

Some Landmarks in Icelandic Cartography down to the End of the Sixteenth Century

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Sometime between 350 and 310 B.C., it is thought, a Greek navigator, Pytheas of Massilia (Marseilles), after a sail of six days from the British Isles, came to an unknown country which he named Thule. The sources relating to this voyage are fragmentary and less explicit than one might wish. The information is taken from its original context and distorted in various ways. No one knows what country it was that Pytheas came upon farthest from his native shore, and most of the North Atlantic countries have been designated as candidates. But in the form in which it has come down to us, Pytheas's account does not, in reality, fit any of them. His voyage will always remain one of the insoluble riddles of geographical history.

After Iceland was discovered and its existence became known among the people of Europe, it was believed for a long time that this was the country to which Pytheas had found his way. This view seems to have been the prevailing one towards the end of the Middle Ages, and it still has its adherents, though it is now generally rejected.

Ancient and early medieval authorities have nothing to add to the accounts of Thule that are attributed to Pytheas or that appear to derive from him. Their ideas about the position of the country are extremely vague. They place it somewhere to the west or the north in the outer ocean, farther from (*ultra*) the disc of the earth than the British Isles, which were universally known. When Thule was assigned a location in a geographical text or on a map, it was put somewhere in the oceanic region between the Straits of Gibraltar and the northwest corner of Asia, most commonly somewhere to the northwest of the British Isles, where Isidore of Seville had given it a place in his encyclopedic *Etymologies*.¹

And thus matters remained. Some scholars look upon Bede's reference to Thule² as an indication that people may already have begun sailing between the British Isles and Iceland in the seventh century or even earlier, assuming that the account of the voyages of St. Brendan contains a grain of truth and is not, in the main, derived from sources much younger than the events related. But both Bede's statements and the account of St. Brendan are too vague for any definite conclusions to be based on them, and the latter, besides being of rather uncertain date and origin, is shot through with motifs from legend and folklore (Selmer, 1959:64-65).

There is, however, fairly general agreement that Dicuil (1870:42-44) is referring to Iceland when, in *Mensure orbis terrae*, he speaks of monks dwelling in Thule from the beginning of February until August sometime towards the end of the eighth century.

Adam of Bremen and Saxo Grammaticus both considered Iceland and Thule to be the same country. Adam is quite explicit on the point: "This Thule is now named Iceland from the ice which bind the sea" (von Bremen, 1917:IV:36; Olrik and Raeder, 1931:7). When the Icelanders themselves began to write about their country (Benediktsson, 1968:31) they were quite certain that Iceland was the same country as that which the Venerable Bede called by the name of Thule.

Oldest among the maps on which Iceland is shown is the Anglo-Saxon map, believed to have been made somewhere around the year 1000. If that dating is approximately right, this is the first known occurrence in writing of the name "Iceland". Like most medieval maps, the Anglo-Saxon map no doubt goes back to ancient originals, but the author has added a certain amount of new material relating to northwestern Europe: the British Isles, Iceland, and Norway, which, however, seem rather to represent the peninsula of Jutland.

On Idrisi's world map (1154), Iceland (*gezire reslanda*) has a shape similar to that on the Anglo-Saxon map, and much the same may be said about the position and shape of some of the other countries of the North. This correspondence cannot be explained on the basis of the sources now known to us. Idrisi appears, in fact, to have visited England during his travels, but it is unlikely that he obtained then the knowledge about the northern countries that his map reveals. At this time, and throughout the twelfth century, there were close connections between the king of Sicily and the kings of England. Knowledge of Iceland and other northern countries may therefore have found its way to Idrisi via England (Haskins, 1915:229).

The origin and age of the Ptolemy maps are, for the most part, a mystery. They are not preserved in any version older than the thirteenth or fourteenth century, and opinions differ as to whether they are only slightly older than the preserved copies, or drawn to a greater or lesser extent on the basis of ancient texts with a certain amount of new material added. Although the substance may be ancient, some things suggest that certain elements are of more recent origin.

The Thule of the Ptolemy maps, surprisingly, bears a remarkable resemblance to the Iceland of the Anglo-Saxon map, in regard to both the shape of the country and its position relative to the British Isles. It seems to agree with ideas current in Britain at that time, namely that Iceland was only three days' sail away in a northeasterly direction, as Giraldus Cambrensis and Ranulph Higden tell us. Similar views regarding the position of Iceland are revealed by the Hereford map (Fig. 1) and by the author of the Ebstorf map, which probably derives from English sources, even though it was made in Ger-

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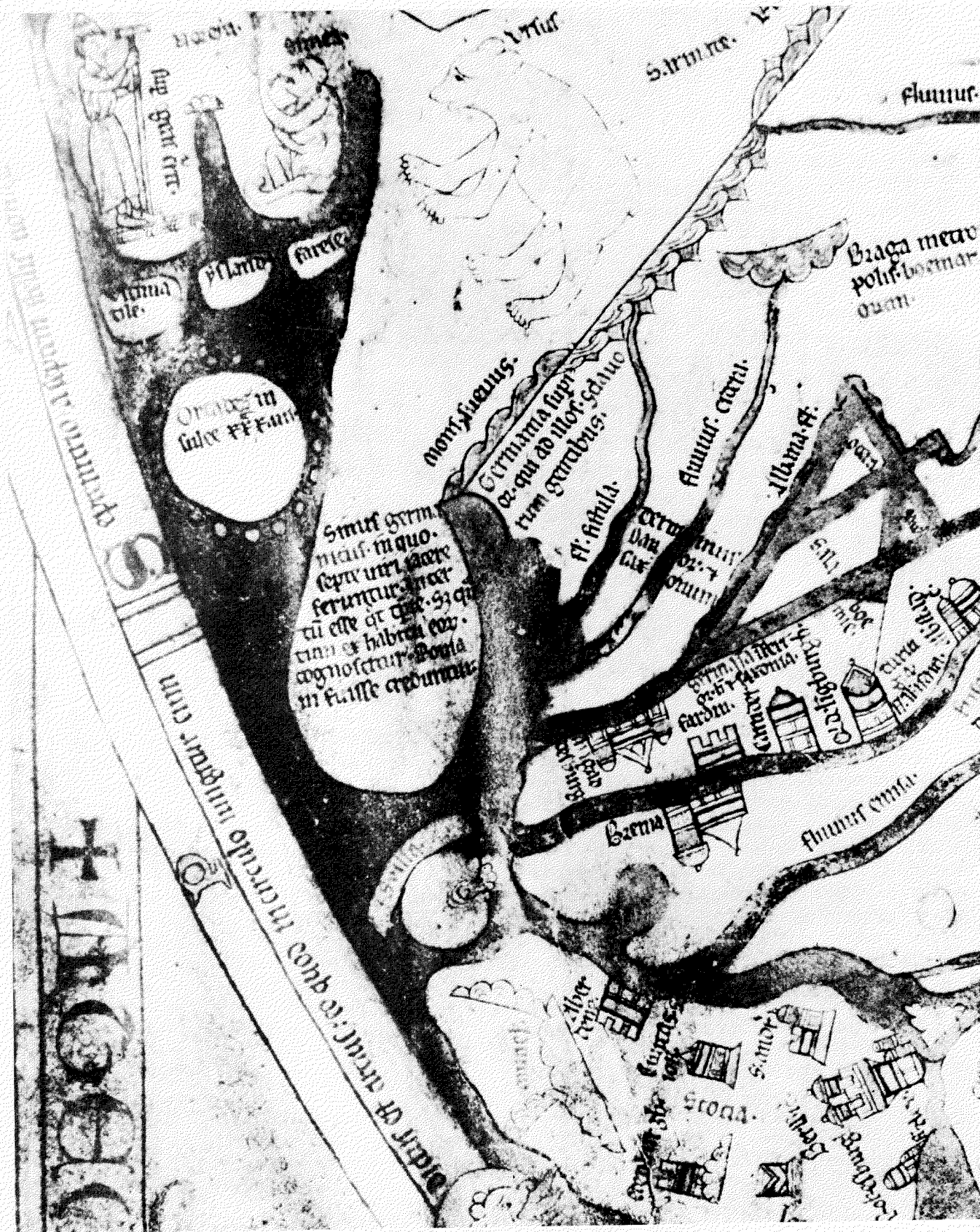


FIG. 1. Part of the Hereford world map, ca. 1280-1300. South off the coast of Norway (norea) are three islands: Thule (ultima tile), Iceland (ysland), and Faroese (fareie).

many (Uhden, 1930:185-200; Rosien, 1952:24-35). The same applies to the world map of Henry of Mainz.

Is, then, the Thule of the Ptolemy maps Iceland, or is it the mythical land of Pytheas? As long as the maps were supposed to have come with little or no change directly from the hands of Ptolemy, only the latter was possible. But if we assume that their final form is more than 1000 years younger than the original, the first alternative is equally probable. A definite answer is no doubt out of the question, but the shape and position of Thule suggest English ideas.

Mention has already been made of the close connection between England and the Normans in Sicily, where Greek, Arabic, and Western civilization met. Two channels especially seem to merit consideration. The connection may have been through Norman and Arab scholars from Sicily, or directly through Englishmen dwelling in Constantinople. When William, Duke of Normandy, had conquered England in 1066, the former ruling classes of the country became rootless and disorganized. Many chose to leave the country rather than submit to the new government. Some went as far as Constantinople and entered the service of the emperor. Later, when hard pressed by circumstances, the emperor made overtures to Henry II for assistance, and in the thirteenth century, mention is made of Englishmen studying in Athens. Through both these channels, new knowledge of Thule could have found its way to Constantinople (Ostrogorsky, 1940:233,272; Blöndal, 1954:222). But it is far more common on medieval maps to find Iceland plunged arbitrarily somewhere to the north or northwest of the disc of the earth. Adam of Bremen seems to have thought that Iceland was located somewhere off north Norway, or at least so it appears from his account of the polar expedition of certain Frisian seafarers, which, however, may safely be regarded as a mere fairy tale (von Bremen, 1917:40).

Towards the end of the Middle Ages, the representation of Iceland deteriorated, as is evident on Ranulph Higden's map of the world and some German and Danish world maps of the late fourteenth and early fifteenth centuries (Bjørnbo, 1912:76-79).

Early in the fourteenth century, southern sea charts began to show lands north of the British Isles. On Angellino Dalorto's chart of 1330 (or 1325), Sialand and Insula Ornaya are two islands north of Scotland, and the Dulcert chart of 1339, which is probably by the same hand, shows a largish elliptical island, Insula stilland (the reading is uncertain), together with Insula orchania and Insula chatenes. Undoubtedly these refer to Shetland, the Orcades, and Caithness, respectively. From these charts, the Catalan charts of the North Atlantic and the adjacent countries derived their principal features, which were destined to have long life. Towards the end of the fifteenth century, some of these charts underwent an alteration in that Stillanda, north of Scotland, was replaced by a rectangular country with an east-west axis, lying to the north of Ireland. It has a considerable and regularly indented coastline and is called Stillanda or Estilanda (the spelling varies). Some of these charts include a few place names, which, in spite of their hardly recognizable appearance, seem to belong in Iceland.

Near the middle of the fifteenth century, yet another change

had taken place in a number of these charts. Stillanda disappeared and was replaced by a new land which undoubtedly was intended to be Iceland. On a Catalan chart in the Biblioteca Ambrosiana in Milan (Fig. 2), a land named Fixlanda appears northwest of Ireland. Fra Mauro's world map of 1457-1459 shows the eastern part of a country called Ixilandia, and on the world map of Juan de la Cosa (1500) this land appears to be named Frislanda, though the reading is not absolutely certain (Sigurdsson, 1971:47-68).

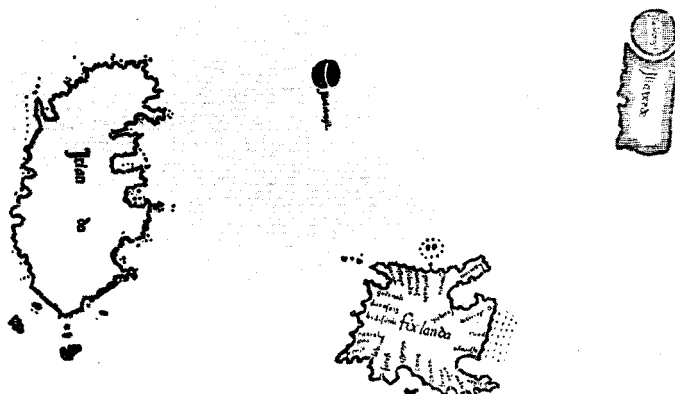


FIG. 2. Northwestern part of the Catalan chart at Milan. The Fixlanda type. The network of compass-lines is omitted. (From Nansen's *Nord i tåkeheimen*.)

The Fixlanda type suggests considerable familiarity with Icelandic local features, especially the two bays on the west coast and the islands in the west, south, and north of the country. On the Ambrosiana chart and various later charts of the Catalan type, there is a fair number of place names. These are all of common origin, but most of them seem to be descriptive of local features and peculiarities rather than place names.

Where did cartographers on the shores of the Mediterranean come by this information about Iceland and Icelandic local conditions? Their only possible informants would seem to be the English, who began sailing to Iceland on a large scale during the first years of the fifteenth century and continued to do so throughout the century, in some competition with the Germans and Dutch towards the latter part of the century. Along with their Icelandic fishery and trade, the English carried on extensive trade with Spain and Portugal. There were merchants who had some of their ships going to Iceland and others to the Mediterranean countries at the same time (Carus-Wilson, 1954:98-110; Thorsteinsson, 1970). Many things indicate that the Fixlanda map type derives from English sources and dates in original form from the years 1412-1457, when Fra Mauro made his map.

Fixlanda had a long history on the charts, sometimes alone, sometimes alongside an "Islandia" or "Islanda" taken from the learned cartography. The position of Fixlanda seems later to have had a decisive influence on the placing of Iceland on Portuguese and French charts, until after the middle of the sixteenth century.

Catalan mapmakers and those who followed in their footsteps continued to show Fixlanda virtually until the end of the sixteenth century and even after that. But, in addition, Fix-

landa was to rise again in a new shape on the Zeno map of 1558. Its name became Frisland; it was compounded of the ancient Fixlanda of the Catalan charts and the Fare, or Faroe, Islands of Olaus Magnus's map of the northern countries of 1539. In this guise, the country was to have a long and rather unfortunate history which did not come to a close until the eighteenth century.

About the time Fixlanda made its appearance—or even somewhat earlier—a new type of chart appeared with new ideas about the island region of the North Atlantic. In the first known version, the islands are placed alongside the three elliptical islands of the oldest Italian and Catalan charts, where Fixlanda seems not yet to have come into the picture. Of these charts, the one closest to the original is probably a Catalan chart in the Biblioteca Nazionale Centrale in Florence. There is disagreement about the age of the chart, but there seems little doubt that it belongs to the fifteenth century (Sigurdsson, 1971:63). Not far to the north of the three Stillanda islands there appear seven islands in the ocean west of Norway, nameless but bearing the legend: “*Aquestas illes son appellades islandes*”. In the Biblioteca Estense in Modena there is preserved another chart of Catalan origin (Fig. 3), probably somewhat younger than the one in Florence (Sigurdsson, 1971:63). The same group of islands is included as on the Florence chart, with the difference that their number has been increased to eight and all of them are given individual names in addition to the common appellation: “*Questas illes son appellades islandes*”. The names are jslanda, donbert, tranes, tales, brons, bres, mjnaut(?) and bitam(?) These islands reappeared with the same or similar names on the 1558 Zeno map.

Behind this swarm of islands there undoubtedly lies some vague intelligence about Iceland. The legend seems most nearly to suggest that “Island” is the common name for all of them, even though one of them in particular is so named. No one knows for certain whence the other individual names derive. The disagreement among scholars who have attempted to trace their origin is a warning to proceed with caution and avoid jumping to conclusions.

The author of this type of map was much less informed about Iceland than those responsible for the Fixlanda type. The

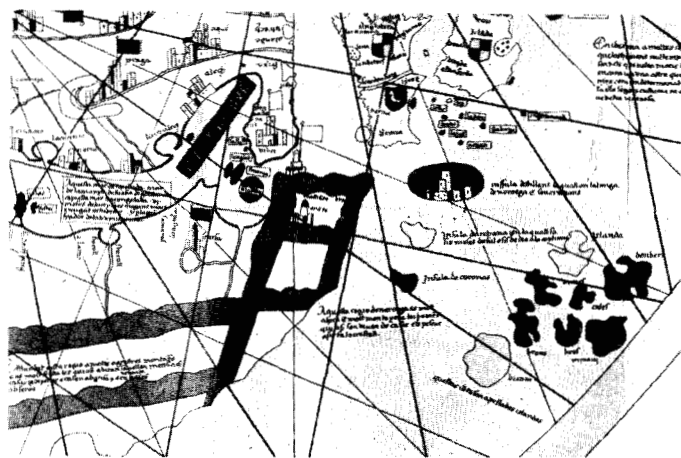


FIG. 3. Northwestern part of the sea chart at Modena. The Islandes type. (Konrad Kretschmer's copy is used for the sake of clarity.)

latter were familiar with the main contours of the coastline, and knew the principal islands and probably at least two place names of the country. Later, this type of Iceland seems to lead a nameless existence next to Fixlanda and as its double. Thus, there are many indications that the cluster of islands in the North Atlantic on the maps by Fra Mauro and Juan de la Cosa (1500) are precisely the Islandes of the Este map.

Ptolemy, or the authors of the maps attributed to him, stopped at 63°N. When these maps reached scholars in the West, they were soon found to correspond poorly to the geographical knowledge of those times. To remedy this, cartographers soon began to augment the ancient maps with new maps (*tabulae modernae*) of countries which had been left out or inadequately represented on the Ptolemy maps.

It was the Dane Claudius Claussón (Claudius Clavus) who apparently led this new departure; at any rate, no earlier instances are known. He made two maps of the northern countries, probably both of them in Italy. Each map was accompanied by a text following Ptolemy's example, but maps and texts alike are now lost and known only in later copies (Björnbo and Petersen, 1904; Nansen, 1911:471-493). The age of the Clavus maps cannot be precisely determined. The copy of the older map, generally called the Nancy map, was made in 1427, so the original map itself must be somewhat older, perhaps from the years 1424-1427. The date of the second map, sometimes called the Vienna map since the accompanying texts were discovered in Vienna, is no less uncertain. The text speaks of a discovery of gold in 1425, and unless this is mere fabrication, the map must have been made after that date. In reality, nothing is known about this discovery from any other source. In 1439, a Church Council was held in Florence. Among the participants was a Greek scholar, Georgio Gemistos Plethon. Paolo del Pozzo Toscanelli showed him a map of the North which had been made by a native of that region. Plethon describes the map in considerable detail (Diller, 1937; Sigurdsson, 1971:71), and there is no doubt that he is speaking of Clavus's second map, or a copy of it. Thus the map can obviously be dated somewhere between 1425 and 1439.

About Clavus's sources little is known in detail. Mostly they seem to have contained very little local knowledge, except in Denmark and possibly in southern Sweden. He appears to have been familiar with the ancient northern ideas of a land connection between Greenland and Northern Europe. He followed the Ptolemy maps as far as they go, and for other areas he appears to have followed Italian marine charts. The Medici atlas and the world map of Albertin de Virga have been pointed out as possible sources. We need not assume, however, that Clavus actually had these maps before his eyes, even though no other maps of this type are now known. It is also considered possible that Clavus made use of sailing directions similar to those published by Lelevel (1852-1857: 281-308) under the title *Itinéraire Brugeosis*. This work seems to have been his source for the placement of Iceland in the middle of the ocean between Norway and Greenland. Some scholars believe that Clavus drew on ancient northern itineraries or even Ivar Bardson's description of Greenland. This is ex-

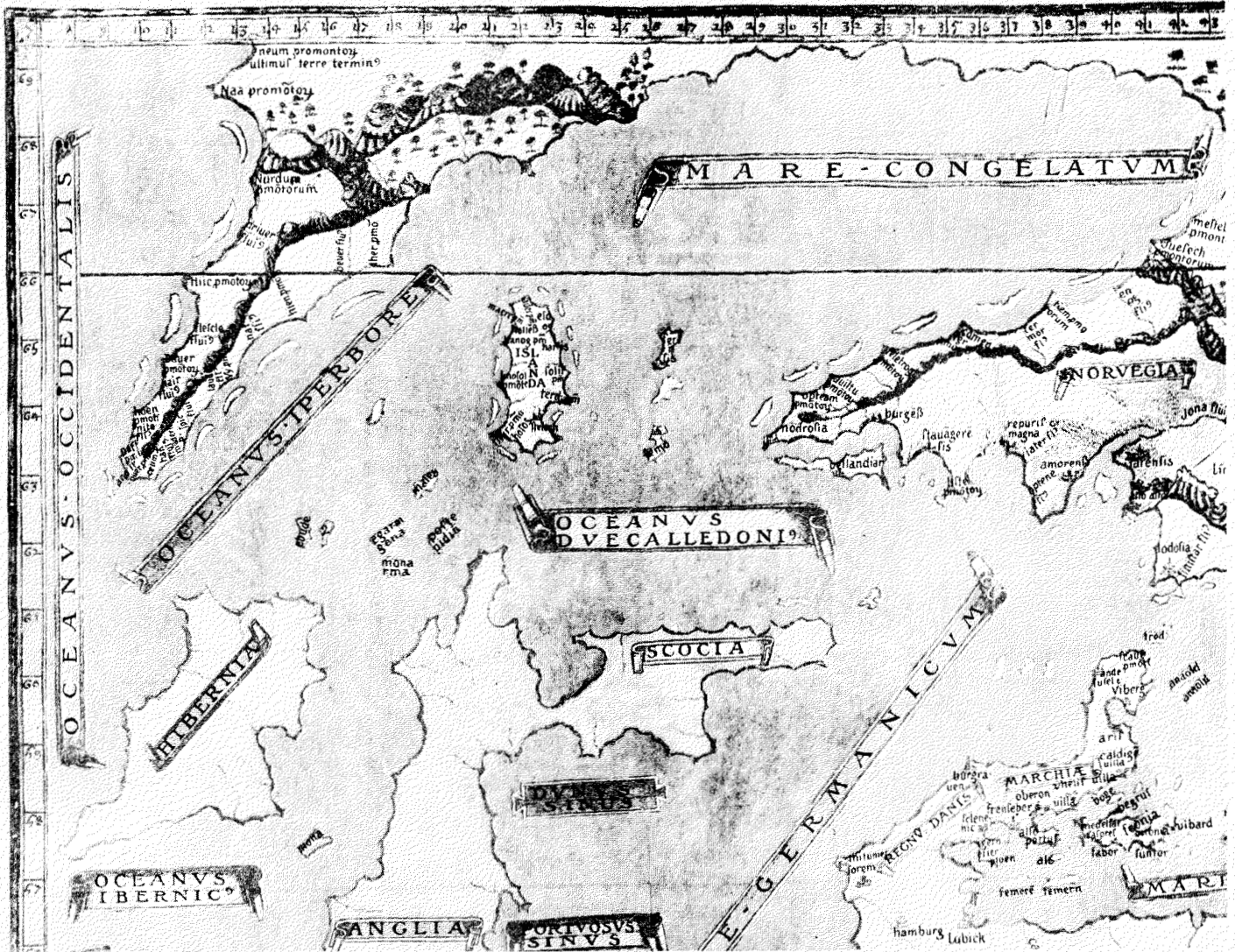


FIG. 4. Clavus map of the North, A-type. Henricus Martellus's copy at Biblioteca Nazionale, Florence.

tremely unlikely; it is still less likely that he himself visited Greenland and observed the inhabitants.

Still, in spite of various flaws and very limited knowledge, Clavus's maps indisputably constitute a stage in the cartographic history of the countries around the North Atlantic. Iceland is given an approximately correct position, although its shape and outlines leave much to be desired. Clavus's importance for the history of Icelandic cartography lies in the fact that his maps provided the model for representations of Iceland on most printed maps until the second quarter of the sixteenth century.

The older Clavus map seems to have had no influence on contemporary or later cartography. But the oldest copies of the younger one were made by Nicolaus Germanus (Fischer, 1902; Björnbo, 1912:129-152; Sigurdsson, 1971:77-85), a monk of Reichenbach who wandered down to Italy and there became a mapmaker and publisher, producing sumptuous manuscripts for the local nobility. Among these are some Ptolemy manuscripts, which are still preserved in three different versions, probably dating from about 1466-1468. The

oldest version has no new maps (*tabulae modernae*). In the second version, a few new maps have been added, including a copy of Clavus's map of the North in different projection (Fig. 4). It is not known how accurate this copy is, since the only possible comparison is with Clavus's text in the Vienna manuscript. It is regarded as certain that Nicolaus Germanus did not know the text but made use of the map alone.

In this version, commonly known as the A-type, the position of Iceland, relative to the neighbouring countries, is approximately accurate and corresponds to that given in the text. Greenland is shown as a peninsula with a southwesterly orientation, connected with Northern Europe by a narrow neck of land. Iceland is placed nearly midway between Greenland and Scandinavia.

Finally, there is a third version, known as the B-type (Fig. 5), on which most things are changed for the worse in the disposition of the countries of the North. Greenland is moved from its former position west of Iceland and Scandinavia, and placed north of the continent of Northern Europe, to the northeast of Scandinavia. Its name has been changed to "Engro-

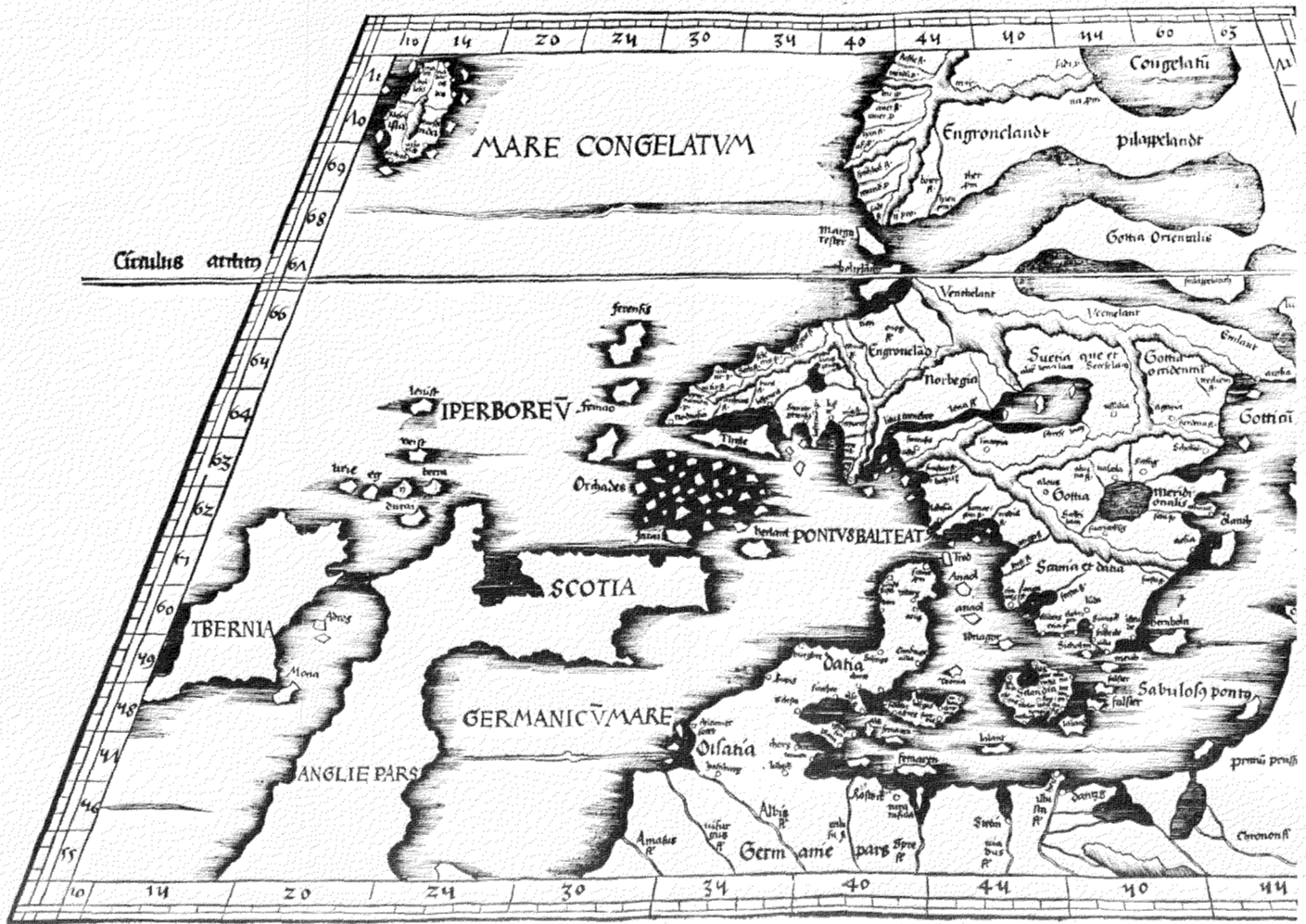


FIG. 5. Clavus map of the North, B-type. Martin Waldseemüller's copy in the Ptolemy edition at Strassburg (1513).

nelant" (the spelling varies). Iceland has been moved west and north, to the former position of Greenland. Its shape, however, is unchanged, and the place names are the same, adopted from the old northern runic alphabet, probably because of almost total lack of information about the country. Nicolaus Germanus gives no explanation for this change; as we do not know his object in thus distorting matters, all attempts at explanation are bound to be mere guesswork. Probably he felt that giving a great continent like Greenland a position so far to the west conflicted with contemporary geographical conceptions. There are also various indications that some of his contemporaries believed that Greenland was located north of Norway. This idea may have drawn support from the fact that somewhat older Italian maps, e.g. the so-called Genoese world map of 1457, show a great peninsula to the north of Scandinavia. It is doubtful, however, that the peninsula was inscribed with the name of Greenland (Zurla, 1818:399).

This travestied representation of the northern countries was to play an important role in the cartographic history of the following decades, and it overshadowed the A-type for some time. Another German cartographer dwelling in Italy, Henricus Martellus Germanus, made copies of the Clavus map, simultaneously taking account of the maps of Nicolaus Ger-

manus. One of these maps, at least, may be regarded as coming quite close to Clavus's original, and is drawn in the same projection, as far as we can determine. Either Martellus's map of the North or the second version of Nicolaus Germanus's map seems to have influenced Portuguese cartographers after the turn of the fifteenth century (the Cantino type), especially as regards the shape and position of Greenland. The Iceland of their maps is more likely of different, perhaps German, ancestry.

One of Nicolaus Germanus's Ptolemy manuscripts representing the B-type came into the hands of a German publisher, Lienhart Holle of Ulm, who decided to print it. The book appeared in 1482 and was reprinted four years later. It contains 32 maps, among them a distorted one of the North. The publication of the book marks the beginning of the triumphal progress of this map, for other authors adopted it for use in their works, printed and unprinted, and this continued for the next half century.

In 1492 Martin Behaim constructed his globe in Nuremberg, the oldest of its kind that has been preserved (Ravenstein, 1908; Muris, 1945; Muris and Saarmann, 1961). The polar region is the section of the globe most difficult to interpret and the one that has given rise to most speculation. In particular, it

has been debated whether in his representation Behaim drew on the *Inventio fortunata*, an ancient and long-lost description of the polar regions, of doubtful origin and by an unknown author (Bjørnbo, 1912:152-157; Nansen, 1911:501-503). About this work little is definitely known, but Ruysch and Mercator used it as a basis for the polar region of their maps. Probably Behaim combined here the Nicolaus Germanus map type of the northern countries and a Catalan chart of the *islandes* group, adopting the concept of Iceland of both, with the result that there are two countries instead of one on the globe.

Behaim knew various things about Iceland beyond what he could gather from his written sources. (Around this time, the Hanseatic League held extensive power throughout the North, and in Iceland they were about to elbow the English away from fishing and trade.) He knew little about the coastline of Iceland and merely followed his models, but the position of the country was brought more nearly in line with the actual facts. He reported a number of things about the way of life of the people. Some of them were, to be sure, far from new; others are not known from older sources but were later to prove remarkably tenacious.

No attempt will be made here to catalogue all the known maps which seem to derive their type of Iceland from Clavus.

It was Martin Waldseemüller who marked an epoch in the learned cartography of the time. He carried the banner of Clavus longer and farther than anyone else, and contributed indirectly to the longevity of the ideas which Clavus had put on parchment three-quarters of a century earlier, by securing them a place in the learned works of the times up until the middle of the century. In 1507, he published a great map of the world of which only a single copy has been preserved. The map does not bear the author's name, but it is regarded as certain that it is the work of Waldseemüller (d'Avezac, 1867; Gallois, 1890:38-69; Fischer and Wieser, 1902). Waldseemüller was a learned man after the fashion of his day, and a tireless collector of information, but his sources were inconsistent and highly disparate in character and quality. He therefore had no alternative but to choose and reject according to probability, or fuse accounts and maps of different origin. His principal source was the ancient maps of Ptolemy, which he amended and added to on the basis of later maps, including the most recent Portuguese charts (perhaps the Caverio map or others of the same type). Considering the nature of the material Waldseemüller had to work with, it is no wonder that he sometimes chose the worst of the alternatives open to him. This is what happened when he put Iceland and its surroundings on his world map. He rejected the Portuguese ideas about the geography of the North, where notice had been taken of the older and better of Nicolaus Germanus's copies of Clavus's map of the North, and local knowledge probably obtained on the voyages of the Cortereal brothers to the northwestern ocean. Instead, he chose the younger and poorer of Germanus's copies, as it appears in the Ulm edition of Ptolemy.

Waldseemüller's map became the basis for many of the most important printed maps of the following decades, and thus it indirectly prevented newer and less inaccurate ideas from

coming to the fore. Waldseemüller thus made no independent mark in the history of Icelandic cartography with his world map of 1507. It was not until some years later that he corrected his error, partially on the world map in the Ptolemy edition of 1513 and fully in his *Carta Marina* of 1516, but this revision had less effect than might have been expected.

There is no space here to mention all the maps derived from Waldseemüller's world map of 1507 on which Iceland is shown. Often we cannot be certain what map the cartographer actually had before him: the 1507 map, the Ulm map on which it was based, or one of the many maps which followed in Waldseemüller's tracks. It is frequently anything but easy to disentangle the many strands from which ancient cartographers wove their product and to determine with certainty on which materials they drew for the different sections of their maps.

The history of Nicolaus Germanus's maps of the North, as well as of the learned maps of Iceland and the surrounding region, is quite clear in its main outline, although various minor details remain in doubt. When we come to the marine charts, we find ourselves on far less solid ground; little is definitely known, and the problems are both more numerous and more perplexing. In these charts, the North Atlantic swarms with islands, most of which do not correspond to reality. It is nevertheless possible to trace their evolution along fairly clear lines, especially in the Catalan charts, where *Fixlanda* (Iceland) developed into a fixed type with place names that recur regularly.

Such was the situation when the oldest preserved Portuguese charts appeared on the scene shortly after 1500. The Cantino map (ca. 1502) is the oldest of those charts that show the countries of the North Atlantic. Here Iceland (*islanda*) has approximately the same position as the *Fixlanda* of the Catalan charts and seems to be derived from them. However, its shape has been altered, partly for the worse but also partly for the better, especially as its orientation, which is from southwest to northeast, was changed to east-west. There are no place names except the name of the country itself, which may be due to the cartographer's not having realized clearly enough that this was the same country as the *Fixlanda* of the Catalan maps. New place names do not appear until somewhat later, and are then of a wholly different origin from that of the old *Fixlanda* names. Far to the north lies another island, nameless and leaf-shaped, which could be taken as sharing a common ancestor with the Iceland of Münzer's map in *Liber cronicarum* (1493) (Nordenskiöld, 1889:Fig. 5; Herrmann, 1940: Taf. V) or else deriving from it. Somewhat farther south is a third island (*frislanda*), where a reminiscence of the land bearing this name on the Catalan charts seems to coalesce with the *Stillanda*/*Eslanda* islands, which go back to the oldest marine charts. Behind these three islands may lie vague and confused ideas about Iceland.

The author of the Cantino map also seems, especially in the case of Greenland, to have drawn from Clavus's map of the North, perhaps directly but more probably through the older version of Germanus's maps of the North or the maps of Henricus Martellus.

These and similar ideas about the countries in and around the North Atlantic are characteristic of people's conceptions of Iceland in the following years. They are revealed most clearly on the Caverio map from about 1502 and on Waldseemüller's Carta Marina of 1516 (and the copy of it by Laurentius Frisius which he furnished with a German text in 1525, and probably also at other times as well) (Johnson, 1963). On Waldseemüller's Carta Marina, the name of Iceland has been erased from the Cantino-type *islanda* and written with pen on the nameless leaf-shaped island in the far north. The world map by Laurentius Frisius in the Ptolemy edition of 1522 is closely related, but the influence of the Cantino type on people's ideas about Iceland, while never becoming general, may be seen in various other maps of the period.

Among distant relatives of the Cantino type, at least as far as the North Atlantic countries are concerned, are an atlas of uncertain authorship in the British Library (Egerton 2803), dating from about 1508, a map in the Bayerisches Staatsbibliothek, known as "Kunstmänn II" from the name of its first editor, and some other maps on which at least Iceland seems to derive from the same source.

In the Bibliothèque Nationale in Paris there is a large and excellent atlas of Portuguese extraction (Res. Gé. DD 683), compiled about 1520 (Corteseo and da Mota, ca. 1960:55-61, pl.16-24). It is usually called the "Miller Atlas" after its former owner. Particularly noteworthy here is the superlative representation of Iceland and the British Isles, especially in comparison with the rendition of other countries of northwestern Europe, which is very poor. It is not known where the Portuguese obtained information that enabled them to draw a map of Iceland which surpassed all older maps, and which was to remain unsurpassed until the appearance of Bishop Gudbrandur Thorláksson's map some 70 years later. It is not likely that the Spanish and the Portuguese were in Iceland or Icelandic waters around this time, though of course individuals may conceivably have found their way there in the company of English or German sailors and fishermen. But even assuming they did, the chances are negligible that they were at home in the art of mapmaking or that they acquired the local knowledge of which the map gives evidence. In the middle of the fifteenth century, Fra Mauro wrote that in his lifetime a Catalan ship loaded with leather goods was at the northeastern part of the world, near North Russia. The representation of Iceland and the British Isles is so superior to that of other countries in northern Europe, in a number of ways, that the conclusion seems inescapable that among those involved in the making of the map were men from England who either actually drafted the contours of the coast or else provided the instructions which guided the hands of the southern draughtsman. On the map, Breidafjörður with its multitude of islands is clearly indicated, and Isafjardardjúp is shown in the northern part of the northwest peninsula. The great bay of the northern coast is sketched, indicating that the author, or his informant, would seem to have been fairly familiar with the northeast corner of the country and the firths at the eastern coast. The south coast and the southwest corner of the country are the parts of the coast least satisfactorily delineated. To some extent this is

probably due to the absence of harbours on the southern coast, though this does not account for the absence of Reykjanes and Faxaflói, which, after all, are clearly shown on the Catalan Fixlanda maps. Except for the name of the country, there are no place names.

The Miller Atlas shows a new type of Iceland in a fully developed form. (Actually, a glimpse of its lineaments is visible in the Cantino type, where it seems to be in the process of development.) This type of map of Iceland is commonly associated with French sea charts of a somewhat later period, i.e. the middle of the sixteenth century, which are often referred to as "Dieppe maps" or the maps of the Dieppe school. As far as the contour of Iceland is concerned, there is no justification for that association, for this map type of the country had reached maturity in Portugal at least 20 years before the oldest Dieppe map was made. The Portuguese continued making maps of Iceland according to this model for a long time, as may be seen from the maps of the Homem family and some other maps from about the middle of the sixteenth century.

Very little is known about the earliest oceanic voyages of the French. There are tales of such expeditions being undertaken towards the end of the Middle Ages, but the accounts are very unreliable (Hennig, 1953:374-390; Sée, 1930:112). Guillaume le Testu's statement in his atlas of 1556 is generally understood to indicate that, to his knowledge, the French were not among the nations frequenting Icelandic waters (Anthnaume, 1916:110). This is mentioned here because the suggestion has been put forward that the type of Iceland found on French charts of the mid-sixteenth century was based on information obtained by French fishermen during their visits to the country. Whether or not such visits actually took place, we know from the Miller Atlas that the concept of Iceland in question was fully developed in Portugal 20 years before. When the French began their ocean voyages, they were naturally lacking in knowledge and experience. The Portuguese, on the other hand, were by then highly skilled and experienced navigators. At this time there were close connections of various sorts between the two nations, and Portuguese pilots and geographers entered French service and settled in the seaports of Brittany and Normandy (Corteseo, 1935:24; Corteseo and da Mota, ca. 1960:I:9). It may therefore be assumed that the French had the Dieppe maps presented to them in practically finished form, although they were able to augment them with certain information less readily available south of the Pyrenees, and they did so increasingly as time passed.

The most widely known of the Dieppe maps are the world maps of Nicolas Desliens (1541-1566), the Harleian map (ca. 1542-1546), and the maps of Pierre Desceliers (1546-1553) (Fig. 6). The form of Iceland found on these maps is the same as that on contemporary Portuguese maps, but many place names were added, of which only a few can be traced back to Icelandic origins. This is not surprising, as foreign sailors had long been in the habit of giving Icelandic places names of their own. One place name, *Portlanda*, is familiar from the old Catalan charts, and is probably of English origin. In some cases, the spelling suggests Portuguese roots. *Oestremone* is undoubtedly *Vestmannaeyjar*, and *Orcac*, *Roca*, *Grimasi*, and



FIG. 6. North Atlantic. Part of Pierre Desceliers's map (1550).

Lamgas may, with equal certainty, be taken to represent Eyr-
arbakki, Reykjanes, Grímsey, and Langanes. Others can hard-
ly be identified with any certainty though attempts have been
made to do so. It is evident that the fishermen who are most
likely to have served as informants frequented especially the
eastern, southern and western coasts of the country. The north
coast was mostly unknown, and Grimsey is the only place
name there.

In 1532 in Strassbourg, Jacob Ziegler published a book with
the kind of enormous title fashionable in those days. The book
deals primarily with the countries of the eastern Mediterranean
but includes a section on the northern countries. This section
he entitled *Schondia*, and the book as a whole is frequently
referred to by that name in works dealing with the geography
of the North (Günther, 1896-97; Schottenloher, 1910).
Ziegler's book contains seven maps of the Near East; the
eighth shows the countries around the Baltic and the North
Atlantic (Fig. 7). This map is actually closely related to the
Clavus maps, as is particularly clear in an unprinted version
of the book which is preserved in the University Library in Oslo
and which is almost certainly older than the printed version
(Nissen, 1956). Still, it must be regarded as probable that
Ziegler also made use of books of sailing directions, and it has
been pointed out that a list of churches may also have been
among his sources. Scandinavia has been changed for the bet-
ter and is represented almost correctly, as a peninsula with the
axis from north to south, not from east to west as on the older
maps. This achievement Ziegler owes to the good fortune of
having met various northern prelates during his stay in Rome
in the years after 1520. These worthies do not, however, ap-
pear to have been particularly well informed about Iceland,
which is perhaps not surprising, since it is especially Swedish
prelates who are named as informants.

In the printed version of Ziegler's map, Greenland has many
of the same features as on the older Clavus map. It is con-
nected by land to northern Europe and reaches to an unknown
land in the north, while on the southwest it seems to join the
mainland of North America. This is different on the Oslo map.
There Greenland is shown as a peninsula, not unlike the one
known to us from Nicolaus Germanus's copies of the younger
version of the Clavus map (e.g., the map in Biblioteca Lauren-
ziana in Florence). There is thus hardly any doubt that Ziegler
was familiar with a copy of either Clavus's text or his map, or
possibly both (Sigurdsson, 1971:69-72).

Ziegler's map of Iceland seems to be constructed on eight
coordinate points with a southern limit fixed at 63°N, the
points being identical with those of Clavus. According to
Ziegler's calculations, the length of the country from south to
north is approximately 200 *skoinos*, or ca. 6°, which sets the
northern limit of the country. It is not clear what Ziegler's
motive was in departing so extensively from Clavus in his
delineation of the country's coastline and changing it from an
ellipse into an oblong rectangle. To be sure, he states that
Iceland is the Thule of the ancients, but on the Ptolemy maps
Thule is a long and relatively narrow island with a general
east-west orientation, situated northeast of the British Isles.
It must have been clear to Ziegler, as to all his contemporaries,
that Iceland was not to be found there, nor indeed was any
country other than the continent of Europe. A conceivable ex-
planation might be that Ziegler only had access to Clavus's
text without the map; alternatively, he may have had reserva-
tions about Clavus's conclusions, as his omission of the de-
scription of Greenland from the final version of his book may
indicate. But it is equally possible that he preferred to trust
Ptolemy rather than Clavus. Ziegler's Iceland bears con-
siderable resemblance to the Thule of Ptolemy as regards
shape and proportion, though the country has been given a
new position and an improved outline and turned 90°. One
might point out that it would otherwise have been rather nar-
rowly hemmed in by the bay between Greenland and Scan-
dinavia.

Many cartographers adopted Ziegler's type of Iceland to a
greater or lesser extent, fitting it into its surroundings in
various ways. Still, it never became as prominent or as in-
fluential as the Clavus type, nor was it granted the time
necessary for that. Only seven years were to pass before the
appearance of Olaus Magnus's map of the North, which was
far more detailed and superior in many other respects and
gradually pushed aside maps of the older types.

The year 1539 was an important one in the cartographic
history of the North. Then Olaus Magnus, a Swedish eccle-
siastic who ultimately became titular archbishop, published his
map of the North, *Carta Marina*, which was printed on nine
sheets and ranked among the largest maps yet made.

A search for likely sources or models for Magnus's map
turns up a number of baffling problems. He had travelled
widely in Sweden and visited Norway, and thus was far better
informed about this region than his predecessors, as is amply
proved by the superiority of his map to all the previous ones of
Scandinavia. He far surpassed earlier authors in his local

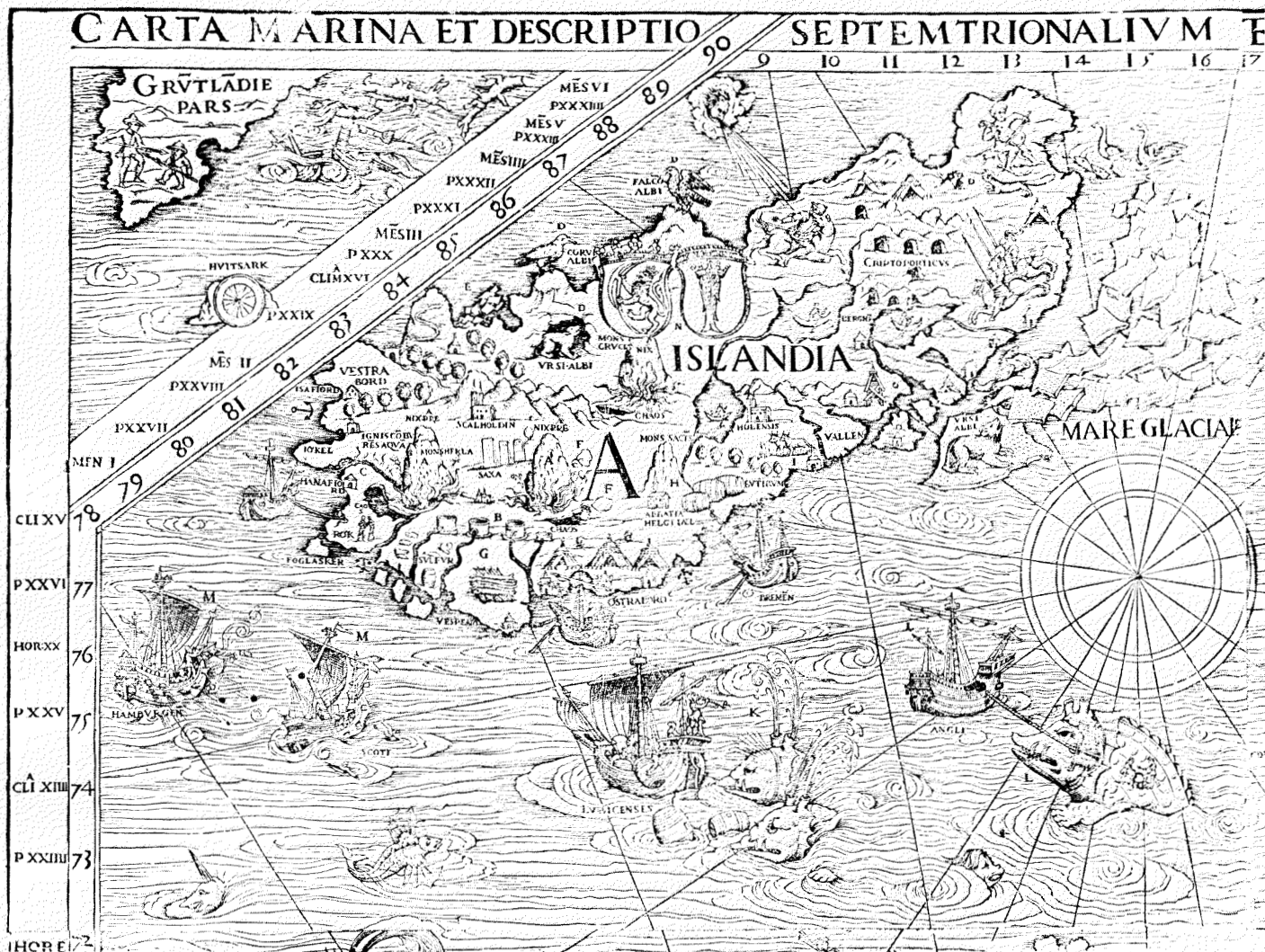


FIG. 8. Iceland. The northwestern part of Olaus Magnus's map of the North (1539).

the same in both cases, and many of them coincide. Mercator's place names are mostly limited to the coast, after the fashion of sea charts and sailing directions, and they are about equally distributed all around the country. Olaus turned his attention inland, being more interested in volcanoes and the occupations of the inhabitants. The greatest difference between the two, however, is that Mercator gave the country a reasonably correct position, which is far from being true of Olaus. In Mercator's map of Europe (1554), on which he included practically all the detail found on Olaus's map but not on his own globe, the coastline of the country is essentially the same as on the globe. Concerning his sources of information about Iceland, Scotland, and the islands between them, Mercator states that he followed a detailed map obtained from an experienced navigator who had repeatedly sailed between the two countries. Even though this statement accompanies the later map, there is no doubt that it also applies to the earlier one (i.e. the globe of 1541) (Ahlenius, 1895:158-186; Lynam, 1949:19; Richter, 1967:124-131).

Although Mercator's type of Iceland bears considerable

resemblance to that of Olaus, the differences between them are great enough to make it seem unlikely that Mercator was following the *Carta Marina*. More probably, each map represents an independent utilization of the same or similar sources which both authors happened to come across, probably in the Netherlands or in Germany, and which are now lost or unknown. That both used the same map as a model seems out of the question, considering the obvious differences in their products, but their models must have been of a similar type. Perhaps Olaus only had access to a map of the south and west coasts, the parts of the country most frequented by the English and the Germans in their race for the stockfish trade, and was obliged to base the rest of his map on guesswork or superficial and fragmentary information. This would account most naturally for the inaccurate outlines, the relative lack of place names, and the lack of detail of the north and east coasts. Far less likely is the suggestion put forward by some scholars that Olaus had before him an older work based on the accounts of Portuguese sailors who had stayed for some time in West Iceland (Larsen, 1925:62-63; Nørlund, 1944:19). As the mat-

ter stands now, no firm conclusion or final decision is possible. For that we must wait until new evidence comes to light.

Many cartographers of the next decades followed the concept of Olaus. But, in fact, Olaus's and Mercator's Iceland are so similar that it can rarely be determined with certainty which of the two provided the model for any particular one of their imitators, especially since other questions are usually involved.

In 1558 a small book appeared in Venice which, among other things, contains accounts of voyages in the North Atlantic and westward to the shores of America. The author was Nicolo Zeno, and the book purports to be a retelling of the exploits of his ancestor and a brother of that man, during their exploration of these regions toward the close of the fourteenth century — or more than a century and a half before the publication of the book. With the book was included a map of the North Atlantic and the countries bordering on it, which the author claimed was contemporaneous with events recounted in the book. It is now known that the narrative was fabricated by the younger Zeno himself not long before the publication of the book, and the same is true of the map. Its principal sources were Olaus Magnus's map of the North, the "Caerte van Oostland" by Cornelis Anthoniszoon, and old maps of the North of the Clavus type, with elements taken from southern sea charts of the fifteenth and sixteenth centuries (e.g., the Fixlanda maps) (Lucas, 1898; Björnbo, 1912; Sigurdsson, 1971).

The source for Zeno's Iceland is easily discernible. It is obviously taken from Olaus Magnus. The ice floes off the east coast on Olaus's map have become islands whose names are borrowed from Catalan charts of the type represented by the sea chart in the Biblioteca Estense in Modena, with names from that source. Most of the place names in Iceland and Greenland are derived from the names which Clavus had used as substitutes for genuine place names.

In addition to Iceland and other lands of marvels in the North Atlantic, the map includes Frisland (called Frislanda in the text of the book), a familiar acquaintance from the Catalan charts, looking very much its old self. Some of the Catalan sea charts gave as many as 22 place names in Frislanda or Fixlanda, and all of them turn up on Zeno's map, besides some names from the Faroes taken from Olaus. Frisland has thus become an amalgamation of Iceland and the Faroes, and the double of both of them.

Zeno's map and book are an uncritical compilation of heterogeneous material from older sources belonging to various dates and places, presumably put together for the purpose of giving Venice, the author's native city, the credit for the discovery of America more than a century before Columbus.

In spite of its discreditable parentage, the Zeno map was to have a remarkable history. It was reprinted, with some changes, in six Venetian editions of Ptolemy between 1561 and 1598, and by other geographers during the next decades. This, however, would probably not have sufficed to secure the Zeno map the fame and longevity that it attained, if Gerhard Mercator had not adopted a number of its principal features for his new world map of 1569 — though he certainly did not fol-

low it slavishly or uncritically. Iceland, for instance, is essentially unchanged from his map of Europe of 1554. He omitted the seven legendary islands; by his time sailing directions had appeared in the Netherlands covering the entire coastline of the country, and in them there was no mention of these seven islands. The old Clavus place names were also left out, except two or three which were borrowed from Olaus Magnus's map of the North.

It was not until Mercator came to the Frisland (Iceland-Faroes) of the Zeno map that he went seriously wrong. He wrote that in preparing his map he compared Spanish and Portuguese maps with each other, and these with a large number of accounts of ocean voyages, both printed and unprinted. Although this statement no doubt applies to the map as a whole, it is worth recalling that some of the maps he used, especially Catalan and Portuguese ones, showed two islands in the general region of Iceland: Frislanda (also called by other names and sometimes shown alone) and a country called Islanda or Islandia. According to Zeno, well-known and reputable men had visited the former and stayed there for long periods of time. Mercator was thus faced with something of a problem and can hardly be blamed for having been led astray by an account supported by such seemingly reliable evidence. The North Atlantic had not yet been so exhaustively explored as to preclude the existence of an unknown land somewhere in those quarters, if it is at all permissible to apply the term "unknown" to a country that had appeared on maps for over a century. The search for this mythical land continued past the middle of the eighteenth century, even though by that time it had had long since disappeared from maps.

In Mercator's great atlas, first published in 1595, Zeno's Frislanda type was retained on all maps of the North Atlantic region, along with the Iceland of Mercator's older type. There is also a separate map of Iceland by Bishop Gudbrandur Thorláksson. All of these maps were reprinted in several later editions of the atlas. Twenty-five years before, Abraham Ortelius had published his new atlas, *Theatrum orbis terrarum*. It includes three maps showing the North Atlantic region in Mercator's version of the Zeno map, some of which appear in all editions of the work up to 1612; others appear with only minor changes. Many scholars copied or imitated these and other maps of Ortelius, sometimes with one eye on Mercator's maps, especially his map of the polar countries. Among them were André Thevet (1575), Christian Sgrooten (ca. 1590), Peter Plancius (1590-1594), Jodocus Hondius the Elder (early in his career), Matthias Quad (1590-1608), and many others.

In 1590, Ortelius published a new supplement to his atlas (*Additamentum IV Theatri orbis terrarum*). Among the new maps is one of Iceland. It was not altogether new, since on it the legend says that it was engraved in 1585. The author is not mentioned, but it was indisputably the bishop of the Holar see, Gudbrandur Thorláksson (1541-1627).

Although the bishop's map is faulty in many ways, it is far superior to all earlier maps of Iceland in content and execution. Here, for the first time, is a map giving a more or less complete survey of all settlements in the country and most places of interest. The central highlands are extremely poorly

represented; amazingly little seems to have been known about them then and indeed much later.

But the more or less legendary cartography of Iceland was at its final stage. Another period with a more realistic representation of the country was beginning.

NOTES

¹Isidori Hispalensis episcopi Etymologiarum sive originum II. Oxonii, 1957. XIV(vi):4.

²Patrol. lat. XCI:732.

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