst the few names laid down on those countries any that might betray a later period than that which we should otherwise be led to ascribe to it; but this, upon examination, proves not to be the case.

On the east coast of Africa, we have but three places mentioned, Sapall, (Sofala); Inclind, a manifest miscopying for Melinda; and Abassia or Abyssinia; but if these names be few, they are full of interest in connection with the period. Melinda was the northernmost point attained by Vasco da Gama in his northward passage along that coast. It was on the 15th of April, 1498, that he arrived there, and from that arrival may be traced the successful accomplishment of the magnificent dream that first had birth in the brain of the never-to-be-forgotten Prince Henry of Portugal, namely, the attainment of the coast of India by the rounding of the Cape of Good Hope. In the sovereign of Melinda, Da Gama found a friend and a helper beyond all price; he supplied him with a Guzerat pilot, named Malemo Cana, or Canaca, who was not only perfectly acquainted with the navigation of the Indian Ocean as known at that period, but entered into the service of the Portuguese with so much loyalty and good faith that, after leaving the coast of Africa on the 28th of April, he brought them on the 17th of May in sight of that India which had been the subject of such ardent longings and such earnest efforts on the part of his countrymen for nearly a century. It was on Sunday the 20th of May that, under the directions of his skilful pilot,

Da Gama anchored off Capocata, two leagues below Calicut. But, meanwhile, at the very time that this map was made, there was resident in Abyssinia a Portuguese, who was not only the first, since ancient times, to visit the coast of Abyssinia, but who also may be called the theoretical discoverer of the Cape of Good Hope. So great had been the desire of finding a short route to India, implanted into the Portuguese by the life-long efforts of that great glory of their nation, the noble Prince Henry, that his nephew King John the Second had determined to gain information respecting India, by means of a voyage over-land, concurrently with the expeditions which were being constantly made, with the view of tracking a course thither by way of the sea. Antonio de Lisboa, a Franciscan friar, had been dispatched for that purpose, in company with a layman, but the attempt was rendered nugatory by their ignorance of Arabic, and, after reaching Jerusalem, they were obliged to return. This disappointment only rendered King John more determined on securing his object, and he now resolved on making a double effort to accomplish it. Bartholomew Diaz had a squadron fitted out for him, with which he set sail in August, 1486, and first rounded that famous cape, to which, from the storms he had encountered, he gave the name of Cabo dos Tormentos, or Cabo Tormentoso. On the 7th of May of the next year Pedro Covilham and Alphonso de Payva, both of them well versed in Arabic, received the following orders respecting a second journey over-land : They were to discover the country of Prester John ; to trace the Venetian commerce for drugs and spices to its source ; to ascertain whether it were possible for ships to sail, round the southern extremity of Africa, to India, and to take particular information on every point relative to this important navigation ; and from Alvarez we learn that they had a sea-card given them, taken out of a general map of the world. We find from Castanheda, that Pedro de Covilham and Alphonso de Payva left Lisbon with five hundred crowns in money and a letter of credit on Naples, where, says Alvarez, their bills of exchange were paid by the son of Cosmo de' Medici. From Naples they sailed to the island of Rhodes. Then crossing over to Alexandria, they travelled to Cairo as merchants, and, proceeding with the caravan to Tor, on the Red Sea at the foot of Mount Sinai, gained some information relative to the trade with Calicut. Thence they sailed to Aden, where they parted ; Covilham directing his course towards India, and Payva towards Suakem in Abyssinia, appointing Cairo as the future place of their rendezvous. At Aden Covilham embarked in a Moorish ship for Cananore, on the Malabar coast, and, after some stay in that city, went to Calicut and Goa, being the first of his countrymen who had sailed on the Indian Ocean. He then

passed over to Sofala, on the eastern coast of Africa, and examined its gold mines, where he procured some intelligence of the Island of St. Lawrence, called by the Moors the Island of the Moon.

Covilham had now, according to Alvarez, heard of cloves and cinnamon, and seen pepper and ginger; he therefore resolved to venture no further until the valuable information he possessed was conveyed to Portugal. With this idea, he returned to Egypt; but found on his arrival at Cairo that Payva had been murdered. Here he met with two messengers from King John, whose names were Rabbi Abraham of Beja, and Joseph of Lamego; the latter immediately returned with letters from Covilham, containing, among other curious facts, the following remarkable report:—"That the ships which sailed down the coast of Guinea might be sure of reaching the termination of the continent by persisting in a course to the south; and that when they should arrive in the eastern ocean, their best direction must be to inquire for Sofala and the Island of the Moon" (Madagascar).

Rabbi Abraham and his companion had, previously to this event, visited the city of Baghdad and the Island of Ormuz, and had made themselves acquainted with many particulars respecting the spice trade. This alone was sufficient to recommend them to the patronage of King John II., and they accordingly were employed by him to seek Covilham and Payva at Cairo, with further instructions to proceed to Ormuz and the coast of Persia, in order to improve their information. Covilham eagerly embraced this opportunity to visit Ormuz, and, having accompanied Abraham to the Gulf of Persia, returned with him to Aden, whence the latter hastened to give King John an account of their tour, and Covilham embarked for Abyssinia to complete that part of his voyage which the death of Payva had hitherto frustrated.

Crossing the Straits of Babelmandeb, he landed in the dominions of the Negus. That prince took him with him to Shoa, the residence of the court, where he met with a very favourable reception, and at length he became so necessary to the prince, that he was compelled to spend the remainder of his life in Abyssinia. He married in that country, and, from occupying highly important posts, amassed a considerable fortune. It is stated by Alvarez, that when, in 1525, the Portuguese embassy, under Don Rodriguez de Lima, arrived in Abyssinia, Covilham shed tears of joy at the sight of his fellow-countrymen. He passed thirty-three years of his life in Abyssinia, and died there. His original account is not now in existence, or at least is unknown; but from the third volume of "Bruce's Travels" we derive the following information, although from what authority he

supplies it we are not told. He says, "Frequent despatches from him came to the King of Portugal, who, on his part, spared no expense to keep open the correspondence. In his journal Covilham described the several ports in India which he had seen; the temper and disposition of the princes; the situation and riches of the mines of Sofala. He reported that the country was very populous, full of cities both powerful and rich; and he exhorted the King to pursue with unremitting vigour the passage round Africa, which he declared to be attended with very little danger, and that the Cape itself was well known in India. He accompanied this description with a chart or map, which he had received from the hands of a Moor in India, where the Cape, and cities all around the coast, were exactly represented."

Dr. Vincent's remarks on this passage from Bruce are important. He says: (see *Periplus*, p. 197) "Whence Bruce draws this account I cannot discover; and if there was such a map among the Moors it must be a fiction, for none of them had ever passed Corrientes by sea; and cities there are none for almost 20° from Corrientes to the Cape or from the Cape for 20° to the northward on the western coast. That fictitious maps of this sort might exist, both in the Indies and Europe, among Muhammedans and Christians, is highly probable, for it was a prevailing notion in all ages that Africa was circumnavigable. We may allow even more than this, and say that the natives had gone by land much further south than the navigators by sea, and that their accounts were almost unanimous in maintaining the same assertion. Whenever I can discover the authority of Bruce it will deserve consideration; till then I shall think that if Covilham filled up the map he had received, or corrected it, or added to it such information as he could collect, it is a more probable account than the report of this Moorish map, which contained cities that never existed. Such a corrected map of Covilham's we read of in Castanheda, who seems to have seen it, as he says it was ill-written and disfigured. This I take to be the map to which Bruce alludes." In any case, it is the aforesaid letter of Covilham to King John, which, beyond all other information, affords the reason for our assigning to Covilham the honour of the theoretical discovery of the Cape of Good Hope, as the practical is to be assigned to Diaz and Da Gama; for Diaz returned without hearing anything of India, though he passed the Cape, and Da Gama did not sail till after the intelligence of Covilham had ratified the discovery of Diaz.

Thus much for the east coast of Africa. With respect to Madagascar itself we have the island laid down, but without a name. It was in 1500 that the Portu-



guese, in their reconnaissances of the coast of Zanguebar, became acquainted with the Island of Madagascar, although Marco Polo had previously spoken of it under the name of Magaster. It received its name of S. Lorenzo from the visit of the Portuguese Lorenzo Almeida, but it was not till 1506 that its coasts and capes and harbours were examined by Tristan d'Acunha. We also find, on the map, what would seem, to judge from their relative position with regard to the north point of Madagascar, the Aldabra Islands; but if the size rather than the exact position of the islands were to be accepted as a criterion, we might infer that the Comoro Isles were intended. Further north, though still without name, we find what is doubtless meant for the Mahe or Seychelles Islands. Of the Mascaren Islands there is no indication whatever. Research has hitherto been fruitless in the attempt to establish the exact date of the discovery of these islands. Various dates have been assigned, but in none of the Portuguese authors who treat of the exploits of Pedro Mascarenhas in the Portuguese conquests in India do I find any allusion to the discovery of these islands. One thing, however, is certain, although I have not found it hitherto noticed, that these islands were discovered not only before the period of the map now before us, but also before 1507, inasmuch as they are laid down in the invaluable map of Johann Ruysch, in the 1508 edition of Ptolemy, published at Rome, where Mauritius bears the name of Dinarobin, and Bourbon that of Margabin, which means "western," as rightly describing its more western position.

It is in America, the scene of active and progressive exploration, that we find the special value and interest of the map before us, as well as the means of more clearly fixing its approximate date. And first I would call attention to the fragmentary parts of North America indicated by what is represented on the map as islands, viz.: the names of Bacalar and Terra Florida. In the former name we have no difficulty in tracing the Terra de Bacalaos or country of the Codfish. The name of Bacalaos is the earliest we find applied to any part of North America subsequently to the Scandinavian voyages. It has been advanced by Father Cordeiro in his "*Historia Insulana*," that it was discovered in 1463, twenty-nine years before the first voyage of Columbus, by Joaõ Vas Cortereal, a nobleman of the household of the Infant Don Ferdinand of Portugal. Against the correctness of this statement we have the reasonable argument of the Baron von Humboldt, that, had this been the truth, so important a fact would scarcely have been omitted by Martin Behaim in the minutely detailed notes which are inserted in the globe which he constructed in 1492, and which is now at Nuremberg. The solidity of this argument is confirmed by the fact that Cordeiro makes Cortereal to

have been appointed Governor of Terceira on the 12th of April, 1464, while it is a certain fact that Jobst de Hürter, the father-in-law of Behaim, only a few years after, went to the Azores, with the rank of Governor of the Flemish colony of Fayal. The truth would rather seem to be that the name of Bacalaos, which in the Basque language means codfish, was first given to Newfoundland, and then also to the countries which they found near that island, by the Biscayan fishermen, who frequented those coasts for codfish as early as the year 1504.

The Biscayans pretend that a countryman of theirs, named Juan de Echaide, discovered the shores of Newfoundland many years before the New World was known, but there is no authority to prove it.

I now come to speak of that country which is here laid down as an island under the name of Florida. The question, as to whether England or Spain may claim the priority in the discovery of Florida, has given rise to many contradictory statements. By the English, the honour has been claimed for Sebastian Cabot; and by the Spaniards, for Ponce de Leon. Upon this subject the historian De Thou, in his "*Historia sui Temporis*," lib. xlv. 12mo, 1609, has the following remark :

"*Floridam qui primus invenerit, inter scriptores ambigitur. Hispani . . . gloriam Joanni Pontio Legionensi deferunt; . . . verum, quod et certius est, plerique affirmant, jam ante Sebastianum Gabotum . . . primum in eam Indiarum provinciam venisse.*"

But, whatever may have been the southernmost point reached by Cabot in coasting America on his return, it is certain that he did not land in Florida, and that the honour of first exploring that country is due to Juan Ponce de Leon. This cavalier, who was governor of Puerto Rico, induced by the vague traditions, circulated by the natives of the West Indies, that there was a country in the north possessing a fountain whose water restored the aged to youth, made it an object of his ambition to discover this marvellous region. With this view, he resigned the governorship, and set sail with three caravels on the 3rd of March, 1512. Steering N.  $\frac{1}{4}$  N. he came upon a country covered with flowers and verdure: and, as the day of his discovery happened to be Palm Sunday, called by the Spaniards Pascua Florida, he gave it the name of Florida. He landed on the 2nd of April, and took possession of the country in the name of the King of Castile.

Cuba is here, for the first time, made an island. Columbus died in the belief not only that the newly-formed continent was part of Asia, but that Cuba was part of Japan, or the Zipangu of Marco Polo. It was not till 1508, two years

after his death, that Captain Sebastian de Ocampo proved it to be an island by sailing round it by the orders of Nicolas de Ovando.

The Isabella of our map is manifestly intended for Hispaniola, although it is mistakenly so called, as that name was originally given by Columbus to Saometo, now known as Long Island.

The other West Indian islands, not indicated by names, may all be without hesitation accepted as amongst the discoveries of Columbus.

I now come to speak of the delineation of South America on the map of Leonardo, but, as the peculiar form of the map itself renders it difficult to trace the form and sequence of all the names which I shall have to refer to, I will, for clearness' sake, take them in the order in which they occur on the north coast of South America westward from St. Augustine, and in a second series along the east coast of that continent southward from the same point.

Of Cape St. Augustine itself I will simply say that it was first seen in January, and again in April, of the year 1500 by Vicente Yañez Pinzon, Diego de Lepe, Alonzo Velez de Mendoza, and Pedro Alvarez Cabral. The word Angla, which we meet with first in passing westward from Cape St. Augustine along the northern coast of South America, is too vague to call for comment, as in Spanish it simply means "a cape," and, I may observe, differs from the similar Portuguese word "Angra," which is "a creek, bay, or station for ships."

The next name which presents itself is C. di S. Giovanni, for which I have not succeeded in finding any explanation either in history or in maps within a century and a half of the period of our map; but in the *Nova et accurata Brasiliæ totius Tabula*, by J. Blaeu, Amsterdam, 1662, and in subsequent maps, there is I. S. Juan, about 2° west of Maranham, which is about the position of the S. Giovanni of Leonardo's map.

The next name, Plaia, is doubtless the equivalent of the Portuguese word Praya, which simply signifies "a shore."

The Tanabacoa of Leonardo's map I have no difficulty in identifying with the Tamaragua of the map of Johann Ruysch, in the 1508 edition of Ptolemy, published at Rome, where it is represented as an island, which, in the "Tabula Terre Nove" by Hylacomilus, inserted in the 1513 edition of Ptolemy published at Strasburg, has its name reduced to Riqua, and is in all probability the island of Aruba.

Poriana, the name which next presents itself, is a mis-spelling for Curiana, the coast where pearls were found, and which comprised the coast of Cumaná and the Gulf of Cariaco, as is shown by a passage in the stipulation of Hojeda with the

Spanish sovereigns, where the expression occurs, “desde el parage de los Frailes, antes de la Margarita, fasta el Farallon, tierra que se llama Curiana,” *i. e.* “From the neighbourhood of the Frailes (islands off the north-east coast of Margarita) to the Farallon, (probably Cape Codera,) which country is called Curiana.” See Navarrete, tom. iii. p. 13. The discovery of this country had been attributed to Rodrigo Bastidas, in the voyage which he made with the pilot Juan de la Cosa, ranging from October, 1500, to September, 1502; but this claim was contested by Alonzo de Hojeda, who claimed the discovery for himself in his second voyage, which occupied from January, 1502, to January, 1503. See *Apendice á la Coleccion diplomatica*. Navarrete, tom. ii. p. 426. My inference that Poriana is a misspelling for Coriana or Curiana is confirmed by the circumstance that the name is repeated further westward, beyond the name “Ciribiceni,” which is manifestly Point Chiriviche, off the mouth of the River Tocayo, near Porto Cabello; for beyond this same point I find a similar repetition of the name of Coriana, represented as explored in 1500 by Hojeda and Vespucci, in the valuable map of the coasts of Tierra Firme, drawn up by Colonel Codazzi to illustrate the routes of Columbus and contemporary navigators. (See *Atlas fisico y politico de la Republica de Venezuela*, por el Coronel Agustin Codazzi, Caraccas, 1840.)

For the intervening name, Palinmot, I find an equivalent in the Palinmete of Codazzi, occupying the same position, but not in any preceding map or book.

Areolodo is a manifest mis-spelling for Arboleda, a grove or plantation of trees. C. D. Grana occupies the position of the Peninsula of Paraguana, the Indian name of Cape San Roman, which protrudes twenty leagues into the sea. See Herrera, tom. i. p. 13, who, a few lines after, speaking of Cape de la Vela yet further west, says that it was so named by Alonzo de Ojeda when accompanied for the first time by Amerigo Vespucci, long after that coast had been discovered by “el primer Almirante” Columbus. Aldea simply signifies a village or hamlet. Its occurrence in this place agrees with the account of the Bachiller Martin Fernandez Enciso, who is said to have accompanied Bastidas in his voyage along this coast. In his *Suma de Geografia*, printed in 1519, the first Spanish book which gives any account of America, Enciso says, “Desde Sancta Marta vuelve la costa al sur veynte leguas y en la vuelta [del] Cabo Sancta Maria está Caria, que es la gente muy mala, y adelante está Aldea grande.” The next name that we encounter in our progress westward on the map of Leonardo is Santa Marta itself, which we all know as the name of an important province lying eastward of the Rio Grande de Magdalena, and including the mountains of the same name. Vespucci and Hojeda did not sail so far westward in their voyage between May

and September, 1499; but, as just shown from Enciso's account, this coast was visited in 1501 by Rodrigo de Bastidas. Herrera describes their route thus: "I pasaron por la ribera de la Mar que aora se llama Santa Marta i Cartagena hasta la Culata o Ensenada que es el Gulfo de Urabá, dentro del qual se contiene la provincia del Darien;" *i.e.* "They passed by the coast which is now called Santa Marta and Cartagena, as far as the Culata or Ensenada, which is the Gulf of Urabá." This sentence at the same time supplies us with the explanation of the word Calata, the next which occurs on our map.

The name which next follows is exceedingly indistinct. It appears to be Arifep, my best explanation of which—and it must of necessity be conjectural—is, that it may be intended for the "Punto de Arcife," *Anglicè* Reef Point, which is given in a similar locality on the 5th Map of Kunstmann's "Atlas zur Entdeckungsgeschichte Amerikas, München, 1859," fol.

The next name is C. de S. Giovanni, which I can best illustrate by a quotation from Acosta's "Descubrimiento y colonizacion de la Nueva Granada," in which he says, "El dia 25 [de Setiembre, 1502] fondeó la expedicion en cierta isla que los indigenes llamaban Quiriviri y Colon Husita, a mas de legua y media de distancia de Cariay, poblacion que estaba situada à las margenes de un gran rio (probablemente San Juan de Nicaragua)," *i.e.* "On the 25th of September, 1502, the expedition anchored off a certain island called Quiriviri, but which Columbus called Husita, at more than a league and a half's distance from Caria, an inhabited spot on the shores of a great river (probably San Juan de Nicaragua)." The two remaining names are Angla and Mastilca. Of the former I have spoken already; of the latter I am at a loss to do otherwise than conjecture that it means the Mosquito Coast, which was visited by Columbus during his fourth voyage in the month of September, 1502. In this voyage Columbus explored the coast from Honduras to the Puerto de Mosquitos, at the western extremity of the Isthmus of Panama.

I will now speak of the names as they occur on the east coast of South America, southward from Cape St. Augustine. The first name which presents itself is Abatia. This word, which is a blunder for Bahia, an abbreviation for Bahia de todos os Santos, is, as I shall hereafter show, the most important for me of any on the face of the map, as supplying me with the most valuable link in connecting the map with the voyages of Vespucci. The next designation which occurs is that of Brazil. The name at first given to the newly-discovered land of South America was Terra de Santa Cruz, or Terra Sanctæ Crucis. The precise period of its replacement by that of Brazil is not known, but that it was



before 1507 is shown by the occurrence of the latter name in Ruysch's map, which was made in that year, although not published till 1508. The word "brazil," which properly signifies "red dyewood," was known in Europe long before the discovery of the New World, as is shown by two documents relating to tariffs of exciseable goods, inserted in Muratori's *Antiq. Ital.*, tom. ii. dissert. 30. One of them is from Ferrara, with the date of 1193; the other from Modena, with the date of 1306. In them Brazil is mentioned among other articles of merchandise. Capmany, in his excellent "*Memorias sobre la antiqua marina, comercio, y artes de Barcelona*," Madrid, 1779-92-4, published several documents in which "brazil" is mentioned, in the years 1221, 1243, 1252, and 1271. It is a mistake, therefore, to suppose that the red dye-wood known as brazil-wood took its name from the country now called Brazil in South America, as has been stated by Covarrubias in his "*Tesoro de la Langua Castellana*," art. Brazil. The converse was the case; for when the Portuguese discovered that that wood was growing in great quantities, and of excellent quality, in the newly-discovered country to which Pedro Alvarez Cabral had, when he first reached it in 1500, given the name of Terra de Santa Cruz, they within a very few years after gave the name of Brazil to the country itself. This same name had already been given on maps of the 15th century to an island near the Azores, which has been generally supposed to be equally imaginary with the islands of St. Brandon and Antillia, also laid down on maps of that period. (See Navarrete, tom. iii. p. 9.)

The next name, Cape S. Jorgio, I find in no contemporaneous map, nor is it alluded to by Barros; the earliest occurrence of the name that I have found is in the form of Villa de San Jorge in a corresponding position on the map of Brazil, which I have already referred to as published by Jan Blaeu, in Amsterdam, 1662; and Father Cazal mentions the place in his "*Corografia Brazilica*," but without allusion to the period at which the name was given.

The last name which occurs on the east coast of South America is Cananea, which lies in  $25^{\circ} 5'$  south latitude, and by its position presents great difficulties with reference to the latitudes stated by Vespucci to have been attained by him in the last two of his four voyages. In his third voyage he asserts that he reached  $52^{\circ}$  south. In his fourth he reaches only the 18th degree. In neither of his letters does he make mention of Cananea, even as a resting-place, much less as a place of which he took possession in the name of the King of Portugal; and yet it stands as a remarkable fact, that not only on the map of Leonardo, but on the map of Ruysch, published 1508; on the *Charta Marina Portugallensium*, published 1513; and on the map of Apianus, dated 1520, and published in the

Polyhistoria of Julius Solinus, in the same year—all of which, by the repetition of a blunder, betray, as I shall have hereafter to show, a common origin from Vespucci,—this name of Cananea, with slight changes in the spelling, is given as the southernmost place on the coast, known to the compilers of those maps, as having been visited and named by any explorer. It is true that Ruysch adds a legend<sup>a</sup> *apropos* of the third voyage of Vespucci, to the effect that the Portuguese sailors had explored this part of the land, and had reached 50° of south latitude without coming to the end of the continent; but I repeat from Vespucci himself we get no intimation of a landing at Cananea.<sup>b</sup> This is the more remarkable as a *pedraõ* or monumental stone bearing the arms of Portugal, but without the towers in the bordure, and with the date of 1503, was discovered in 1767 by Colonel Alfonso Botelho de Sousa, in the Island of Cardoso, off the Bar of Cananea; and it is well known to have been the custom in more early days to place such boundary-marks to establish the right of possession.

And here I trust it may not be considered a fault if I have purposely refrained from touching upon the *verata questio* of the authenticity of the voyages of Vespucci, a question the consideration of which entailed upon Humboldt the laborious research and deep reflection of many years, while even from his magisterial decision the distinguished French geographer the Chevalier d'Avezac, and my no less distinguished friend His Excellency Senhor F. A. de Varnhagen, still find reasons to make exceptions. Were I to allow myself to dwell either upon this or any other seductive ramification from the many points which it is my duty to touch upon, even though occasionally such digressions might seem desirable for completing the story, I should find myself writing a book instead of a simple notice of this important map from the hand of Leonardo da Vinci.

I have now examined all the portions of this map containing names indicative of actual discovery; but it possesses one feature peculiar to itself, with respect to the indications of discovery westward and northward as to the continent of America. We see nothing of North America beyond the two supposed Islands of Bacalar and Florida; nothing of the coasts of Central America beyond the shores of Honduras; and here we find the coast line erroneously continued from the Caribbean Sea into the Pacific, implying the certainty of the discovery of a separation of the newly-found continent from Asia. I feel bound to accept this

<sup>a</sup> Nautæ Lusitani partem hanc terræ hujus observarunt et usque ad elevationem poli antarctici 50 graduum pervenerunt, nondum tamen ad ejus finem austrinum.

<sup>b</sup> See Cazal, *Corografia Brazilica*, tom. i. p. 207.

fact as an indication of the map being posterior to the discovery of the Pacific by Vasco Nuñez de Balboa, on the 25th of September, 1513. The earliest known map showing a similar indication is that of Johan Schoener printed at Bamberg, 1520, but which at the same time presents this great difference from Leonardo's map, that it contains the north coast of the Gulf of Mexico, and thus manifestly indicates a period considerably later. This one feature, therefore, I present to you as involving the latest date which, with respect to the progress of discovery, can be applied to this map. Let a fair allowance be made for the arrival of the information into Europe, and its delineation upon paper, and I think I am safe in ascribing to the map the virtual date of 1514.

I said at the commencement of this paper that this map was the earliest known, at least by me, on which was delineated the ancient notion of a great southern continent, previously to the supposed corroboration of that idea by the discovery of Tierra del Fuego in the voyage of Magalhaens, after which we find that country delineated on maps as an immense continuation of the Tierra del Fuego over the whole southern portion of the globe. The existence of a great southern land, habitable like our own, under the designation of Antichthone, —not to be confounded with the Antichthone of Pythagoras, which was a celestial body,—was admitted by Aristotle and Demosthenes. What Virgil in his first Georgic, v. 233 to 239, says on this subject,

Quinquē tenent cœlum zonæ: quarum una corusco  
Semper sole rubens, et torrida semper ab igni;  
Quam circum extremæ dextrâ lævâque trahuntur,  
Cœruleâ glaciē concretæ atque imbribus atris.  
Has inter mediamque duæ mortalibus ægris  
Munere concessæ divûm: via secta per ambas,  
Obliquus quâ se signorum verteret ordo.

is but a translation from the *Hermes* of Eratosthenes. This opinion of a great southern continent was also entertained by the school of Alexandria, with the exception of Hipparchus and his partisans; it also recurs in the *Somnium* of Scipio, in Manilius, Mela, and Macrobius.

Thus far I have endeavoured to show what the date of this map would be if the state of geographical information laid down upon it could be accepted as a delineation by a person perfectly informed of the progress of discovery in the West; but, as this is a condition not reasonably to be presumed upon, and as nevertheless I am claiming for this map the distinction of being the first, hitherto known, containing the name of America, it is necessary that I bring evidence to

prove that if later than 1513 or 1514, it is yet earlier than 1520, the date of the earliest map previously known on which the name of America had been inserted. I have stated, without hesitation, that this map is by the hand of Leonardo da Vinci, and, if I can demonstrate this, my case is proved, for Da Vinci died on the 2nd of May, 1519. In the first place, the map occurs marked with the numbers 232b and 233a, holding the place of those numbers in an undoubted collection of papers in the handwriting of that illustrious man, in Her Majesty's library at Windsor. The history of the volume, on the cover of which are stamped the words "Disegni di Leonardo da Vinci. Restaurati da Pompeo Leoni," is as follows:—

During the war with France, Leonardo spent much time with his friend Francesco Melzi at Vaprio, and his books and drawings were left in the possession of the latter in 1516, when Francis the First invited Leonardo to France. Subsequently Leonardo bequeathed them all to Melzi. A successor in the Melzi family had so little appreciation of them that he let them pass from his hands in the following manner, as abridged from the description of one of the recipients, Giovanni Ambrosio Mazzenta. (*See "Le Cabinet de l'Amateur," par E. Piot. Juin, 1861, pp. 60—64.*)

In 1587 one Lelio Gavardi, who had been a teacher in the Melzi family, found an old forgotten coffer, from which he managed to abstract thirteen volumes of MSS. and drawings, which he carried to Florence, with the view of offering them to the Grand Duke Ferdinand I. This prince, however, fell ill and died at the time of Gavardi's arrival; the latter therefore went to Pisa, where his near relative, Aldus Manutius the younger, then held the chair of Belles Lettres in the university. At that time Mazzenta was at Pisa studying law. This man reproached Gavardi on account of his ill-acquired property. The latter acknowledged his fault, and begged Mazzenta, who, having finished his studies, was returning home to Milan, to carry the volumes back with him. This he did, and restored them to the head of the family the Doctor Orazio Melzi. That gentleman was much astonished at the trouble he had taken, and made him a present of the volumes, stating that he had many more lying in boxes under the roof of his house. This being talked of caused many applications to Doctor Orazio, who consequently gave away an abundance of drawings and anatomical models and other precious relics from Leonardo's studio. Pompeo Leoni, then in great favor with Philip II, for whom he made all the gilt bronze statues which adorn the retablo of the high altar in the chapel of the Escorial, was one of these applicants. Pompeo promised Dr. Melzi many lucrative posts, and a seat in the

senate of Milan, if he could recover the thirteen volumes, and give them to him for King Philip, who was a great amateur of such curiosities. Melzi, excited with these hopes, hastened to Mazzenta's brother, who then possessed the drawings, and begged him on his knees to restore him the MSS. which he had given him. Seven of them were given back. Of the six which remained, one, presented to Cardinal Federigo Borromeo, is now in the Ambrosian Library. Another was given to Ambrosio Figini, a painter of the time, and left by him to Ercole Bianchi with the rest of his cabinet. A third was obtained by Mazzenta from his brother to give to Charles Emmanuel, Duke of Savoy, and the three others fell into the possession of Pompeo Aretino, and were afterwards sold to Galeazzo Arconati for 300 ducats. The drawings and MSS. which were recovered by Melzi, and handed over to Pompeo Leoni, were mounted by him and arranged in two great volumes. For one of these volumes now at Milan and known as the Codex Atlanticus, James I. is said to have offered 3,000 pistoles. Pompeo took the other to Spain, and there Lord Arundel endeavoured to buy it of him. At his death in 1610 it was bought by Don Juan de Espinas, and soon afterwards was acquired by Lord Arundel. (See his Letters in Tierney's History of Arundel, and in Noel Sainsbury's Rubens.) It certainly remained, Mr. Woodward informs me, in the Arundel Collection at Antwerp till 1650. (See dates on Hollar's etchings after drawings in that collection.) Most probably it was purchased by Charles II., by the advice of Sir Peter Lely, and at Lely's death forgotten. It was discovered in 1763 by Dalton, the Keeper of the King's Prints, in the same bureau at Kensington in which Queen Caroline had previously found the Holbein drawings, which came from the same collection of Lord Arundel, and were certainly bought by Charles II. (See Sketch of the History of the Royal Collection in No. II. of Fine Arts Quarterly Review, Introduction to Catalogue of Poussin's Drawings.)

A remarkable fact, which gave me the fear that I should be unable to bring to an unanswerable proof the proposition that this map was by the hand of Leonardo, has itself happily supplied that proof in a manner which I believe to be perfectly incontestable. It was the habit of Leonardo to write down his observations and memoranda from right to left in the oriental fashion. In the British Museum we have, in the Arundel Collection, a volume illustrated with numerous diagrams by him, on subjects connected with mechanical powers, written entirely in this manner, and with only a very few words written from left to right. In the library in Paris there are volumes of his writings, but these were beyond my reach, and it therefore became necessary for me to inspect for myself



the collection of his MSS. at Windsor, to see if I could find evidence that the hand-writing of the map now before me, which is written from left to right, was that of Leonardo da Vinci. I take it for granted that, even if it should be unreasonably supposed that, in a collection preserved under the circumstances already detailed, there had been some subsequent interpolations by another hand, yet the most sceptical would not deny the evidence of writing on the same page and in the same ink, both from right to left and from left to right. I found cases of this kind, of which, and others corroborative of my conclusions, I give, for the satisfaction of future investigators, the numbers in the series, viz., 212, 220, 226, 227, 230, 231, and 234.

It happened, however, that on most of these the writing was principally not in capitals, but in small letters, and, although satisfied myself, I was not content to advance those cases as evidence, because I know that, in all tests of the kind, the strongest evidence lies not in small letters, but in capitals; and it so happens that, in the map now under consideration, a considerable number of words are given entirely in capitals. At length I lighted upon a map of the Val di Chiana and surrounding country, numbered 230, *carefully drawn in colours*, with the lettering *from left to right*, and often in capitals, which at a glance I recognised as corresponding with those of the map of which I am treating. Both the careful drawing and the writing from left to right showed that the map was intended for the eyes of others. It then became a question whether this newly-discovered map could be shown beyond all doubt to be by the hand of Leonardo da Vinci. This question was speedily solved. The map thus numbered 230, was as I have said, carefully drawn in colour, the hills being in bistre and the base of them in yellow, while the great marsh formed by the river Chiana was painted in blue. On referring to number 227, I found a map of the same district, though *far less carefully drawn*, depicted *in the very same colours*, with the exception of the yellow, but full of writing, in Leonardo's well-known hand, *from right to left*, evidently only for his own purposes. Number 220 showed the same subject in sepia, with the writing also *from right to left*. These maps seemed to me to contain evidence sufficient to satisfy the most sceptical; but, if further evidence were wanting, it is found in the very subject of the maps themselves, which embody a fresh point of interest in connection with the marvellous genius of this highly-gifted man.

Amongst the many widely diverse branches of study which he cultivated in the pursuit both of the useful and the beautiful, there was one in which he took more than ordinary pleasure, namely, that of engineering and the science of dynamics.

Of his finished efforts in this direction the Martesana Canal, made navigable by him from Trezzo to Milan, still exists as an evidence of his far-sighted ability. If at the present day we visit the Val di Chiana, the site of that which is represented in Leonardo's map as a huge marsh, we shall find one of the most fertile districts of Tuscany, rich in corn, vineyards, and mulberry plantations, bestudded with numerous villages, and inhabited by a healthy peasantry. In fact this valley exhibits a phenomenon in the scientific modification of physical geography which is almost unique. In the early periods of the Christian era, the Chiana, then called the Clanis, was a branch of the Arno, which, separating itself from that river in the neighbourhood of Arezzo, ran into the Tiber near Orvieto. To these bifurcations a parallel case is advanced by Humboldt in the Oronoco, in South America. We learn from Tacitus that, in the time of Tiberius, it was proposed that the waters of the Clanis flowing into the Tiber should be diverted and made to flow into the Arno, in order that Rome might be saved from inundation; but the Florentines, fearing that their lands would be flooded if this plan were carried into effect, opposed it so strenuously that it was abandoned. In the process of time, the fall of the Chiana being very slow and gradually becoming slower, it formed itself into a marsh rather than a river, whose waters, stagnant in the middle, discharged themselves at the two extremities into the Tiber and into the Arno. The evil by degrees increased, till one of the most fertile provinces of Tuscany was rendered unfit for healthy habitation. Of the pernicious nature of the exhalations from this stagnant water a forcible description is given by Dante in the 29th canto of the *Inferno*, where, wishing to express the intolerable stench of the lower regions, he says:—

“ Qual dolor fora se degli spedali  
 Di Valdichiana, tra 'l luglio e 'l settembre,  
 E di Maremma, e di Sardigna i mali  
 Fossero in una fossa tutti insembre ;  
 Tal era quivi.”

The effects of this pestilential atmosphere are also described by Fazio degli Uberti, in the *Dittamondo*, L. 3, C. 10, l. 22, where, speaking of the people dwelling near Chiusi, he says:—

“ Quivi son volti pallidi e confusi,  
 Perchè l'aere e la Chiana è lor nemica,  
 Sicchè li fa idropici e rinfusi.”

Boccaccio also, wishing to describe a place of intolerable filthiness, uses the word “Chiane” in the plural as an illustration, thus:—“Nelle chiane di mezza

state con molta men noia dimorerebbe ogni schifo.” (Liberinto, Vinegia, 1558, p. 41.) And in like manner Pulci, in his “Morgante,” canto 23rd, stanza 41, uses the name of Chiana to express a marsh.

“Tutto quel giorno cavalcato avieno  
Per boschi, per buron, per mille chiane.”

Such was certainly the condition of the Chiana at the beginning of the sixteenth century, and it caused great anxiety to the two governments; but the efforts which were at first made to procure a discharge of the waters were utterly fruitless, until the introduction of a mode of drainage peculiar to Italian hydraulic engineering, namely, that of *colmate*. This process is effected by conducting torrents charged with alluvial matter into the marshy districts, so that the mud brought down in them is deposited. The subjacent soil thus becomes raised, and a fall for the stagnant waters is procured, so as to allow of the employment of the ordinary methods of drainage. These *colmate*, which have been long employed in Tuscany, were first recommended by Leonardo da Vinci. (Libri, Storia delle matematiche in Italia, tom. iii. p. 219.) The adoption of the principle thus recommended was due to Torricelli, but it was not applied with success to the Chiana until the close of the seventeenth century, when the engineer Ciaccheri began to put it in practice with good effect; the work went on, nevertheless, with comparative slowness under the feeble government of the last of the Medici. At length the Grand Duke Pietro Leopoldo, who neglected no means of contributing to the material well-being of his subjects, in 1788 entrusted the superintendence of this great undertaking to Count Fossombroni, for many years prime minister of Tuscany, under whose administration that country enjoyed a degree of peaceful prosperity unknown elsewhere in Italy, and to him is due the happy change already described as now visible in the lovely valley of the Chiana.

I have thus shown, I think, sufficient reasons why Leonardo da Vinci should have occupied himself with the laying down of a detailed map of the district comprising the Arno, the Tiber, and the Val di Chiana, whilst at the same time I trust that I have thereby shown the authenticity of the map of the world now before us, as being from the hand of Da Vinci himself. The question naturally arises as to whether any link can be traced to connect Da Vinci with the subject of general cosmography, so as to explain the circumstance of a map of the world having been delineated by him.

I must here observe that the map shows indications of having been first drawn in pencil, suggesting the great likelihood of its being a copy from the work of another, and it would seem that the map from which it was copied was laid down

by an Italian, since the names in Spanish are not only Italianised in the spelling, but are in some cases so grossly mis-spelt as to indicate misreading of names from their form as written in Spanish, and in others the misapprehension of the form of name as uttered *vivá voce*. Of the first kind of mis-spelling we have examples: in the word "Inclind," on the east coast of Africa, a manifest mis-spelling for "Melinda," the three strokes of the "M" being mistaken for "In," and the "e" for a "c." "Areolodo," on the north coast of South America, for "Arboleda," the third letter, "b," of the Spanish being mistaken for an "e." Of the latter kind we have an instance in the sound of "Mosquito," on the coast of Honduras, being altered into "Mastilca," and "Tamaragua" into "Tanabacoa." Now, although I am not prepared to show to a certainty—as indeed I should be very fortunate if I could—from whose map this copy was made by Leonardo, yet I am able to present a series of facts of the highest interest with reference to the cosmography of the day, and which at the same time show a connection between Leonardo and Amerigo Vespucci.

During the residence of Leonardo da Vinci at Florence, he was engaged for four years, probably from 1500 to 1504, on what, as a portrait, has been considered his *chef-d'œuvre* (although he himself was dissatisfied with it as incomplete), namely, that of Mona Lisa, the wife of a nobleman of Ferrara, named Francesco Giocondi. This picture, formerly at Fontainebleau, now at the Louvre, was purchased by Francis the First for 12,000 francs. It is a perfect marvel of life-like expression, and it is recorded by Vasari that Leonardo took such interest in bringing it to perfection, that it was his habit to provide dancers and buffoons to amuse the lady during her sittings, so as to throw animation into a face which otherwise, though very beautiful, had somewhat too great a tendency to pensiveness. Francesco Giocondi was an intimate friend of Leonardo, and it was at the earnest request of the latter that permission was given by the former, for this more than ordinarily elaborated portraiture of his wife. Furthermore, during this period, Leonardo enjoyed the especial patronage and friendship of Pietro Soderini, Gonfaloniere of Florence, who, in his youth, had been a schoolfellow of Amerigo Vespucci, under the tutelage of Vespucci's uncle, Georgio Antonio Vespucci, as we find particularly mentioned by the antiquary Giuliano Ricci, as quoted in Bandini's Life of Vespucci.

Now, when Vespucci was at Seville in 1501, we find from a statement in a letter descriptive of his third voyage, addressed to Soderini, that one Giuliano, son of Bartolommeo Giocondi, then resident at Lisbon, was sent to him by Don Manoel, King of Portugal, to induce him to exchange the service of the King of Spain for that of Portugal; in which mission Giocondi was successful. In another

letter describing the same third voyage, written originally by Vespucci in Spanish, but translated into Italian and Latin, we find at the end of the Latin version, printed at Augsburg in 1504, the words “ex Italica in Latinam linguam Jocundus interpres hanc epistolam vertit,” and at the close of the Italian version of the same letter, printed with the “Paesi novamente ritrovati” at Vicenza, 1507, are the words, “De Spagnola in lingua Ro. et Jocôdo interprete, questa epistola ha traducta.” This member of the Giocondi family was supposed by Humboldt to have been identical with the just mentioned Giuliano, son of Bartolommeo (whom, *i. e.* Giuliano, he incorrectly calls Bartolommeo) Giocondi. In this very natural and reasonable conjecture, however, the illustrious Humboldt was in error. Meusel more correctly says, “Auctor versionis fuisse dicitur Jocundo sive Johann Giocondi;” and Brunet likewise, in his “Manuel de Libraire,” is right in stating “On croit que le ‘Jocondus interpres,’ dont il a été question ci-dessus, est Giov. Giocondi.” It is thus seen, that both Meusel and Brunet, though right, speak with uncertainty as to the identity of this Giocondi who made the translation. It has been my good fortune to see a rare and possibly unique work, purchased by the British Museum within the last few weeks, which tells us distinctly who this translator was. This work, entitled “Speculi orbis succinetiss. sed neque poenitenda neque inelegans declaratio et canon.” consists of only four leaves. It is written by Walter Lud, canon of the cathedral of St. Dié in Lorraine, and secretary to René II., Duke of Lorraine and titular King of Jerusalem and Sicily, to whom it is dedicated with the date of 1507. In it, speaking of the aforesaid letter of Vespucci descriptive of his third voyage, he says, that it was “per Jocundum Veronensem qui apud Venetos architecti munere fungitur, ex Italico in Latinum sermone verso.”

This information enlightens us completely as to the person in question, who was the celebrated Fra Giocondi, a native of Verona, and highly distinguished as an architect at Venice, and, furthermore, was, at the very period when Leonardo was at work on the portrait of Mona Lisa, engaged in the service of Louis the Twelfth, and built the bridge of Nôtre Dame at Paris, which is at present standing, together with, as some had supposed, the *petit pont* in continuation, crossing the southern branch of the Seine. This supposition was drawn from the following couplet by Sannazaro—

“Jocundus geminum imposuit tibi, Sequana, pontem,  
Hunc tu jure potes dicere Pontificem;”

but it has been since disproved.



Fra Giocondi was also as remarkable for his skill in the classical languages as for his scientific and artistic attainments, which, together with the probability of his family connection with the above-named Giuliano Giocondi, will explain the reasonableness of his having the letter of Vespucci placed in his hands for translation. It is not improbable that Giuliano Giocondi was connected with the Florentine mercantile house of Berardi at Seville, of which Vespucci had in 1496 been the manager. Francesco Giocondi, the husband of Mona Lisa, it is true, was a native of Ferrara; but the long period of four years, during which Leonardo da Vinci was engaged on the portrait of his wife, shows that he was a resident of Florence at the time when the discoveries of the Florentine Vespucci were there followed with the keenest curiosity and pride. Although these facts, however, do not prove to demonstration a connection between Leonardo and the interest in geographical explorations thus represented by Giuliano and Fra Giovanni Giocondi, yet I offer them for *quantum valeant*, and think they are not without their suggestive importance. It is also worth mentioning that we learn from Vasari that Leonardo made a portrait of Vespucci in charcoal, which is described as being that of a very handsome old man. This portrait is now unknown.

I have stated that the letter I have just been speaking of was intended for Soderini, and so it is shown to be, not only from the tenor of the address at its commencement, but by the fact that it was afterwards printed by Ramusio, and later by Bandini, with the name of Soderini at the head of it. It is however not the less true that it was first printed with the name of Lorenzo di Pierfrancesco de' Medici. In a valuable letter from Professor Ranke to the Baron Von Humboldt, upon the subject of this simultaneous correspondence of Vespucci with Soderini and Lorenzo di Pierfrancesco de' Medici, we are informed who this latter personage was. He belonged to the younger branch of the Medici family, which, although equally wealthy with the elder branch, had no share in the power experienced by the latter. After the death of Lorenzo the Magnificent, in 1492, Pietro de' Medici, who assumed the reins of government at Florence, by various affronts alienated from him all his cousins of the younger branch, and a deadly rivalry between the two branches was the consequence. The opposition of the younger branch was most remarkably shown on the invasion of Charles VIII., when Pietro de' Medici allied himself with the King of Naples, while his cousins entered upon negotiations with France, and received the ambassadors of that country. At the very time when the victories and the successes of Charles the VIII. were exciting great discontent among the people at Florence, these movements were encouraged by the younger branch of the Medici, and Lorenzo

di Pierfrancesco in particular, whose partisans adopted the name of Popolani. The family of Soderini had for a long time been regarded as the adherents of the elder branch of the Medici, and in fact no citizen of Florence had rendered greater services to the father and grandfather of Pietro de' Medici than had Tommaso Soderini; but these services were forgotten by Pietro de' Medici, who neglected and treated with disdain the children of Tommaso. The latter in consequence made common cause with the younger branch of the Medici, had a share in the revolution of the 9th of November, 1494, which overthrew the elder branch, and took an active part in the republican system of government which followed on these popular movements. It is true that at a later period there arose some slight disagreement between the Soderini and the Popolani, and that Lorenzo di Pierfrancesco was not pleased with the nomination in 1502 of Pietro Soderini, the son of Tommaso, to the rank of Gonfaloniere of Florence; yet, in the main, the political interests of the Soderini and the younger branch of the Medici remained united. Now it can be further proved that the Vespucci themselves belonged to the republican party of Florence. Guidantonio Vespucci, of whom Bandini speaks at p. xvi., was closely mixed up with the movements of this party. After the expulsion of Pietro de' Medici in 1494, he at first sat, together with Lorenzo di Pierfrancesco, among the twenty *accoppiatori* of the first magistrate (Nerli, *Commentarii de fatti civili di Firenze*, p. 59), and afterwards himself became Gonfaloniere. The political connection of the Vespucci with the younger branch of the Medici is further confirmed by a letter written from Pistoja, in 1494, by Pietro Vespucci to Lorenzo de' Medici, (See Bandini, p. xv.) who is most probably the identical Lorenzo di Pierfrancesco, to whom Amerigo Vespucci addressed some of his letters during his long absence from Italy. This connection of Amerigo with the republican party at Florence is by no means difficult to comprehend. Even Francesco Lotti, who is mentioned by Vespucci in the narrative of his second voyage, and by whom he proposed to send a mappemonde to Lorenzo di Pierfrancesco, was in 1529 member of an administration entirely hostile to the Medici of the elder branch. The title of Magnifico sometimes given by Vespucci to Lorenzo is easily intelligible, for, as it had always been conceded without opposition to the elder branch, it might readily be applied to the younger branch also on account of the important position they now held in connection with the affairs of state. Lorenzo di Pierfrancesco died in 1503, and in this fact the Baron Von Humboldt finds a difficulty, on the score of this narrative of the third voyage having been written, as he says, after the fourth voyage, which was finished in June, 1504, for which he advances as evidence the expression "*Peraventura vi aggiugneró la quarta*

giornata," as if it were already completed; now this inference is not for a moment tenable, for the next words following, in this narrative of his third voyage, are, "Ho in animo di nuovo andare a cercar quella parte del mondo che riguarda mezzogiorno;" and, what is still more important, this letter was written three years earlier than, and of course quite independently of, the collective four voyages addressed to Soderini under date of the 4th September, 1504. This confusion removed, the difficulty disappears, for the true date of the independent narrative of the third voyage was probably at the close of 1502, and certainly before Vespucci's departure on his fourth voyage on the 10th of May, 1503.

So much for a probable personal connection between the two distinguished Florentines,\* Leonardo da Vinci and Amerigo Vespucci. I will now proceed to show a yet further connection between the map of the former and the writings of the latter—a connection the certainty of which is established by that surest of all tests, the repetition of a blunder. It has been seen that on the east coast of South America occurs the word Abatia, the real interpretation of which is the well-known name of Bahia de todos os Santos. It is fortunate, for the avoidance of prolixity, that the examination of the origin of this blunder leads us, at the same time, into the history of the first suggestion of the name of America, which was otherwise a point of interest that would have to be dealt with in connection with the prominent peculiarity which I claim for Leonardo's map.

But, before I commence my narrative, I will for clearness' sake state, as briefly as possible, the dates of the earliest manuscript and engraved maps on which the new world is delineated, as well as the date of the first suggestion of the name of America, the date of the first adoption of that suggestion, and the date of the first map hitherto known on which that name was inserted.

Until the year 1832, the earliest known manuscript map containing the delineation of America was one of the date of 1527, now in the military library at Weimar; it is earlier by two years than the map of Diego Ribero, in the same library. In 1832, however, was discovered the now famous map of the pilot Juan de la Cosa, who accompanied Columbus in his second voyage in 1493, and Hojeda and Vespucci in their expedition of 1499. It was this Juan de la Cosa of whom, according to the testimony of Bernardo de Sbarra, in a suit against Diego Columbus, the admiral complained that being "hombre habil, andaba diciendo que sabia mas que él." In this map, which is dated 1500, we find the earliest known delineation of the new world.

\* I do not hesitate to call Leonardo a Florentine, as Vinci, his native place, was but five leagues west of Florence.

It was in May of 1507, just one twelvemonth after the death of Columbus, that one Martin Waldseemüller, whose name is strangely Hellenized into Hylacomilus, produced a little work, entitled "*Cosmographiæ Introductio*," to which was appended a Latin translation of the four voyages of Vespucci. In this book, which was printed at the small town of St. Dié, in Lorraine, and was one of the only two works known to have been printed at that place (of which I shall have presently to speak more fully), he proposes that the name of America should be given to the new world. His suggestion is offered in the following words:—"Et quarta orbis pars, quam, quia Americus invenit, Amerigen, quasi Americi terram, sive Americam nuncupare licet." And a few pages later he says:—"Nunc vero et hæc partes sunt latius lustratæ, et alia quarta pars per Americum Vesputium, ut in sequentibus audietur, inventa est, quam non video cur quis jure vetet ab Americo inventore, sagacis ingenii viro, Amerigen, quasi Americi terram sive Americam dicendam, cum et Europa et Asia a mulieribus sua sortita sint nomina. Ejus situm et gentium mores ex his binis Americi navigationibus quæ sequuntur liquidè intelligi dant." In September of the same year appeared a re-issue at St. Dié of this same book, and in 1509 a new edition of it was issued from the printing-press of the celebrated printer Johann Grüninger.

In 1508, in an edition of Ptolemy published at Rome, appeared the first engraved map containing the new world, by Johann Ruysch. It does not bear the name of America; but it is proved, in common with Leonardo's map, to have had a Vespuccian origin, for it contains the remarkable word *Abbatia*, of which I have spoken already, and shall have presently to speak more fully.

In 1509 the name of America, proposed by Hylacomilus in 1507, appears, as if it were already accepted as a well-known denomination, in an anonymous work entitled "*Globus Mundi*," printed at Strasburg in that year. This was three years before the death of Vespucci.\* Although, as Humboldt says, this work is anonymous, yet from the colophon I have discovered, if not the author, at any rate from what quarter the book emanated. It runs thus, "*Ex Argentina ultima Augusti, 1509. J. Grüniger imprimebat, Adelpho castigatore.*" Now, this Adelphus was a physician, a native of Mühlingen, near Strasburg, who afterwards established himself in that city. But I have but just said that in this self-same year, 1509, a re-issue of the "*Cosmographiæ Introductio*," containing the first suggestion of the name of America, appeared from the press of this same

\* The work has been erroneously attributed by Panzer to Henricus Loritus Glaucanus, born in 1488, author of "*Geographiæ Liber*." Basil, 1527.

Johann Grüniger, with the following words in the colophon, "Johanne Adelpho Mulicho, Argentinensi, castigatore." Mulicho simply means native of Mühlingen. The coincidence suggests the suspicion that Hylacomilus, the author of the suggestion, is the author also of its adoption; but, in any case, I think that the idea presented to the mind by Humboldt of the denomination being well known on account of its insertion in the "Globus Mundi," receives a serious modification, for the original suggestion and its adoption two years later are thus shown to emanate, almost to a certainty, from the same quarter.

The first place in which we find the name of America used a little further a-field, is not, as has hitherto been stated by Humboldt and others, in the Pomponius Mela of 1522, but in the edition of that work of 1518. The passage itself is to the following effect:—"Si Americam a Vespuccio repertam et eam Eoæ Terræ partem quæ terræ a Ptolemæo cognitæ adjecta est ad longitudinis habitatae rationem referimus, longè ultra hemisphærium habitari terram constat," and occurs in a letter addressed by the editor Joachim Vadianus to Rudolphus Agricola at the end of his commentary on the ancient geographer, and this letter is dated from Vienna, 1512. But, although this Vadianus, whose real name was Joachim Watt, writes from Vienna in that year, I find that he was a native of St. Gall, whence in 1508, being then twenty-four years old, he went to the High School at Vienna. His learned disputations and verses gained him the chair of the Professorship of the Liberal Arts at that school, and he subsequently studied medicine, of which faculty he obtained the doctorate. This attachment to the study of medicine recalls to my mind a fact which awakens a suspicion that he may have been a personal friend of John Adelphus just referred to, and if so of the little confraternity of St. Dié. Before Adelphus established himself in Strasburg he had practised as a physician at Schaffhausen, and this at the time when Joachim Watt was a young man still resident in his native town of St. Gall, which is distant from Schaffhausen seventy English miles, a distance which would offer very little hindrance to Swiss intercommunication. Whether this suspicion be worth anything or no, I advance it as a possible clue to yet further researches which may show the process by which this spurious appellation of America became adopted through the efforts of a small cluster of men in an obscure corner of France.

The first map of the New World, either engraved or manuscript, hitherto known with the name of America inserted on it, is a mappemonde by Appianus bearing the date of 1520, annexed to the edition by Camers of the Polyhistoria of Julius Solinus (Viennæ Austr. 1520), and a second time to the edition of Pomponius Mela, by Vadianus, printed at Basle in 1522.



Having thus laid before you the leading points of priority in connection with our subject, some of them as hitherto accepted and others newly discovered by myself, I will proceed with my story.

In September, 1504, Amerigo Vespucci indited an account of his four voyages, which Humboldt, influenced by the fact of the Italian containing many Italianized Spanish words, felt convinced was originally written in Spanish. For my own part, I am bold to confess that this fact conveys to me an exactly contrary conviction, and in that conviction I am supported by the opinions of many learned friends whom I have consulted, and who, without a single exception, agree with me in the belief that the letters were written originally by Vespucci himself in Italian; and that the thirty-three purely Spanish, and about one hundred and forty Italianized Spanish or Portuguese words, which occur in the letters, are the result of his almost uninterrupted habit of speaking Spanish or Portuguese during the previous twelve years. Of the correctness of this judgment we have collateral evidence in the effect upon the Italian language of the introduction of Spaniards at the court of Charles V. at Milan, thus ironically spoken of by Ariosto in his Satire (Ariosto, Satira 3, a Messer Galasso Ariosto):—

Signor, dirò, non s'usa più fratello,  
Poichè la vile adulazion Spagnola  
Mess' ha la signoria fin in bordello,  
Signor, se fosse ben mozzo da spola,  
Dirò, fate per Dio che monsignore  
Reverendissimo oda una parola.  
Agora non se puede, et es migliore  
Che vos torneis a la magnana; almeno  
Fate ch'ei sappia ch'io son quì di fuore,  
Risponde che'l padron non vuol gli sieno  
Fatte imbasciate se venisse Pietro,  
Paol, Giovanni e'l mastro Nazareno.

I am further confirmed in my conclusion that the letters were originally written in Italian by the fact that, whereas every one of the numerous editions in various languages, either of the separate third voyage or of the four voyages collectively, declares from what language it had been translated, the Italian edition of the four voyages, printed without date or year, but almost certainly in the first decade of the sixteenth century, makes no allusion to any translation at all, while the earliest edition, a Latin one, which does announce itself as a translation, declares it to be from the Italian into French, and from the French into Latin. This question is not unimportant in connection with the blunder in the word *Abbatia*, for, while Humboldt argues that “it is easier to

convert through ignorance the equally Spanish and Portuguese word 'Bahia' into 'Abbaye' than the Italian word 'Baia,' unless the Latin translator had simply translated by mistake 'Abbaye' for 'Baie,' I venture to maintain, in conformity with what I have already advanced, that Vespucci wrote in his original Italian letter the Portuguese word "Bahia," with the Italian conclusion of the name "de tucti e sancte." Humboldt, it would seem, had never seen the early separate Italian edition of these four voyages, a copy of which is in the Grenville Library, but he had seen the reprint of the same in Bandini's "Life and Letters of Vespucci;" for on page 159 of vol. iv. he quotes the passage in question as having the form of "La Badia," and so, in fact, it stands in the Grenville Library edition. And in this very form we have the explanation of the whole blunder. It is easily intelligible how Vespucci, whose Italian abounds in Italianized Spanish and Portuguese words, should, when writing in Italian the Portuguese name "Bahia de todos os santos," describe it as "Bahia (not the Italian 'Baia') de tucti e sancte;" and it is equally easy to understand how the printer should misread an "h" for a "d," and thus convert "La Bahia" into "La Badia." Whereas, had the original been Spanish, and then translated into Italian, we should naturally have had the pure Italian word "Baia," which would never by any blunder have led to "La Badia" or anything like it. The translator from the Italian into the French, finding nothing in the word "Badia" to suggest to his mind the idea of a bay, gives it its literal rendering of "Abbaye," and hence, when translated into Latin, comes in due course the word "Abbatia." An additional reason for supposing that the original was written in Italian is, that the early Italian edition in the Grenville Library is prefaced by an address to a person whose name is omitted, but who is proved to be Pietro Soderini, Gonfaloniere of Florence, by the following concurrent points of evidence. Vespucci, in this address, reminds the person that he is writing to, that "nel tempo della nostra gioventù, vi ero amico, e hora servidore: e andando a udire i principii di grammatica sotto la buona vita e dottrina del venerabile religioso frate di S. Marco, fra Giorgio Antonio Vespucci, mio zio; i consigli e dottrina del quale piacesse a Dio che io avesse seguitato, che come dice il Petrarca: Io sarei altro huomo da quel che io sono. Quomodocunque sit, non mi dolgho; perche sempre mi sono dilettrato in cose virtuose; e anchora che queste mie patragne<sup>a</sup> non siano convenienti alle virtù vostre, vi diro, como dixe Plinio a Mecenate;<sup>b</sup> voi solavate

<sup>a</sup> In this word "patragne," which means "fabulous stories," in Spanish, "patrañas," we have an example of Vespucci's Italianized Spanish.

<sup>b</sup> He should have said, "Catullus to Cornelius Nepos."

in alcun tempo pigliare piacere delle mie ciancie. Anchora che vostra Mag. stia del continuo occupata né pubblici negotii, alchuna hora piglierete di scanso consumare un poco di tempo nelle cose ridicole o dilectevoli." He states also that the bearer of these letters Benvenuto Benvenuti is "nostro Fiorentino, molto servitore di vostra magnificenza e molto amico mio," and the fourth letter concludes with a recommendation of the writer's brother and family to the protection of the person addressed in the following terms:—"E vi raccomando Ser Antonio Vespucci mio fratello e tucta la casa mia. Resto rogando Dio che vi accresca i dì della vita e che s'alzi lo stato di cotesta eccelsa Rep. e l'onore di V. M. Data in Lisbona adì 4 di Settembre, 1504."

Now we know from the antiquary Giuliano Ricci that Soderini *had been* a schoolfellow of Vespucci, and what I have read is otherwise sufficient in itself to show that the letters were addressed to Pietro Soderini, but the fact is further confirmed by Soderini's name being placed at the head of these letters forty-three years later by Ramusio in his reprint of them in the first volume of the "Navigationi e Viaggi" in 1550, and also by Bandini in his later reprint in 1745, it being presumable that they had seen the original letter with Soderini's name placed at the head of the address. Who, then, will doubt that to Soderini Vespucci would naturally write in Italian? But while it is thus shown to be certain that Soderini was the person thus addressed—a fact upon which I have dwelt for the sake of showing one more incidental link between Leonardo da Vinci, whose patron and friend Soderini was, and Vespucci—another fact that is not so easily intelligible is equally certain, and of the greatest importance to our subject. Forty-three years before these letters and that address became placed before the world with Soderini's name attached to them, we find them published in Latin so early as 1507, with the address in the very same identical terms with respect to the writer and the person addressed having been schoolfellows, but headed with the name of René, Duke of Lorraine and King of Jerusalem and Sicily. This remarkable fact is surrounded with mystery. What the relationship was between Duke René and Vespucci I have been unable to trace, but the false glorification of both was unquestionably given forth to the world in print in the lifetime not only of Vespucci and Duke René, but of Soderini also. It was under the auspices of Duke René II. that these four letters were printed, as already stated, at St. Dié in Lorraine, with the dedication of the above-mentioned address of Vespucci to the Duke, preceded by a *Cosmographiæ Introductio*, in which was offered the first suggestion of giving to the New World the name of America. That this was

a false glorification of Vespucci to the prejudice of his friend and captain the illustrious and much-injured Columbus, whether intentional or not, has been demonstrated by Humboldt in a manner which is as honourable to his impartiality as it is to his vast learning and untiring industry. That it was a false glorification of the Duke is highly presumable from the extreme improbability that an address, involving personalities unquestionably applicable to Soderini, should be equally applicable in the very same terms to the reigning Prince of Lorraine. It is true that M. Beaupré in his "*Etudes sur l'Imprimerie*," Saint Nicolas de Port, 1845, p. 81, advances arguments to the following effect to show the possibility of Duke René having, in fact, been, as well as Soderini, a schoolfellow of Vespucci. He says, "Is it so unlikely that René II., when young, should have accompanied his father Ferry de Vaudemont into Italy either in 1460, when he was sent by René I. to the help of John of Calabria, or in 1463, when Ferry followed that prince, his brother by alliance and his sovereign, in the last expedition which was attempted by the House of Anjou to reconquer the kingdom of Naples?" And he further suggests that no city would be so convenient either for the education or the safety of the youthful prince as Florence.

This argument of M. Beaupré's is at the best but the advancement of a possibility of very little probability, for, in mentioning the schoolfellows of Vespucci, is it reasonable that the antiquary Giuliano Ricci should have omitted the name of a person so high in rank, and who had otherwise subsequently rendered himself so distinguished in history by his conflicts with Charles the Bold, as King René, Duke of Lorraine? But, whether truth or falsehood be at the bottom of this presumed and publicly announced connection between Vespucci and the Duke, I will proceed to a description of the details by which the letters of the former came to be printed under the auspices of the latter.

The Duke's secretary was one Walter Lud, of whom I have already had occasion to speak, Canon of the Cathedral of St. Dié, a small city on the banks of the Meurthe within the Duke's dominions. A zealous friend of literature, this worthy priest established a gymnasium or college at St. Dié, and, what is still more remarkable, he there set up also a printing press. The professor of Latin at the college was a young man of great abilities, named Mathias Ringmann, better known in the literary world by the pseudonym of Philesius, with the adjunct of Vosgesigena in allusion to his having been born either at Schlestadt or in a little village near it, on the eastern side of the Vosges mountains. This Ringmann was corrector of the press in Walter Lud's printing office. Another important

personage in this little confraternity was Martin Waldseemüller, or Hylacomilus, for the first discovery of whose identity we are indebted to the unflagging zeal of the Baron von Humboldt. He was a native of Fribourg in Brisgau, and entered as student at the famous academy of that place on the 7th of December, 1490. Going in the vintage season in 1504, in conformity with an annual habit of his, to eat grapes in Lorraine, he became so charmed with the society of his learned friends at St. Dié, that he made up his mind to take up his abode there, and became a teacher of geography at the gymnasium. Now, I cannot but deem myself exceedingly fortunate that the possibly unique work of Walter Lud, the "*Speculum Orbis*," to which I have referred, should have been purchased for the British Museum at the very time that I was engaged in preparing this paper. One sentence from this opusculum not only brings before us the little group of fellow-labourers each in his own place, but will throw a light, which has till now been wanting, on the history of the publication of the letters of Vespucci.

After speaking of the "*ignota terra per Lusitaniæ regem pridem inventa*," he says, "*De quâ orâ plura et veriora in Ptholomæo per nos et Martinum Ilacomylum talium rerum scientissimum cum multis additamentis recognito (quem nostris impensis mox Christo favente imprimemus) videre licebit. Quarum etiam regionum descriptionem ex Portugalliâ ad te, illustrissime Rex Renate, Gallico sermone missas, Jo. Basinus Sendacurius insignis poeta a me exoratus, quâ pollet elegantîâ, Latinè interpretavit. Et circumferunt bibliopolæ passim eâ de re nostri Philesii Vogesigenæ quoddam epigramma in libello Vespuccii per Jocundum Veronensem qui apud Venetos architecti munere fungitur ex Italico in Latinum sermonem verso impressum quod bis subjicere libuit.*" From this we learn that the French version of the letters of Vespucci, intended for King René, and which was probably in manuscript—for no copy in type has ever been heard of—was prepared in Lisbon, under the eye of Vespucci himself, by which the seal of his sanction was given to the claim of early school-boy intimacy, at first addressed in Italian to Soderini but now transferred, without any change except that of translation, to the Duke of Lorraine. We further learn, and that now for the first time, that the translator from the French to the Latin was not, as has been hitherto supposed upon Humboldt's conjecture, Mathias Ringmann, otherwise known as Philesius, but the "*insignis poeta*," Jean Basin de Sandacourt, also a canon of St. Dié. If his poetry were not superior to his latinity, it must be confessed that his worthy friend Walter Lud must either have been a very warm friend indeed, or a very incompetent critic,

unless, which is inconceivable, he spoke in irony of the “*quâ pollet elegantîâ*” of his really barbarous translation.

But further, we have in this extract from the “*Speculum Orbis*,” an intimation that our little cluster of friends were bent upon the production of an edition of Ptolemy. Walter Lud wrote his “*Speculum*” in 1507, but it was not till six years after, in 1513, that the great and really valuable work thus promised appeared. In a letter addressed to Essler and Ubelin, the editors of this edition, by Giovanni Francesco Pico di Mirandola, under date of Como, 1508, we have evidence of two journeys made into Italy by Ringmann in connection with the subject of Ptolemy, and in the same letter we have evidence of the manner in which the discoveries of Vespucci were lauded, to the exclusion of those of Columbus. He says: “*Cujus viri (Ptolomæi) diligentîæ pleraque vos adhibituros retulit Philésius: inter quæ illa cum Ptolomæo ipsi, tum cæteris ignota scriptoribus, nostra ætate miro divinæ providentiæ munere, Lusitana classe reperta. Quâ de re ut indicam illam navigationem subsignaremus, nuper in nostro ad Christum hymno nostris etiam interpretamentis patefacto ita cecinimus:*

“*Quin et Ulysseo nuper de littore solvens  
Nauta per infidum pelagus, per atlantica regna  
Discurrens: viridique jugo post terga relicto  
Arctoi relegens contraria sidera currus:  
Pertulit eos tua Rex vexilla sub Indos.*”

The “*Lusitana classe reperta*” is all in Vespucci’s honour, while Columbus is utterly ignored.

In another letter from the editors of the 1513 edition of Ptolemy to the Emperor Maximilian, we find that Pico de Mirandola gave Ringmann a Greek manuscript of Ptolemy, and that this was before the appearance of the suggestion of the name of America in 1507 is shown by an expression in the dedication of the very book containing the suggestion. In it Hylacomilus says that he had lately established a library or book-shop (*librariam officinam*), and that there he had been laboriously occupied in the critical examination, both of a Greek manuscript of Ptolemy, and of the edition of the four voyages of Vespucci. Whether it was in the first or the second journey of Ringmann to Italy that he received this manuscript from Pico de Mirandola I am unable to show, but it appears probable that his first journey was several years before the second, and that in it he caught the enthusiasm in favour of Vespucci from communication with the more justifiably enthusiastic compatriots of that navigator. I derive this inference from a remark in my extract from the *Speculum Orbis* of Walter Lud,

which says that a poem by Ringmann, which appeared in the *Cosmographiæ Introductio*, was also inserted in an edition of the third voyage translated by Fra Giovanni Giocondi four or five years before, as already described. In the absence of a known reason for a connection between King René and Vespucci, may it not be traced on the one side from this intercourse of Ringmann with the Italian connections of Vespucci,—among whom we must, upon grounds already shown, reckon Leonardo da Vinci,—and on the other from the intimate relationship of Walter Lud with the prince in his character of secretary; combined with the manifest glorification of each and of all of them, by the confraternity at St. Dié fixing upon Vespucci the honour of the discovery of the new world, by the suggestion of the name of America in widely disseminated printed works purposely dedicated to their princely patron?

From the dates of the letter of Pico de Mirandola to the editors, and of another from Lilio Gregorio Giraldi to Ringmann himself in September, 1508, we may presume that the preparation of the edition of Ptolemy was, at that time, going on in full vigour; but King René died in December of that year, and the consequence was that the printing-press at St. Dié was broken up, and Ringmann went home to Schlestadt, where he died in 1511, at the early age of twenty-nine. It is probable that his withdrawal from the work may have caused the delay in the production of the contemplated edition of Ptolemy till 1513. When that work appeared, however, it contained a new map, entitled *Tabula Terre Nove*, by Hylacomilus, on which, strange to say, the name of America does not appear, but, on the contrary, there is inserted on the very continent of South America the following legend: “*Hec terra cum adjacentibus insulis inventa est per Columbum Januensem ex mandatis Regis Castillæ.*” No fact more strongly than this could demonstrate the falsehood embodied by this very man in the suggestion of the name of America, for this sentence is in direct contradiction of the only basis upon which he could have pretended to have given this honour to Vespucci. In the 1522 edition of Ptolemy, which I have not had an opportunity of seeing, there appears to be a repetition of a *mappe-monde* by Hylacomilus inserted in the 1513 edition, with the addition, on that of 1522, of the name of America, for a long time considered the first insertion of that name on any map.

These various facts, I submit, offer an explanation of the connection between Vespucci at Lisbon and the suggestion and adoption of the name of America for the western world, as well as between both these and Leonardo da

Vinci, on whose map we now find that name inserted at a period earlier than on any other map with which we are as yet acquainted.

I ought scarcely to close this paper without one word of homage, however feebly uttered, to the colossal genius of the wonderfully-gifted man who has now in a manner been brought in presence before us. Of distinguished personal beauty, with bodily strength so great that he could bend a horse-shoe with his hands as if it were lead, he possessed a comprehensive and effective grasp of intellect which I believe we may look for in vain elsewhere amongst the sons of men. Before I be blamed for this apparently audacious statement, let it be remembered that his vast collections of manuscript notes in that uninviting handwriting of his from right to left, have not as yet been laid before the world in print. But if only the statements made by Venturi, in his *Essai sur les Ouvrages physico-mathématiques de Leonard de Vinci*, Paris, 1797, based upon the examination of a portion of Leonardo's papers be correct, I respectfully but confidently repeat my eulogium. But, lest I be deemed presumptuous, let me quote the words of one to whom all will listen with deference. Hallam, in his *Literature of Europe*, vol. i. p. 216, says as follows: "His Treatise on Painting is known as a very early disquisition on the rules of the art. But his greatest literary distinction is derived from those short fragments of his unpublished writings that appeared not so many years since, and which, according at least to our common estimate of the age in which he lived, are more like revelations of physical truths vouchsafed to a single mind than the superstructure of its reasoning upon any established basis." The discoveries which made Galileo and Kepler, and Mæstlin and Maurolycus, and Castelli and other names illustrious, the system of Copernicus, the very theories of recent geologists, are anticipated by Da Vinci within the compass of a few pages, not perhaps in the most precise language, or on the most conclusive reasoning, but so as to strike us with something like the awe of preternatural knowledge.

But let facts be my sanction. "In an age of so much dogmatism," as Hallam again remarks, "he first laid down the grand principle of Bacon, that experiment and observation must be the guides to just theory in the investigation of nature." Beyond this, both as a musician and as an improvisatore poet, he surpassed all his rivals. If we regard him as a sculptor, by the acknowledgment of all his contemporaries, his monument to Francesco Sforza could fairly claim the palm by comparison with the most beautiful statues. As a painter he had Michael Angelo for a rival, and Raffaello for an imitator in energy and natural gracefulness of effect, and, if it should be the opinion of any that these two afterwards



surpassed him in that one art, it should be remembered that to him justly belongs the merit of having first pointed out the road they so successfully followed.

In mechanics he was acquainted with the theory of oblique forces applied to the arm of the lever; the relative resistance of beams; the laws of friction; the influence of the centre of gravity on bodies in rest and in movement; the application of the principle of virtual velocities under a variety of circumstances, the knowledge of which has been brought to so great perfection in our own times. It was he who invented the smoke-jack, and, what is perhaps more striking than all, there is found among his writings the design for a steam-gun. But beyond evidences of theoretical knowledge of mechanics, his practical skill as a mechanician was shown in most marvellous specimens of handiwork constructed for adornment or amusement at a variety of princely festivals. In optics he described the camera obscura, some ninety years before Porta developed the idea into practice. He explained the effect of the sun's rays through an angular hole, more than half a century before the same principle was developed by Maurolycus. He instructs us on aerial perspective, the nature of coloured shadows, the movements of the iris, the effects of the duration of impressions on the eye, with many other optical phenomena, which were unknown to his famous predecessor Vitellio. He conceived the first idea of a barometer, and also of a diving apparatus. He not only made observations promulgated a century later by Castelli on the movement of waters, but seems to have been far superior to the latter, who, nevertheless, has been looked upon in Italy as the founder of hydraulic science. He had very extraordinary but correct notions as to the time of descent on inclined planes of equal height, which he declared to be as their length. He first asserted that a body descends along the arc of a circle sooner than down the chord, and that a body descending an inclined plane will re-ascend with the same velocity as if it had fallen down the height. He frequently repeats that every body weighs in the direction of its movement, and weighs more in the ratio of its velocity; by weight evidently meaning what we call force. This is anticipative not only of Torricelli, a century and a half later, but, as it would seem, approximatively at least, of Huygens' theory of the wonderful properties of the cycloidal curve, some twenty years later still.

Leonardo was in advance of the geologists in observing that the sea had already covered mountains which contained shells; and by remarking that banks of such shells were, in process of time, covered by strata of fresh shells, again covered by alluvium. He seems to have had an idea of the elevation of continents, although he gives no intelligible reason for such a phenomenon.

He gave an explanation of the obscure light of the unilluminated part of the moon by reflection from the earth, as Maestlin did one hundred years after. He made the observation that respirable air alone could support flame. He ascribes the elevation of the equatorial waters above the polar to the heat of the sun; in which, with certain modifications, he is not far wrong. He not only understood fortification well, but since, as he said, "artillery has in our time four times the power it used to have, it is necessary that the fortification of towns should be strengthened in the same proportion." He was employed, as we have already seen, in several great works of engineering. He was the first in his very boyhood to propose a canal from Pisa to Florence. In after life, though still a young man, he made the Martesana Canal navigable from Trezzo to Milan. He first proposed the use of lock-gates to meet the difficulty of unequal levels in canals. He also was the first to recommend the use of *colmata*, a process for removing marshes by conducting into them torrents charged with alluvial matter, so that the mud brought down is there deposited, and, the subjacent soil thus becoming raised, a fall for the stagnant water is procured, so as to allow of the employment of the ordinary methods of drainage. He was, moreover, an ardent student of mathematics, of chemistry, of natural history, of botany; and in his anatomical drawings the great John Hunter, who examined them, remarked with admiring wonder the extreme diligence and exquisite exactness of their author, especially in the drawing of the most minute parts of the muscles.

In the presence of such a stupendous assemblage of original conceptions from the mind of this one noble monument of God's creative power, what transcendent honour must we own to have been shed upon the glorious country which gave birth to such a man. Great as he was, and without compeer, we know that he was not alone. Full many a kindred genius shed a lustre that can never die upon the country and upon the age in which he lived; many that, like him, have poured forth thoughts to brighten the world's darkness, which in their amplitude and perfection remind one of the birth of Minerva full clad from the head of Jupiter; and yet, amongst that host of intellectual giants, may I not fearlessly assert that that one man, Leonardo da Vinci, has a right to be regarded in all truth as *inter maximos maximus*?

I remain, my dear FRANKS, yours very truly,

R. H. MAJOR.

To Augustus Wollaston Franks, Esq.

&c. &c. &c.

## POSTSCRIPT.

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Since the foregoing pages passed through the press I have been shown by Henry Stevens, Esq., F.S.A., a memorandum which he had recently received from America, to the effect that in the *Revue Germanique*, vol. viii. p. 205, reference was made to a map bearing the name of America as early as 1512, and consequently earlier than the map by Leonardo da Vinci which forms the subject of this memoir. On reference to the work in question I found that such an assertion was really made in a review of *Die Entdeckung Amerikas*, by Fried. Kunstmann, München, 1859, 4to., and in the following terms:—"En Allemagne le nom d'Amérique fut appliqué de très bonne heure aux deux continents; on le trouve pour la première fois sur une carte qui accompagne quelquefois l'*Introductio in Ptolemæi Cosmographiam* de Joh: de Stobnicza, volume extrêmement rare imprimé à Cracovie en 1512, petit in 4to."

Should this assertion prove correct, which, for reasons that I shall presently adduce, I extremely doubt, it will be a fact to be wondered at, that within only a few days of the printing of a statement made by me in accordance with the accepted belief of the greatest writers on the early history of America, such as Humboldt, Lelewel, &c., this novel assertion should have been brought to my knowledge. At the same time it is evident that when any map whatever is put forth as the earliest of its kind *hitherto* known, it cannot be supposed to preclude the possibility of some other map appearing of an earlier date, not previously known to the writer. I will, however, proceed to give the result of my researches on this subject, which, although disproving almost conclusively the special statement in question, is not without interest in connection with the adoption of the name of America. That such a work as that referred to in the *Revue Germanique* was published at Cracow in 1512 is certain, although it is so rightly described as "*extrêmement rare*" that it is not known to Brunet. Kunstmann himself, indeed, states that in a copy of this book which he saw at Munich, there was an exceedingly rare map, which is not to be found in other copies; but, so far from saying that the name of America occurs on that map, he distinctly

asserts that the *earliest* date of a map hitherto known containing that name is, as I stated on page 26, 1520. Upon reference to the *Historia Literatury Polskiej*, by Wiszniewski, tom. 4. p. 105-6, the title of this work is given in the following terms:—*Introductio in Ptolemæi Cosmographiam cum longitudinibus et latitudinibus regionum et civitatum celebriorum. . . . . In titulo inveniuntur adhuc Pauli Crowsnensis ad lectorem versus et Distichon; titulo verso, Epistola dedicatoria ad Joannem Lubranski Episcopum Posnem Joannis de Stobnicza. In fine operis, Impressum Cracoviæ per Florianum Unglerium, A.D. 1512, 4to. fol. 40.*

Then follows the title of another edition, also printed at Cracow, but by Hieronym Wietor, in 1519. A copy of this latter edition is in the British Museum, but without a map; and it will be observed that, in the above bibliographical descriptions, *no mention* whatever is made of a map belonging to either edition. These two editions are also spoken of by Panzer, in his "*Annales Typographici*;" by Janotski, in his "*Janociana*," and also in his "*Nachricht von denen in der Hochgräfllich-Zaluskishen Bibliothek sich befindenden raren polnischen Büchern*;" but in none of them is the slightest mention made of any map. Maps of so early a date are surely rare enough to be deserving of notice by any bibliographer; how much more a map which would afford to men, whose love of country has been sharpened upon the very hardest of grindstones, the satisfaction of showing that to Poland was due the production of the earliest known map containing the name of America. But what is still more remarkable is, that this work of his countryman Stobnicza seems to have been utterly unknown to my late venerated and noble friend Joachim Lelewel, who had not only written largely upon the literature of his country, but devoted years of labour to the special study of the progress of geographical knowledge. To him the map, which is said to have accompanied this work, would have been a matter of peculiar interest, even if he had not been a Pole; of how much more interest then would it have been to one who loved Poland so dearly, that he unselfishly devoted to the support of his destitute fellow-countrymen the scanty earnings of his own laborious study. But further, if we refer to the article on Geography in tom. 9 of the "*Encyklopedyja Powszechna*," page 783, published at Warsaw so lately as 1862, we shall find it mentioned, as a fact to be noticed, that "*in the beginning of the sixteenth century, Petrus Appianus published a map in which America was mentioned*," evidently thereby implying that it was the *earliest* hitherto known, as on page 26 I stated it to be. Nevertheless, in spite of all these counter-arguments and the possibility that the map alluded to in the

“Revue Germanique,” may have been an accidental insertion, the assertion still remains in print that such a map exists; and if, contrary to all probability, that be the case, it will be a matter of interest to all geographers, as well as to myself, to make its acquaintance. One thing is certain, that, whether such a map exist or not, the volume to which it is said to belong is not only new to me, but contains a sentence which forms an interesting link in the chain of the story of the adoption of the name of America. It is a satisfaction to me to find that, whereas that link was brought to me loose, I am able to rivet it on to the chain to which it belongs.

The passage, which I take from the 1519 edition, runs thus:—“Non solum autem prædictæ tres partes nunc sunt latius lustratæ, verum et alia quarta pars ab Americo Vesputio sagacis ingenii viro inventa est, quam ab ipso Americo ejus inventore Amerigem quasi Americi terram sive Americam appellari volunt.” The language is evidently taken from that of the first suggestion of the name in the *Cosmographiæ Introductio* of Hylacomilus; see *supra*, page 25. At page 26 it will be seen that the first adoption of the name of America at any distance from S. Dié, where it was first suggested, was in a letter written from Vienna in 1512 by Joachim Vadianus or Watt to Rudolphus Agricola. Now in both the editions of Stobnicza’s work is inserted a Sapphic poem by Rudolphus Wasserburgensis, under which name lies concealed no other than Rudolphus Agricola, so named from his birth-place Wasserburg in the Grisons. Hence, through this Rudolphus Agricola, we trace a connection between Vadianus, who uses the name of America in Vienna in 1512, and Stobnicza who uses the same name in Cracow in the same year. This connection is still more closely shown by a passage in the “Janociana” already referred to, vol. i. p. 291, where it says that Vadianus, who had lived in the most affectionate intimacy with Rudolphus Agricola at Vienna, accompanied him on his journey into Poland, and especially mentions Cracow as the place where the former established a close friendship with one Justus Ludovicus Decius. It is further worth notice that Hieronym Wietor, who printed the second edition of Stobnicza’s work in Cracow in 1519, was the friend of Vadianus at Vienna in 1512, and in 1515 printed one of his works in that city; while Unglerius, who printed the 1512 edition at Cracow, is distinctly stated by Janotski to have been the intimate friend of Rudolphus Agricola the friend of Vadianus.

Of John Stobnicza himself, Janotski further informs us at page 253 that he received his name from his birthplace, a small town in Lesser Poland; he was educated at Cracow, where at the beginning of the 16th century he succeeded the

celebrated John of Glogau in the chair of philosophy, and shortly after was made president of the Gymnasium of Posen by John Lubranski, Bishop of Posen, who was its founder. I will content myself with giving the title of another work printed at Cracow, in the same year, and by the same printer, as the work by John Stobnicza now in question, in order further to connect him with the authors of the suggestion of the name of America. It runs thus, “*Modus epistolandi Philippi Beroaldi Bononiensis Viri clarissimi. Additis quibusdam ex elegantiss Jacobi Uimphelingii epistole necessariis. Cum Rudolphi Wasserbουργensis prefatione et carmine anapestico ad ingenuum lectorem. Cracoviæ, 1512.*” 4to. Now the excellent and learned Wimpheling, who is thus brought into fellowship with Rudolphus Agricola, was the townsman and tutor of Mathias Ringmann, the fellow-workman of Hylacomylus (see *supra*, p. 30), and had himself been a student at Fribourg, where Hylacomylus was born and received his education. He subsequently held a prebendal stall at Strasburg, where the 1509 edition of the “*Cosmographiæ Introductio*,” as well as the “*Globus Mundi*,” was printed. It is further worthy of notice that Wimpheling shared the opinions of Luther on the abuses which had been introduced into the Christian church, which would naturally bring him into connection with Vadianus, the founder of the Reformation in his native town of S. Gall, and with the friend of Vadianus, Rudolphus Agricola, himself a reformer; while all three were on terms of intimate correspondence with the learned Erasmus.

R. H. M.

British Museum, April 12th, 1865.