

A Brief Guide
To an Exhibition of
Maps of the Sixteenth Century
Illustrative of
The Discovery of America

BY

FRANK CUNDALL, F.S.A.,

Secretary and Librarian of the Institute of Jamaica.

ILLUSTRATED,

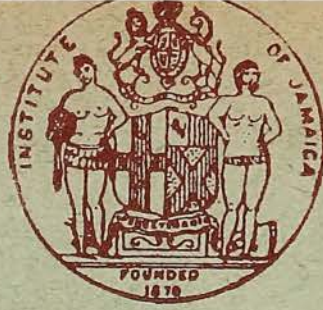
PUBLISHED FOR THE INSTITUTE OF JAMAICA

BY

THE EDUCATIONAL SUPPLY COMPANY,

16 KING STREET, KINGSTON.

1906.



THE INSTITUTE OF JAMAICA.

FOR THE ENCOURAGEMENT OF LITERATURE, SCIENCE AND ART

East Street, Kingston.

MEMBERS.—The Subscription is ten shillings or (to those who wish to borrow additional books) fifteen shillings; or, in case of Members residing outside Jamaica, five shillings per calendar year, payable on election, and on the 1st of January in each following year.

Members have the right to use the Members Room; to borrow two books (of which one only may be a new book that has been less than six months in the Library) and one magazine from the Library; and to attend, and to bring one friend to Members Meetings. Members who pay fifteen shillings a year are entitled to borrow four books of which two only may be new) and two magazines at a time.

A reduction in the favour of Members is made in the price of the subscription to the courses of Institute of Jamaica Lectures. They also receive copies of the current publications of the Institute, either gratis or at reduced rates, and are admitted free to exhibitions held by the Institute.

SUBSCRIBERS TO THE LIBRARY pay three shillings for three months' right to borrow books and magazines on the lines of the ten-shillings-a-year membership, or four shillings and sixpence for the facilities of the fifteen-shillings-a-year membership. Unless recommended by a member of the Board, they must lodge a deposit of ten shillings.

COUNTRY MEMBERS—Members and Subscribers to the Library can receive from and return to the Institute, free by post, books which may be taken to represent reading for the sake of improvement (not novels) and certain periodicals.

THE CATALOGUE OF THE LIBRARY, 1895, may be purchased, price 2s. There is a card catalogue in the Library, kept up to date.

BOXES OF BOOKS.—Boxes of 100 selected books are lent to local institutions, or private individuals, in the country, at a charge of £2 10s. per annum, payable in advance. The boxes are exchanged as often as is found possible.

THE LIBRARY, READING ROOM, MUSEUM, AND PORTRAIT GALLERY are opened to the public every week day. The Library and Reading Room from 11 a.m. to 9 p.m. on Mondays, Wednesdays, and Fridays, and from 11 a.m. to 5 p.m. on Tuesdays, Thursdays, and Saturdays; the Museum from 10 a.m. to 5 p.m.; the Portrait Gallery from 11 a.m. to 4 p.m., daily.

ART CLASSES. Art Classes are held in connection with the Institute. Art Mistress, Mrs. J. A. Allwood (late of the Peterborough School of Art).

OFFICE HOURS—9 a.m. to 4 p.m.

Forms of application for membership and further particulars may be obtained on application to the Secretary.



JAMAICA.

From the Map of the World, Circa 1523-25, in the
Library of the King of Italy at Turin.

A Brief Guide
To an Exhibition of
Maps of the Sixteenth Century
Illustrative of
The Discovery of America

BY

FRANK CUNDALL, F.S.A.,

Secretary and Librarian of the Institute of Jamaica.

ILLUSTRATED.

PUBLISHED FOR THE INSTITUTE OF JAMAICA

BY

THE EDUCATIONAL SUPPLY COMPANY,

16 KING STREET, KINGSTON.

1906.

PREFACE.

It has been well said that if we wish to make ourselves thoroughly acquainted with the history of the discovery of the New World, we must not only follow the navigators on their ships, but we must look into the cabinets of princes and into the counting-houses of merchants, and likewise watch the scholars in their speculative studies. This, thanks to the enterprise of those who made the reproductions and to those who lent the maps on exhibition, we can do now in Jamaica.

What grammar is to language, cartography is to travel and discovery : and the charts and maps which were compiled as the result of the enterprise of the early discoverers must ever prove of interest to those who concern themselves with the development of geographical knowledge.

There has recently been issued in America a limited edition of reproductions (the actual size of the originals) of twelve early maps, dating from 1502 to 1529. One set (the only set outside the United States) has been lent to the Institute, and is at present on exhibition in the Art Gallery. To these twelve have been added facsimiles of the celebrated Waldseemüller maps of 1507 and 1516, and also a few later sixteenth century maps, lent by His Excellency the Governor, having reference to the frontiers of Guiana and Brazil and Venezuela—of which two are of special interest to Shakespearean students.

The series of twelve maps, issued under the direction of Dr. E. L. Stevenson, professor of history in Rutgers College, New Brunswick, New Jersey, is "by far the most important contribution of its kind ever issued under American auspices." They have been reproduced by photography in the sizes of the originals ; and they are limited to eighteen sets. Some are reproduced in what is known as the artotype process ; the others, somewhat to the detriment of the series, have been reproduced simply by prints from the negatives, for the foreign depositaries of some of the maps made a condition that the negatives should not pass out of their jurisdiction.

The following is a list of the maps shown :—

1. Kiepert's Identification of Ptolemy. 150.
2. Toscanelli. 1474.
3. Juan de la Cosa. 1500.
4. Cantino. 1502-04. (Stevenson 1).
5. Munich-Portuguese. 1502-4. (Stevenson 2).

6. Pilestrina. 1503-05. (Stevenson 3).
7. Waldseemüller. 1507.
8. Waldseemüller. 1516.
9. Maggiolo. 1519. (Stevenson 4).
10. Munich-Portuguese. 1516-20. (Stevenson 5).
11. Apian. 1520.
12. Turin-Spanish. 1523-25. (Stevenson 6).
13. Salviati. 1525-27. (Stevenson 7).
14. Wolfenbüttel-Spanish. 1525-30. (Stevenson 8).
15. Weimar-Spanish. 1527. (Stevenson 9).
16. Maggiolo. 1527. (Stevenson 10).
17. Weimar-Ribero. 1529. (Stevenson 11).
18. Propaganda-Ribero. 1529. (Griggs).
19. Verrazano. 1529. (Stevenson 12).
20. Sebastian Cabot. 1544.
21. Gutierrez. 1550.
22. Homem. 1558.
23. Mercator. 1569.
24. Zürich Globe. 1598.
25. America—from Zürich Globe. 1598.
26. Langren. 1598.
27. Hondius, 1598.
28. Hakluyt. 1600.

In the descriptive catalogue, much information concerning the Stevenson maps has been taken from the article on them by Mr. V. H. Paltsits in "The American Historical Review" for July 1905, and concerning the Waldseemüller maps from the historical treatise of Professors Fischer and Wieser.

F. C

INSTITUTE OF JAMAICA.

November, 1906.

INTRODUCTION.

In the twentieth century, the greatest feat of discovery may be the reaching of the North Pole by an airship—a relatively easier task than Columbus set himself in the discovery of a western route to the East Indies; while the West Indies seem destined to be prominently in the public eye in connection with the junction of the Atlantic and Pacific: in the nineteenth they were a principal object in the battle-field of the abolition of slavery; in the eighteenth and seventeenth they formed the scene of many of the doughtiest deeds of the navies of Europe, while in the early sixteenth and the late fifteenth they were in constant evidence in connection with the movements of Columbus and other world-famed discoverers.

The first definite geographical theories to affect the western world were those evolved by the Greeks.

At the time of Homer, it was supposed that the earth was a flat disc, circular or elliptical in form, surrounded by the “circumfluent ocean.”

The Pythagorean school of philosophers, for metaphysical reasons, adopted the theory of a spherical earth. The Ionian school, however, professed to deal with facts demonstrated by travel: and this took Hecataeus of Miletus (B.C. 520–500), the father of geography, no further than a circular disc. This however did not satisfy Herodotus, who thought the world to be longer from east to west than from north to south, and supplemented his personal travels by the theory of a symmetrical world.

Aristotle, the true founder of scientific geography, demonstrated that the earth was a sphere. Thenceforth the efforts of practical geographers were directed towards fitting the habitable earth on to this globe, Aristotle himself favouring the idea that it was confined to a long and narrow band encircling the globe in the temperate zone. Dicæarchus of Messana (310 B.C.), a pupil of Aristotle, made the first approach to a projection on a map, and divided the known world by the first parallel of latitude.

To the science of geography was given an immense impetus by the labours of the Egyptian, Claudius Ptolemæus (circa A.D. 150) who collected all possible data (often unfortunately incorrect when dependent on travellers' estimates) for a true

representation of the habitable world ; working by means of cartography and excluding theory, and being aided in a high degree by his own great knowledge of astronomy. He adopted from Hipparchus the division of the equator and other great circles into 360 parts or "degrees" (as they were subsequently called), and supposed other circles to be drawn through these, from the equator to the pole, to which he gave the name of "meridians."

He thus conceived the whole surface of the earth (as is done by modern geographers) to be a complete net-work of "parallels of latitude" and "meridians of longitude."

Ptolemy's maps were long adopted as the basis of further progress, and formed a chief part of the argument of Toscanelli and Columbus for a westward voyage to India ; and indeed were only superseded by the voyages of Prince Henry the navigator, Columbus and subsequent navigators—voyages made possible by the discovery of the polarity of the magnetic needle and the construction of the mariner's compass.

"No maps appear to have been drawn by Ptolemy himself ; those to be found in the oldest editions of his work are by Agathodæmon, a mathematician of the 5th (?) century after Christ." Ptolemy unfortunately followed Marinus of Tyre (about 150 B.C.) in adopting Posidonius's estimate of the circumference of the earth at 180,000 stadia, instead of the more correct estimate of Eratosthenes, the keeper of the Alexandria Library (276-196 B.C.), of 250,000 stadia or 25,000 geographical miles. He was also misled by Marinus's prime meridian through the outer island of the Canaries, which was 7 degrees out. In estimating the extent of the known world he put it at Thule (the Shetland Isles) to the north, and the Canaries to the west.

In his mathematical construction or projection, as it is now called, of his maps, Ptolemy was greatly in advance of his predecessors : and the methods by which he obviated the difficulty of transferring the delineation of different countries from the spherical surface of the globe to the plane surface of an ordinary map differed little from those in use to-day. How near he succeeded in getting to the actual facts is shown by Kiepert's identifications (No. 1).

A contemporary of Ptolemy, Crates of Mallus, made the first globe, in which he, thinking the torrid zone could be occupied by nothing but water, ran an oceanic belt along the equator.

The science of cartography in the early centuries of the Christian era sank into a position beneath contempt ; the world being shown as a "a T within an O, with Paradise atop."

The man who made the greatest contribution to geographical knowledge in the middle ages was Marco Polo: but he was concerned with the eastern not the western world.

The first work ever published professedly on navigation, by Dr. Pedro de Medina, appeared at Valladolid in 1545. As early as 1584 the Dutch published charts made up as atlases.

A contemporary historian says "The idea of obligation to one's fatherland is of modern growth." And it was Italy (the home of cartographical study in the middle ages) that played a large part, in the fifteenth and sixteenth centuries, in the discoveries of navigators, and the inventions of shipwrights and mathematicians with respect to things maritime; supplying four of the principal discoverers, whose labours enriched lands which did not give them birth. North America fell to the lot of England and France by reason of the discoveries of Cabot of Venice, and Verrazano of Florence: the southern continent and the West Indies were discovered for Spain by Columbus of Genoa, while Vespucci, of Florence, added glory to his adopted country of Portugal.

"What if wise men as far back as Ptolemy,
Judged that the earth like an orange was round,
None of them ever said, 'Come along, follow me,
Sail to the West and the East will be found.'"

The chief difficulty which early navigators and map-makers had to encounter was that of longitude.

In 1503, (Mr. Winsor points out) Reisch, for the first time settled upon something like the modern methods of indicating latitude and longitude, though, so far as climatic lines could stand for latitudinal notions, Pierre d'Ailly had in his map of 1410, set an example of scaling the zones from the equator. All sorts of experiments were tried in representing the converging meridians on a plane surface, so as not to distort the geography, and in order to afford guidance for ships.

Nordenskiöld estimates that some twenty different projections were devised before 1600. To the Dutch is due the credit of having first brought the chronometer to the aid of navigation: and Gemma Frisius suggested the carrying of time in running off the longitudes, and he passed on his cartographical genius to his better-known pupil Gerhard Kramer, usually called Mercator, whose genius culminated in his great plane chart of 1569, albeit his theory was anticipated by Pirckheimer in his edition of Ptolemy of 1525.

In England a great stimulus to inventions with regard to geographical research was given by the establishment in 1713

of a commission for the discovery of longitude. To the invention of John Harrison, the principle of compensation through the unequal contraction of two metals which he applied to the construction of a watch, is due the introduction of timekeepers by which Greenwich time can now be carried to any part of the world, and the longitude found with ease, simplicity and certainty. On the trial trip to Jamaica in 1761-62, it was found that the error of the watch was only five seconds, assuming that the longitude found by the transit of Mercury was correct, which it was not. The actual error was found to be 1 m. 54.5 s. = 18 geographical miles. The watch lost on its voyage home 1 m. 49 s. = 16 geographical miles. Harrison ultimately received the £20,000 offered for the best method of determining longitude at sea.

The "nautical almanac" first appeared in 1767.

While the Spanish and Portuguese reckoned as their first meridian, the line of Demarcation sanctioned by the Pope 370 leagues west of the Cape Verd islands, the Dutch, Germans and English went back to the meridian of Ptolemy which began at Grand Canary. Greenwich Observatory was established in 1675: and at a later date the site of the Observatory was taken by Englishmen as the prime meridian. France later adopted Paris: and Germany, Berlin.

Nautical (loxodromic or compass) maps made their first appearance in Italy in the thirteenth century. They were constructed by the aid of the compass, and were covered by compass-cards with radiating lines issuing from them.

The maps were produced as follows:—The courses of individual ships were first of all inserted as straight lines calculated according to the distances traversed, from particular ports, such as Genoa or Venice, to other ports, and when a good supply of such material had been collected and a series of diagonals drawn in accordance therewith, the most important points on the coasts and in the islands were fixed. Sometimes these compass-cards were placed in mid ocean; and it is only of recent years that this confusion of lines has been omitted from sea-charts.

The numerous radii of the compass (rhumbs or loxodromic curves) shown on the maps enabled the sea-man to find the direction which he had to take to reach his goal; making, as a landsman would say, a bee-line.

In Leyden in 1584 was published the first sea-atlas.

If the discovery of the western world was sure it was slow: and it took a long time for the results of the latest discoveries to be accepted as cartographical and literary facts.

It was many years after Columbus's first discovery of Watling Island made in his attempt to discover Cipang, Cathay and India—without either chronometer or log—that Balboa first discovered the Pacific; more still before Magellan discovered the straits named after him and first sailed into the Pacific (on the 27th of November, 1520). The voyage of Magellan shook the scales from the eyes of Europe, by proving that the so-called new world of America was not part of Asia. "Discovery had outrun theory: the rush of new facts made Ptolemy practically obsolete in a generation, after having been the fount and origin of all geography for a millenium." But it took quite a century to fully eradicate the idea promulgated by Columbus that the land which he had discovered was part of Asia. In the development of this knowledge all the maps now exhibited played a part.

As an instance of the care with which the Spanish Council of the Indies concealed the cartographical records in their office, it may be mentioned that when Ortelius published, in 1570, his celebrated *Theatrum* which gave the final death blow to the old cartographies based on Ptolemy, he included a list of ninety-nine makers of maps consulted by him, and the list does not contain a single Spanish name.

It is interesting to note how the early navigators and cartographers worked together for the common weal. Each voyage made by a navigator contributed something to the cartographer's knowledge, and enabled him to make more correct and informative his chart or globe for the guidance of future travellers by sea; and so the work progressed; the sea-men enduring the toil, the landmen using their best brain-work to make such toil the more effective.

In present days, maps may be said to be of three kinds:—

- (i) those based on trigonometrical surveys, at present confined to countries in the front rank of civilisation:
- (ii) those based on positions fixed by astronomical observation on cross bearings, and on chained distances:
- (iii) those based on the work of explorers of unknown or little known regions, and of the geographers who delineate the features of such regions by compilation from such travels.

The maps on exhibition belong to the third class. As the world progresses in civilization, this class, as well as the second, will give place to the first-named.

To us in Jamaica, it is of peculiar interest to note the various

spellings of the name of this island on the foregoing maps as well as others. They are as follows :—

Cantino, 1502-4	...	...	Jamaiqua
Bartolommeo Columbus, 1503	...	...	Jamaicha
Canerio	...	...	Jamaiqua
Waldseemüller, 1507	...	...	Jamaiana
“Admiral’s Map,” 1507	...	...	Jamaqua
Peter Martyr, 1511	...	...	Jamaica
Ptolemy, Strasburg edition of 1513.			Jamaiqua
Waldseemüller, 1516	...	...	Jamaiqua
Maggiolo, 1519	...	...	Jamaica
Munich-Portuguese, 1516-20	...	...	Jamayca
Apian, 1520	...	...
Salviati, 1525-27	...	...	Jamaye
Wolfenbüttel-Spanish, 1525-30	...	...	Jamaica
Weimar-Spanish, 1527	...	...	Jamaica
Maggiolo, 1527	...	...	Jamaicha
Weimar-Ribero, 1529	...	...	Jamaica
Verrazano, 1529	...	...	Jamaica
Martyr-Oviedo, 1534	...	...	Jamaica
Mercator, 1541	...	...	Jamaica
Medina, 1544	...	...	Jamaica

CATALOGUE OF MAPS

ILLUSTRATIVE OF THE DISCOVERY OF AMERICA

I. **Ptolemy, 150.**

Kiepert's identifications of Ptolemy's chart.

2. **Toscanelli, 1474.**

Reconstruction of the Map of the World according to Paolo Toscanelli, physician and astronomer of Florence, and sent by him to Alfonso V., of Portugal, and to Columbus, who had applied to him for information, in 1474.

3. **Juan de la Cosa, 1500.**

Sketch of the map, given in Winsor's "Christopher Columbus." De la Cosa was Columbus's pilot.

4. **Cantino, 1502-1504.**

(Stevenson I). The original of this map has had a checkered career. It is on vellum, coloured and gilt—1060 by 2180 mm. At one time it was used as cover for a screen. In 1859, the librarian of the Bibliotheca Estense at Modena, found it in the shop of a pork-butcher, purchased it, restored it, and presented it to the library of which he had charge.

Alberto Cantino, who, in the very early days of the sixteenth century, was envoy for Hercules d'Este, duke of Ferrara to the court of Lisbon, kept his patron informed of the discoveries being made under Portugal and Spain: and, in order to make his information clear, employed a cartographer, probably an Italian, to compile this map, which was made between December 1501 and October 1502. It gives the results of the third voyage of Columbus (1498), of Corte-Real (1501) and of Cabral (1500).

The cursive hand-writing on it represents subsequent additions based, it is thought, upon the voyage of Vespucci, from data Cantino obtained from him on his return.

With the exception of Juan de la Cosa's planisphere (of the year 1500), it is the oldest known map upon which the new world is sketched: and it is the earliest known map in which the West Indies received the appellation of "Antilhas." It is also the earliest known map bearing the Line of Demarcation. The original line was drawn by Alexander VI in May 1493 about a hundred leagues westward of the Azores; but, by mutual agreement between Spain and Portugal at the treaty of Tordesillas on the 7th of June, 1494 (subsequently confirmed by papal bull), the line was moved further west, to 370 leagues west of the Cape Verde Islands. All land to the west of it, not already occupied by Christian powers, was given to Spain, that to the east to Portugal.

This map exercised great influence on the subsequent Portuguese-German type of cartography, and much greater influence on cartography generally than Juan de la Cosa's map.

5. **Munich—Portuguese, 1502–1504.**

(Stevenson 2). The original, in the Royal Library, Munich, measures 1040 mm. by 1170 mm. It exhibits certain features of the Cantino map, gives some new names and represents the coast of South America in particular. The West Indies are poorly shown.

It did not have much influence on later cartography.

6. **Pilestrina, 1503–1505.**

(Stevenson 3.) The original, in the Royal Bavarian Conservatorium, is known to be the work of Salvatore de Pilestrina of Majorca. It measures 1220 mm. by 830 mm. It shows a mixture of Italian and Portuguese work with Spanish traits. It gives the result of the discoveries of Corte-Real and of Vespucci.

7. **Waldseemüller, 1507.**

The original, measuring 1270 mm. by 2315 mm., is in the Library of Prince Waldburg at Wolfegg Castle, in Würtemberg. It consists of a series of wood-cuts in twelve sections, proof-sheets, fine examples of the wood-engraver's art of the period. They were probably done at Strasburg.

It is drawn on the modified cone projection of Ptolemy with curved meridians; and the Ulm edition of Ptolemy of the year 1486, edited by Angelus, was Waldseemüller's chief source of information for the old world.

This map approaches more nearly to the Canerio map (in the Marine Archives of Paris), especially in South America, than to the Cantino map (No. 4): and it is assumed that Waldseemüller utilized the Canerio chart in the preparation of this map. Indeed he copied its errors of nomenclature; for example on the Canerio chart the Virgin Islands are miscalled *Laonizes mil Virgines*, instead of *Las omze mjll Virgines*. Waldseemüller miscalls them *Laonizes mil Virginum*.

It seems strange that a map of which one thousand copies are known to have been printed in 1507, should have entirely disappeared for centuries, and that one copy only should have been re-discovered and that as late as 1901. When the Wolfegg volume of maps was taken to pieces for the purpose of reproduction, it was found that strips of Schöner's terrestrial globe of the year 1515 had been employed in the binding, and it is assumed that Schöner bound up this set of Waldseemüller's maps, and thus preserved them for posterity.

Its principal claim to fame rests on the fact that it is supposed to be the earliest map containing the name America, although this even has been disputed in favour of another map by the same hand, recently acquired, for the sum of one thousand guineas, by the Carter-Brown Library, Providence, Rhode Island.

The original name-day of the continent of America took place nearly four centuries ago—on the 25th of April 1507, when in the small town of St. Dié, in the Vosges mountains, was published a small geographical treatise, "*Cosmographiæ Introductio*," a work which ran into several editions in a few months, and which was intended as a companion to the map in question, and a globe of the same year which is in the Hauslab-Leichtenstein collection in Vienna in which was made the suggestion, that the then lately discovered fourth part of the globe should be named "*America*," because Americus (Vespucci) discovered

it. The man who made this suggestion was Martin Waldseemüller, professor of geography in the college of St. Dié, who later became canon of St. Dié, and died, probably, in 1522.

The fierce light which recent cartographical criticism has shed on the claims of the old-time discoverers, has robbed Vespucci, as it has robbed Sebastian Cabot, of much of the glory attached to him alike by his contemporaries and later generations: but there seems to be no truth in the accusation that he himself suggested that the newly-found continent should bear his name, albeit he did exploit other men's deeds for his own ends, suppressing the very names of the commanders under whom he sailed. At that time Vespucci was regarded as the discoverer of a continent, Columbus of the islands, and the fact that Fernando Columbus made no protest at the ascription to Vespucci is probably thus accounted for.

Mr. Winsor has pointed out that, if Columbus was the greater navigator, Vespucci was the greater physicist. While the Genoese thought that on his third voyage, when he found the air growing colder, he was actually sailing up-hill, ascending a protuberance of the earth, which was like the stem end of a pear, with the earthly paradise at the top, the Florentine, by his diagram of a globe with two men in it ninety degrees apart, each dropping a line to the centre of the earth, showed that he had grasped, together with the idea of the sphericity of the globe, the essential conditions of gravitation.

Waldseemüller made his suggestion in good faith, but before he published his *Carta Marina* of 1516, from which he omitted the misleading designation, he had found out his mistake. The false ascription to Vespucci had however, "caught on," except in Spain, where "The Indies" was the official name and the one used by historians like Oviedo, Las Casas and Herrera: and America was destined to be written on the maps of the western hemisphere for all time—Waldseemüller's alternative of America, for *Amerige*, based on the analogy of Europe and Asia, easily supplanting the original suggestion of Amerige.

Mercator, in 1541, in drafting some gores for a globe, divided the name between the two halves of the continent.

Ortelius, in 1571, desiring to do equal honour to Columbus and Vespucci, proposed that North America should be called "Columbana" and South America "America." It may be that euphony has had a hand in deciding the question. It may be interesting to mention that the use of the terms "North America" and "South America" date from the early years of the seventeenth century. At all events it is by the irony of fate that the name "America" is now chiefly associated with a land unknown both to Columbus and Vespucci.

This world map of 1507 "has exercised a deep and lasting influence on cartography. It represents a new type of map and exhibits the world-picture in a magnificence unknown before." In its earliest years after its issue, it was freely plagiarised in reduced forms, the principal sinner being Apian. (No. II).

This and the 1516 map are lithographic facsimiles of the woodcuts, without retouching: the faults in the joining of the sheets exist in the originals. In this map, single realms are denoted by means of escutcheons—the Roman imperial eagle appears in the middle of Europe, the Mohammedan crescent in Africa and part of Asia, the Tartar anchor in Scythia, the red cross of Prester John in India, and the arms of Castile and Portugal in the newly discovered lands; while parts of the sea dangerous to shipping are marked by small

crosses. Walseemüller's name does not appear on the map, but there is abundant proof of his authorship. The portraits are: to the left, Ptolemy, and to the right Vespucci, typifying the old world and the new.

8.

Waldseemüller, 1516.

Carta Marina 1516. The original, measuring 1220 mm. to 2280 mm., is in the Library of Prince Waldburg at Wolfegg Castle, in Würtemberg. It was discovered at the same time as the Waldseemüller map of 1507, in 1901. It is drawn not on the Ptolemaic projection, but on a rectangular net-work of degrees, and characterized as a sea-chart by a net-work of intersecting rhumbs issuing from compass cards with 32 divisions. The names of the eight chief kinds are those used by the sea-faring nations of Southern Europe. The artistic skill displayed in this map, in the heads, the ornamentation, the borders, cartouches and festoons, is higher than that of the 1507 map, and points to the work of an artist of the school of Albrecht Dürer, which is the more likely as Waldseemüller is known to have kept up an intercourse with the artistic world of Nuremberg.

This Wolfegg copy, like that of the map of 1507, is a proof-sheet. Errors have been corrected in manuscript.

As has been already said, the author had by this time found out that he had been misled as to Vespucci's claim to be the discoverer of America, and omitted his name from South America, putting in its place the legend "Brasilia Sive Terra Papagalli," and did tardy justice to Columbus by adding a note to his effect. "This land, with the adjacent islands, was discovered by Columbus, a Genoese, under the authority of the King of Castile."

North America bears the designation "Terra de Cuba Asie Partis," and the name "Isabella" disappears from the island of Cuba.

Waldseemüller, on this chart, made so much use of the Canerio chart above mentioned, that Professors Fischer and Wieser state that it is "a printed edition of the Canerio chart, not indeed a slavish reprint, but an improved, and, with regard to the interior of the continents, much enlarged edition." It is the oldest known example of a printed sea-chart: and it is considered highly probable that it was the source whence Mercator derived the idea of projecting his large map of the world, and of inventing a projection suitable for this purpose.

Waldseemüller's name as author appears twice on this map.

It was between the issuing of these two Waldseemüller charts—i.e. on the 25th of September 1513—that Balboa discovered the Pacific ocean.

Professor Stevenson says of these Waldseemüller maps, "An astonishingly large part of the literature of early American cartography needs careful revision since the issue of this volume of facsimiles."

9

Maggiolo, 1519.

(Stevenson 4). In size 335 mm. by 500 mm., the original, by the Visconte de Maggiolo, is in the Royal Library, Munich. Its chief characteristics are, that it gives more islands than any preceding map, and "fills a gap in the Hydrography of the New World."

The Maggiolo family, famous for its cartography, flourished in Genoa between 1571 and 1648. The Visconte de Maggiolo, the founder of the family, is known to have produced nineteen atlases between 1571 and 1587.

Barbados appears as "Barbuda": Barbuda as "Barbada." It is interesting to note in this connection that more than a century later, in 1628, confusion still existed between Barbuda and Barbados, and gave rise to complications in connection with the grant of "Trinidado, Tobago, Barbudos and Fonseca" to the Earl of Montgomery.

10 **Munich-Portuguese—1516-1520.**

(Stevenson 5). The original, in the Royal Library, Munich, measuring 630 mm. by 1260 mm., was formerly erroneously attributed to Salvatore de Pilestrina. It is the earliest known map in which Balboa's discovery of the Pacific is designated—"Mar Visto de los Castelhanos." The demarcation line of Tordesillas divides the map.

11 **Apian, 1520.**

This map first appeared in an edition of Solinus by Camers at Vienna in 1520.

Though much reduced in scale it is—say Professors Fischer and Wieser—but a slavish copy of the world map of Waldseemüller of 1507, as regards projection, delineation of lands, legends and ornamentation. It was long considered to be the earliest map bearing the name of America.

The reproduction here given is that of Fischer and Wieser.

12 **Turin-Spanish, 1523-1525.**

(Stevenson, 6). The original, measuring 1125 by 2600 mm., is in the library of the King of Italy at Turin. After De la Cosa's, it is the first map founded on Spanish discoveries. The legends are Spanish and Latin, seldom Portuguese. Harrisse says that it is "the most valuable cartographical document of the sixteenth century which we possess for the nomenclature."

It is the only map in the Stevenson collection that gives names of towns in Jamaica, albeit the name of the island itself is not given. De bayas appears to the north-east, and refers to Port Antonio which had not then received its name: then (going westward) Melilla, then Sevilla (which had been founded in 1510) and Mayomon at the north west, with Moranto at the south east. St. Jago de la Vega, founded in 1520, had not yet come under the cartographer's notice.

It will be observed that Melilla occurs, as some historians maintain it was, where Port Maria now is. There is also evidence as good, in favour of its site having been in the north west portion of St. James. It is possible that the name may have at some time migrated with the settlement. Such cases did occur, as for instance in Vera Cruz and Habana.

13 **Salviati, 1525-1527.**

(Stevenson, 7). The original on paper, measuring 950 by 2055 mm., is in the famous Bibliotheca Mediceo-Laurenziana at Florence. It derives its name from the fact that it bears the coat of arms of Cardinal Giovanni Salviati, who was nuncio in Spain from 1525 to 1530, for whom it is supposed to have been made.

It is completer in respect to Africa and Asia than America.

14. **Wolfenbüttel-Spanish, 1525-1530.**

(Stevenson, 8). The two original sections on parchment, measuring 652 by 855 mm. and 557 by 854 mm., are in the Grand Ducal Library at Wolfenbüttel. They form a portion of a planisphere, in colours,

representing America from Labrador to Patagonia. The sheet with the old world portion is lost. The nomenclature is Portuguese but of Spanish origin. It is the earliest Spanish map showing the Gulf of St. Lawrence. Oristan and el Nogrillo are marked in Jamaica. This map should be compared with the Riberos (Nos. 17 and 18).

15. **Weimar-Spanish, 1527.**

(Stevenson, 9). The original on parchment, measuring 805 by 2160 mm., is in the Grand Ducal Library, Weimar. It bears the date 1527, and is "the first extant official Spanish marine chart." The name of its author has not been absolutely determined: it has been ascribed variously to Fernando Columbus, Nuño Garcia de Torenó and Ribero. It portrays for the first time the new world as a whole land mass, in the north named "Mundus Novus," and in the south "Brazil:" and in it the Straits of Magellan are for the first time set down correctly.

16. **Maggiolo, 1527.**

(Stevenson, 10). The original, on parchment, coloured, measuring 1700 by 600 mm., is in the Ambrosian Library, Milan. It is by the Visconte de Maggiolo. It influenced later maps. HARRISSE says of it that it "represents closely a prototype, still unknown, on which was inscribed Verrazanian data, shortly after the return of the Florentine navigator." It shows a supposed waterway from the Atlantic to the Pacific.

17 **Weimar-Ribero, 1529.**

(Stevenson, 11). The original, on parchment, measuring 850 by 2125 mm., is in the Grand Ducal Library, Weimar. It is by Diego Ribero, the royal cosmographer, one of the best map-makers of his time, and is a work of great importance. It (with a map of the year 1527 usually known by the name of Fernando Columbus) was the outcome of a convention of pilots and cosmographers held at Seville in 1526 by royal order. The convention met in the house of Fernando, who presided, while Ribero and Alonzo de Chaves examined the pilots. It is worthy of note that Ribero in 1526 obtained a royal pension for an improved ship's pump, for which, and an invention for turning sea-water into fresh, the Spanish government had been offering premiums for years.

In 1524 or 1525, Estevan Gomez attempted to find a northern passage to India and bring back *clavos* (spices). He only skirted North America and brought back *esclavos* (slaves). His voyage is credited on the Ribero map.

18 **Propaganda-Ribero, 1529.**

(Griggs). The original 17 ft. by 3 ft., is in the library of the Propaganda Fide, Rome. It was lent to the Colonial and Indian Exhibition in London in 1886, and was then reproduced by Mr. William Griggs, for the exhibition authorities.

Kohl, in his "Die beiden ältesten general Karten von America," has attempted to give reasons why he thinks the Weimar map (No. 17) was made not later than May 1529, and his reasons appear good to Professor Stevenson, who says in a letter to the author of this catalogue:—"The Propaganda map appears to be a more careful piece of work, containing some additional details; and one, it seems to me

is justified in asserting that the Weimar map is the older. You will observe that the Wolfenbüttel map in my series appears also to be a map of the Ribero type, and yet one other of striking similarity is also known, which it is probable I shall reproduce some time in the future."

19 **Verrazano, 1529.**

(Stevenson 12). The original, measuring 1270 by 2560 mm., is in the library of the Propaganda Fide, Rome. to which it was bequeathed in 1804 by Cardinal Stefano Borgia. It is by Girolamo da Verrazano, brother of the celebrated navigator. All its nomenclature is Italian. It shows the discoveries of Giovanni da Verrazano who was sent out by Francis I. in 1521 to take possession for France of the North Atlantic coasts, and is the first Italian map to bear the name America which here occurs as "Terra America" across Venezuela. The United States are marked, "Nova Gallia, Sive Ivcatanet," the latter name being, it is supposed, a misapplication of Yucatan.

20. **Cabot, 1544.**

America. Part of the mappemonde of Sebastian Cabot, published in 1544. The original, measuring 1480 mm., by 1110 mm. is in the National Library, Paris.

21. **Gutierrez, 1550.**

South America. Part of a marine chart by Diego Gutierrez, of 1550. The original, measuring 1320 mm. by 865 mm., is in the Ministry of Marine, Paris.

22. **Homem, 1558.**

South America. Portion of a portulano attributed to Diego Homem of 1558. The original is in the British Museum.

23. **Mercator, 1569.**

South America. Part of Mercator's mappemonde of 1569. The original, measuring 2000 mm. by 1240 mm., is in the National Library, Paris.

24. **Zürich Globe, 1598.**

Globe of the end of the 16th century. The original, the circumference of which is 3800 mm., is in the Schweizerisches Landes Museum, Zürich.

25. **Zürich Globe, 1598.**

America. Part of the Zürich Globe.

26. **Langren, 1598.**

Map by Arnoldus Florentius à Langren. The original, measuring 550 mm., by 380 mm., is in the Foreign Office, Paris.

27 **Hondius, 1598.**

Guiana. In this map we see marked the home of the Jamaica Arawâks, and "a nation of people, whose heads appear not above their shoulders" mentioned by Raleigh in his 'Discoverie of Guiana,' pub-

lished in 1519; in reference to which Shakespeare makes Othello speak of

“ . . . the Cannibals that each other eat,
The Anthropophagi and men whose heads
Do grow beneath their shoulders.”

28.

Hakluyt, 1600.

America. Section of the mappemonde on Mercator's projection, made probably by Edward Wright, to accompany Hakluyt's "Principall Navigations", London, 1598—1600. The original measuring 640 mm. by 440 mm. is in the National Library, Paris. This is the "new map" to which Shakespeare makes Maria compare Malvolio's face:—

"He does smile his face into more lines, than is in the new map, with the augmentation of the Indies."



THE WEST INDIES.
From the Map of the World of the year 1519, by the Vesconte de Maggioto,
in the Royal Library, Munich.

PUBLICATIONS OF THE INSTITUTE OF JAMAICA.

To be obtained at the Institute.

Root-Food Growth in Jamaica. By Rev. J. CORK	1881	6d.
Some Objects of Productive Industry: Native and other Fibre Plants. By D. MORRIS	1884	6d.
Outline of a Lecture on Vegetable Chemistry. By J. J. Bowrey	1884	6d.
The Cultivation of the Orange in Jamaica. By Dr. JAMES NEISH	1884	6d.
The Vine and its Culture. By Rev. WM. GRIFFITH	1884	6d.
The Cultivation of the Ramie. By Hon. J. C. PHILLIPPO	1884	6d.
On a New Beverage Substance: the Kola Nut. By Dr. JAMES NEISH	1887	6d.
The Advantages to result from Railway Extension. By Hon. W. B. ESPEUT	1887	6d.
On the Geology of Jamaica } On Mining in Jamaica. } By Rev. H. SCOTLAND	1889	6d.
The Mineral Springs of Jamaica. By Hon. J. C. PHILLIPPO	1891	6d.
A Provisional List of the Fishes of Jamaica. By T.D.A. COCKERELL, F.Z.S., F.E.S.	1892	<i>Gratis.</i>
Institute of Jamaica Lectures: Agriculture	1893	2/6
List of the Decapod Crustacea of Jamaica. By MARY J. RATHBUN	1897	1s.
The Economic Geology of Jamaica. By F. C. NICHOLAS	1899	2d.
The Rainfall Atlas of Jamaica. By MAXWELL HALL, M.A.	1892	2/6
The Meteorology of Jamaica. By MAXWELL HALL, M.A.	1904	6d.
Systematic Catalogue of the Land and Fresh-water Shells of Jamaica: By HENRY VENDRYES	1899	3d.
The Mosquitoes or Culicidae of Jamaica. By F. V. Theobald, M.A., and M. GRABHAM, M.A., M.B. (<i>Illustrated</i>)	1905	6d.
The Journal of the Institute of Jamaica (<i>Illustrated</i>)—		
Vol. I., Pts. i., ii., iii., iv., (<i>others out of print</i>) per part	...	6d.
Vol. II., Pts. ii. and v., (<i>Pts. i. and iii. out of print</i>)	...	1s.
Vol. II., Pt. iv. (Special "Aboriginal Indian Remains" Number)	...	1s.
Vol. II., Pt. vi.	...	2s.
Vol. II., bound	1894-99	15s.
Bibliotheca Jamaicensis: Some account of the principal works on Jamaica in the Library of the Institute. By FRANK CUNDALL, F.S.A.	1895	6d.
Bibliographia Jamaicensis: A list of Jamaica books and pamphlets, magazine articles, newspapers and maps, most of which are in the Library of the Institute of Jamaica. By FRANK CUNDALL	1902	6d.
Classified Book List: Agriculture	1893	1d.
Catalogue of Books in the Library of the Institute	1895	2s.
List of Books on Jamaica in the Library of the Institute, Excerpted from the Catalogue	1894	3d.
Studies in Jamaica History. By FRANK CUNDALL. Illustrated by Mrs. LIONEL LEE	1900	2/6
Biographical Annals of Jamaica. By FRANK CUNDALL. (<i>Illustrated</i>)	1904	6d.
Jamaica in 1905: A Handbook of Information for intending Settlers and Visitors. (<i>With Illustrations and Map</i>) By FRANK CUNDALL	1905	6d.
Political and Social Disturbances in the West Indies: A Brief Account and Bibliography. By FRANK CUNDALL	1906	6d.
A Brief Guide to an Exhibition of Maps of the Sixteenth Century Illustrative of the Discovery of America. By FRANK CUNDALL <i>Illustrated</i>	1906	6d.
Lady Nugent's Journal. Jamaica One Hundred Years Ago. Edited by FRANK CUNDALL. (<i>With Illustrations and Maps</i>) <i>In Preparation</i>		2/6

