ASIA AND AMERICA.

AN HISTORICAL DISQUISITION CONCERNING THE IDEAS WHICH FORMER GEOGRAPHERS HAD ABOUT THE GEOGRAPHICAL RELATION AND CONNECTION OF THE OLD AND NEW WORLD.

BY JOHANN GEORG KOHL.[1]

There are only two great first-class islands on our globe: Asia (with her appendages Africa and Europe) and America.

Whether these two large parts of our terrestial dry-land, the so-called Old and New World, were connected with each other, and in what degree and manner they were connected, or if they were perfectly separated by water, has been since the time of Columbus a matter which has been investigated by numerous navigators, explorers and geographers, and has been answered at different times very differently.

The history of the various speculations and hypotheses on this geographical point, one of the most interesting of its kind which the surface of our earth offers, goes

[1] Dr. Johann Georg Kohl, one of the most learned cartographers of his day, came to this country from Germany in 1854, bringing with him a large collection of transcripts of early American maps, both manuscript and printed, and a greater knowledge of early American geography than was possessed by any scholar of his time. With the aid of a government appropriation of $6,000, obtained in 1856, he prepared an elaborate catalogue of American maps, the chief feature of which was a series of finely executed hand-copies of the rare originals. After the financial panic of 1857, Dr. Kohl failed to obtain a further appropriation and returned to Germany. He later became the librarian of the city library of Bremen, where he pursued his favorite studies in geography and where he died, October 28, 1878. His collection of maps long remained in the custody of the State Department, but was transferred to the Library of Congress in 1903. A full description of the collection was compiled

through the space of more than three centuries and it is not long since that we have found a perfectly satisfactory answer and that all doubts on it are removed. A thorough history of these speculations and of all the shapes and forms which they assumed, together with all the reports of discoverers and travellers who brought this question step by step nearer to its ultimate solution, would involve a great part of the whole history of the discovery of America.

It is not my intention to attempt such a complete history. I will only try to give here a series of reduced copies of the original maps, on which geographers and explorers have laid down their hypothetical views or actual experience about this question, and to illustrate these maps by historical notes. I believe that in this manner and by this new method the question may be laid before the reader and may be conveyed to his mind and eye in the most striking, compendious and instructive manner.

1. Old Maps before the Time of Columbus.

If we at first inspect the old maps of the world which were made *before* the time of Columbus, we find that

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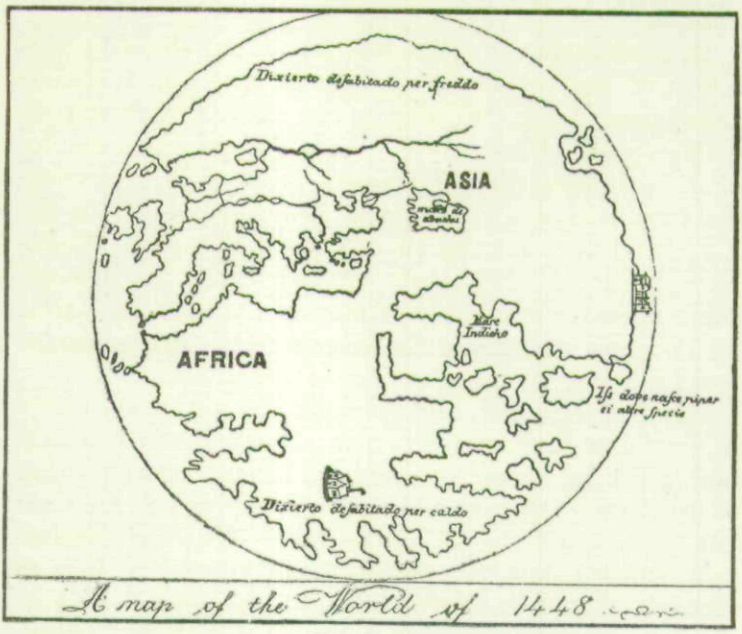
by Justin Winsor in 1886 and published as No. 19 of the Bibliographical Contributions of the library of Harvard University. This catalogue was reprinted, with the addition of useful indexes, by the Library of Congress in 1904.

The monograph herewith printed was undoubtedly written by Dr. Kohl during his stay in America, and was deposited with this Society by Prof. Joseph Henry of the Smithsonian Institution. It aroused much interest among such scholarly members of the Society as Charles Deane, Samuel F. Haven and Justin Winsor and the hope was frequently espressed that the manuscript might be printed by the Society with facsimiles of the maps included. By some it might be considered that the publication of the treatise at this late day is inadvisable because more recent discoveries along cartographical lines have rendered the memoir less useful. But the continual inquiries received regarding the manuscript and the fact that it contains certain maps reproduced in no other way except through Dr. Kohl's drawings, seem to justify its present printing. It has not been deemed necessary to double the size of the paper with explanatory notes, and for more or less elaborate treatises on the subject of the cartographical history of the Pacific coast, the reader is referred to Winsor's "Narrative and Critical History of America," vol. 2, p. 431, and to H. H. Bancroft's "Northwest Coast," vol. 1. No alteration of Dr. Kohl's manuscript has been made other than to correct the spelling and punctuation, and occasionally to adapt his phraseology to the English idiom.

they all represent the mass of habitable dry-land which they pretend to know, as an *island*. On nearly all of them, whether made by Greeks, Italians, Arabians or Persians, a great water, the Ocean, surrounds the whole old Continent Europe, Africa and Asia *everywhere*. The dry-land is nowhere without end, nowhere connected with boundless unknown regions. It is everywhere confined, and only the water is without limits.



Map No. 1

We find the same idea again in the cosmographical traditions of the Indians, who in comparing it to a lotus-flower with leaves swimming on the water, make the dry-land to be an island. This is a very curious and remarkable fact, and we may well question if the old nations could arrive at such a uniform and true view only by chance or mere speculation, or if they adopted it from actual experience. Perhaps the whole body of the Asiatic population was pervaded by old traditions and reports, which were handed down from one nation

to the other, from the inhabitants of the northern shore to those of the central and the southern parts, and which flowed from the inhabitants of the southern coasts back to those of the north, so that by the flux and reflux of these reports, about the water in every direction, a conviction of the insularity of the old world and of the existence of an everywhere circulating ocean was created throughout the whole body of the wise men of all the nations.

It appears that in a like manner among the old population of the second great island, America, a similar conviction to a certain degree has existed, with respect to their part of the world. Also the old cosmography of many Indian tribes of America, if not of all, represents the inhabited world (America) as engendered from the water and as existing in the midst of the water. Menaboshu or some other mythic creator threw the inspired sands upon the water and prepared from them the earth, which grew out under his fingers with its peninsulas and headlands over the surface of the water.

Our first explorers and pioneers did not come, either in South or in North America, to any part so distant and so central, where they did not hear the people speak of great salt-waters in all directions, and where they did not find oceanic shells or some other salt-water production, which might be considered as a proof that mutual intercourse and commerce had brought with these productions also the report of an all circulating ocean. Even the Chippeways and Sioux, who live at the headwaters of the Mississippi in a nearly equal distance from the Atlantic and Pacific in the east and west, and from the Arctic and Mexican Sea in the north and south, think that the sun rises from a great water and sinks also down in the ocean; they designate America as surrounded by water, and speak of it in their mythical traditions as an island.

From this it seems that a certain conviction of the insularity of Asia as well as of America, and of a boundless ocean, has existed among the traditions of the human

race since the most ancient times. But this old venerable traditionary view can scarcely be called a geographical conviction. It was too vague, and the authorities upon which it rested could not be produced. And because the population, the life and soul of the two great parts of the world, did not come in contact with each other, and existed isolated from each other, that view helped in no way to throw light upon the *relative* position of those two worlds, islands to each other, upon their true configuration, and upon the exact circumstances of the manner and whereabouts of their approach. The more exact geographical history of this question could not begin before the European navigation and civilization commenced to throw its chain round the whole globe.

2. Time of Behaim.

That the world was a globe had been thought and proved already by the ancient Greek philosophers. In the middle ages many doubted this theory again. Some believed that the world had the figure of a high mountain. Others made it to be a flat square or gave to it an oval shape. But many enlightened mathematicians—for instance those distinguished amongst the Arabs—adhered to the old true theory of the Greeks. The Arabians had executed even some good measurements of a degree and had tried to calculate the size and extent of the terrestrial globe, and had arrived at a result which was not very far from truth.

Towards the time where the great exploring activity of the Portuguese and Spaniards developed itself, it was by the well instructed cosmographers pretty generally admitted, that the world was a globe of not very great dimensions, and that therefore Asia must bend round this globe and must with its eastern end approach again somewhere to the western coasts of Europe and Africa. The question was only how far Asia stretched eastward and how long the distance was between it and Europe across the unknown waters.

The great authority and oracle on this point was the most celebrated traveller of the fourteenth century, Marco Polo, who had been to China and to coasts of the Eastern Ocean. He had informed the world that in this Ocean east of Asia was situated a large rich island, called Zipangu (our Japan) and besides this many hundred smaller islands. Likewise on the side of Europe the navigators and discoverers of the Canary Islands and the Azores had created a belief, that there might be still more islands towards the West, amongst which was named a certain island of the Holy Brandan and another larger island, which was called Antilia.

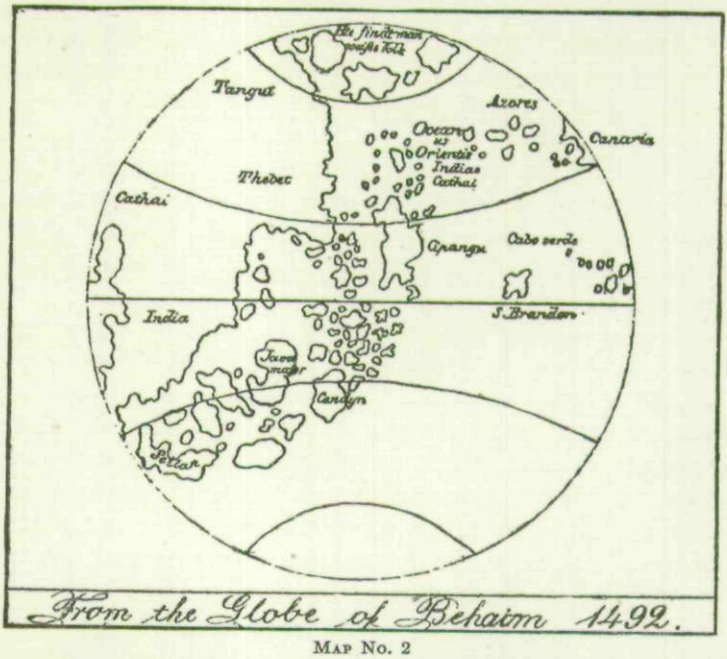
But of all these islands, with which from both sides the void space between Eastern Asia and Western Europe was filled, none was considered to be more worth exploring than that of Zipangu, described by Marco Polo as the residence of an Emperor, and rich in gold, silver and many other precious products.

This geography was laid down on many maps of the time immediately before Columbus. Columbus himself, his friend the Italian astronomer Toscanelli, the famous German cosmographer and traveller Behaim, constructed such maps, on which Africa was depicted after the latest Portuguese explorations, East India after the old map which was made one thousand years ago for Ptolemy, and the coast of Eastern Asia with Japan and his many hundred islands after the reports of Marco Polo. Asia was so far stretched out to the east, that its most eastern capes advanced towards Africa and Europe to about the distance of 100 degrees of longitude, and Zipangu, or Japan, remained to the west of Europe only for about a quarter of the whole circumference of the globe. The western islands of the Azores, Canaries, Antilia, St. Brandan formed as it were chains or bridges, conducting to Japan.

From all these general maps of the world, which represent the ideas of that time, not a single one has been preserved to us, except that which Martin Behaim laid down on his celebrated Globe in Nuremberg in the year

1492, and of which we present here to the reader the principal features in a reduced copy.

Similar maps, like this, Columbus had on board his vessel, when he sailed over the Ocean towards the west. His voyage was called an expedition to Zipangu (Japan) and China. Columbus called it so himself and he thought that he had found some of those islands, which we see on our map to the south and east of Japan. He



Map No. 2

thought that he was in the midst of the Asiatic islands of the Indian Archipelago. And when on his third and fourth voyage he reached the coast of the continent of South and Central America he thought himself to be on the back side (or the eastern coast) of that long large country or peninsula, which on our map is called "India" and stretches out from China far towards the south. He looked for a passage or channel through this peninsula to arrive to the Sinus Magnus (the Chinese Sea) and to the Ganges. Columbus died with the conviction

that he had been among the islands of the Indian Archipelago south of Japan and on the eastern coast of Asia.

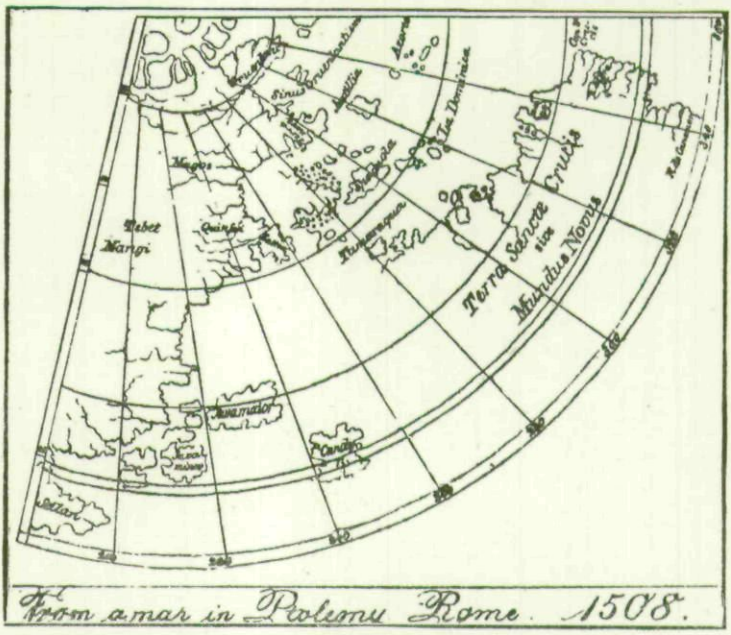
3. Soon after Columbus.

When Columbus and his contemporaries had traced a great part of the northern and eastern coasts of South America, and when the small distances of these new countries from Europe and Africa became better known, subsequent cartographers could not believe that the whole continent of Asia reached so far round the world without interruption. By measuring the distances of Asia from the Mediterranean and Egypt and other known longitudes of the west, as given by Ptolemy, Marco Polo, etc., they arrived at the conviction that Columbus and his new islands must be something separate from Asia, and that they must lie still a good way in advance from Asia, particularly that great southern island, called "Terra Sanctæ Crucis" (the Country of the Holy Cross) that is to say our South America. The magnitude of this country, to which the first great exploring expeditions were directed, was first well understood, and was therefore also first as it were detached and separated from Asia, and first called a New World (Novus Mundus).

North America, to which besides the Cortereals and Cabots and Ponce de Leon not many others at once did sail, became only known in detached pieces. And these detached pieces were either believed to be separate islands or peninsulas of the north of Asia, which was prolonged towards the west much more than southern Asia. The generality of the maps, which were made and published soon after Columbus therefore show us the ocean between eastern Asia and western Europe filled with a number of large and small islands. Some of them are the old islands, mentioned by Marco Polo (Zipangu, etc.), others are the new ones added by Columbus and his companions, "Isabella" (Cuba), "Spagnuola" (Haiti), "Terra de Cuba" (North America), "Terra Sanctæ Crucis" (South America), etc. This latter is always by far the most extensive of all.

I produce here reduced copies of three of this class of maps.

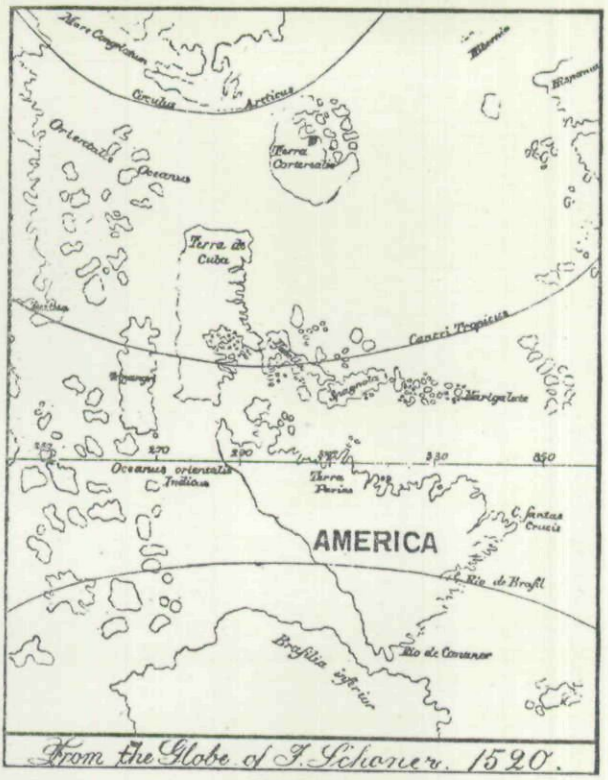
The first (No. 3) is a copy of a very famous map made by the German geographer, Ruysch, and published in the year 1508 in the Roman edition of Ptolemaeus. The principal features of this map are the following. South America (Terra Sanctæ Crucis) appears on it as a detached piece of country, of which the southern and



MAP No. 3

western coasts are said to be unknown. Spagnola (Hayti) is only 10 degrees to the east from that place, where Martin Behaim on his map of 1492 had put down his Japan, and the author of the map requests the reader not to be astonished at not finding on the map a Japan at all, because this Spagnola of the Spaniards was, so he says, this very same Japan of Marco Polo itself. Cuba appears to the west of Spagnola as the beginning of a large piece of country, of which the west and north is said to be unknown. The breadth of the ocean between

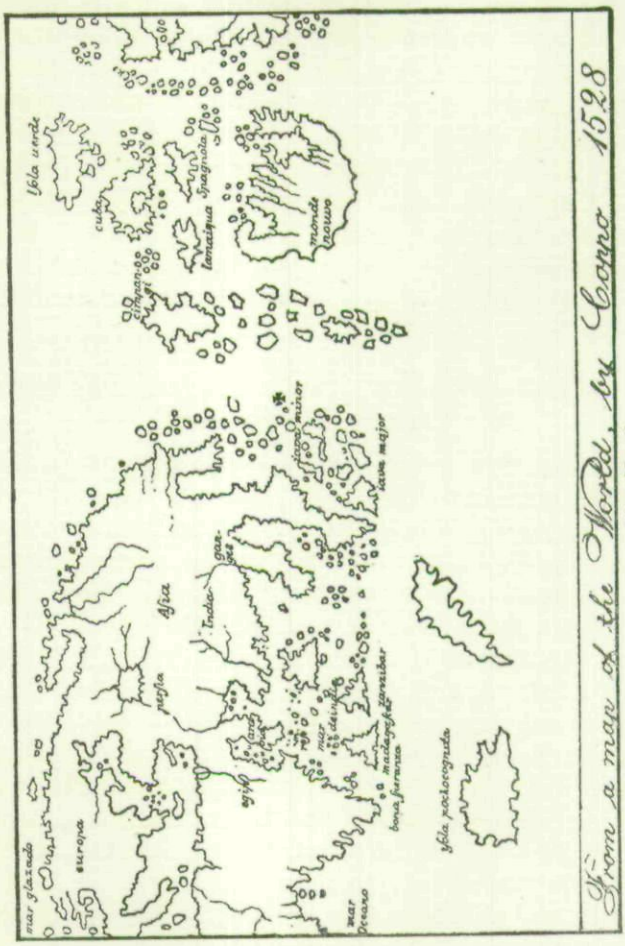
America and Asia (the Pacific) is still very small, in the south about 50 degrees of longitude and in the north not even twenty. The more Arctic countries "Terra Nova" (Newfoundland) and "Gruenlant" (Greenland) are at last perfectly melted together with Asia and appear as north-eastern peninsulas of the Old World.



Map No. 4

The second little picture (No. 4) is a reduced copy of a map contained on the well-known globes of Joh. Schöner of the year 1520. South America appears upon it as a large island, which ends in about 50° S. L. with a pointed peninsula. The island of North America is somewhat larger than on the Ruysch map. But the ways and navigation round it to Japan and China are

still open on all sides. Zipangu is situated only a few degrees of longitude to the west of it. The Pacific between North America and Eastern Asia has a breadth of 30 degrees, or about 400 leagues. The regions of



Labrador and Canada, the Land of Cortereal (Terra Corterealis), form a large round island and the North Pole is again surrounded by an insular country.

No. 5 is a copy of a map made in the year 1528 by a Venetian geographer, Pietro Coppo. It has upon the

whole the same features as the preceding and combines in a similar manner the geography of Ptolemy for the Indian Ocean, that of Marco Polo for eastern Asia, and what we might call the geography of Columbus for the new countries. The whole of America is dissolved in islands, of which the largest is South America, called "Mundo Nuovo" (the New World). That piece of country, which represents the island of Cuba *and* North America, is called "Cuba." The large island, which Coppo names "Isola verde" (green island) is probably the "Cortereals Land" of Schöner's map. About 60 degrees to the west of this group of American islands appears the coast of eastern Asia and Japan, surrounded by its archipelago of numerous islands as described by Marco Polo.

4. Maps of South America after Magellan, Cortes and Pizarro.

The idea that South America was a great peninsula of Asia, similar to that long peninsula appendix which could be seen stretching to the south on all the ancient maps after Ptolemy, was first given up, particularly after the conquests and voyages of Magellan and Pizarro and their contemporaries, that is to say after 1533. By them the whole circumnavigation of South America was completed, and Magellan showed by what a broad ocean South America was divided from Asia. The same thing at the same time was proved by the Portuguese conquerors, who pushed their explorations to China and the Molucca-islands, and by setting the geographical longitude of these countries, showed how far these regions remained back to the west.

There are still, it is true, even after 1530 to be found some maps of South America on which some Asiatic reminiscences may be discovered. I could for instance produce some upon which we find the famous East India trading emporium Cattigara, of which Ptolemy speaks and which he calls a great trading station of the Chinese. Ptolemy had put down this "Cattigara" on the west

coast of his large southeastern peninsula of India. The modern mapmakers, who believed that Columbus had discovered this peninsula on the east side and that it was the same with his country of "Paria," put therefore that Chinese city on the coast of Chile or Peru. But these were only exceptions or a few remains of the old erroneous views. And upon the whole, there was now no more doubt that South America formed a widely separated and isolated world for itself. It was generally called "Mondo Nuovo" or "Western India" or also "America," names which were exclusively given to it and seldom applied also to North America.

After 1530 we may therefore in the disquisition which occupies us here, give up South America and its maps altogether and turn our attention exclusively to North America, of which it remained for a much longer space of time doubtful if it formed a part of Asia or not.

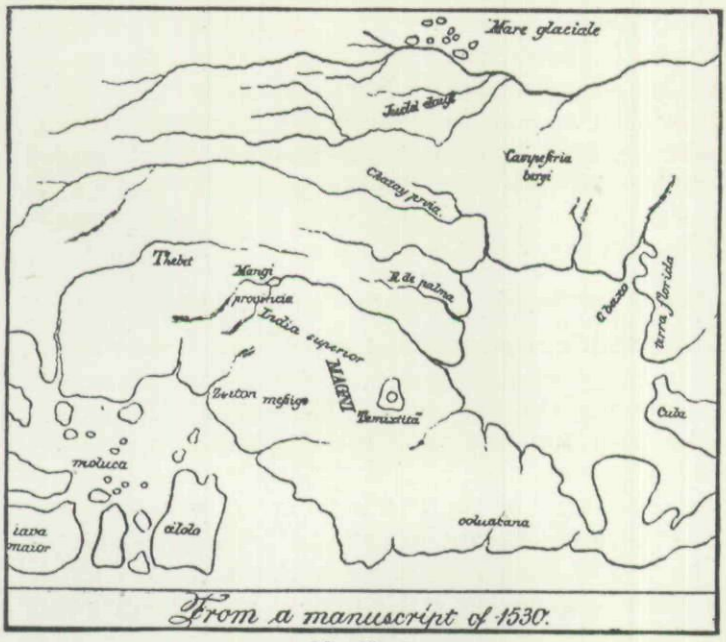
5. Maps of North America soon after Cortes.

Cortes and his companions entered Mexico with ideas more or less similar to those with which Columbus and his contemporaries had entered the archipelago of the Antilles, that is to say, with the expectation of finding Asiatic kingdoms and nations. When Cortes set out for his discoveries on the Pacific he hoped soon to reach Japan, which he thought to be near. When his successors arrived on the shores of Upper California, or what they called Quivira, they reported to have seen richly laden *Chinese* vessels.

Many geographers after Cortes accordingly painted North America, of which only the eastern coast had become known, as connected on a broad basis with Northern Asia. They represented on their maps Mexico and other American places, as Asiatic cities, and adorned them with mosques, minarets, temples and cupolas. They gave to the Rio Colorado its heads and sources in northern Asia. They laid down the famous province "Mangi" of China as bordering on Mexico. When they heard of the wild buffaloes of the western prairies, they

thought them the herds of the Nomadic tribes of Asia, and put down on their maps in the western regions, which they called Cibola, inscriptions like the following: "Here the people live like the Tartars and raise large droves of cattle."

Nay some seem to have made advance[2] China and the Asiatic elements, with which their North American maps for saying so were impregnated as far as the Mississippi.



Map No. 6

In the British Museum is preserved a Spanish map of the year 1560, on which the portrait of a true Chinese with a blue caftan, a red painted bonnet and yellow silken stockings is posted in the centre of the Mississippi valley, and near him an elephant grazing.

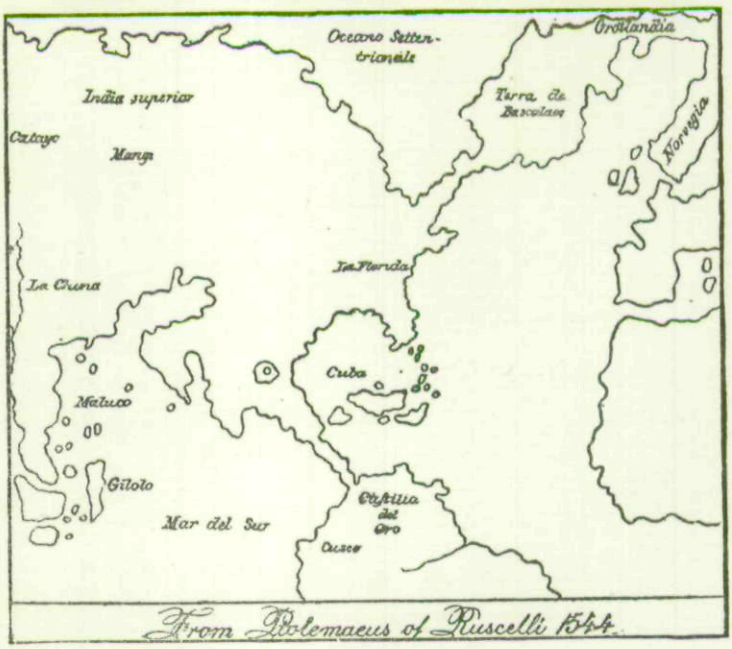
The maps of the middle of the 16th century, which have adopted this view of a connection between Asia and America on a broad scale, are very numerous. We

[2] The word "advance" should apparently follow "impregnated" [Ed.].

find them among the French maps as well as among the Italian, German and English. They are scattered in the editions of Ptolemaeus, in Grynaeus and other books.

For the sake of illustration I have chosen among them and reproduced in small copies three of this class.

No. 6 is the oldest among them. It is probably of the year 1530, that is to say soon after Cortes' conquest of Mexico. It is contained in an old manuscript pre-



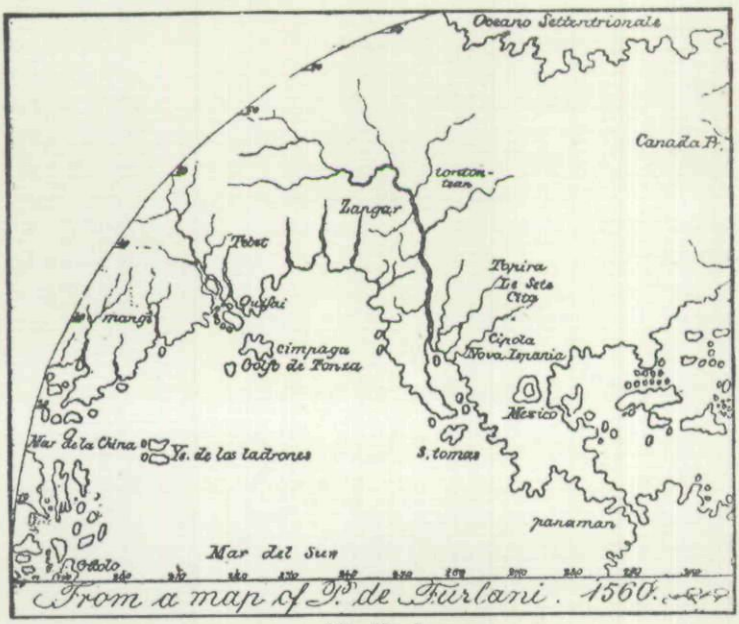
Map No. 7

served in the British Museum. It may illustrate in a certain manner the ideas and expectations which Cortes had, when he set out from the western coasts of Mexico for the discovery and conquest of California.

The name of the Chinese province, Mangi, is near to Temixtitian (Mexico) and the countries towards the west of the Mexican Gulf are called "India Superior" (Upper India), China and Thibet. The rest of eastern Asia is not far distant and Gilolo, Java and the Moluccas

are a few degrees distant from the Mexican coast, which is brought down as far south as the equator.

No. 7 is of a little later date and though somewhat improved it shows features upon the whole similar to those of No. 6. It is from a map of the world, called "Carta Marina Nuova" (A new marine chart), and contained in the edition of Ptolemy of the Italian Ruscelli. Also on this map the union between North



Map No. 8

America and Asia is on such a broad scale that both may be called one. The names Mangi, India Superior and China are placed at a distance from Mexico, which is somewhat greater than on the former map, but they are still near. The North Pacific is very narrow and has its northern end a little beyond the Tropic of Cancer while on No. 6 it was already closed south of this circle. Gilolo and the Maluccos are at no great distance from the coast of Mexico, though this has received a truer latitude.

Ruscelli had moreover the idea that North America also in the east was connected through Greenland and Scandinavia by a continental bridge or isthmus with Europe. And his map, which is in this respect unique in the history of chartography, shows the whole dry-land of the globe in one unbroken continental piece.

No. 8 is taken from a general map of America by the well-known Italian geographer Paulo de Furlani, who made it in the year 1560. Though on this map the northern Pacific is extended to the north as high as nearly 40° N. L., yet the union between North America and Asia is still on a very broad basis. Cimpaga (Japan) is at a distance of about 20 degrees longitude from California. "Quisai," the famous port of China, Tebet and other Asiatic names are still very near. The rivers of the Californian Gulf, the mouth of which had been discovered by the Spaniards twenty years before, has its sources and headwaters in the interior of Asia and flows round the whole northern Pacific.

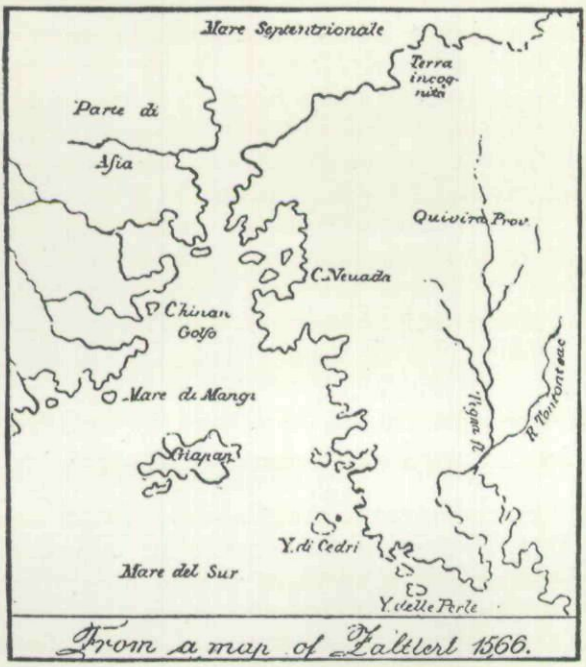
6. Maps of the Middle and End of the 16th Century with the Strait of Anian.

Though the views on the geographical point in question were very common in the period after Cortes, still they were not generally adopted. There were always many navigators, geographers and mapmakers, who believed in the existence of open water or a strait between America and Asia. There was a report current, which found more or less credit, that Cortereal had already in the year 1500 entered a Strait in about 60° N. L., and that he had called this strait after one of his brothers "the Strait of Anian." According to this tradition there was open water to the north of America and then in the west again a narrow channel between Asia and America, which was likewise called the "Strait of Anian." This name, of which the origin after Humboldt[3] is quite

[3] See his Crit. Researches, Germ. Edit., Berlin, 1852, 1: 477.

uncertain, was at last exclusively applied to the western strait, supposed to be between Asia and America.

Though the history of this geographical supposition reaches much higher up, still the belief in it became more or less general not before the middle of the 16th century, and the first maps on which the Strait of Anian was actually laid down are those of the Italian Geographer



MAP NO. 9

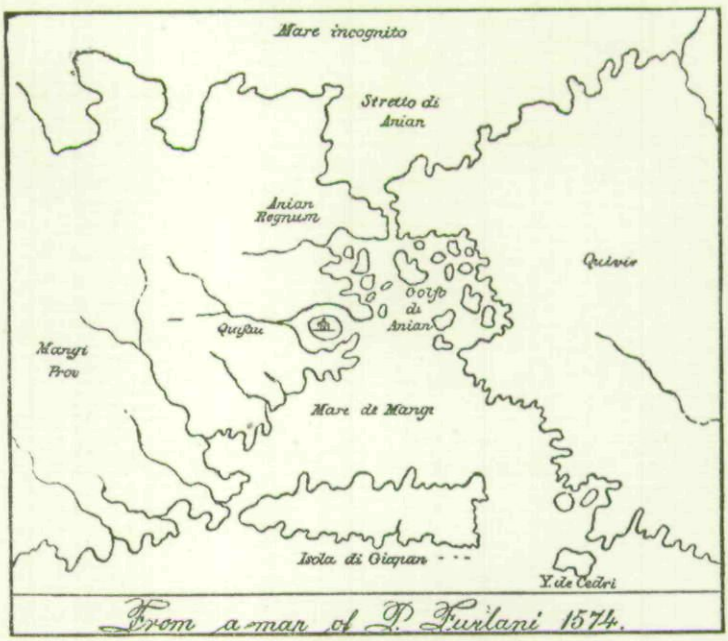
Zaltieri of the year 1566 and of the German Ortelius of the year 1570.

On innumerable maps of this time the general features of the configuration given to north-eastern Asia and north-western America are the following: Asia approaches to America with China, with Tartary with the whole broad mass of its body. And America steps forward to the west likewise with a broad mass of its body, with California and Mexico. A more or less

narrow channel, the "Strait of Anian," divides them in about the latitude of 50 degrees N. Before the southern mouth of this channel, in a pretty equal distance from Asia and America, is situated the island of Japan.

It would be impossible and useless to copy and communicate here all the maps which have adopted and reproduced this view.

I will give only the following two:

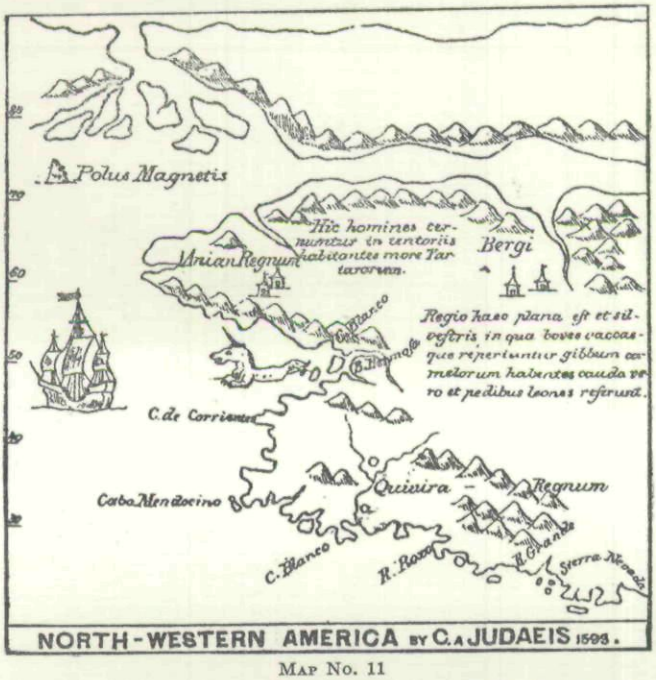


MAP NO. 10

No. 9 is the oldest map of this class which I could find. It is made by Bolognino Zaltieri in the year 1566. It has unhappily no indication of longitude and latitude. But the Strait of Anian has about the latitude of Newfoundland (Baccalaos). The northern Pacific is called with the Asiatic names: "Mare di Mangi" and "Chinan Golfo."

No. 10 shows the division of the two continents in a similar way. It is a part of a map which the geographer Paulo de Furlani published, and which he is said to have

received in the year 1574 from a Spanish nobleman, Don Diego Hermano de Toledo. Though the map has not indicated the latitudes, it is evident from other circumstances that the Strait of Anian is put down in about 50° N. L. North-eastern Asia is called "Anian Regnum" (the Kingdom of Anian) and north-western America "Quivira." Though so far as we know no



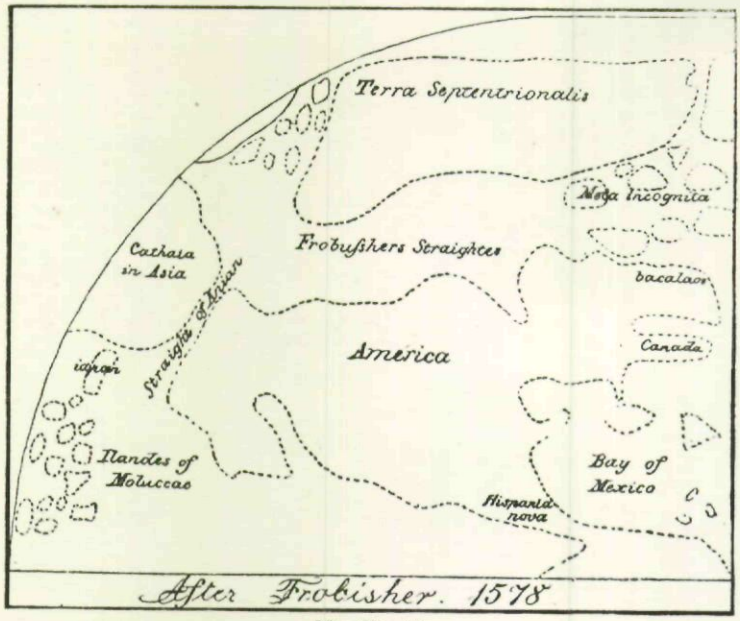
MAP No. 11

explorer at this time had yet passed Bering's Strait, still the configuration of the coasts of the two continents, the Strait of Anian, the Gulf of Anian, full of islands, as represented on our map, resemble in a striking degree the real and true configuration of Bering's waters and his islands. If it is a mere chance, it is a very curious instance how mere chance can foreshadow as it were and hit the truth.

No. 11 is a somewhat similar map of this class by Cornelius de Judæis.

No. 12 is a copy of the map on which Martin Frobisher sketched his views about this point, and on which he showed in what manner the Strait discovered and named by him might be combined with the Strait of Anian and conduct to China. This map was published in the work: "A true discourse of the late voyages of discovery for the finding of a passage to Cathay," London, 1578.

On the maps of Peter Apian, of Ortelius, of Sebastian



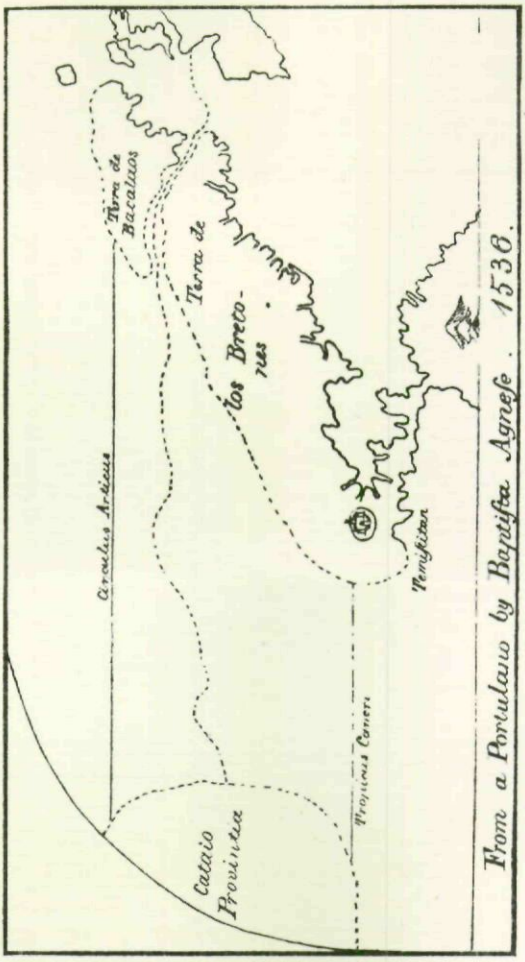
Map No. 12

Münster, of J. Martines, of Sir Humphrey Gilbert, which I will content myself to name only, we find similar views adopted, though they sometimes vary with respect to the latitude and dimensions given to the Strait, and with respect to the adopted configuration of the coast.

7. Maps of the 16th Century on which the Question is Left Undecided.

After our above remarks, we may state that there were among the geographers two contending parties

with respect to our question, one which believed in a separating strait and one which rejected the strait and believed that everything to the north of the Pacific

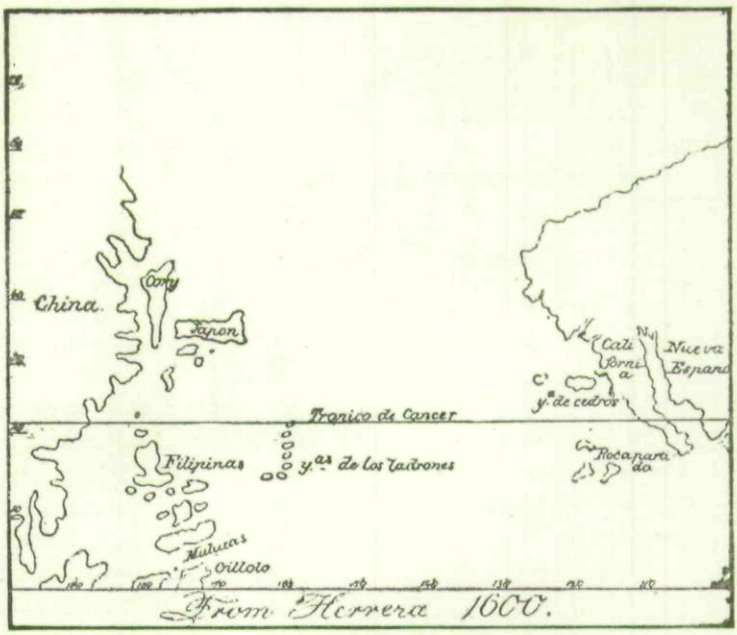


MAP No. 13

was barricaded by dry-land, and that this latter party may be considered to have preceded the first, but that the first pretty generally gained ground at the end of the century. We must add that there was also a neutral party, which adopted neither the one nor the other view,

which depicted on their maps the countries only as far as they were actually discovered and which laid down upon them no hypothetical straits or dry-lands. It may suffice here to give a few instances of the productions of such cautious men, which we find, of course, at all times.

No. 13 shows our regions as they are represented on a map of the Italian Baptista Agnese of the year 1536.



Map No. 14

"Cataio," that is northern China, is limited by a dotted coast-line, which is pretty much rounded off. We dare say that this coast-line of Agnese shows the state of knowledge of the Chinese coast acquired at that time in a much truer manner than all the accurately drawn coast-lines of other map-makers with capes and names upon them, derived from Pliny and Ptolemy. The same we may say of the dotted and uncertain coast-line which Agnese gives to north-western America.

No. 14 is a reduced copy from the map of the Spanish historian Herrera, made at the end of the 16th century. At this time the Portuguese had already reached Japan and found out its true position, and Spanish as well as English navigators (Cabrillo, Drake) had already traced the coast of north-western America beyond 44° N. L. Drake and his countrymen thought that from here the coast ran back towards the east and so Herrera seems also to believe it.

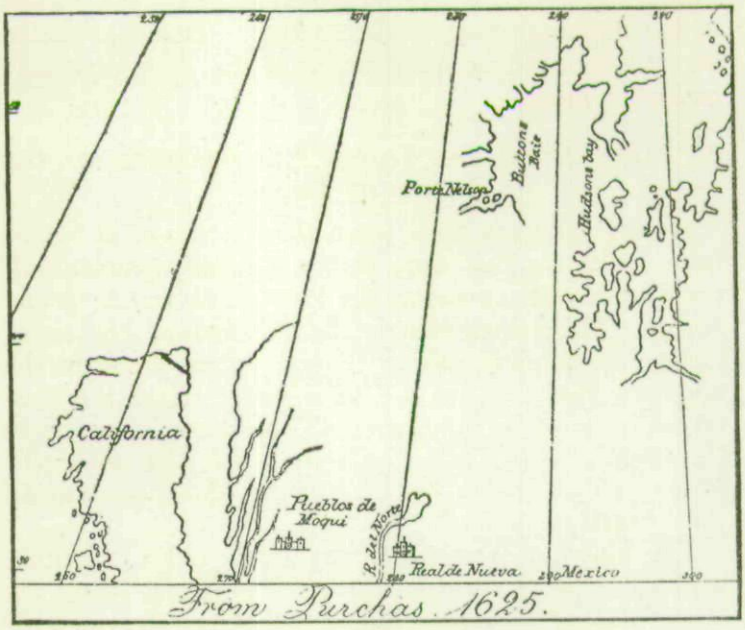
Diego Homem, a famous Portuguese geographer, has represented on his numerous maps the relative position of America and Asia in quite a similar manner as we see it here done by Agnese and Herrera. And so it has been done by Molineaux, by Michael Lok, by Oliva, by Cespedes and many others.

8. Maps after Hudson's Time.

When Henry Hudson, in the year 1610, entered his Strait and the unknown waters to the west of it, he believed that he was circumnavigating America. He thought that the countries to his right hand were a part of Asia, stretching out far to the east, and when he sailed down on the western-coast of Labrador to the south, where he was caught in a Bay, he thought that he was on his best way to California to the open Pacific and China. Even after him for a long time it was hoped that Hudson's Bay might have an outlet to the west and a communication with the Pacific, which made an end to the Continent of America.

The map-makers and geographers who cherished this hope, represented, therefore, some part or inlet of Hudson's Bay, not quite satisfactorily explored, as open and as possibly leading out to the west. They conducted in the same time the north-west coast of America not higher to the north than towards the 45° N. L., to which point in the 16th century Cabrillo and Drake, and at the beginning of the 17th century, Vizcayno had explored it. There they made the coast turn round to the east and represented an open space, through which as they

hoped the waters of Hudson's Bay would be found running. A map of this kind (No. 15) is that of Master Briggs, which Purchas has inserted in the third volume of his great work in the year 1625, and of a part of which our accompanying sketch gives a reduced copy. On this map we see many western inlets of Hudson's Bay as leaving still a hope for a passage, and the coasts of



Map No. 15

California, which end in 44° N. L., seem to be prepared to receive this passage. A design of the north-western part of America is not attempted at all, and the author of the map seems to be uncertain if there is water, or dry-land, and if these regions belong to America or Asia.

On other bolder maps, for instance on one of Canada printed in the year 1677 in Paris, the whole large broad channel, which was represented to come out from Hudson's Bay, is actually laid down, and even the route of

a vessel is traced through it and the inscription added "that in the year 1665 a vessel sailed this way round America to Japan."

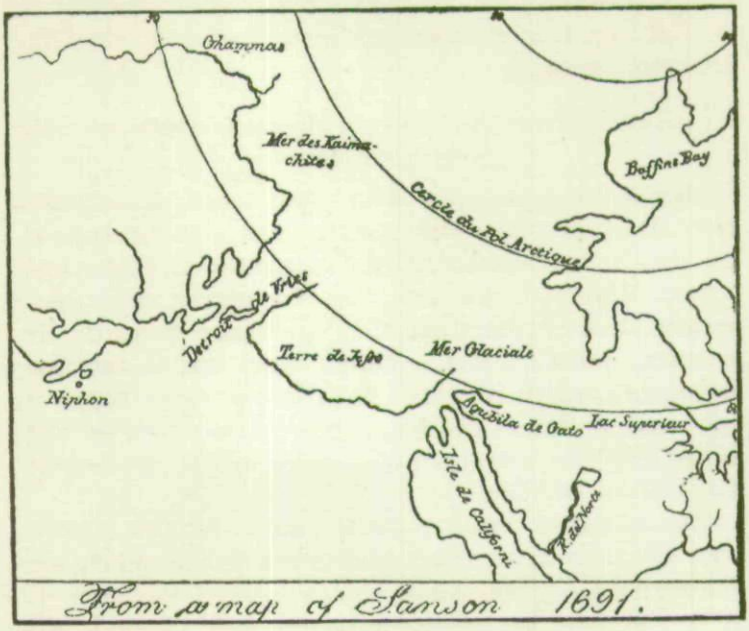
The old idea of the Strait of Anian to the north of Japan was now either totally abandoned or at least that Strait of Anian, which divided Asia and America, was now displaced and was put down immediately north of California, where it was supposed to enter the Pacific in the direction from Hudson's Bay. This supposition we find depicted on many maps of the time, especially on Dutch maps.

9. Maps after the Dutch Explorations to the North of Japan.

During the same time when these hopes of an outlet from Hudson's Bay were pretty generally entertained, the Dutch had succeeded the Portuguese in China and Japan. Their predecessors, the Portuguese, had never pushed their explorations beyond Japan towards the northern Pacific. But a Dutch vessel called the Castricom reached in the year 1643 the island of Yesso to the north of Japan and discovered a strait between this island and the neighbouring islands, which was named the "Strait de Vries."

The island of Yesso is pretty large, but the Dutch, who sailed along its coasts and probably also along the coasts of some of the islands near to it, which they took all to be one, and the same continental land, made it still much greater than it really was. They believed it to be the beginning of a large new land, which was stretching far to the north and to the east. Because the accidental discovery of the vessel Castricom was not farther pursued, that island of Yesso was delivered for saying so in an unfinished state to the imagination and speculation of the geographers and map-makers and they did their best with it. They blew it up to a great continent intermediate between Asia and America and some of them filled with the so-called "terra de Yesso" the whole northern Pacific.

According to this view the continent of Asia ended towards the east with the Strait de Vries, which conducted between Asia and the "terra de Yesso" to the northern ocean. The continent of America ended with Upper California and the southern coast of Hudson's Bay, and was separated from the country of Yesso by the Strait of Anian, which was considered to be a branch of Hudson's Bay. All the real and supposed dry-land

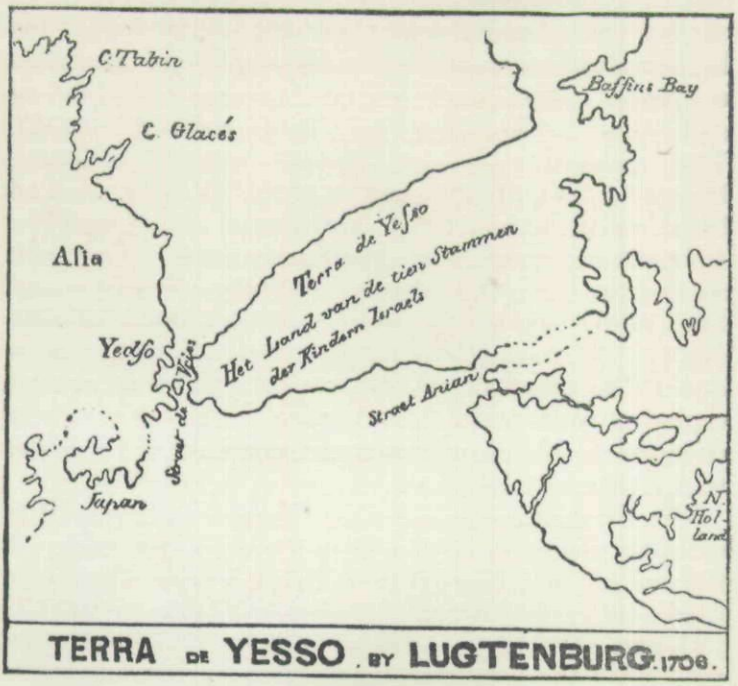


Map No. 16

between Hudson's and Baffin's Bay and the Strait of Anian in the west and between Strait de Vries and Asia in the west was ascribed to a new created continent called "Yesso." These ideas prevailed partly through the latter half of the 17th century and they are laid down on some maps, which were more or less bold and decisive in these fanciful suppositions.

For the illustration and corroboration of these matters I will insert here reduced copies of the maps of a French and a Dutch geographer of that time.

No. 16 is a sketch after a map of Sanson, the geographer of the King of France, of the year 1691. He makes the north Pacific closed and the coast of Yesso run in about 45° N. L. He calls the northern ocean near the coasts of north-eastern Asia, to which the "Strait de Vries" conducts, "Mer des Kaimachites," which name seems to be an allusion to Kamtschatka.



Map No. 17

No. 17 is a sketch after a map of a Dutchman named Lugtenburg of about the year 1700. He shows that curious idea about the configuration of the north Pacific regions to perfection. He makes the Strait of Anian cut right through from California to Hudson's Bay, gives to his "Terra de Yesso" well defined outlines and ascribes to it everything between Baffin's Bay and Asia. He calls it moreover "Het Land van de tien Stammen der Kindern Israels" (The country of the ten tribes of

Israel), intimating that this was the dry-land bridge by which the American population, which he thinks to be of Jewish extraction, wandered over from Asia.

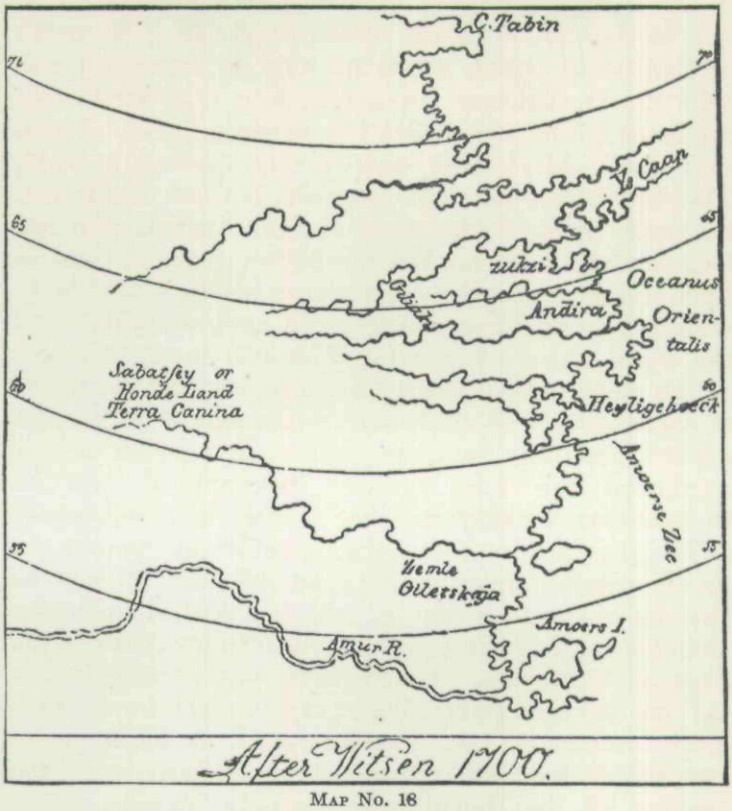
10. Maps after the First Discoveries of the Russians before Bering.

The European nations found so much useful occupation in the southern parts of the Pacific that the north of this broad ocean, where no kind of attraction was held out to explorers, for a long time was completely neglected. The Dutch did not advance beyond Japan and Yesso, which they had already reached in 1643. The Spaniards did not proceed beyond California, known to them for 200 years, and the English, who had been under Drake on the north-west coast already in 1578, did not make their appearance again. Everybody seemed to shun those stormy, cold, useless regions, and the world remained in total ignorance about this part of the globe until a new nation appeared on the coasts of north-eastern Asia, which gave the sign for an earnest exploring activity in these regions, and which at last conducted this long agitated geographical question to a satisfactory solution.

The Russians, or rather the Cossacks, had passed the dividing mountain ridge between Asia and Europe at the end of the 16th century and had worked their way from river to river through the whole of Siberia towards the East and North Sea. Already in the year of 1648, Deschnef, one of these enterprising Cossack adventurers, with a few companions had circumnavigated the whole north-east end of Asia from the mouth of the Lena round the country of the Tschuktschi through Bering's Strait to the coast north of Kamtschatka. But Deshnef laid not down his discoveries on a map. Because he was no well instructed geographer, he himself did not exactly know where he sailed and what he discovered. Besides this, nothing at the time became known of his voyage to the geographers of Europe. His reports remained for more than one hundred years hidden in the

archives of Siberia and his discovery was therefore of no consequence for geography.

Towards the end of the 17th century, during the victorious reign of Peter the Great, numerous bands of Cossacks arrived at many points on the borders of the eastern ocean along the Amur to the neighbourhood of

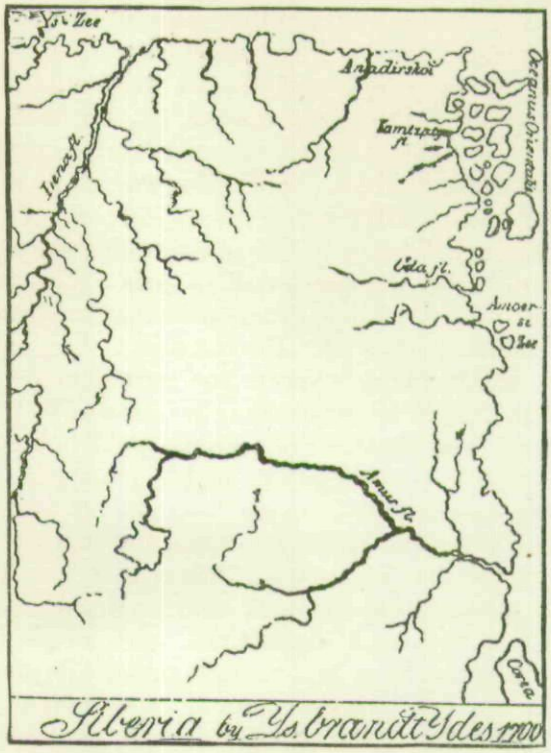


Map No. 16

northern China and Japan, on the coasts of the Sea of Ochotsk, and to the northern parts of the Peninsula of Ochotsk. We are informed that these Cossacks sent also to their Russian authorities reports as well as maps. They must, however, have been very rude. And whatever was laid down about the North Asiatic discoveries on general maps and became known to the rest

of Europe, was still ruder, as we may learn by a look at the following two sketches, which are taken from two of the first maps made at this period of the north-eastern parts of Asia.

No. 18 is taken from the Dutch map of Tartaria by the Burgomaster of Amsterdam, Nicolas Witsen. The



Map No. 19

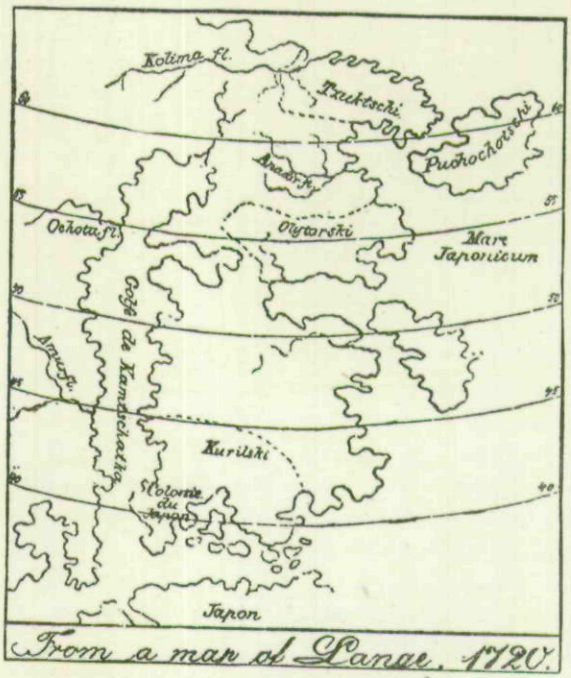
Dutch, who were at this time very good friends of Peter the Great, and the Russians could be better informed about Russia than other Europeans and Witsen's map was therefore considered to be a revelation and was copied by many French, English and German map-makers. We see upon this map the long north-eastern cape of Asia, called Ys Caap, represented as unknown in its extremity and put in 67° N. L., not far from its

true position. Of Kamtschatka appears nothing. But the name of a river called "Kantzanki River" may allude to Kamtschatka. The river Amur is rudely laid down in its true latitude of 54° N., and the sea before it including the Sea of Ochotsk is called "Amoerse Zee" (the Sea of Amur). There is no indication of a great country to the East (America).

No. 19 is taken from another map of the same time, which is dedicated to Peter the Great. On the title-page of this map, it is said that it was made after the delineations of the Burgomaster of Amsterdam, N. Witsen, but that it was corrected and improved by Everard Ysbrandt Ides. This Ides was a German who travelled about 1700 as an ambassador of Peter the Great through Siberia to China and collected much information about the north-east of Asia. The map has no indication of latitude, gives a rectangular form to the north-eastern end of the old continent, but resembles for the rest in many respects the former map. It has also no peninsula Kamtschatka, but instead of it a river Kamzatga, and south of it a group of high mountains, which may be the mountains of the peninsula. Along the north-eastern coast appear a number of islands, but no indication of the great country to the east (America).

During the first years of the 18th century the Russians had completed the conquest and exploration of this country on repeated expeditions, and more truthful and numerous maps and reports about it may have reached the seat of the Russian government. Peter the Great ordered the results of these explorations to be laid down on a new general map of Siberia. And on this map, which was copied in western Europe repeatedly and amongst others is added to the work on the travels of Lange to China in the years 1721-1722, the north-eastern end of Asia was represented in the manner in which No. 20 shows it. Kamtschatka is a large Peninsula. But as usually in the discoveries of new countries, it is represented here still much larger

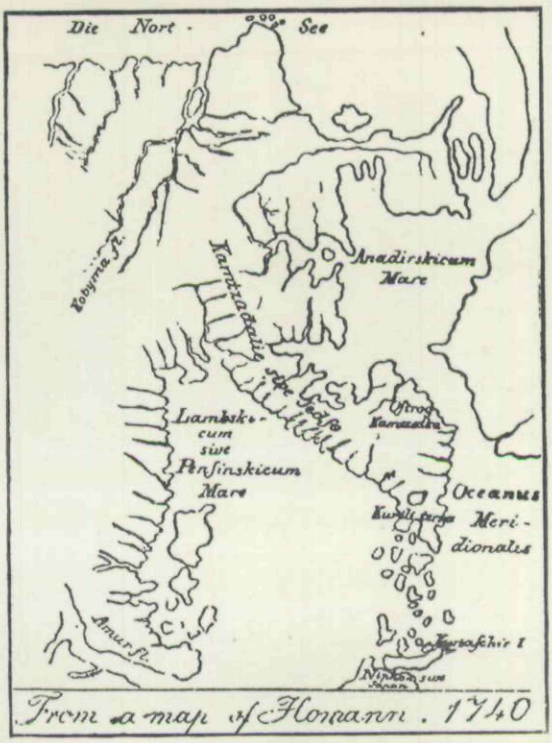
than it really is. It goes down as far south as a little beyond the 40° N. L., and its southern end approaches the island of Japan, whilst it really ends, already in 51° N. L. The Cossacks probably saw something of the Kurile islands and took a whole chain of them for a part of Kamtschatka. The name "Kurilski" is written on our map on the southern end of Kamtschatka. The sea



Map No. 20

of Ochotsk is called the Gulf of Kamtschatka. Beyond the 60° N. L., appears something like Bering's Strait, and the most eastern end of Asia (4 degrees too far south) is called "Cape Swetoi Nos" (the Holy head). To the east of this head and strait appears a large island called "Puchochotschi," which is perhaps the first indication of the most western end of America. What we now call "Bering's Sea" is named on the map "Mare Japonicum" (the Sea of Japan).

No. 21 is a sketch after a map which was published some years later than the former and shows some progress and some new features. It was published on a large scale by the well-known German cartographers Homann in Nuremberg. The date of publication is not given. But the map must have been made before the year 1728,

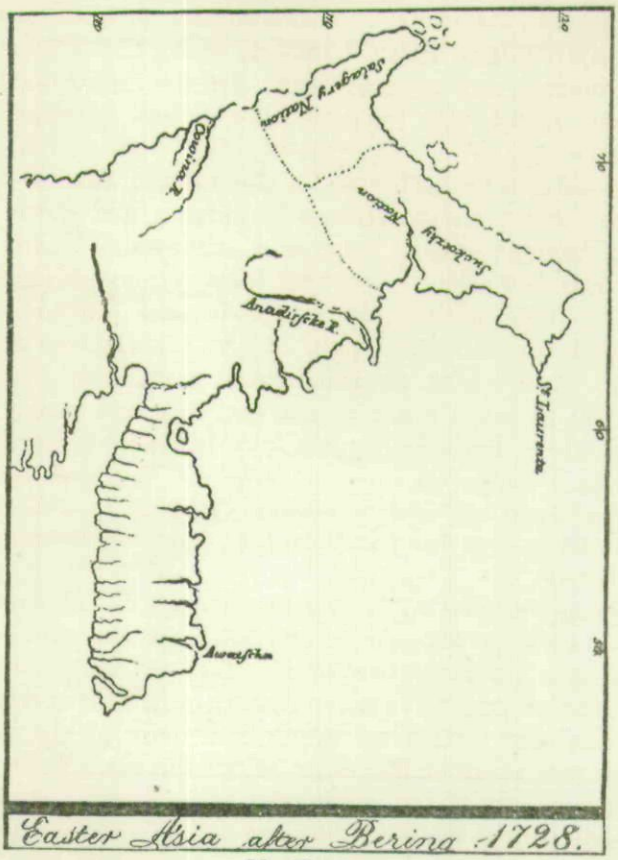


MAP NO. 21

that is to say before the first voyage of discovery by Bering. At least the map has no sign that Bering's maps and reports were used. The Homanns, who were in scientific correspondence with Russia say that they made the map "after the observations of the Russian hunters, who had explored those regions on numerous expeditions by sea and by land." The map seems to have been esteemed at the time by geographers, and a reduced

copy of it is also to be found among the Japanese manuscript of Kempfer. Unhappily the map has no latitudes.

Nevertheless it is evident that Kamtschatka has received a much better configuration and position than on No. 20. It does not go down as far south as Japan



MAP NO. 22

and as the mouth of the Amur, and ends in about 46° N. L., which is only 4 degrees too long. Between Niphon (Japan) and Kamtschatka appear the Kurile islands. Bering's Strait is indicated, and moreover to the east of Kamtschatka a large piece of country without name, alluding probably to the great unknown eastern countries

(America), of which the Tschuktschi and Kamtschadali may have spoken to the Cossacks.

In the year 1728-1729, Capt. Bering executed at last the first official and scientific exploration of the north-eastern end of Asia, circumnavigated with astronomical instruments the whole of Kamtschatka, penetrated into Bering's Strait, without, however, seeing the west coast of America, and brought home the first map of these regions, which was founded upon actual astronomical survey.

No. 22 is a reduced copy of this map of Bering, upon which with a few exceptions nothing is laid down but what Bering actually saw and surveyed. Upon this map Kamtschatka, for the first time, received something like its true position in longitude and latitude. Its length is shortened to about 51° N. L., which is nearly right. And whilst on the former maps (see Nos. 20 and 21) it swept much to the east and had nearly the longitude of Bering's Strait and of the most eastern end of Asia, it turns on this map much to the west and its southern end remains from Bering's Strait in a distance of about 34 degrees of western longitude, which is pretty much true.

Bering received on this his first voyage no information and knowledge of America and his map, therefore, contains also no indication of it. But we may consider that the geography of north-eastern Asia in its principal outlines was settled by him. This part of the world stood now more or less clear before the eyes of the geographers whilst the west end of America remained still enveloped in utter darkness.

11. First Maps of the North-West End of America after Bering.

During the reign of the Empress Katharina of Russia a thorough and scientific exploration and survey of the whole of north-eastern Asia was concluded and executed, and corps of engineers and surveyors went out in all directions, also towards the unknown east. Two vessels

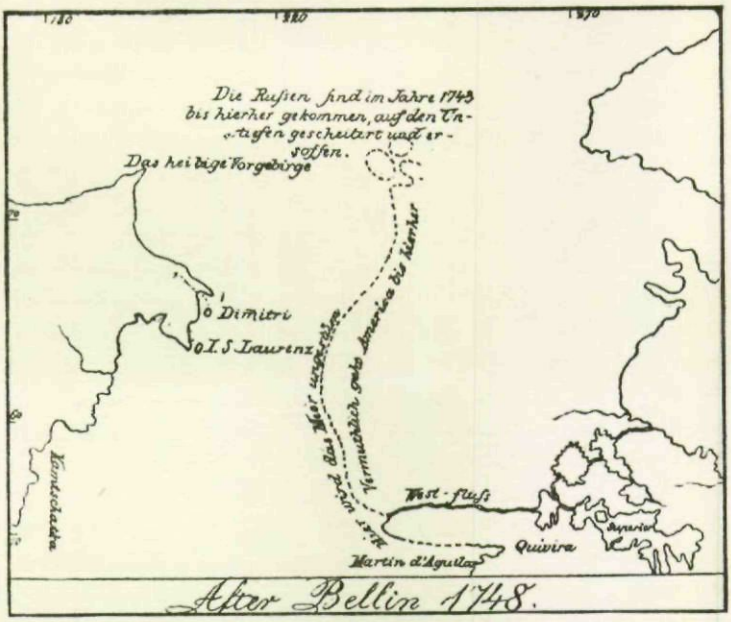
under the command of Captain Bering and Tschirikow sailed this way in the year 1741. They took their course at first very far to the south into the northern Pacific as far down as beyond 45° N. L., because they principally went out in search of a certain great country, which a Portuguese Captain Don Jozé da Gama was said to have seen there on a voyage from China to New Spain.

This country was already depicted on a map in Thevenot's great work in the year 1663, as a great tract of land between Asia and America in the latitude of northern Japan or Yesso and Upper California. It resembled in its form and situation very much the old fabulous Terra de Yesso of the Dutch navigators, as may be seen by the annexed sketch which we give of this country, as it has been depicted in the Atlas of Reiner and [Joshua] Ottens. Bering and Tschirikow could not find that this country really did not exist, and which was probably nothing but some of the Kurile islands, mistaken for a great country. They therefore steered towards the northeast and touched the coast of America on different points between 55° and 60° N. L., saw it also again repeatedly on their home voyage, and discovered different islands, upon one of which Bering himself shipwrecked and died. Some of his companions and Tschirikow returned, however, to Asia and Russia, where, however, for a long time nothing was officially published about the results of their voyage.

The rest of Europe heard only by a very general report that the Russians had made an expedition and some discoveries to the east of Siberia and Kamtschatka. Some believed that they might have been in America. Others thought that the land seen by them might be something like Terra de Yesso, a new country between America and Asia.

How very vague, uncertain and varying the opinions of European geographers were with respect to these Russian discoveries may best be shown by the inspection of some maps, which were published soon after Bering's and Tschirikow's expedition.

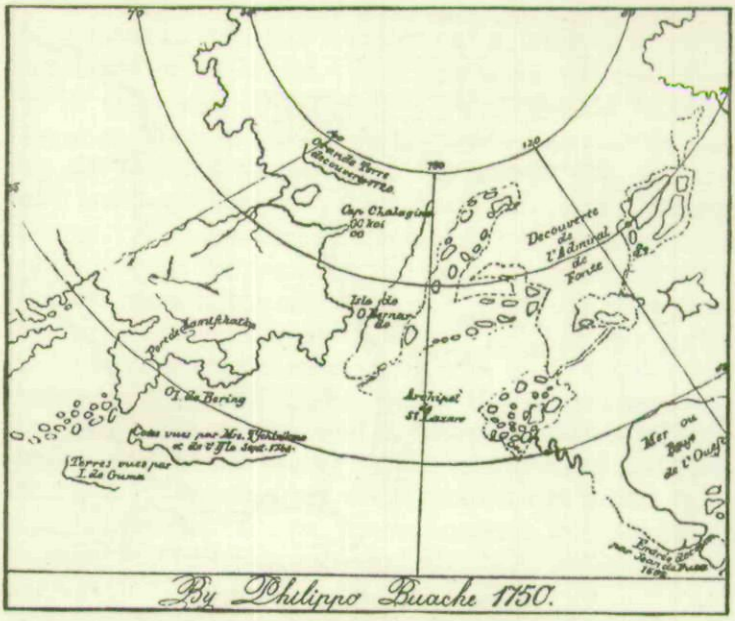
No. 23 is a reduced copy from a map published in Germany a few years after the return of Bering's people in the year 1748. Of all the Russian discoveries nothing is indicated as [but] the island where Bering perished and this island is put in about 70° N. L., that is to say about 15 degrees too high. We find written to it the following inscription: "The Russians have come so far as this in the year 1743 but they have been ship-



Map No. 23

wrecked on the shoals and drowned." The whole rest of north-western America is indicated by a dotted line running from north to south to the Bay of Aguilar in California, with the inscription running along it: "Probably America goes as far as this." At the northern end of California the observation is added that "there the Sea begins to be very boisterous." A more laconic report on the Russian discoveries a map-maker could not make. The same map with exactly the same inscriptions was also published in France and in other countries.

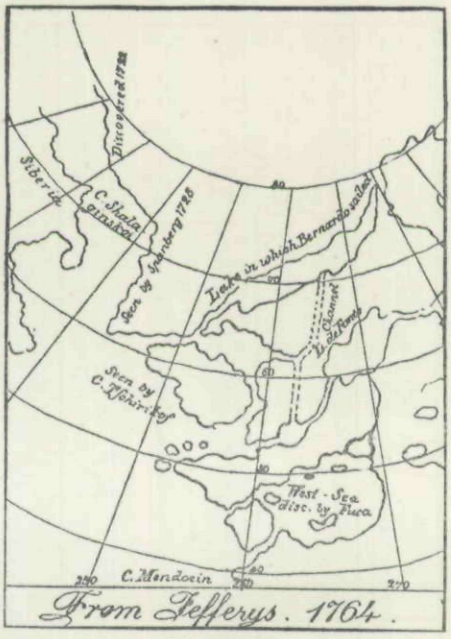
No. 24 is a copy of a map, which was made by the French geographer, Philippe Buache, as he said after the memoirs of the astronomer De L'Isle, who accompanied the expedition of Bering, and which was presented in the year 1750 to the Academy of Sciences in Paris. He tried to combine on it the fabulous discoveries of the so-called Spanish Admiral Fuente and of another Spaniard, De Fuca, which he believed were the real discover-



MAP NO. 24

ies of the Russians, of which he had a very incomplete knowledge. He put down on his map all the great lakes, straits and the great "Sea of the West" (Mer ou Baye de l'Ouest), which Fuente and De Fuca were reported to have seen. He laid down in 56° N. L., a piece of the coast seen by Tschirikow, and again a long stretched coast seen by the same Tschirikow farther to the west and in 54° N. L. He adopted likewise, more to the south and west, the coast seen by J. da Gama and another country in the Arctic regions, north of Siberia, seen by

the Russians in 1723. In this way he made of the whole of north-western America a broken country or a complex of islands, curiously formed peninsulas and unfinished coast pieces. Of Bering's discoveries his map gives nothing except the little island of Bering where this explorer died. This map of Buache and De L'Isle was, however, considered to be a very good authority, which



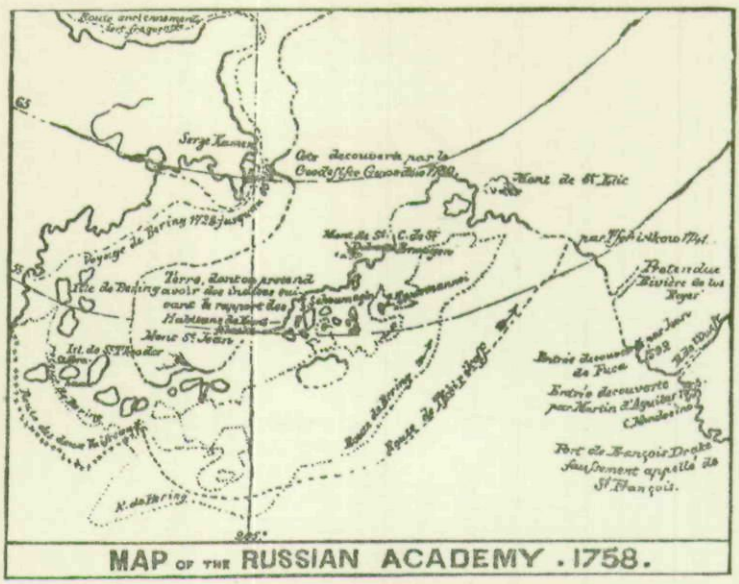
MAP NO. 25

it partly was. And it was therefore copied in many countries and by different geographers, only that they added to it sometimes a little of their own.

No. 25, for instance, shows a copy of the map of Buache and De L'Isle by the English geographer, Jefferys. He adopts on it everything. But he thinks that the country seen by the Russians in 1723 to the north of Siberia is nothing but a prolongation of the countries seen by them to the east of Kamtschatka, that is to say of America, and he therefore gives to north-western

America an enormous extent. Other map-makers, on the other hand, made the coast-line of North America from Bering's Strait run due north to the Pole.

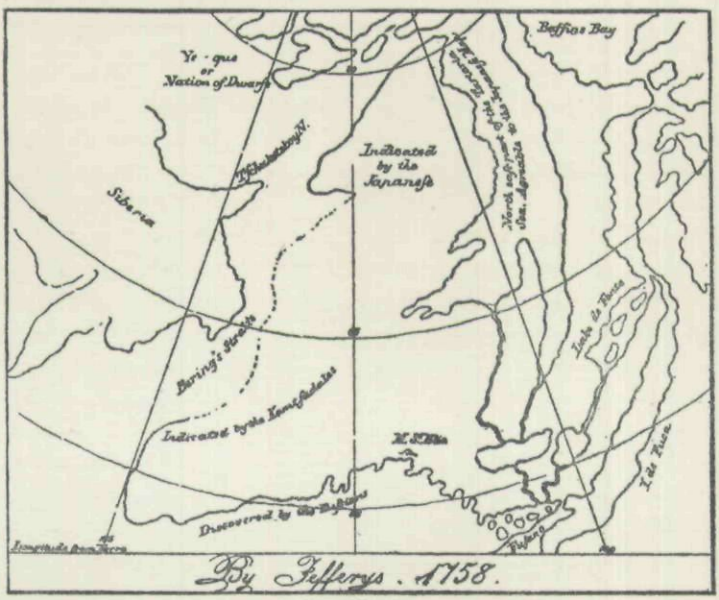
At last in the year 1758, the Russian Academy of Sciences published an authentic and complete chart of the discoveries made by Bering and Tschirikow. No. 26 is a copy of this chart. On it in the same time the detached pieces of coasts seen by those navigators



Map No. 26

are joined by dotted lines, which show the outlines of the countries as the members of the Academy (principally Mr. Müller, the historian of Siberia) thought them to be. Though the name of America does not occur on this map, still it is evident that the Russian Academy thought the new countries to be a part of this continent. They supposed, even, that all the pieces of coast which Bering and Tschirikow had seen, along what we now call the Aleutian islands, made a part of this continent and formed a long, broad peninsula, which error was only corrected by later discoveries.

This map of the Russian Academy was now of course as the most reliable information adopted and copied by all geographers of Europe. It left, however, still open a large field of speculation and this open field was filled out by them with many speculations, which they tried to introduce into this map. Besides the old traditions of the North American discoveries of the Admiral De Fuente, to which some still adhered, other reports



MAP NO. 27

about certain discoveries, made in north-western America by the Chinese and Japanese, gained credit at this time. De Guignes in his great work on China had pronounced that the Chinese knew north-west America under the name of "Fusany" or "the country of the rising sun." Kempfer had brought to Europe certain Japanese maps, on which were figured countries to the north-east of Japan. Some thought that by these countries was meant the north-western part of America.

No. 27 shows how a map-maker, who believed in all these discoveries, tried to combine on a map the real

discoveries of the Russians with the supposed knowledge of the Chinese, Japanese and De Fuente. He copies on it first the map of the Russian Academy. But there into the interior and the unknown North he puts down countries and bays taken from Kempfer's Japanese map. In the south he has the country "Fusany" of the Chinese, mentioned by De Guignes, and besides this the lakes of De Fuente.

12. Maps of the Russian Fur-hunters between Bering and Cook.

It was a long time after Bering (1743) before an important official and scientific expedition was made again from Siberia towards the east. But Bering had opened a field for private speculation. His companions had brought with them from the eastern countries rich shares of most precious furs, which were sold at high prices. And this circumstance induced many Russian privateers and speculators to fit out in Kamtschatka and Ochotsk small vessels and to sail to the east for the exploration of the seats of these fur animals. These privateers rediscovered at first Bering's Island, and having exhausted this, then reached the chain of the Aleutian islands one after the other. They reported that what the Academists on their map of 1758 had represented as continental land were all islands. They also sometimes brought home a map, which they tried to construct of these islands. But for want of astronomical instruments they could not well define their position.

This kind of trade became by degrees important and the Russian government at last decided again on some scientifical and official expeditions towards the east, to assist their subjects in their navigation by defining the position of the new islands and by taking possession of them. Between the years 1764-1769 two such official expeditions were made, one commanded by Lieutenant Synd and the other by Lieutenants Krenitzin and Levascheff.

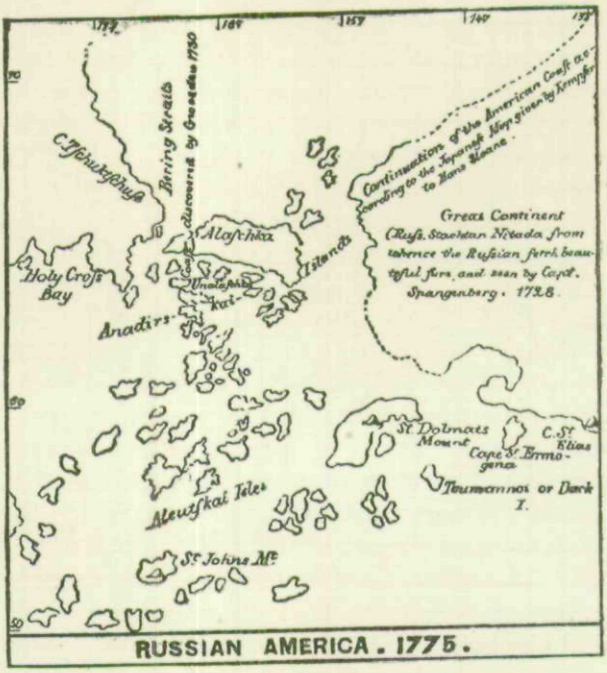
Synd followed (from 1764-1768) the first route of Bering (in 1728), sailed along the east coast of Kamtschatka and the country of Tschuktschi of Bering's Strait and recognized there also the most western point of America, which Bering had not seen, which had been, however, already visited by a Russian of the name of Gvozdec in the year 1730.

Krenitzin and Levascheff (1768-1769) visited the Aleutian islands as far as the western point of the peninsula of Alaska. Both brought home maps of their discovery which remained, however, hidden in Russia and became only known at a much later period.

The European geographers received of all these Russian discoveries only very confused reports. They seem to have heard only that the great large peninsula, painted on the map of the Russian Academy of 1758 was now recognized to be all islands, to which different names were given. It seems now to have become a passion to see islands everywhere. Not only the whole space of water between America and Asia was filled with islands where none existed, but also the long peninsula of Alaschka was considered to consist of islands, and also the great western spit of land, with which America [. . .] toward Bering's Strait, was supposed to be an island. The great continental land of America was therefore placed far back to the east behind this great new archipelago.

No. 28 shows how these things were figured at the time. It is a copy of a map by the English geographer, Jefferys, of the year 1775. Jefferys made this map principally after another map, composed by a Mr. Staehlin, who was considered to be a good authority and whose work lay at the bottom of all the similar maps of that period which were published in Germany, Holland, France and other countries. We see on this map the terra firma of America in the latitude of Bering's Strait at a distance of 20 degrees of longitude from the eastern cape of Asia. It is called the Great Country of "Stachtan Nitada," a curious name, which is probably

of Aleutian origin and which was adopted at the time on all maps. The western broad spit of land is made to be an island and called "Alaschka." Also "Unalaschka," which was discovered by Krenitzin and Levascheff is transferred to this region and with them many other islands, which are named with an Asiatic name: "Anadirskai islands" (the islands of Anadir), as if they be-

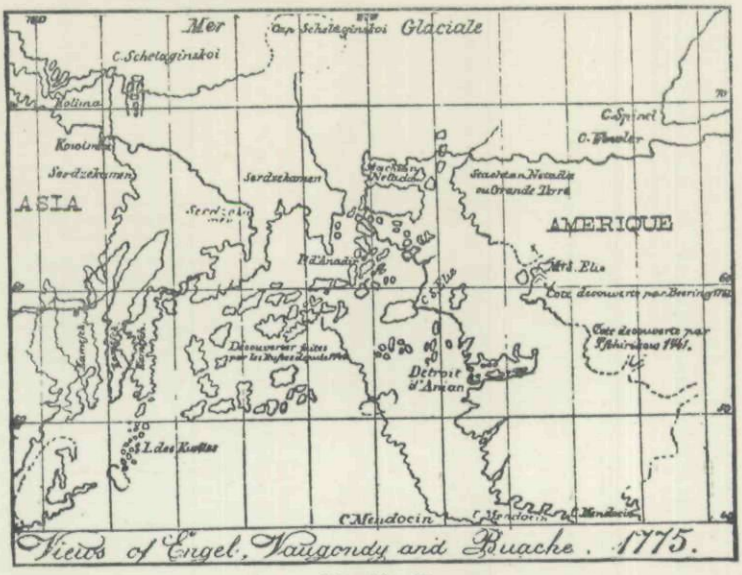


Map No. 28

longed to Asia. To the south of them is laid down another group of islands called "Aleutskai islands" (the islands of the Aleuti). Their arrangement resembles very little the order in which this chain of islands is put in reality. From Mount S. Elias to the north-west, north and round to the east is open water and navigation.

It was on maps like these that the plans for Cook's great expedition to these regions were based. But to throw still more light on the great merits of this dis-

coverer, we will reproduce and insert here a map of comparison, No. 29, which was composed and compiled by the French geographer, J. N. Buache a few years before Cook. He tried to show on this map how different the opinions of geographers were about the configuration and position of the northern extremity of the two continents. He combined on it the delineations of three distinguished geographers: Engel, Vaugondy



MAP NO. 29

and of himself. The red lines on the map represent the ideas of Engel, the yellow those of Vaugondy and the blue those of Buache.

[The present reproduction does not give the variations in color, as noted in Kohl's drawing.]

We learn by it that their positions deviated sometimes about 20 degrees of longitude and also in some parts considerably in latitude.

13. MAPS AFTER COOK.

That there could not be any large channel or bay between Hudson's Bay, or some other north-eastern

bay of America, and the Pacific Ocean, as had often been supposed, was principally proved by the travel of Hearne in the year 1771. He went by land round the whole of the western coast of Hudson's Bay, cut right through the large body of the American continent, found everywhere fresh-water lakes and rivers and reached the salt-water, or the Arctic Ocean, only beyond 70° N. L.

Soon after him other travellers of the north-west and Hudson's Bay companies advanced far into the interior to the north-west and found here likewise an everywhere connected mass of terra firma, not otherwise interrupted but by lakes and rivers, and not separated by such fanciful bays and channels as had been drawn on the maps after the so-called De Fuente or after the geographical views of the Japanese.

The idea that the American continent ended already at a very low latitude, and that that piece of land which the Russians had discovered was something separate between Asia and America, was therefore more and more given up. Also the explorers, whom the Spanish government had sent out after 1774 along the north-west coast and who advanced as far as about the region where Bering and Tschirikow had been before, had found firm land everywhere when they touched the coast and no signs of broad channels and waters.

When, therefore, Cook in the year 1777 sailed to these regions with the intention of trying a circumnavigation of the whole of northern America and of returning by the north and north-east through Baffin's Bay, neither his instructions nor he himself paid much attention to the coast east of Mount Elias, expecting that it would be all terra firma and not hoping that he could effectuate his passage to the north there. But to the west of Mount St. Elias, where as I have shown nearly all the former maps had shown America to be dissolved in islands, he held a sharp look-out, entered every inlet and bay, thinking that he might find something like a passage. He was, however, baffled in his expectations.

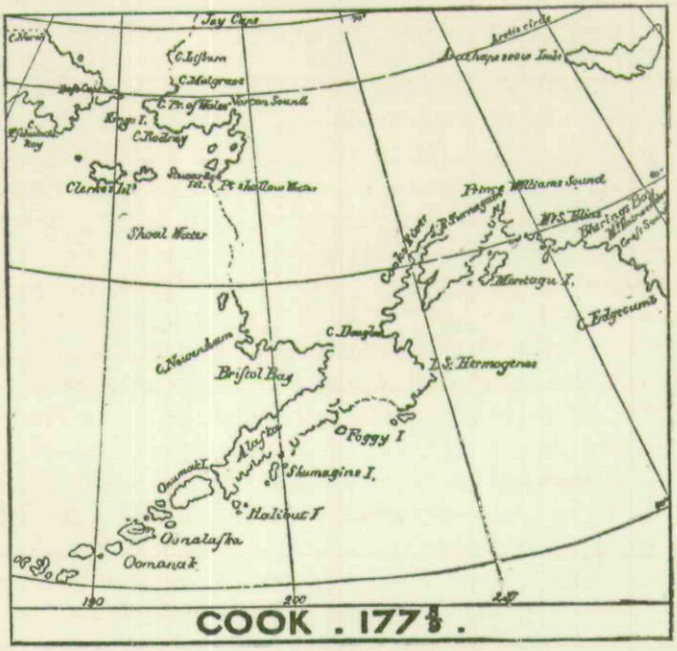
Every large inlet was found to be nothing but a sound, one of which he called "Prince Williams's Sound," and another Cook's River.

On his progress to the west the continental coast threw him even back much to the south and he could not push to the north into open water before he had reached the western end of what he called the peninsula of Alaska. He sailed along this peninsula on both sides, discovered [and] entered Bristol Bay and Northon Sound and passed Bering's Strait into the Arctic Ocean. He circumnavigated the most western end of America, which he called C. Pr. of Wales, found the northern coast of America turning to the north-east, but was stopped in his progress by an unpassable barrier of ice in about 70° N. L., where he called the last head-land seen by him Icy Cape. He sailed along this barrier of ice towards the west, touched the coast of northern Asia in the same latitude, where he called the last head-land seen by him Cape North, traced this coast backward towards Bering's Strait, and returned to the south through the chain of the Aleutian islands.

No. 30 is a reduced copy of the map on which the discoveries of Cook were laid down and which was published soon after his death and after the return of his officers. We see upon it, for the first time, the north-western end of America given its true proportions and configurations at least in its principal features. The parts of the coast which Cook could not approach and ascertain are marked with dotted lines. He did not recognize the figure of the large island of Kadiak and he did not survey the interesting part of the coast between Bristol and Norton Bay, which he could not approach because the water was too shoal, and where in later times were discovered the deltas of some large rivers. Cook traced the principal features of its configuration in an undoubted and scientific manner and put them down on the map in their true latitude and longitude. All the erroneous suppositions of a "terra de Yesso," or some other separate continent between Asia and America, of great inland

channels cutting through the whole continent of America, of a great archipelago, full of islands between Asia and America, vanished before Cook's delineation.

There remained still after him it is true much detail work to be done, many special questions to be answered. The length of the many inlets were still to be explored, many islands were to be circumnavigated, the question

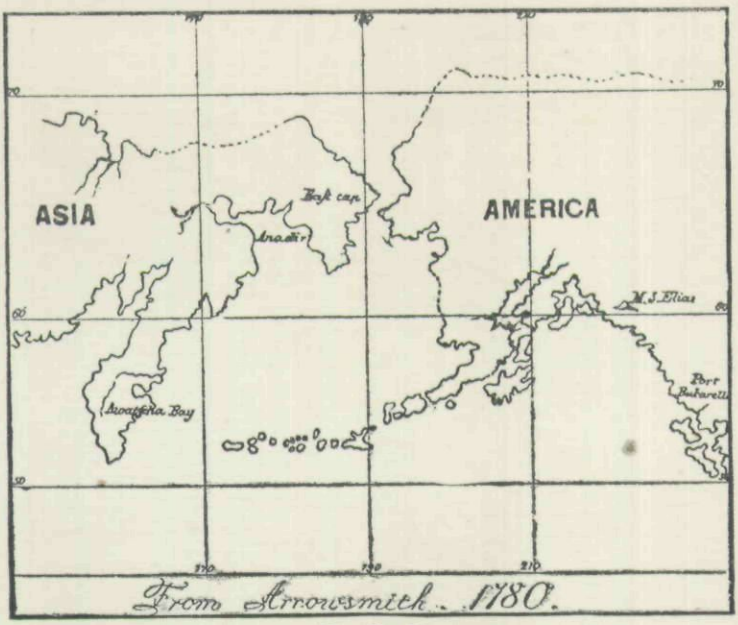


Map No. 30

whether on the north-west coast there was such a large "Bay of the West" as De Fuca was said to have discovered, was still open and remained long after Cook still a subject of discussion and research. But the great and rough work was done by Cook, and all his Spanish, French and English successors may be considered as progressing and building on the fundamentals given by him. We may say that Cook did in this manner in the year 1778 the same thing for the west end of America that Bering had done in the year 1728 for the east end

of Asia. And it was, therefore, also very just and fair that the dividing strait between the two great islands of our globe was called as well after the Asiatic as the American explorer: "Cook's and Bering's Strait."

Cook's map was of course at once adopted by all the geographers of the time, who inserted after it into their general maps and remodelled according to it the map of North America and northern Asia. On these maps were also sometimes drawn the northern shores of North



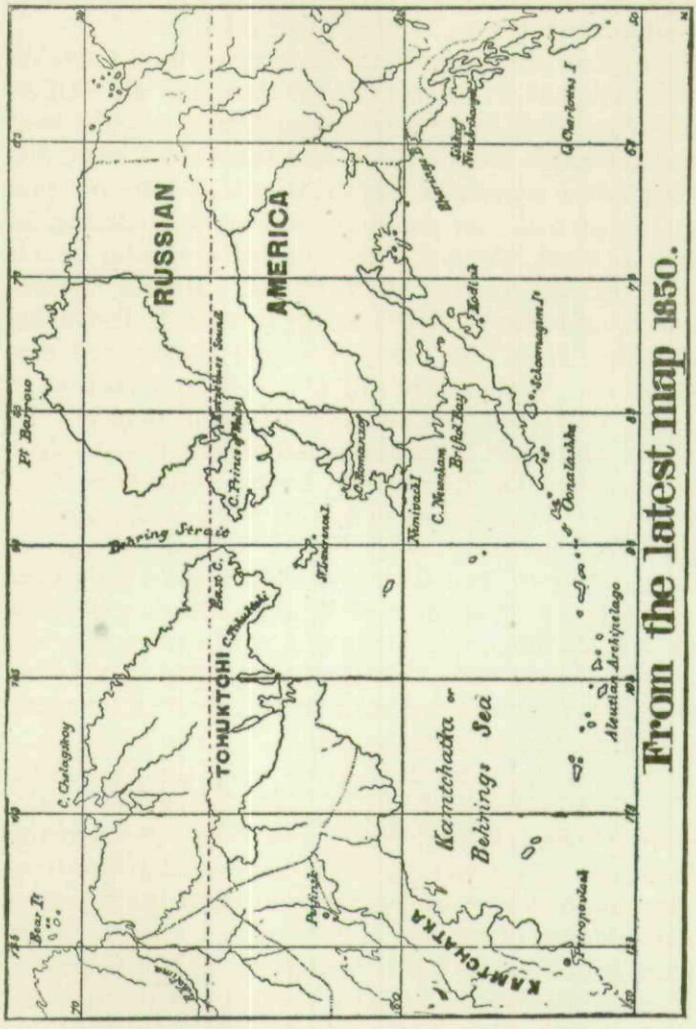
Map No. 31

America by connecting through a hypothetical line the most northern coast-points reached by Cook and Hearne.

No. 31 shows how this was done by the English geographer, Arrowsmith. It is a reduced copy of a map of north-eastern Asia and north-western America, which this geographer published soon after Cook and on which he combined the discoveries of Cook and Bering and other Russian navigators. Similar maps were published, some time after Cook, in Petersburg and elsewhere.

14. Time after Cook.

After the time of Cook no more principal and essential changes were made in the map of north-eastern Asia



and north-western America, and thence we may come down at once to the latest and most modern map of these regions which has filled out the gaps left by Cook,

and gives the most perfect and complete view of the question. We therefore conclude here our series of pictures with a small reduced picture of our regions, No. 32, as they are figured on our present maps and which we subjoin for the sake of comparison.

To explain this picture the following short notes on the further history of north-west America will suffice. Soon after Cook, a general interest in the north-west American coast arose. Cook had discovered here, like Bering in the regions nearer to Asia, that rare and precious fur-animal, the sea-otter, and as after Bering, so also after Cook, the trade and hunt after the fur of this animal excited further explorations. Meares, Dixon, Portlock and many other English captains sailed along this coast, made new discoveries and constructed new maps of it. Also the French, who wished to partake in it, sent along the northwest coast their excellent La Pérouse, who made there many new observations. Even some American Captains, Gray, Irving, and others, came out to the coast and helped in this work in the hope of gain. The Spaniards, who feared in this struggle of other nations to lose their old claims and pretensions to that whole part of the New World, until then so much neglected by them, sent also out a whole series of scientific expeditions under Bodega y Quadra, Malaspina and others, who explored likewise the coast as far north and west as the Aleutian islands.

At last in the years 1792-1794, came the great Vancouver, who from California to the peninsula of Alaska exploring every sound, strait and inlet, and circumnavigating every island, set all the geographical questions of this coast at rest, and gave upon his maps the most perfect picture of it.

During the same time, 1793-1794, a land-traveller, Alexander Mackenzie, made a similar cut through the whole of the north-western American continent, as Hearne had done it twenty years before him. Partly by actual walking over dry-land, partly by a canoe navigation in rivers, in two different directions, one to

the north towards the Arctic Sea, and one to the west towards the Pacific Ocean, he proved that everything was here continental. But Hearne had proved this only for the region near Hudson's Bay. Mackenzie proved it in a like manner for the neighborhood of the Pacific. Twenty degrees of longitude to the west from the Nec plus ultra of Hearne he gained and fixed another point of the Arctic coast of America, like Hearne and like Cook not far from the 70° N. L. The conjectural line by which the geographers united these three given points, and with which they traced the probable configuration of this part of the great American peninsula of the north-west, became now nearly certain.

There still remained, however, for some time one essential point of doubt. Between the Nec plus ultra of Cook (Icy Cape) and that of Mackenzie (the mouth of Mackenzie River) was a large tract of unknown coast. The continent of America might in this place as well send out a large spit of land to the north or west, as run directly east and west, as was generally adopted. On the other side there was one equally uncertain point on the Arctic coast of Asia. A long peninsula, called by the Russians "Swatoi Nos" (the Holy Head), projects from this coast not far north-west from Bering's Strait and reaches far into the Arctic waters. It was represented nearly on all the maps with dotted lines as something unknown. Though the Cossacks pretended to have circumnavigated it already in the year 1648 under their chief, Deshnef, of whom we have spoken above, still this circumnavigation could for nearly two hundred years never be effected again. And geographers commenced, therefore, to question this circumnavigation of the Holy Cape by Deshnef and made it likely that instead of navigating there he had drawn his boats over a portage of dry-land and had not seen the end of the country.

Cook, as we said, had also approached this peninsula from the east, but was hindered there in his progress by a barrier of ice, which seemed to unite the Holy Cape in

Asia with the Icy Cape in America. Cook found along this icy barrier not very deep water. Could this barrier of ice, which also after Cook was seen again in the same position by other navigators, not perhaps lie upon a bank? Was it not perhaps even the ice-bound shore of a great land of a continental bridge between Holy and Icy Cape? The possibility of this union was admitted still by geographers as late as the year 1820, among others, for instance, by Captain Burney, the able historian of north-western explorations. He tries to prove that the water north of Bering's Strait may be nothing but a shore-bound bay and that the two great islands of our globe may be still linked together in the indicated region by a bridge of dry-land.

This supposition was discovered only in our times by the combined efforts of the navigator Beechey, who progressed beyond Cook's Icy Cape towards the east, and of Franklin, Richardson, Parry, Rae and other land and sea-travellers, who wandered or sailed in boats along the whole Arctic coasts of North America, and who, by uniting the Nec plus ultra of Hearne, Mackenzie, Cook and Beechey, carved out its true figures and showed that the American continent really ended, as it had been supposed for some time, in a long, more or less straight line from east to west near about 70° N. L. Only after those travellers, that is to say after about 1830, it was quite doubtless that America could in no way whatever be continentally connected with Asia, though there might be between them still many great Arctic islands, the history of which does not, however, enter into our subject.

The Russians also were during the course of the first half of this century very active in exploring as well their north-west American as their north-east Asiatic possessions and in improving the map of them. They (under Kotzebue, 1816) discovered a great bay to the north-east of Bering's Strait (Kotzebue Sound). They reconnoitered and defined the shoal piece of coast between Norton and Bristol Bay, which Cook could not

approach, and traced there (under Zagoskin and others) the course of two large rivers: the Kwikhpak and Kuskoquim. They (under Schelikof) showed Kadiak to be an island, and they made (under Wrangell, Tebenkof and other officers) many special surveys of bays, harbors, straits and islands belonging to them. They also (under Anson, Wrangell and others) explored again the Arctic coast of Asia and published a most accurate survey and map of Kamtschatka. But we can dispense with tracing here step by step the progress of all these interesting expeditions because they contributed nothing more to the decision of our main question, the relative geographical position of north-eastern Asia and north-western America, which was, as we said, ultimately decided by Beechey and Franklin.