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The Site of the Lost Colony of Greenland Determined, and Pre-Columbian Discoveries of America Confirmed, from 14th Century Documents

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Source: *Journal of the Royal Geographical Society of London*, Vol. 43 (1873), pp. 156-206

Published by: [Wiley](#) on behalf of [The Royal Geographical Society \(with the Institute of British Geographers\)](#)

Stable URL: <http://www.jstor.org/stable/1798626>

Accessed: 25/06/2014 05:04

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III.—METEOROLOGICAL REGISTER AND TABLE OF ALTITUDES—continued.

Place and Elevation in Feet.	Date.	Time.	Aneroid. Carey, 85.	Thermo- meter.	Wind, &c.
	1872.				
△ 77 7392	Dec. 10	7.0 a.m.	·52	° 26	W.
△ 78 6950	„ „	10.0 p.m.	·92	38	„
△ 79 Suok	„ 11	7.0 p.m.	23·32	36	N.W.
„ „ 6302	„ 12	9.0 a.m.	·28	32	W.
„ „	„ „	9.0 p.m.	·38	39	„
„ „	„ 13	9.0 a.m.	·48	34	N.W.
„ „	„ „	9.0 p.m.	·51	34	„
„ „	„ 14	8.0 a.m.	·48	29	„
Chui and Katune] 2646	„ 23	6.0 p.m.	27·50	10 to 15	„
	1873.				
Bisk	Jan. 5	9.0 a.m.	29·63	59	„
„ 416	„ „	9.0 p.m.	·96	58	„
„	„ 6	9.0 a.m.	30·12	55	Calm
„	„ „	9.0 p.m.	·08	56	„
„	„ 7	9.0 a.m.	29·95	53	N.E.
„	„ „	9.0 p.m.	·93	52	„
„	„ 8	9.0 a.m.	·92	52	„
„	„ „	9.0 p.m.	·87	51	„
„	„ 9	Noon	·86	52	Calm
„	„ „	10.0 p.m.	·83	51	„
„	„ 10	9.0 a.m.	·84	51	N.E.
„	„ „	9.0 p.m.	·80	52	„
„	„ 11	9.0 a.m.	·81	52	E.
„	„ „	9.0 p.m.	·71	51	„
„	„ 12	9.0 a.m.	·69	51	„

VIII.—*The Site of the lost Colony of Greenland determined, and Pre-Columbian Discoveries of America confirmed, from 14th Century Documents.* By R. H. MAJOR, F.S.A., Secretary R.G.S.

[Read, June 9th, 1873.]

My object in the present paper is to bring before you two geographical documents, one Venetian, the other Greenlandic, of the close of the fourteenth century: to demonstrate from internal evidence the authenticity of the former, which has been doubted and even denied, and to prove by a geographical discovery of my own the correctness of the latter, which had been impugned on a very vital point; and, having established the genuineness and validity of both documents, to determine from them beyond all dispute the true site of the lost Greenland Colony, and to show that at that period, which was a hundred years before the great voyage of Columbus across the Atlantic,



Published for the Journal of the Royal Geographical Society, by J. Murray, Albemarle Str^o, London, 1873.

Edw^d Weller, Litho

CARTA DA NAVEGAR. DE NICOLO ET ANTONIO











ISLANDIA

ESTLAND

NORVEGIA

FRISLAND

OSTROGOTIA

SCOTIA



AUTOTYPE

there still existed remains of the ancient Scandinavian colonists in North America. The outline of the Venetian story is as follows:—Towards the close of the fourteenth century (the precise date will be matter for special consideration presently), Nicolò Zeno, a member of one of the noblest and most ancient families in Venice, went at his own expense on a voyage, rather of curiosity than of discovery, into the Northern seas. For a long series of years before his time, the Flanders voyage from Venice had been a matter of annual occurrence, but chance gave to this voyage a very peculiar interest. Nicolò Zeno was wrecked on what he describes as the island of Frislanda, and he and his companions were rescued from the wreckers by the chief of a neighbouring principality, named Zichmni, who happened to be there, and into whose service he entered in the capacity of pilot of his fleet. After remaining with this chieftain a year or so, Nicolò Zeno wrote home to his brother Antonio, inviting him to join him, which he did. Nicolò survived his brother's arrival four years, and died in Frislanda. Antonio remained ten years more in the service of Zichmni, and then returned to Venice, where he died, as far as we may judge from the annals, about the year 1405 or 1406. It is from the above-mentioned letter of Nicolò to Antonio, and subsequent letters from Antonio to a third brother, Carlo (a very distinguished man in Venetian history), that the narrative of the movements of the two brothers is derived.

After Antonio's arrival the two brothers accompanied Zichmni in a victorious attack on what can be clearly shown to be the Shetland group, although named Eslanda. The narrative, however, fortunately treats at greater length on two much more important subjects; viz., a visit by Nicolò Zeno to Greenland, which he calls Engroneland, and the observations of some fishermen in two parts of North America, called respectively Estotland and Drogeo, showing the existence at that period, more than a century before the time of Columbus, of the remains of those old Scandinavian colonists mentioned by Adam of Bremen in the eleventh, and Ordericus Vitalis in the twelfth, century, and about whom we have learned so much in the present century from the Danish antiquaries C. C. Rafn and others. The whole story had been written out by Antonio Zeno, but a descendant of his, named Nicolò Zeno, born in 1515, when a boy, not knowing the value of these papers, tore them up, but, some of the letters surviving, he was able from them subsequently to compile the narrative and publish it, as we now have it, in the year 1558. He found also in the palace a map, rotten with age, illustrative of the voyages. Of this he made a copy, unluckily supplying, from his own reading of the narrative, what

he thought was requisite for its illustration. The first to do himself honour by vindicating the truth of the Zeno story was the distinguished companion of Captain Cook, Johann Reinhold Forster, in his 'History of the Voyages and Discoveries in the North,' published in *German*, Frankfort, 1784, *English*, London, 1786, 4to; but the value of his dissertation is marred by many wild conjectures. Eggers, in his well-known prize essay on the 'True Site of the Old East Greenland,' Kiel, 1794, 8vo, was another advocate of the truth of the narrative. Early in this century Cardinal Zurla wrote a lengthy work in favour of the voyages, but was so far from realising the fact that the Frislanda of the Zeno was the Færøe Islands, as is plainly demonstrable from internal evidence, that he concluded that it represented some island since submerged. Zach, Buache, Malte Brun, Walckenaer, de la Roquette, and the Polish geographer Joachim Lelewel, have all been advocates of the narrative. In 1845, the Danish antiquary, J. H. Bredsdorff, wrote a valuable paper on the subject in the third volume of 'Grönland's Historiske Mindesmaerker,' and has been more accurate and judicious than any of his predecessors in his conjectures and commentaries on difficult points. But what is wanted is not conjecture but demonstration, and Bredsdorff, in common with all the rest, has failed in detecting those simple facts connected with the history of the document which would have led to inevitable conclusions in its favour. The deniers of the authenticity of the document have been numerous, and even so late as the present year, the distinguished Professor Konrad Maurer has printed his opinion that the Zeno narrative is a compilation of Nicolò Zeno junior's from a variety of sources. But of all those who have thrown discredit upon the document, the most conspicuous is Admiral Zahrtmann, the late Hydrographer to the Danish Admiralty, who, in the year 1836, published in the fifth volume of our Society's Journal, an article of the most learned and elaborate character translated from the Danish, the object of which is to prove that the whole story is "false" and "a tissue of fiction," emanating from the pen of Nicolò Zeno junior, in 1558. It was said with great truth by a writer in the 'North American Review' for July 1838, after speaking of the various distinguished persons who have disputed or vindicated the credibility of this narrative:—"The most formidable assailant of the Venetian title to the discovery of the New World is yet to be named. The essay of Captain Zahrtmann of the Danish navy, originally published in the Transactions of the Royal Antiquarian Society of Copenhagen in 1833, and subsequently communicated to the London Geographical Society, is by far the ablest attempt ever made to shake the authority

of the voyages of the Zeni. We must say that our first impressions after perusing that masterly production, were so strong against even the possible truth of the account, that we well-nigh resolved to abandon the matter as beyond all hope of surgery without bestowing another thought upon it. The writer brings such a mass of *prima facie* proof to bear upon the subject, and discovers so many loose points and apparent inconsistencies in the story, that the argument comes upon one with the force of demonstration. At the same time, the perfect freedom of the paper from vituperative remark, and the admirable coolness as well as skill with which the operator dissects his victim, are far from diminishing the effect produced upon the mind. A more careful examination, however, of this elaborate effort from the pen of so profound a scholar has suggested several ideas that detract, to some extent, from the conclusive character of the argument, and leave a ray of hope to the sanguine admirers of Venetian prowess." I trust that, if the reader will be pleased to follow me through this paper, it will be found that this "ray of hope" has now expanded into noon-day light. The result of my investigation has been to prove Admiral Zahrtmann, either in his facts or his deductions, wrong on every point, and to convict him of throwing upon an honourable man, occupying no less distinguished a position than that of one of the Council of Ten of the Republic of Venice, a series of aspersions of the most ungenerous character. The 'North American' reviewer just quoted commends Admiral Zahrtmann for refraining from vituperative remark. "Falsehood" and "tissue of fiction" applied to different parts of the narrative, are tolerably strong expressions, but, if true, would be justifiable in criticism. How different was the verdict of the illustrious and far-seeing Humboldt, who, with his usual large-mindedness, although he had perceived the difficulties attaching to the narrative of the Zeni, said, "On y trouve de la candeur et des descriptions détaillées d'objets, dont rien en l'Europe ne pouvoit leur avoir donné l'idée."—(*Examen Critique*,—tom. ii. p. 122.) True, the complications and difficulties which surround this narrative are such as amply to justify very serious doubts in the minds of those who have never made a special analysis of the subject. Admiral Zahrtmann, however, *has* devoted *very special attention* to such an analysis, and yet has failed to perceive the facts which should have averted such opprobrious epithets. Not the least important of these is, that, in fixing the localities written down by a Southerner, from the lips of Northerners, it is requisite to follow strictly the words of the narrative, and to see what names in the route tally, *not in form, but in sound*, with those written down. This has never been done.

Admiral Zahrtmann summarises his examination of the subject into the four following conclusions:—

“ 1. That there never existed an island of Frisland ; but that what has been represented by that name in the chart of the Zeni is the Ferøe Islands.

“ 2. That the said chart has been compiled from hearsay information, and not by any seaman who had himself navigated in these seas for several years.

“ 3. That the ‘ History of the Voyages of the Zeni,’ more particularly that part of it which relates to Nicolò, is so replete with fiction, that it cannot be looked to for any information whatever as to the state of the north at that time.

“ 4. That both the history and the chart were most probably compiled by Nicolò Zeno, a descendant of the Zeni, who for brevity’s sake may be called ‘ Nicolò Zeno junior,’ from accounts which came to Italy in the middle of the sixteenth century, being the epoch when information respecting Greenland first reached that country, and when interest was awakened for the colony which had disappeared.”

These propositions, and the arguments on which they are based, I propose to deal with in such order as shall seem best calculated to bring the series of details clearly before the mind, and will commence by transcribing the first proposition and its arguments *en bloc* just as they emanate from Admiral Zahrtmann’s pen. The proposition stands thus:—

1st. “ That there never existed an Island of Frisland, but that what has been represented by that name in the chart of the Zeni is the Ferøe Islands ;” and the following is Admiral Zahrtmann’s argument:—

“ 1. The first point has already been proved by Buache, Eggers, and Malte Brun, by arguments which I shall not repeat, nor shall I relate the voyage itself,—a task already performed by various others. I shall only add a few remarks on the subject.

“ Of the identity of Denmark, Norway, Sweden, and Scotland, there can be no doubt ; as not only their relative positions, their outlines, and the names of many places in them, but also their proper names in Latin, are decisive proofs of this. Of the five groups, Greenland, Iceland, Shetland, the Ferøe Islands, and the Orkneys, we recognise the proper names of the three which end in ‘ land’ ; whereas the two last, called in those days Fær-eyar and Orkn-eyar, are not to be found, these sounds being difficult to Italianise, or even to be at all caught or retained by any Italian ear. The name Gronlandia is applied, it is true, to quite a wrong place, where no land is to be found ; but that the Engroneland in the chart, which in Antonio Zeno’s account is

moreover called Gronlandia, corresponds with the present Greenland, is proved so evidently by its shape, that I cannot conceive how Eggers could entertain a moment's doubt on the subject, or could believe that it was land on the opposite side of Baffin's Bay; the more so, as it is now ascertained that in that bay there is no St. James's Island in existence. The identity of Iceland is proved not only by the name 'Islanda,' but further by the names of the bishops' sees, Scalodin and Olensis; that these two names, in particular, should be so easily recognised, and should bear so close a resemblance to the Latin names of the places, seems to indicate that the accounts respecting them were drawn from ecclesiastical sources. Though Shetland is called Estland, yet, in the first place, this is only a trifling transposition of the name in the spirit of the Italian language, and not exhibiting any greater deviation than is found in the other appellations given at different times to these islands, such as Hialtland, Yealtaland, Yetland, Zetland, and Hetland; and besides, we recognise so many names here, that we are almost tempted to believe that this was precisely the part of the chart best known to the author. We find, for example, Cledere, *i.e.*, Queendal, Sumbercouit (Sumbergh Head), St. Magnus (St. Magnus Bay), Scaluogi (Scalloway), Bristund (Brassa Sound), Itlant (Fetlar), Lonibies (Lambness), Onlefort (Olna-Firth), and Oloford (Onge-Firth). And, further, the placing of St. Magnus and Scalloway on the east side instead of the west side, naturally leads to the inference that these names were not copied from any other chart, but laid down from verbal depositions. These points being admitted, the Orkneys must naturally be looked for between Shetland and Scotland; and this Eggers has done, but in my opinion not in a very satisfactory manner. He supposes that the name Contanis may be assumed as Continent, or, in other words, Mainland, the largest of the Orkneys. I, on the other hand, consider beyond all doubt that it means Caithness (formerly called Katanes), the most northern county in Scotland, a province which, from the evidence of the ancient code of laws called the Grágás, we know belonged in the Middle Ages to the Crown of Norway. The only name I find to have a resemblance to any name in the Orkneys is Podalida, not unlike Pomonia, the principal island in the Orkneys, or Pentland (formerly Petland), the name of the strait which separates them from Caithness. Podalida corresponds with Pomonia in this respect also, that it is represented as a large island surrounded by several smaller ones. This, however, is not quite satisfactory: we have, therefore, two groups remaining unaccounted for, *viz.*, the Orkneys and the Ferøe Islands, one of which must of necessity be Frisland: unless we

would suppose that a seaman, who had for several years navigated the northern sea in all directions, should have remained ignorant of the existence of the Orkneys and the Ferøe Islands, and at the same time known and laid down a country which has since disappeared, and of which, moreover, all the inhabitants of the north in those ages had ever remained in utter ignorance; this appears to me so very highly improbable, that we may safely pronounce it to be impossible. If we subsequently compare names and positions, we shall find that Frisland can be nothing else than the Ferøe Islands; as the Rock Monaco, at the southern point, exactly corresponds to the position of the Rock Munk, in respect to the Ferøe Islands, as the names Sudero Colfo, Streme, and Andefard must of necessity be considered homonymous with Suderö Sound, Strömöe, and Andefar; and, finally, as the absolute geographical position of Frisland corresponds better to that of the Ferøe Islands, than is the case with almost any of those places on the chart concerning the identity of which no doubt can be entertained. The south end of Frisland, for example, is placed in the latitude of the Ferøe Islands, whereas the northern extremity of Scotland is placed 2° , and all places in Greenland, Iceland, Shetland, Norway, and Denmark, are placed about 6° too far northward. In like manner, the eastern extremity of Frisland is laid down exactly as much to the westward of the Naze as the western extremity of the Ferøe Islands is distant from that point; whereas Iceland is placed 10° , and Cape Farewell 20° of longitude nearer to the Naze than they really are. This was, therefore, the place which Antonio Zeno, who knew as little about Frisland as we do, would, according to his brother's description, be most likely to fall in with when he went in search of him. It is further mentioned, that Estland (Shetland) lies between Frisland and Norway, which is its relative position to the Ferøe Islands; and, finally, it is expressly stated that Frisland was subject to the King of Norway; but as we know with certainty, from the Grágás Code, that no other islands were in this predicament than those now known to us, it follows that the country in question was the Ferøe Islands."

With trifling exceptions, I freely accept all that Admiral Zahrtmann here says as true: true, but not as a proof of the falsehood of the voyages of the *Zeni*, but of exactly the contrary. It is quite true that there was no such island as Frislanda, but, from the names adduced by Admiral Zahrtmann himself as identical in Frislanda with those of the Færøe Islands, it is equally obvious that the Færøe Islands *were* represented by the Frislanda of the Zeno narrative and map. We must take things as we find them; and while imperfect geography on a map of the fourteenth



MAP OF THE
FÆRÖE ISLANDS
 to illustrate the Route of
NICOLO ZENO.

Monk, = Fleserne
(MONACO)

or even of the sixteenth century, is no necessary proof of its inauthenticity, the occurrence of names thereon which can be found in no other contemporary map or document, but which agree with the known geography of to-day, is a very strong proof indeed of its authenticity. But I have still further evidence to adduce in proof that the Færøe Islands and Frislanda were identical. A description is given in the text of a voyage made by Nicolò Zeno to Frislanda to meet Zichmni on his return from a victorious progress through the country. By carefully following the text, we shall with great facility trace the route on a modern map, and realise the several points visited, and thereby, *for the first time*, remove the difficulties which have arisen from conjectures as to what those places could be, as represented by the quaint and distorted spelling given to them both in the ancient map and in the narrative. It is one of those cases which show that apparent trifles may prove of great moment. A more insignificant transaction than the passage which we are about to trace on the map of the Færøe Islands could scarcely be found in history, and yet it will go far to settle a difficulty which has perplexed the minds of some of the most distinguished literati of different countries in Europe. We commence the route without even a shade of uncertainty. The words of the narrative are, "They sailed to the westwards" (whence is not said, but the following words render the omission of no importance), "and with little trouble gained possession of Ledovo and Ilofe, and other small islands, in a gulf called Sudero." The adjoining map will show beyond all question that Sudero Gulf, or as we call it Suderoe Fjord, lies between the islands of Suderoe and Sandoe, and the islands described as Ledovo and Ilofe, &c., must of necessity be Lille Dimon, Store Dimon, and Skuoe; and we have no difficulty in understanding how the Venetian Zeno, hearing Lille Dimon uttered by a northerner, should give to the sound which he heard the form of "Ledovo." A very good suggestion has been made by Bredsdorff in his article on the Zeno voyages in 'Grönlands Historiske Mindesmærker,' that the "I" in Ilofe has been mistakenly written by Nicolò Zeno, junior, for an "S," and thus we may see that Skuoe easily becomes, when written down by the southerner, Slofe. The text goes on to say, that "in the Gulf of Suderoe, in the harbour of the country called Sanestol, they captured some small barks laden with fish." The harbour of Sandsbugt, in the island of Sandoe (Sanestol), corresponds exactly with the position and description of this unnamed harbour. The track thence is thus described: "Making their course still westwards, they came to the other cape of the gulf," which cape corresponds with the south-west point of Sandoe, as seen in the

modern map; "then turning again," that is, rounding the cape, and consequently proceeding northwards, "they fell in with certain islands and lands which they brought into possession of Zichmni. This sea was in a manner full of shoals and rocks." The course being now northwards, it is obvious that "the sea" mentioned is that between Sandoe and Stromoe, in which lie the small islets of Trothoved, Hestoe, and Kolter. After passing these, "the captain determined to land at a place called Bondendon," and the track which the fleet was now taking leads straight into the harbour of Norderdahl, the name of which there is no difficulty in supposing transmuted by the Venetian into Bondendon. There they awaited Zichmni's arrival; and after the recital of what occurred when he arrived, the narrative states that "departing thence they went in triumphant manner towards Frislanda, the chief city of that island, on the south-east of it, lying inside a bay in which there is such great abundance of fish, that many ships are laden therewith to supply Flanders, Britain (England, Scotland), Norway, and Denmark, and by this trade they gather great wealth." Now, knowing as we do the custom which obtained in the Middle Ages of giving to the capital of a country the name of the country itself, we can have little doubt that Frislanda was not the capital of the island only, but of the country to which that name was given; that is, the whole Færøe group; and in it we accordingly recognise Thorshavn, the position of which on the island of Stromoe precisely tallies with that of Frislanda in the narrative. Nearly every man in Thorshavn is a fisherman; and it is a very curious and significant fact that, whereas we know that in old times a considerable amount of commerce was carried on with Iceland from the English ports of Bristol, Scarborough, &c., we have here an indication that the Færøe Islands, which lay on the route from England to Iceland, were not omitted from that intercourse at the close of the fourteenth century. Even if Admiral Zahrtmann had not already satisfactorily shown that Frislanda and the Færøe Islands were identical, from the occurrence of such names as Andefjord, Stromoe, Monaco, &c., that fact would be conclusively established by the track which we have now been following; for even although any one should be disinclined to accept the suggested versions of the intermediate names, their individual and relative positions would nevertheless remain in harmony with the language of the text, while the entrance into the Gulf of Suderoe from the east at the commencement of it, and the position of Frislanda, the capital of the country, as the point of arrival at its close, correspond so exactly with the modern map as to leave no room for doubt. Now, when we turn from the Færøe Islands of the modern map

to the Frislanda of the Zeno map, of which the copy here given is a photographic facsimile, we find indeed a single island of preposterous size, possibly because it had to receive the largest number of names; but it will also be seen that, in spite of the abnormal delineation of the island, the places indicated in our route-track occupy exactly corresponding positions thereon.

As to the word Frislanda, as Admiral Zahrtmann, himself a Dane, tells us that in old Danish these islands were called Færøisland, the transmutation is by no means difficult. Meanwhile, the inevitable fact remains that the Færøe group *was* represented by Nicolò Zeno, senior, in the fourteenth century, by the word "Frislanda," and that the process, whatever it may have been, must have been easy, is proved by the fact that another Italian, the illustrious Christopher Columbus, wrote the same word down in exactly the same form in a note preserved by his son Ferdinand in his father's biography, where he says that, "in February 1477 I sailed a hundred leagues beyond the island of Tile, the southern part of which is not, as some will have it, sixty-three, but seventy-three, degrees from the equinoctial line. It lies much more to the west than the western meridian of Ptolemy. This island is as large as England, and the English, especially those of Bristol, go there with their merchandise. At the time that I was there the sea was not frozen, but the tide runs so high as in some places to rise and fall twenty-six fathoms. It is true that the Tile mentioned by Ptolemy lies where he says it does, and this is called by the moderns *Frislanda*."

Now it is quite useless to spend time in discussing the many geographical blunders embodied in this short note. It is quite sufficient that Columbus gives the word "Frislanda" in exactly the same form as Zeno does, and even mentions it as a generally recognised name, and since it has already been demonstrated that Frislanda and the Færøe Islands are identical, even though in Columbus's blundering note some sort of confusion has been made between Iceland and the Færøe Islands, his blunder does not do away with that identity. Meanwhile, the fact that he alludes to, of the men of Bristol carrying their commerce into those seas (it is well known that they traded with Iceland), presents to those who approach the inquiry in the spirit of seeking how the commutation of the word can possibly be explained, instead of how it cannot be, a very reasonable explanation of the difficulty; but as it has been objected by some that Columbus may have picked up the name from Zeno, it is necessary to state that not only were the three men—Nicolò Zeno, senior, of the close of the fourteenth century; Christopher Columbus, of the close of the fifteenth century; and

Nicolò Zeno, junior, the editor of his ancestor's work in the middle of the sixteenth century—perfectly independent of each other personally, but no one of them had the means of knowing the name as coming from any other of them. The Zeno story lay in the Zeno palace, unknown to anybody and unvalued, until found by Nicolò Zeno, junior, when he was a boy. He was born in 1515, and Columbus died in 1506. Nicolò Zeno, junior, published his ancestor's "Frislanda" in 1558, long before anybody had heard of Columbus's allusion to the same name; for the statement of the great navigator in which that name was mentioned was not given to the world till 1571, when the Italian version of his son Ferdinand's biography of his father was first printed.

But, in the above quoted arguments of Admiral Zahrtmann, we have seen not only names adduced which identify Frislanda with the Færøe Islands; but also similar evidence amply supplied from the map—but, be it observed, not from the narrative—of names establishing the identity of Estland with the Shetland group. There is also very good reasoning, indeed, respecting the Orkneys and Caithness, the correctness of which must be fully acknowledged. But to these reasonings I would wish to add some corroborative observations of my own.

It will have been observed that Zichmni is styled Lord of Porlanda and Duke of Sorano. The language of the text is, "He [Zichmni] was a great Lord, and possessed some islands called Porlanda, near to Frisland, on the south;" and "besides the said small islands, he was Lord of the Duchy of Sorano, lying off the land and facing towards Scotland." If we look to the Zeno map, we find the name Porlanda placed against some islands between Suderoe [which means the southern island] and the Monk. Now, not only do no such islands exist; but, as Zichmni sails *from* Porland, his own domain, to attack Frisland, it is clear that the former was not *in* Frisland, but has been placed there by Nicolò Zeno, junior, under a misapprehension of the meaning of the statement of the text that "it lay near to Frisland on the south."

We have to look elsewhere, then, for Porlanda; and the narrative tells us to look southward from the Færøe Islands and towards Scotland, where Sorano, another property of Zichmni, lay, and this points us direct to the Orkneys, which, it will be observed, are not laid down by their proper names, as we should have expected them to be on the Zeno map. We do, however, find "Podanda,"* which is placed in the very direction

* The cross-stroke of the "d" in this word is broken in the map, and looks like "rl," and was so read by Admiral Zahrtmann; but it is really "d."

indicated, and there can be little doubt that the "Podanda" of the map and the "Porlanda" of the text are identical, the "rl" of the one being easily mistakable by Nicolò Zeno, junior, for the "d" of the other. And now we shall see how this fits in with other facts. It is to the learned Johann Reinhold Forster that we are indebted for the valuable suggestion that Zichmni is the Venetian Zeno's rendering for Sinclair. It was in 1379 that Henry Sinclair of Roslyn was invested by Hacon VI., King of Norway, with the earldom of the Orkneys and Caithness. The declaration of Sinclair's fealty to the King is given entire by Torfæus in his 'History of the Orkneys,' p. 174. It will now be seen how Zichmni, Lord of Porlanda, is Sinclair, Lord of the Orkneys. But why Porlanda for Orkneys? In the absence of certainty I venture on a suggestion. Throughout the narrative this chieftain is never mentioned by his title, but always by his surname. When once, therefore, Zeno had made a note of the territorial possessions of this chief as they might chance to be communicated to him, there would arise nothing in daily intercourse to correct such memorandum if it were either inaccurate or inadequate. We will suppose, therefore, Zeno cruising in the Pentland Frith, which lies betwixt Sinclair's lordships of Orkney and Caithness, and he is informed by the sailors that he is now in the midst of the domains of his lordship. He thereupon takes note from their lips of the names of those domains as they lie respectively on the north and on the south. On the north he would have Pentland, which by misspelling, misreading from the old writing, or by Venetian transmutation, becomes, finally, Podanda or Porlanda; we have the island of Swona in the Pentland Frith (in exactly the position indicated by the text: "fra terra posta della banda verso Scotia"), which becomes written down in the text Sorano, and on the south we have Contanes, which is beyond all question Caithness, for it is found under that form in several other documents. It is necessary to dwell on the exact correspondence of Swona with the position of the Sorano of the text, in order to establish its identity in spite of the ridiculous epithet of "Duchea" which is attached thereto. Whether the use of the word originated in ignorance, or bombast,* or both, we must remember that the portion of the text in which it occurs was a compilation by Nicolò Zeno, junior, from the letters of his ancestral namesake; that the latter was ignorant of the language of the north, and would pick up his information with difficulty; and that epistolary correspondence

* The grandiloquence which could enlarge a rocky islet into a Duchy is a characteristic of the narrative which will be treated of more specially presently.

can scarcely be expected to embody the severe accuracy of history. The acceptance by many commentators of this most unquestionable blunder of placing Porlanda in the Færøe Islands has led only to confusion; whereas under this new suggestion a variety of unquestionable facts are brought into harmonious combination. But now that we have seen that the Zeno map possesses the merit of containing a variety of names of places in the Færøe group which we might hope in vain to find in any other map, even of the comparatively late period (1558) when it was engraved and published—places recognisable by the light of modern geography—let us turn and see what absurd blunders it exhibits in the misplacement of localities through the want of that light by Nicolò Zeno, junior, the very man to whom we are indebted for the document itself. It may be asked on what ground these blunders are attributed to him. The answer is very simple. They are all of the most preposterous character, unlike anything else on the map. They consist of *those names, and those only, which occur in the narrative*, and as the bearings in the narrative agree with modern geography, it follows, beyond all doubt, that the blunders have arisen from the misreading of it. The narrative gives an account of a second victorious campaign, this time directed against Estland, which it describes as lying upon the coast between Frisland and Norway, and which unmistakably, therefore, is Shetland. “Here they did much damage; but hearing that a fleet of the King of Norway’s was coming to oppose them, they departed, but with such a gale of wind that they lost several of their vessels, and the rest were driven on a large but uninhabited island, called Grislanda, lying to the south.” Nicolò Zeno, junior, misreading Esland for Iceland, places Grislanda off the south coast of that island, and, in pursuance of the same mistake, endows Iceland with a cluster of seven islands on its eastern coast, which will presently be seen to belong to Shetland. Now south of Shetland lie the Orkneys, the Mainland of which is called Hross-ey or Gross-ey, and just as the Færøe Islands or Færøisland became to Italian ears Frislanda, so would Gross-ey or Gross Island become Grislanda, and that this, whatever the process of derivation may be, is really correct we shall immediately have proof. News came that the enemy’s fleet had been entirely wrecked in the said storm, and Zichmni seeing that the Shetlands (already described as lying between the Færøes and Norway, and called in the Italian “*le Islande*” in the plural, consequently not Iceland, but evidently “the Shetlands”) *lay not far off to the northward* (exactly their position with respect to the Orkneys), resumed his purpose.

The first place that he approached was called Islanda, and

just as we have seen that the word "Frislanda" was used for the capital of Frislanda or the Færøe Islands, so we must infer that "Islanda" is here the capital of the "Islande" or Shetland Islands, wherever that may have been. Lerwick did not then exist. He found it so well protected that he removed his attack to the other islands in those channels, called the Shetlands, seven in number: Talas (Yelli), Broas (East and West Barras), Iscant (Unst), Trans (St. Ronan's Isle), Mimant (Mainland), Dambere (Hamna), and Bres (Bressay). He took them all, and built a fort in Bres, where he left Messire Nicolò with some vessels and men and stores, and he himself returned to Frisland. Now, there is no doubt that "Islanda" was a proper form for Iceland, and therefore eminently calculated to mislead Nicolò Zenò, junior, but it is hoped that from the position of the islands in question, between the Færøe Islands and Norway, from their description as lying "in those channels," from the correspondence of the individual names with the islands, and the plural generic name "le Islande" for the group, no doubt will be left on the reader's mind as to the "Islande" being the Shetland Islands and not Iceland, and that Grislanda occupies the position of Grossey in the Orkneys, the wild coast of which would give it the aspect of being uninhabited to any one driven on it in a storm. Yet it will have been seen that while the narrative is consistent with itself and with modern geography, the map places Grislanda to the south of Iceland, and the islands which have been identified with Shetland are engrafted on the east coast of Iceland. In this fact we have a proof that Nicolò Zenò, junior, the restorer of the map, is the cause of all the perplexity. But while this is a proof of his ignorance of the geography, it is the greatest proof that could be desired that he could not possibly have been the ingenious concocter of a narrative, the demonstrable truth of which, when checked by modern geography, he could thus ignorantly distort upon the face of a map.

Ignorance of the geography of the North in the middle of the sixteenth century cannot be looked upon as a reproach to him, but it had its consequences, and I dwell upon them because I claim the argument as a demonstration, now advanced for the first time, of the authenticity and truth of the original documents.

I venture to maintain that this proof is so conclusive that it could not be invalidated, even if we were unable to find a solution of some of the puzzles which the narrative and map present to us. Such, however, is happily not the case. We shall find that all of them can be met with explanations, based not on mere fancy or opinion, but on solid and substantial

arguments and facts; and the result is, that when we have once been able to detach that which is erroneous from that which is correct, we find that those portions of the ancient story which have not been marred by misreading, exaggeration, or unintelligent interference, are, with one exception, which will be spoken of hereafter, in harmony with the knowledge which we possess in the present day.

But we must not yet quit this subject of the attack upon Shetland, which the narrative would lead us to understand involved a conflict with the King of Norway.

Zahrtmann says on this subject: "As to the war asserted to have been waged between Zichmni and the King of Norway, this assertion is the less entitled to belief, from the circumstance that there was no king in Norway, that country being at that period under the government of Queen Margaret. Forster's opinion, that Zichmni might have been Henry Sinclair, Earl of the Orkneys, is altogether destitute of foundation; as that lord, on whom the said earldom was bestowed in 1380 [say rather 1379] by King Haagan, both in 1388 and 1389—as a Norwegian Councillor of State—signed the act by which Eric of Pomerania was acknowledged true heir of the realm, and therefore at that time could not have been in rebellion against the Crown. Neither is there any reason for supposing that his earldom, which comprehended Shetland, was in the meantime attacked and completely ravaged, and yet the Danish history make no allusion to any such circumstance; more especially when we again, in 1397, find that Jonas, Bishop of the Orkneys, signed in Calmar the coronation act of Eric of Pomerania, which shows that the connection between the islands and the mother country had continued without interruption."

This criticism of Admiral Zahrtmann's is perfectly just and reasonable from his point of view, a point of view most certainly, *primâ facie*, sanctioned by the language of the text. But is there no possibility that that language itself may not be perfectly correct? We have already seen how the editorial intervention of Nicolò Zeno, junior, introduced inaccuracies into the map, which have been a perplexity and a trap to commentators ever since. Now, no one can read the text without perceiving that while he has fortunately given us entire pieces of original matter, he has himself supplied the cement which binds the whole together.

We have also seen by the example of the map that he was capable of incorporating into his publication his own views of the facts related in the documents which he had before him; and yet there is no legitimate reason to doubt that this was done conscientiously. Now, as we shall presently see, the

narrative, as we have received it from him, exhibits beyond all contradiction a quality excessively misleading to the critic who takes each word *au pied de la lettre*, and that quality is hyperbole: yet no one it may be hoped, who is acquainted with the genius of the Southern mind, would condemn a tendency to a certain amount of hyperbole, especially in the record of the deeds of an ancestor, as involving any conscious want of integrity. At the same time, it is even quite possible that some or all of the inflation of the language may have existed in the original letter. Of this we have no means of judging. Nicolò Zeno, junior, we do know; Nicolò Zeno, senior, we do not, in regard of the sophistication, however blameless, of the matter which has reached our hands. But that hyperbole has been indulged in by the early Nicolò, or the later, or both, may be judged from the following sentence. When Nicolò's fleet reached Bondendon (Norderdahl), "they heard to their great satisfaction that Zichmni had fought a great battle, and put to flight the army of the enemy; in consequence of which victory, ambassadors were sent from all parts of the island to yield the country up into his hands, taking down their ensigns in every town and village."

It would be difficult to find in all literature a more striking example of grandiloquence and bombast in the description of so petty an occurrence. And yet it would be as unwise to condemn the reality of the scene, on account of the vividness of the colouring, as it would be to utter a sweeping condemnation of the hospitality of a Spaniard, because he places his house and all that he possesses at our disposal. Nevertheless, under the rigid exactness of criticism, this hyperbole has exposed the document to the gravest suspicions, simply because all hyperbole is a deviation from strict truth. Not only is the scantiness of towns and villages and population in the Færøe Islands utterly at variance with the strict letter of the above description; but the known gentleness of the people would lead, and to my own knowledge has led, to a denial of the truth of the story of the attack on Zeno, when first wrecked on their shores. I object to this denial on the grounds already advanced, and submit that as we have already had unanswerable proof of the general authenticity of the story, we must accept the exaggerations as merely the husk which surrounds a real and genuine kernel. Now it must be acknowledged that the elder Nicolò Zeno ran a great risk of imperfectly apprehending facts in the simple circumstance of his ignorance of the language of those amongst whom he moved. Whatever may have been the character of Sinclair's so-called triumphant expedition in the Færøe Islands, it appears pretty certain that there has been

great misapprehension on the part of Nicolò Zeno, senior, as to the motives of Sinclair's movements in the Shetland Islands, or else there have been both misreading and exaggeration on the part of Nicolò Zeno, junior, in dressing up the story.

Exaggeration is patent enough in the statements that "bearing that the King of Norway was coming against them with a great fleet to draw them off from this attack, they departed under a terrible gale of wind," and that "the King of Norway's fleet being caught in the same storm, was utterly wrecked." We can scarcely suppose the king to have acted in such a movement in person, or that his whole fleet was wrecked, and yet so notable an event be unrecorded in history. Exaggeration, however, is not the only difficulty in the way of our comprehending this attack on the Shetland Islands. Admiral Zahrtmann truly states that Sinclair's "earldom comprehended Shetland." Sir William Douglas tells us in his 'Peerage of Scotland,' p. 337, that the earldom had come into the family by the marriage of Henry Sinclair's father, Sir William Sinclair of Roslyn, with Isabelle, one of the daughters and co-heiress of Malise, Earl of Strathern, Caithness, and Orkney. The last Scandinavian Yarl was Magnus, the father of Malise's first wife. Among the charters of Robert III., King of Scotland, is one confirming a charter dated the 23rd of April, 1391, by Henry de Sancto Claro, Earl of Orkney and Lord of Roslyn, to David de Sancto Claro his brother, of the lands of Newburgh and Auchdale in Aberdeenshire, "pro suo homagio et bono servitio nobis impenso, et pro toto tempore vitæ suæ impendendo, ac etiam pro suo jure et clameo aliquali in partibus Orcadiæ seu Schetlandiæ sibi ratione Isabellæ de Sancto Claro, matris suæ, aliquo modo contingente."

By this we see that Shetland was included in the earldom, and we also see the ambiguous position in which Henry Sinclair stood with reference to the two sovereigns of Norway and Scotland.

It was from the King of Norway that Henry Sinclair had received in 1379 the recognition of his claim to the Earldom of Orkney, but his investiture was burdened with severe conditions. He was bound to serve the King with a hundred well-armed men whenever required, upon a notice of three months; to defend the Orkneys and Shetland against any invasion, not only with the native force, but with the whole power of his house; to assist the King when he attacked any foreign State; not to build any castles or ports in the islands without the royal consent, and to assist the King against the Bishop of Orkney, who belonged virtually to the Scottish Church, with other clauses which need not here be enumerated.

We have in the 'Orcades' of Torfæus, pp. 174-7, Sinclair's own Declaration of Fealty to the King of Norway, in which all these pledges on his part are fully detailed. If, therefore, we took the Zeno narrative *au pied de la lettre* as regards this attack upon Shetland, and understood it as a real conflict with the King of Norway, we should find ourselves in a dilemma from which it would be next to impossible to escape, for by such a transaction the earldom would be forfeited.

Now there is very strong reason for suspecting that, in the present case, exaggeration, employed only for the glorification of the occasion, has, from a foreigner's liability to misapprehend the true state of the case, led to the introduction of a false element into the story. Only let it be assumed that the same bombastic style of description which introduced armies and ambassadors and taking down of ensigns in every town and village of the poor and scantily peopled island of Stromoe, has with equal accuracy, in the present case, brought the King of Norway with a large fleet upon the scene of action, and our difficulty will disappear. I have an historical incident to adduce which will not only present a reasonable explanation of the mistake into which, under this assumption, Zeno would have fallen as to the political nature of the conflict, but it tallies both in time* and place with the Zeno story, and involves no infringement of Sinclair's fealty to the King of Norway. In Sinclair's Declaration of Fealty (Torfæus, 'Orcades,' p. 176) occurs the following passage: "We also promise that, since we have been already promoted by our Lord the King himself to the earldom and lordship aforesaid, our cousin Malise Sperre must cease from his claim and altogether lay aside his very claim itself, if it is decided that he has any, to the said lands and islands, so that our Lord the King, his heirs and successors, shall endure no vexation or annoyance from him or from his heirs."† Then, at page 178 of Torfæus occurs the following entry: "Anno MCCCXCI., Comes Orcadensis occidit Mallisium Sparrium in Hialtlandia cum septem aliis. Juvenis autem quidam cum sex aliis, navem sex (*sic*) scalmorum nactus in Norvegiam fugâ evasit." "In the year 1391 the Earl of Orkney slew Malise Sperre in Shetland, with seven others. A certain youth, however, with six others, procured a vessel at Scalloway and escaped to Norway." We

* The question of date will be fully dealt with a few pages farther on.

† Item promittimus quia ad comitatum, et ad dominium sæpefatam, per ipsum Dominum nostrum Regem sumus jam promoti, quod consanguineus noster Malisius Sperre cessare debet a jure suo, et ipsum jus suum omnino dimittere, si quod ad ipsas terras et insulas habere dignoscitur, ita quod Dominus noster Rex, hæredes sui vel successores, nullam ab eo, aut ab ejus hæredibus vexationem vel molestiam sustinebunt.

have seen how the earldom passed by marriage from the old Scandinavian yarls into the house of Sinclair, and the name of Sinclair's cousin, Malise Sperre, is suggestive that he was of the Norse side of the family, and that in that capacity he put in the rival claim to the inheritance, of which Sinclair himself speaks. Torfæus does not inform us of the immediate cause of the conflict in which Sperre was slain by Sinclair in Shetland, but there can be little doubt that that cause was the disputed lordship of Shetland, and that Sinclair, in the incident recorded by Zeno, was taking possession *de facto* of that which he already possessed *de jure*, while his contests with his Norse rival would easily bear to Zeno's intelligence the aspect of a conflict with Norway. It must be borne in mind that the authenticity of the Zeno document being now fundamentally established, we are not called upon to do more than show the *possibility* of any of the facts related, but in the incident just recited it must be allowed that we have a case not of possibility only, but of the highest probability.

We now come to Admiral Zahrtmann's second proposition, which is couched in the following terms: "That the said chart has been compiled from hearsay information, and not by any seaman who had himself navigated in those seas for several years." The last clause of this proposition, of course, must be understood to mean, "was not laid down from actual survey." Quite true. Now, seeing that it was compiled from hearsay information; that it supplies us with names of places in the Shetland group, and in the Færøe Islands, &c., remarkably in advance of what is laid down on any map, even of the comparatively late period of Nicolò Zeno, junior's, publication in 1558; what could we ask for more in harmony with the statement of the latter in that publication, viz.: "Of these north parts I have thought good to draw a copy of the sailing chart, which I find that I still have amongst our family antiquities, and although it is rotten with age, I have succeeded with it tolerably well"?

When Admiral Zahrtmann recognises that "the old forms of Fær-eyar and Orkn-eyar, which are not found on the map, are difficult to Italianise or even to be at all caught or retained by any Italian ear, and that names are transposed in the spirit of the Italian language," and when he draws the just inference that these names were not copied from any other chart, but laid down from verbal depositions, how can that inference be other than confirmative of the fact that the map, "rotten with age," contained these names as they were received from Northern tongues by the Zeno of the fourteenth century, and written down by him or them after being distilled through the alembic of a Southern mind? If this map had been a compilation of Nicolò Zeno,

junior, from any other chart or charts, this phenomenon would not have been exhibited, but the names would have been copied from the Northern sources in their native Northern form. But it must never be forgotten that the old chart *was* "rotten with age," that Nicolò Zeno, junior, had "drawn a copy of it," and, as he flattered himself, "had succeeded with it tolerably well." It is clear that in this attempt, having a desire to remedy the damages of the old chart and to make his copy as complete as possible, he had recourse to the narrative for guidance; but, unhappily, not possessing maps at that early period which could set him right when he misread the narrative, his very laudable effort resulted in the most deplorable confusion, and has, in fact, been the cause of very nearly all the doubts and discussions and disbelief to which this ill-starred document has given rise. Hence, we have on the face of the same map two opposite realities—good geography, in advance even of the period at which it was published, side by side with the most preposterous blunders. But the explanation is manifest, the good was of the fourteenth century, gathered by the ear on the spot; the bad was of the sixteenth century, misapprehended from the ancient narrative.

We now come to Admiral Zahrtmann's arguments on his second proposition: "That the said chart has been compiled from hearsay information, and not by any seaman who had himself navigated in those seas for several years."

"As to the second point," he says: "it is in the first place hardly credible that a seaman acquainted with the navigation of the Northern Seas should have assigned so incorrect a relative position to the different places. For example, that Shetland (from which may be seen the Orkneys, lying close under the coast of Scotland) should be represented as situated near Norway, far distant from Scotland, and without any intermediate islands. The same fault; however, is found, to a greater or less degree, in all the maps published in the sixteenth century, which shows that the chart of the Zeni is, in this respect, a copy. We are perfectly acquainted from the Landnama-Book with every particular of Iceland in the thirteenth century, and we know that it was then just the same as now; how, then, is it possible that a seaman, who had resided there for so long a time, should represent it like an archipelago of several considerable islands? How could he have remained ignorant of the native names of the places, particularly of the harbours, and have only learned the Latin names of the island and its two dioceses? How could he give it a shape which, though it is called by Malte-Brun, in his '*Précis de la Géographie universelle*,' "bonne à l'exception de la partie Nord-Ouest," in truth resembles any

other place as much as Iceland? How could he lay down to the north-east of Iceland a continent upon which he pretends to have been, when we know that in that direction there exists no continent, but only the island of Jan Mayen? And finally, how could he have been in the Ferøe Islands, and yet represent them as one large island surrounded by some smaller ones? The whole chart bears the most palpable marks of having been compiled by a person who had never been at the places themselves, and who knew nothing of either the language or the history of the North; for the Sagas and Sailing Directions prove that in those days the inhabitants of the North had much juster ideas of the relative position of places, and that they knew, for example, that a line drawn from Bergen, between Shetland and the Ferøe Islands, would pass about 60 geographical miles to the southward of Iceland. The chart is dated 1380, an epoch at which Zurla has proved that both Nicolò and Antonio Zeno were in Italy; which shows that they had not drawn the chart at the places themselves,—for as to the possibility of their having antedated it, it is to be presumed that in those days there was as little inducement as there is now for the framer of a chart to publish it as older than it really was. Finally, the comparative correctness of the delineation of Denmark and Norway is the best proof that the chart was not drawn in 1380, but about the middle of the sixteenth century. Zurla himself mentions that in the *Isolario* of Benedetto Bordone, published at Venice in 1534, Norway and Greenland are very erroneously laid down,—a topic to which we shall have to return hereafter. The exiled Archbishop of Upsala, Olaus Magnus Gothus, published at Venice, in 1539, a map of the three Scandinavian kingdoms, which I have not seen, as it appears doubtful whether any copy of it remains in existence; but undoubtedly this map, and those published at Antwerp, particularly those of Ortelius, were the first that gave a tolerably correct representation of these countries, an accurate knowledge of which it was impossible for the Zeni to have procured at any of the places visited by them, viz., Frisland, Estland, Iceland, and Greenland.”

With what has been already written present to his mind, the reader will be able, it is hoped, to see how, with the exception of the date, which will be dealt with presently, answers can be given to the objections here brought against the authenticity of the map. He will be able to see, what Admiral Zahrtmann did not see, that Iceland is, in truth, not brought into question at all in the part of the narrative under review, but that Nicolò Zeno, junior, through misreading the name, mistook Shetland for Iceland, and added to the latter the names belonging to the former. We cannot answer for how much of the map may be

due to his handiwork, but of this we may be sure, that information therein, which was in advance of the knowledge of his day, and coincident with the knowledge of our own, was derived from the early visit to the spot, while deviations from correctness, even though not his own, are no proof of inauthenticity in a map of the fourteenth century.

The remainder of Admiral Zahrtnann's facts, comments, and insinuations, are not so categorically arranged, but I have analysed them all, and for the sake of clearness have grouped them in the order in which they bear upon the narrative and its publication.

"It cannot be denied," says Zahrtnann, "that the story has been composed with great ingenuity, but still it contains contradictions. We may ask, for example, how was Nicolò Zeno informed that Antonio spent fourteen years in Frisland, when no mention is made of this either in the last complete letter, or in that fragment which was the last discovered, and in which he says he has only made some alterations in the style and the obsolete expressions, but not in substance? If it was from the dates of the letters, he certainly could not mistake ten years in fixing the epoch when the voyages were performed. Neither is it to be believed that in a family like that of the Zeni, where not less than three, viz., Jacopo, Nicolò, and Pietro, each in his century, published descriptions of the exploits of their ancestors, the children should have been suffered to destroy the family archives, or that records similar to Antonio's description of the North should have been left unnoticed and unpublished for more than a century—at a period, too, when Columbus's transcendent discovery attracted universal attention to the West. That the family could not have been ignorant of their contents is proved by the circumstance of Nicolò knowing what he had destroyed, which, as he himself was a child at the time, he could only have learned at a later period from his parents. Allowing, however, that Nicolò, when a child, did really destroy the work of his own direct ancestor, Antonio, it still remains to be explained how he had it in his power to destroy several of the letters, they being all addressed to Carlo, the most respected of the brothers, who survived all the rest, and whose direct descendants did not become extinct till a whole century later: viz., in 1653. Even supposing that the whole of the family archives were deposited with the senior branch, the chance of their falling into the younger Nicolò's hands remains as unlikely as ever, inasmuch as he was descended from Antonio, the second son, whose elder brother's lineage was not extinct before the year 1756."

The reply to all which is, that whatever part of American

soil may be referred to in the Zeno narrative, it was in no sense connected by Nicolò Zeno's ancestors with the idea of a transatlantic world, for it had been only regarded as a continuation of Europe. We could ask no better proof that his parents did not attach this extreme value to these papers than the fact that they did not secure them from being torn up by a child, and it is clear that neither then nor afterwards could they communicate to him what they had no idea of themselves. Comparatively unimportant, however, as these papers would, therefore, in this sense, be to them, it is most easy of belief, and most natural, that Nicolò's father or grandfather should have received from a cousin, one of Carlo's descendants, the letters addressed to Carlo, simply as describing the exploits, whatever their value, of his own direct ancestor. When, however, Nicolò Zeno approached manhood, North America began to be known, and hence the recognition by him of the value of the papers which had lain hitherto neglected in the palace. That family papers, more or less important, may fall into a child's hands and be destroyed or damaged, is too certain to need of argument; and the chances and changes of this mortal life have not, we may suppose, been sent to all God's creatures to the single exclusion of the Zeno family.

Admiral Zahrtmann raises a great question as to which of three Nicolò Zenos mentioned in the Venetian Annals at the close of the fourteenth century was the hero of the voyages. There need be no question at all on the subject. Nicolò Zeno, junior, tells us in his genealogy at the beginning of the narrative that his own direct ancestor Antonio, and Nicolò the Cavalier, the heroes of the voyages, were brothers of the famous Carlo, who, in 1382, saved the Republic, and thereby so much increased the reputation of the family. This Nicolò the Cavalier was, for distinction's sake, called "quondam Ser Dracone," and in Muratori's '*Rerum Italicarum Scriptores*,' tome xxii. p. 779, we find him mentioned by this same designation as one of the three syndics who were elected on the 14th December, 1388, to take possession of the city of Treviso. After this date, however, no mention of him occurs in the Venetian Annals, and as we are told in the Zeno narrative that he died while out in the North, a victim to the climate, Cardinal Zurla very justly says that this silence respecting him in the Annals is in conformity with the fact that he was away from his country and engaged in the voyages as represented. We have, therefore, no room left for doubt as to his identity. But, this being so, it is evident that the date of 1380, given both in the text and on the map, must be erroneous, and we shall presently see from other evidence that such in very truth is the case, and that the date has really

to be placed ten years later. In dealing with this discrepancy of ten years in fixing the epoch when the voyages were performed, Admiral Zahrtmann's indictment against Nicolò Zeno, junior, takes the following shape.

"According to Cardinal Zurla," he says, "Nicolò cannot have left Venice till 1390, and it is certain that in 1406 Antonio was already dead. Of that interval Antonio is said to have spent fourteen years in Frisland. There remain, therefore, scarcely two years for Nicolò to have completed his perilous voyage, to have been wrecked, to have made his first brilliant campaign, ending in the conquest of Frisland, and to have reported it to Antonio (whom he actually induced to perform the voyage from Venice), and finally to have died there, and all within the interval of two years. Even nowadays this would scarcely be possible."

I cannot but express my amazement at such an assertion. Suffering shipwreck is usually not a lengthy process. The brilliant campaign in Frisland, which we have followed in the preceding pages, must have been a very lazy operation if it occupied a week; so that if we deduct these events from two years, there will be left "ample space and verge enough" for the two voyages out and the transmission of a letter between, and a great deal of time to spare into the bargain. To call the crowding of these events into two years an impossibility is simply absurd. On the strength, however, of such assumed impossibility Admiral Zahrtmann proceeds to say:—

"Yet it is on the authority of Antonio's letters, which Nicolò Zeno, junior, pretends to have had in his possession, that he has written this narrative. From the same letters he must have drawn his dates, and a solitary error in this respect could easily have been detected, as there were several letters. Now, as the dates of these letters correspond exactly with the time at which Zurla has clearly proved that the brothers were in Italy, it follows that the letters from Frisland were either fabrications or that they never existed."

The date of 1380, it is true, stands in Roman numerals on the Zeno map, and is written out in full in the narrative. But facts are stubborn things, and if we conscientiously and industriously resort to them instead of to preconceived conclusions, we shall generally arrive pretty near the truth at last. Admiral Zahrtmann elsewhere shows his perfect knowledge of a remarkable fact, which, if he had been as anxious to find where Zeno was right, as where he might be made out to be wrong, would have rectified the above error of 1380, and neutralised all the arguments that he founds upon it.

A relative of the family, named Marco Barbaro, wrote, in

1536, a copious work, entitled ‘Discendenze Patrizie,’ on Venetian noble families, and in the genealogical table of the Zeno family makes the following entry under the name of Antonio Zeno. ‘Scrisse con il fratello Nicolò Kav. li viaggi dell’ Isole sotto il polo artico, e di quei scoprimenti del 1390, e che per ordine di Zieno, Re di Frislanda, si portò nel continente d’Estotilanda nell’ America settentrionale, e che si fermò 14 anni in Frislanda, cioè 4 con suo fratello Nicolò e 10 solo.” “He wrote with his brother, Nicolò the Cavalier, the voyages of the islands under the Arctic Pole, and of those discoveries of 1390, and that by order of Zieno, King of Frisland, he went to the continent of Estotiland in North America. He dwelt fourteen years in Frisland, four with his brother Nicolò and ten alone.” Cardinal Zurla first mentioned this fact, and I have verified it, by procuring an extract of the entry from Venice, through the kindness of my distinguished friend Mr. Rawdon Brown. Admiral Zahrtmann adverts to it, solely to make the following insinuation :—

“It must be observed,” says he, “that this work is a manuscript, and that it is therefore impossible to decide when or by whom any article in it was written, and as the families of Zeno and Barbaro were related to each other and on most friendly terms, Nicolò Zeno, who was the firstborn of the family, might very well have been intrusted with the drawing up of the family genealogy”—implying thereby that little trust was to be placed in a statement possibly drawn up by one whom he, Admiral Zahrtmann, had mentally condemned as an impostor. But here he overshot the mark. There is little doubt that Barbaro *did* derive this statement from Nicolò Zeno, who had so nearly, but not quite, destroyed, when a boy, the old papers on which it was based. But in drawing up the said statement Nicolò Zeno showed that he was cognisant in 1536, two-and-twenty years before the Zeno narrative and map were printed, of that true date of 1390, which coincided exactly with the evidence of the annals of his country.

If both the dates 1380 and 1390 emanated from him, one was clearly a mistake, and as we can have no doubt which was the erroneous one, we have in the error itself, whether made through carelessness in either one or both cases by Nicolò, or by the printer, or by the engraver, a proof that Nicolò was not at least the subtle and ingenious concocter of falsehoods that Admiral Zahrtmann would represent him to be. Nicolò Zeno held the high position of Member of the Council of Ten of the Republic, and had all his country’s annals at his command. As the historian of his family, he had those annals intimately within his own cognisance. Did it never, therefore, strike Admiral

Zahrtmann, that if Zeno had been the cunning and laborious impostor he would make him to be, there was nothing he would more carefully have avoided, or could have avoided with greater ease, than the lapsus of giving an enemy the opportunity of proving an *alibi* against his ancestors in the matter in question? The conclusion is evident therefore that 1380 was an error, and when it is considered that this date is written above the map in Roman numerals, thus: MCCCCLXXX, it will be seen how easily that easiest of all delinquencies either of the author, the editor, or the engraver, viz,—the dropping of a final x, may have occurred. The short sentence in the narrative “this was in one thousand three hundred and eighty,” most certainly occurs in a part written by Nicolò Zeno, junior, and the legend at the top of the map is manifestly by him also, so that there is a common origin for both. How the blunder may have occurred, however, is all conjecture, but enough has been said to prove that *it was* a blunder; and it may well be asked whether, on the strength of such an accident, a nobleman of high and ancient lineage, the members of whose family had many of them so eminently distinguished themselves in the history of their country as to stand in no need of falsehoods to add to their glory, himself a Member of the Council of Ten, is to be branded as a concocter of falsehoods?

That there is reason in my suggestion about the possible dropping of an “x” in the date is shown by a remarkable fact. The great Antwerp geographer Ortelius, in recording this very narrative, copied the Roman numerals as they stand at the top of the map, making 1380, yet when our Hakluyt produced the same story on the authority of Ortelius, he gave the date of 1390, thus proving by a converse blunder how easily this kind of error may occur.

But now that we have 1390 for Nicolò Zeno’s arrival in the Færøes, and 1391 for the exploits in the Shetland Islands (see ante, page 173), in which Antonio was present, there are but three transactions to be accounted for in the interval, the attack on the Færøes, the transmission of Nicolò’s invitation, and Antonio’s voyage out, and to say that a year and a half, and possibly more, was not sufficient for all this, would be an absurdity. With these dates also before us, we see that ample time is left for Antonio’s sojourn of fourteen years in the North, his return to Venice, and death before 1406.

We will now pass on to another example of the manner in which the truthfulness of Nicolò Zeno, junior, is impugned by Admiral Zahrtmann. Most geographers have heard of the famous collection of Voyages and Travels made by the illustrious Ramusio. Now because the Zeno narrative, which was

published in 1558, was not inserted in the first edition of the second volume of Ramusio, published in 1559, Admiral Zahrtmann would insinuate that this showed a mistrust in Zeno's probity, but as Ramusio died in 1557, it is difficult to see in what earthly way this omission could imply any want of confidence on his part.

"In the third edition of 1574, however," says Zahrtmann, "the voyages are adopted to their full extent, together with their splendid descriptions of the riches of Estotiland, which last part of the story, however, it was thought fit to leave out of the fourth edition, published in 1583, Frobisher having in the meanwhile performed his voyages and, as we all know, without finding any gold."

Now although Frobisher mistook Frisland for Greenland, and assumed the existence of a strait which his subsequent voyages showed to be a mistake, this was not Zeno's fault, and what Zahrtmann says of the consequent *alteration* in Ramusio is simply not the fact. Instead of the omission in the 1583 edition being an intentional one, as it would have been if it emanated from the editor, it is merely a case of a whole line, neither more nor less, having fallen out by the printer's carelessness, the full page in the 1574 and 1583 editions exactly tallying, with the exception that the former has 54 and the latter only 53 lines, in consequence of the accident in question. The absence of intention is shown by the utter nonsense, resulting from this omission, in the sequence of the language. The passage runs thus, the line in brackets being that which was printed in the previous edition of 1574 and in conformity with the Zeno text, but which has fallen out in the 1583 edition:—

"Hanno lingua e lettere separate, e cavano [metalli d'ogni sorte, e sopra tutto aboundano d'oro, e le lor pratiche sono in Engroneland] di dove traggono pellereccie e zolfo e pegola." "They have a separate language and letters. They dig up [metals of every kind and abound in gold. Their commerce is with Greenland] whence they receive furs, brimstone, and pitch."

Let the reader join the two lines between which the omission occurs, and judge whether the editor of Ramusio adopted that mode of showing his mistrust of the Zeno narrative. It is true that Admiral Zahrtmann adopts this mare's-nest from the words of Mr. Biddle, the American author of the anonymous memoir of Sebastian Cabot, but it is difficult to believe that one who was so anxious to show that Ramusio mistrusted Zeno, and who was so intimately acquainted with the editions of Ramusio's work, should not have had a copy of that work by which he might verify the point for himself. One thing is certain, that

it was a bounden duty, both in Biddle and Zahrtmann, before putting forth this insinuation against the credit of Zeno, that each should have made sure for himself that it was founded on a right basis, whereas the reader has seen that the proof of the exact contrary lay open to view on the very surface.

But I must not here detain you with the different attempts that Admiral Zahrtmann has made to impugn the truth of Nicolò Zeno. A refutation of them all will be found in the volume which I am editing on the subject for the Hakluyt Society. I will merely here remark that one of Admiral Zahrtmann's principal endeavours was to show that Nicolò Zeno was mistrusted by his fellow-citizens.

In one place, however, Admiral Zahrtmann says that Zeno was so great a proficient in geography, that his own countrymen looked upon him as the greatest geographer of his time; but here the writer in the 'North American Review,' who was so impressed with Admiral Zahrtmann's "masterly production that he well nigh resolved to abandon the matter as beyond all hope of surgery," takes courage, and very justly says: "We shall not allow our nautical critic to blow hot and cold in the same breath; in one passage to give the noble Venetian the benefit of the respectability he enjoyed as a man of science, and in another, when it better suits the drift of his argument, to deny him the favourable estimation of learned men among his contemporaries." Of the estimation in which Nicolò Zeno was held for probity there can be no doubt. That his geographical knowledge may, for the period in which he lived, have been very respectable, is quite possible, and the really valuable map which came down to him from his ancestors may have enhanced his credit in that respect; but in very truth, he had no means from without, except the narrative, whereby to check the geography of the map, and none at all whereby to check his own misconceptions of the geography of the narrative.

After the affair in Shetland, Earl Sinclair left Nicolò Zeno in a fort which he had built at Bressay, with some small vessels, and men, and stores; and in the following summer, Zeno resolved to try his fortune in a voyage of discovery. He fitted out three small barks in the month of July, and sailing north, arrived in Engroneland or Greenland.

Here he found a monastery of Friars Preachers, and a church of St. Thomas, close by a volcanic hill. There was also a hot water spring, which the monks used for heating the church and the entire monastery, and by which they cooked their meat and baked their bread. By a judicious use of this hot water, they raised in their small covered gardens the flowers, fruits, and herbs of more temperate climates, thereby gaining much respect

from their neighbours, who brought them presents of meat, chickens, &c. They are indebted, the narrative says, to the volcano for the very materials of their buildings, for by throwing water on the burning stones while still hot, they convert them into a tenacious and indestructible substance, which they use as mortar. They have not much rain, as there is a settled frost all through their nine months' winter. They live on wild fowl and fish, which are attracted by the warmth of that part of the sea into which the hot water falls, and which forms a commodious harbour. The houses are built all round the hill, and are circular in form and tapering to the top, where is a little hole for light and air, the ground below supplying all necessary heat. In summer time they are visited by ships from the neighbouring islands and from Trondheim, which bring them corn, cloths, and other necessaries in exchange for fish and skins. Some of the monks are from Norway, Sweden, and elsewhere, but most of them from Shetland. The harbour is generally full of vessels, detained by the freezing of the sea, and waiting for the spring to melt the ice. The fishermen's boats are like a weaver's shuttle; they are made of the skins of fish, and sown together with fish bones in such a manner, that, in bad weather, the fisherman can fasten himself up in his boat and expose himself to the wind and sea without fear, for they can stand a good many bumps without receiving any injury. In the bottom of the boat is a kind of sleeve tied fast in the middle, and when water gets into the boat they put it into one half of the sleeve, close it above with two pieces of wood and loose the band beneath so that the water runs out. The friars are liberal to workmen, and to those who bring them fruit and seeds, so that many resort to them. Most of the monks, especially the principals and superiors, speak the Latin language. And this is all that is known of Engroneland, as described by Messire Nicolò Zeno.

This interesting story brings us to the much-vexed question of the site of the old Icelandic settlements in Greenland.

Until the first quarter of the present century the almost universal opinion was in favour of the east coast opposite Iceland. There was much to encourage this conclusion. The names of the two settlements, *Ostrebygd* and *Westrebygd*, easily led to the supposition that the former was seated on the east and the latter on the west coast of Greenland. The prevalent idea too, on the part of Icelanders in general, that this was the case, as well as certain expressions in the ancient itineraries, when separately considered, seemed to lead very forcibly to the same conclusion. The story of the Icelandic colonisation of Greenland may be summarily stated as follows: In the beginning of the

tenth century, Gunnbjorn, the son of Ulf Krake, a celebrated Norwegian rover, discovered at some distance due west from Iceland some large rocks, which he named after himself, Gunnbjornarsker; and, in the same voyage, he also discovered still further to the west an extensive country, but on which he does not appear to have landed. No attempt to explore this region was made for a very long time, but the report of the discovery was preserved in Iceland, and at length Erick the Red, son of Thorward, a Norwegian Jarl, who, together with his father, had some years before been compelled to flee to Iceland, after his father's death was himself outlawed for murder, and resolved to seek the land which Gunnbjorn had seen, and promised to return with tidings if he discovered it. In 982 he sailed west from Sneefeldsnaes and found land, which from its height he called Midjokul, near the place afterwards known as Blaesérk or Blue Shirt. Thence he sailed along the shore in a southerly direction, seeking for the nearest habitable land. The first winter he passed in Erickseya, near the middle of what was afterwards called the Ostrebygd or eastern colony. The following year (A.D. 983) he came into Ericksfiord, where he fixed his abode. The same summer he explored the western desert and gave names to many places. In 985 he went to Iceland, and in the summer of 986 began to settle the land which he had discovered, which he called Greenland, because he said that the people would not like to move thither if the land did not have a good name. Colonists followed in considerable numbers, and the chiefs gave their own names to the bays and capes which they occupied, following the example of Erick, who dwelt at Brattahlid in Ericksfiord. In the year 999, Leif, Erick's son, sailed to Norway, and passed the winter at the Court of King Olaus, who was zealous in propagating the Christian faith. Leif received baptism, and the next spring introduced Christianity into Greenland, taking with him a priest and several monks to Brattahlid. In course of time churches were built, and in the twelfth century the number of Christians had multiplied to such an extent, that they resolved to endeavour to obtain a bishop of their own, and in 1126 Bishop Arnold came to Greenland, and set up the episcopal seat at Gardar. From the Gripla we learn that Gardar was at the bottom of Ericksfiord, in the East Bygd, and there was a church there dedicated to St. Nicholas. There were twelve churches in the East Bygd and four in the West Bygd. The Episcopate continued till the beginning of the fifteenth century, Professor Finn Magnussen having shown that Andreas, the late Bishop, officiated in the Cathedral at Gardar in 1409; but after this period, communication with Norway and Iceland seems to have been almost entirely given

up. An event, however, had occurred in 1349 of great interest to our subject, not only as regards the fate of the colony, but the information with respect to its position, which we derive from a contemporary chronicler. In that year a descent was made by the Skrellings, or Esquimaux, upon the West Bygd, and it so happened that Ivar Bardsen, a Greenlander, who had been for many years steward or lay justiciary to the Bishop of Gardar, was sent to convey succour to the sister colony, and to drive away the Skrellings. He found, however, on arriving there, neither Christian nor heathen, but only some cattle running wild, which his people took on board their vessels and returned home. Of this occurrence, Ivar Bardsen has himself left a record in a document of very great importance, of which more will have to be said presently.

There is yet another document extant which throws light upon the subsequent fate of the abandoned colonists. A letter of Pope Nicholas V. to the Bishops of Skalholt and Holar in Iceland, dated 1448, discovered by Professor Mallet early in this century in the Papal Archives, tells us that the Christians had maintained for many centuries the Christian faith, established by King Olaf in Greenland, and had erected many churches and a cathedral, until, about thirty years ago (*i.e.* about 1418), some heathens from the neighbouring coasts came upon them with a fleet, and laid waste the country and its holy buildings with fire and sword, sparing nothing but the small distant parishes, which they were prevented from reaching by the intervening mountains and precipices. The inhabitants of both sexes they carried away into slavery. What became of the remnant of the colony of the East Bygd is a mystery. Either like their brethren of the West Bygd, they may have been exterminated by the Skrellings, or may have mingled with the Esquimaux, and adopted their manners and customs. At any rate, the consequence was that Greenland was for a long time forgotten, until at the beginning of the sixteenth century, Erick Walkendorf, Archbishop of Trondheim, took pains to collect together all the ancient accounts concerning it that he could, and submitted to the Government a proposition for the re-discovery of the lost colony. Unfortunately, however, before his plan was developed, he fell into disgrace with the King, and was banished to Rome, but subsequently died at Amsterdam, in 1523. Since his time a great many expeditions have been sent out by the Kings of Denmark in search of the colony. In the reign of Frederick II., Magnus Heinesen went out in 1578. In the long reign of Christian IV., from 1588 to 1648, were sent out the expeditions of Godske Lindenow, and Carsten Rickardsen,

and Jens Munk: but all these attempts were fruitless, as far as concerned the discovery of Greenland to the east of Cape Farewell. The voyages of David Danell, in the reign of Frederick III., however, furnish some useful data about the East Coast. At length, in the beginning of the eighteenth century, Hans Egede, a Norwegian clergyman, regardless of ridicule or hardship, persuaded Frederick IV. to send him out as the missionary priest of a new colony to be established in Greenland. His judicious conduct secured him the confidence of the natives of the West Coast; but being convinced that they could not be descendants of Europeans, he determined on visiting the East Coast, and set out for that purpose with two barges on the 9th of August, 1723, but for want of sufficient necessaries was obliged to put back on reaching lat. $60^{\circ} 20'$. Between the 60th and 61st degrees of latitude he discovered at Kakortok, in what is now called Julianashaab, a remarkable ruin which proved that the Icelanders had formerly been there. In 1728 Major Paars and Captain Landorf were ordered to ride on horseback from the West Coast to the East, but, as may be supposed, with little success. In 1752 Peter Olsen Valloe with four other Europeans in a Greenland skin-boat explored several of the fjords in the district of Julianashaab, and gave a description of some of the many ruins to be found there. He succeeded in reaching the southern shores of the East Coast in lat. $60^{\circ} 28'$. The expeditions of Lövenörn in 1786, and of Paul Egede and Rothe in 1787, were equally unsuccessful in attaining the desired object. Not more successful than the Danish voyagers were our own great navigators, Davis, Hudson, and others, who aimed at the solution of this problem. The attempt to approach the land on the east appears to have been abandoned as hopeless, until Captain Scoresby showed that even in such high latitudes as between 70° and 75° N., the coast was not altogether unapproachable. Indeed, Scoresby effected more for geographical science in a few days than had been done in that direction for centuries. His voyage appears to have been the stimulus which roused the Danish Government to the exertion of sending out a very able naval officer, of perseverance, intelligence, and courage, not exceeded by the most enterprising officers of any country. Captain Graah sailed from Copenhagen the 31st of March, 1828, and returned in September 1831, but it was not till 1837 that we were able to read in English that excellent narrative with which most of us are so well acquainted.

The now well-known fact that the ruins of churches and other buildings have been found in the district of Julianashaab, on the south-west coast of Greenland, may lead some to suppose

that the question is thereby settled; but it should be remembered that there is nothing in the ruins themselves, apart from the testimony of ancient documents, to show that they may not have been those of the West Bygd, whereas the point at issue is the site of the East Bygd, far and away the more important of the two, and the seat of the bishopric. It is true that Captain Graah believed the East Bygd to have been situated in Julianashaab, and laboured to prove it; but I can conscientiously assert that, after a careful study of his book, I was still of opinion that the East Bygd was on the east coast; and that I was not the only one unconvinced by Captain Graah's arguments will be seen by the following quotation from a valuable work, entitled 'Iceland, Greenland, and the Farøe Islands,' published in 1844, by Harper, of New York:—

“The voyage of Graah, which has been regarded as settling the dispute, is by no means decisive. The difficulties he had to encounter prevented him from surveying the shores with the requisite accuracy, and the interior of the fiords, where the ruins of the colony might be expected to occur, were almost unvisited. Moreover, he himself acknowledges that before going out he was ‘thoroughly convinced that the East Bygd would not be found on the east coast,’ a state of mind not the best fitted to ensure success or encourage exertion. While these things lessen the value of his evidence against its existence on the eastern coast, some facts stated by him tend rather to favour the opposite conclusion.”

And, after having well weighed Captain Graah's arguments, he says:—“For these reasons we are disposed to regard this point not only as still undecided, but one on which, without more evidence, it would be premature to come to any conclusion.”

It will have been observed that I have not allowed myself to pause upon the details of any of those explorations, which occupied some three centuries, and with good reason. The point in dispute has been an object of inquiry not for the keel and the compass only, but also for the pen, and Danes and Icelanders have for centuries studied old Sagas and chorographies, in the hope of arriving by dint of comparison, analysis, and digestion at the solution of a mystery which seemed always to slip away from the grasp of certainty; and yet the whole of that time they had the best possible means of settling the question within their possession.

That same Ivar Bardsen, so many years steward or justiciary to the bishopric of Gardar in the East Bygd, was sent out by the bishop with succours to the West Bygd when the latter was

attacked by the Skrellings. Now this man has left us sailing directions for reaching the East Bygd, both from Bergen in Norway, and from Iceland, and he has also left us a chorography of Greenland itself; and as he was himself a Greenlander, and long a resident in the East Bygd, knowing perfectly all the places of which he speaks, I hold his testimony to be of the highest value and not to be lightly disputed.

There is in Purchas a copy of this document in English, the result of many translations, which belonged to Henry Hudson. It was translated from a German translation into Dutch by William Barentz. The Dutch belonged to Peter Plancius, who lent it to Hudson, and he had a fresh translation made into English expressly for himself. A more interesting group of names in connection with one document could scarcely be produced. Fortunately, the learned Danish Professor C. C. Rafn has given us in his extremely valuable '*Antiquitates Americanae*,' published in Copenhagen (1837, 4to), the text of an early copy of the document found in the Færøe Islands, with a Latin translation, by which I have been able to correct the defects of Hudson's mongrel copy.

Captain Graah, of whose gallantry as an explorer and ability as a writer I would never willingly speak without the deepest respect, is scarcely consistent when he speaks of this valuable document. He at one time says that 'the Chorography of Ivar Bardsen is the only one we can at all depend on in deciding the position of the Ostrebygd' (see p. 155); and when he mistakenly supposes that it does not sufficiently answer his purpose, he says (p. 175), that "His sailing directions are at best apocryphal; that they have been written down from oral tradition, and collected and put together by Archbishop Walkendorf a century after all intercourse with Greenland had ceased."

I am reluctantly obliged to say that this assertion is not compatible with common sense. How could oral traditions, collected by Archbishop Walkendorf in 1516, be made to be one and the same thing with a consecutive description of the topography of the country more ample in detail than any other that exists, derived from Ivar Bardsen, who flourished in the fourteenth century, and which, as will be presently shown, proves the East Bygd to be on the south-west coast, while Walkendorf and all those whom he consulted were convinced it was on the east coast?

Captain Graah has given us another very remarkable proof that his critical treatment of Ivar Bardsen cannot be blindly accepted. In his sailing directions Ivar Bardsen tells us that, "in sailing from Iceland to Greenland, you first shape your

course due west till you come to Gunnbiorn's Skerries, which lie midway between Iceland and Greenland, and in the ancient times this westerly course was followed to Greenland, but now the ice has drifted down from the north, and set itself fast so near to Gunnbiorn's Skerries, that none without peril of life can follow it. You then sail to the south-west until you have got past all the ice lying at and about Gunnbiorn's Skerries, and must then steer to the north-west for a day and a night, which will bring you to Hvarf."

On this downward drifting of the ice Captain Graah remarks (p. 158): "This can scarcely have been the real cause, for the ice along the east coast of Greenland was in all likelihood much the same in the tenth century as it was in the fourteenth and is now."

This, to me, unintelligible remark, reads oddly by the side of the following expression of the Danish hydrographer, Admiral Zahrtmann. "We learn," he says, "from Captain Graah,* that the ice is continually on the increase along this coast, thereby necessitating its thin population to emigrate to the west side, where this increase of ice and decay of the monuments of antiquity are also keeping pace together."

Having thus disposed of the ice round Gunnbiorn's Skerries, Captain Graah dealt with the Skerries themselves in the following manner. Not finding them where Ivar Bardsen places them, midway between Iceland and Greenland, he says that "the fact is disproved not only by the experience of the Icelandic traders and fishermen, but by that also of the English and Dutch whalers," and, *proprio motu*, he applied the name of Gunnbiorn's Skerries to some small rocks close off the coast of Greenland, in lat. $65^{\circ} 30'$, an artificial mode of making Ivar Bardsen's sailing directions lead to the site where Captain Graah assumed the East Bygd to lie. By such a route to Julianashaab, it is clear that Captain Graah cannot claim to be following the guidance and authority of Ivar Bardsen, but simply his own conclusions. These conclusions, though very natural, threw discredit on the value of Ivar Bardsen's guidance, and yet, as we shall see, Ivar Bardsen was a faithful guide who would have led him unerringly to the desired spot.

Gunnbiorn's rocks, to have answered Ivar Bardsen's description, could have been of no insignificant size, and yet it is quite true that they were not to be seen where Ivar Bardsen places them. Captain Graah, therefore, was in no sense to blame for the conclusion that he came to, but at the same time

* 'Royal Geographical Society's Journal,' vol. v. p. 102.

Ivar Bardsen was not at fault either. It has been my good fortune to make the discovery of a fact with which neither Captain Graah nor any of the disputants in this case have been in the slightest degree acquainted, but which entirely vindicates the integrity of Ivar Bardsen's directions, and will, it is hoped, help to remove from the long-vexed question of the site of the East Bygd those remains of doubt which Captain Graah, with all his great merits, has still allowed to rest on the minds of many on this subject.

In the 1507 edition of Ptolemy is a most valuable map of the world, made by a German named Johann Ruysch, a map which would be eminently remarkable as an engraved map if only for its very early date, but it is pre-eminently so from the fact that it is the first engraved map on which America is laid down. Now, for more than a quarter of a century, I have been aware of the fact that on this map was a legend recording the destruction by a volcanic eruption, at an early date, of an island somewhere up in the north, and I recollect many years ago pointing out the fact to Sir John Richardson; but no special line of study had at that time led him or me to the recognition of what this island might be. When, however, the subject of which I am now treating began seriously to occupy my attention, the existence of this legend came back to my memory, and, on recurring to the old map, I found midway between Iceland and Greenland, as Ivar Bardsen had described the position of Gunnbiorn's Skerries, though rather nearer to Iceland than to Greenland, a large island, against which stood this inscription—"Insula hæc anno Domini 1456 fuit totaliter combusta." "This island in the year of our Lord 1456 was entirely blown up;" and, in confirmation of the fact, I found on later maps the shoal formed by the remains of the explosion laid down in precisely the same locality with the name of "Gombar Scheer," a name which it is impossible not to recognise as a sailor's version of Gunnbiorn's Skerries.

On one of these maps, entitled "Pascaert van Groenlandt," by Jan van Keulen, without a date, but about 1700, I had the pleasure to find soundings on the reef. The shoal was represented as *full sixty miles* long from north to south, and about 25 miles broad from east to west. The soundings at the north and south ends were both 25 fathoms, while the nearest soundings northwards were 70, 80, and 100 fathoms. It has been stated, that while this shoal lies essentially in the position described by Ivar Bardsen, midway between Iceland and Greenland, it is, if anything, somewhat nearer to Iceland, a fact which will, I conceive, from a nautical point of view, give additional weight to the correctness of Ivar Bardsen's direc-

tions; for the more easterly the point at which the sailor began to set his south-west course, the more likely would he be, under the influence of the strong south-west current, to make sufficient southing to bring his vessel into a position to make Cape Farewell by a subsequent tack to the north-west.

But now that Ivar Bardsen's sailing directions are restored to their integrity, let us see what his chorography says. Of course only such extracts are given as are necessary. He brings us by sea to a highland named Hvarf, a word which means a turning-point, and is the same word which, in the north of Scotland, has taken the shape of Cape Wrath.

From this point Ivar Bardsen takes us first eastwards, and by long leaps brings us to two fiords, quite uninhabited, named respectively Berefiord and Oellum-lengri, which means "the longest of all." It is so long that he says "no one ever saw the end of it." It may very easily be Franz Joseph Fiord, which Lieutenant Payer, in Captain Koldewey's expedition in the *Germania* in 1870, ascended for 70 miles, and then from the top of a peak, 7000 feet high, saw it still stretching indefinitely westward. "Further to the east," Ivar Bardsen says, "is a great mountain of ice named Finnsbuda, and further still an island named Kaarsoe, beyond which nothing can be seen on sea or land but ice and snow."

He then brings us back to his starting-point Hvarf, and thence leads us westwards, describing *seriatim* the different fiords and localities in the East Bygd, about whose names there is no manner of doubt, as several of them are mentioned in the Sagas and the other chorographies. And now what follows is deserving of special notice. After leading us from place to place gradually westwards to a fiord called Ericksfiord, he says: "Northwards from Ericksfiord are two arms of the sea, named Ydrevig and Indrevig. Next, northwards, lies Bredefiord; thence, further to the north, is Eyrarfiord; and so on to Isefiord, which is the most westerly fiord in the East Bygd."

He then says, that between the East and the West Bygd a space of twelve nautical miles of entirely uninhabited country, and finishes his chorography by saying that the West Bygd had been utterly depopulated by the Skrellings.

Now it does not need much reflection to see that this series of places running westwards from Hvarf cannot possibly be on the east coast, for let us place Hvarf on that coast wherever we may—say, for argument's sake, where the old Icelanders conjectured that it lay, in about lat. 63°—every step we then take to the west, *i. e.* to our left hand, leads us more and more to the south, while Ivar Bardsen makes the last-named places in the series go more and more to the north. It is needless

to say that on the west coast the case is exactly reversed. If, therefore, we take Hvarf to be, as its name would suggest, the "turning-point" of the east and west coasts, the description is in harmony not only with common sense, but with the real trending of the land first west, then north, as later geographical research has shown it to be, and thus, beyond all question, we have the East Bygd in the district of Julianashaab, where Captain Graah, by more circuitous but less conclusive processes, strove to prove it to be.

This simple exposition is my strong point for the final settlement of the site of the East Bygd, and I believe it to be unanswerable. It may not unreasonably be regarded as a matter of surprise that an argument so conclusive as this should have escaped the attention of all the distinguished commentators who have sought the solution of this question, from Archbishop Walkendorf in 1516, and the learned Torfæus, downwards to the present day. A higher authority than Ivar Bardsen could not possibly be desired; a more explicit and lucid description could not be wished; the conclusion from it is utterly inevitable; and yet Captain Graah himself, whose whole heart and soul were in the subject, and whose very words are "that the chorography of Ivar Bardsen is the only one we can at all depend on in this matter," wrote a most able and learned appendix of twenty-one octavo pages in small type to prove his point by ingenious arguments on the application of almost every other ancient passage but the one which would have placed unanswerable demonstration between his fingers.

It may be suggested that in the sixteenth and seventeenth centuries they had no maps sufficiently trustworthy to help them to such a conclusion. There remains, however, another process of reasoning, equally simple, which leads to the same result without the need of a map. If the series of places *eastwards* from Hvarf brings us to where "one can go no further for the ice and snow," which are characteristics of the north, and if the series of names *westwards* terminates also with places more and yet more to the north, it stands to reason that Hvarf itself must be a point at the south between the two, and, consequently, the East Bygd, by Ivar Bardsen's showing, must of necessity have lain immediately to the west of the southern point of Greenland. Although neither of these lines of thought seems ever to have occurred to any commentator for the last 360 years, they are not the less conclusive for all that.

And now let us see how far Ivar Bardsen's and Zeno's descriptions are confirmative of each other.

After enumerating a few places west of Hvarf, Ivar Bardsen brings us to a place called Petersvig, near which is a great

monastery dedicated to St. Olaus and St. Augustine. He also says that "in the inner recess of a neighbouring fiord, called Rafnsfiord, is a cloister of Sisters of the Order of St. Benedict. Within the bay are some small islands half belonging to the cloister and half to the cathedral. These islands abound in water, so hot in winter as to be unapproachable, but in summer temperate enough to be used for washing and for the healing of the sick."

We have a corroboration of this fact in the hot springs of Ounartok, near which some remains of the buildings of the old colonists have been found. Captain Graah, who visited these, tells us that there are three springs close by one another at the north-east corner of the island of Ounartok. The one nearest the sea is insignificant, its temperature being only 26° of Réaumur (91° Fahr.). The second, a few paces from it, forms a lake of about 48 feet in circuit; its temperature was 27° (93° Fahr.) The third is still larger, being about 70 feet in circuit, and its temperature from 32 to $33\frac{1}{2}^{\circ}$ Réaumur (104 to 108° Fahr.) The Greenlanders state that the water is much hotter in winter than in summer: an effect which probably arises from the air being much colder in winter, and the contrast accordingly more perceptible. This must be acknowledged to be, incidentally at least, a very remarkable confirmation by the old Greenlanders of Zeno's interesting story of the monastery. That he makes no reference to the ingenious applications of the hot water need occasion no surprise, for they may not have existed at the time when he wrote, which was considerably before Zeno's period; and even if they did, they were items of detail which would not necessarily be inserted in a mere chorography. The difference between the names of St. Olaus and St. Tomaso, given by the two to the same monastery, is easily explainable. The Northern name of St. Olaf would be as strange as Sanscrit to the mind of the Venetian, and its Latinised form of St. Olaus would sound to his ear like nothing so much as San Tomaso. As regards his describing the monks as Dominicans instead of Augustinians, we have no alternative but to accept it as a misapprehension on his part, bearing no influence upon the question either one way or the other.

Professor Rafn, to whose learning and untiring industry we are so deeply indebted for the great amount of enlightenment that we now possess on the movements of the old Scandinavians in Greenland, has endeavoured to fix the localities of the ancient settlements on the face of a modern map, and, as far as may be judged from Ivar Bardsen's chorography taken by itself, the Professor's map appears most admirably and judiciously drawn up. A sketch map of the district from a Danish



SKETCH CHART OF THE
 SOUTH WEST
 of
GREENLAND,
 from the Danish Admiralty Survey,
 corrected to 1873.

*with Professor Rafn's adaptation of the ancient
 Sites from Ivar Bardsen's Chorography.*

46

45

44



61

60
30'

60

46

45

44

Admiralty chart corrected to 1871, with Rafn's adaptation of the ancient names, is here given. At the time that I had the honour of reading this paper before the Royal Geographical Society, I was easily tempted to conclude that the hot springs referred to by Ivar Bardsen, which seemed to tally with those of Ounartok, visited and described by Captain Graah, were also identical with the sources of the hot water used in the monastery described by Zeno. Subsequent reflection has caused me to alter this opinion. The only monastery mentioned by Ivar Bardsen is the Augustinian one dedicated to St. Olaus, and as far as I am able to form an opinion from Ivar Bardsen's chorography alone, I see no reason to differ from the conclusion of Professor Rafn, who places its site near the lake which lies on the right-hand side of the inner recess of the Fjord of Tessermuit, in lat. $60^{\circ} 26'$, in almost the same latitude, it is true, as Ounartok, but separated therefrom by two fjords, at the mouth of the second of which Ounartok lies. Moreover, the description of the islands of Ounartok does not tally with that of the site of the monastery, which, according to Ivar Bardsen, was near a lake, a condition realised in the position adopted by Rafn.

It is true that Dr. Rink, the late Inspector of South Greenland, has obligingly written to inform me that he knows of no hot springs in the district of Julianashaab, besides those of Ounartok; but there is enough capriciousness in volcanic action to make that fact far from conclusive as to the non-existence of hot springs in another proximate locality five centuries ago. Moreover, there is a remarkable explicitness in the description of a phenomenon which our knowledge in the present day shows to be perfectly accurate. The text says that "where the warm water falls into the sea there is a large and wide harbour, which, from the heat of the boiling water, never freezes all the winter, and the consequence is that there is such an attraction for sea-fowl and fish, that they are caught in unlimited quantity."

In this description we have a picture of far greater volume and activity in the hot spring than is conveyed by Captain Graah's description of the shallow pools, nowhere deeper than a foot, at Ounartok. Yet this volume and this activity of the thermal spring are requisite for the effect described, viz., the attraction of the fish, so that we are compelled to assume the former existence of a spring near the monastery, now no longer known.

The mention of the employment of the pumice and calcareous tufa in constructing buildings, and making the mortar which bound them together, would also seem to imply greater abundance of material than could be looked for in the pools at Ounartok. In any case we cannot but regard the account of

the monastery as one of those "descriptions détaillées d'objets dont rien en l'Europe ne pouvoit leur avoir donné l'idée," for which Humboldt commends the Zeno narrative: while the existence of the Ounartok hot springs in the neighbourhood at the present day, and the mention of such hot springs by Ivar Bardsen about the same locality, are evidences quite sufficient to warrant our acceptance of the credibility of the Zeno account. But the monastery was not only near a lake according to Ivar Bardsen, but according to Zeno it was near a hill which vomited fire like Vesuvius and Etna, and whether it be an extinct volcano or not, there is on the Danish map, in a position corresponding with that fixed by Rafn, a hill named Suikârssuak. Closely connected with this subject is one to which I at page 170 promised to recur. It is to be noticed that both in the map and in the narrative there are two names, "Grolanda," or "Grolandia," and "Engronelanda," which the text shows to mean only one country. In one place, the word Grolanda is applied by Antonio Zeno to the country discovered by his brother Nicolò, whereas on a previous page that same country is called Engronelanda, and we have the clearest possible proof in the Zeno map, that that country is Greenland. From an extract from Antonio Zeno's letter, in the text, we gather that the remarkable delineation of Greenland on the map is derived from Sinclair, since the language takes the following shape: "I have written the life of my brother, the Chevalier, Messire Nicolò, with the discovery which he made, and all about Grolanda. I have also written the life and exploits of Zichmni, a prince as worthy of immortal memory as any that ever lived for his great bravery and remarkable goodness. In it I have described the *discovery of Engroniland on both sides and the city that he founded.*"

The combination of these two expressions in one sentence leads to the inference that the discovery of Greenland on both sides was due to Sinclair. On page 170 I wrote as follows:—"Those portions of the ancient story which have not been marred by misreading, exaggeration, or unintelligent interference, are, *with one exception*, which will be spoken of hereafter, in harmony with the knowledge which we possess in the present day."

We now come to speak of that exception. As has been just said, in the description of Nicolò Zeno's visit to Greenland it is stated (p. 12), that "he found a monastery *hard by a hill, which vomited fire like Vesuvius and Etna,*" and then the account goes on to speak of the spring of hot water with which the church of the monastery and the chambers of the friars were heated. Now although we know of thermal springs in Greenland, and

in the very district which has been demonstrated to be the site of the ancient colony, we have never heard of any active volcano there. Nevertheless, we have at the close of this very narrative a corroboration from an independent source of this statement respecting a volcano. When Sinclair reached Greenland, after an adventure off Ireland, to be detailed presently, he entered a harbour, from which, Antonio says, "we saw in the distance a great mountain that poured forth smoke." The harbour they called Trin, and whether rightly or wrongly, that is to say, whether so standing on the old map or inserted haphazard by Nicolò Zeno, junior, the promontory of Trin is placed at the extreme south point of Greenland. A hundred soldiers sent out from the harbour of Trin to explore the country, returned after eight days, and brought word that "they had been up to the mountain, and that the smoke was a natural thing proceeding from a great fire in the bottom of the hill, and that there was a spring from which issued a certain matter like pitch, which ran into the sea."

This twofold testimony to the existence at that time of a volcano in the south of Greenland, of which we know nothing at the present day, seems to place the subject out of the range of those puzzles which have originated from Nicolò Zeno junior's misreading or misapprehension. Although no one yet, as far as I am aware, has detected the existence in this locality of either an active or an extinct volcano, it must be conceded that in a country like Greenland the existence of an extinct volcano may very easily elude observation, both from the denudation of its peak by glacial action, and from the snow and ice concealing what lies below them. Meanwhile, the known existence of thermal springs in the neighbourhood favours the reasonableness of our accepting as accurate the two statements of the text.

So much for the confirmation of Zeno by Ivar Bardsen; we now come to the confirmation of Ivar Bardsen by Zeno. In spite of all the ridiculous blunders implanted on it by Nicolò Zeno, junior, from misreadings of the narrative, the Zeno map was based on a genuine old map made by his ancestor. As such it is a most remarkable phenomenon in geographical history, for it contains geography far in advance not only of what was generally known at the time when it was first laid down in the fourteenth century, but in advance even by generations of what was known at the time of its publication in the sixteenth century. The approximate accuracy in the delineation of Greenland under the name of Engroneland has been the subject of repeated notice. The reader's attention is invited to the word "Avorf" on that map near its south point.

It is a valuable word, for it proves a very great deal. There can be no doubt that it is the "Hvarf" of Ivar Bardsen and all the chorographies. In fact, in Bjorn Jonsen's chorography, where it is spelt "Hafhvarf," the identity is still more apparent. Near it also is the name of "Af Prom," which is doubtless a second mode of writing the same thing, viz., the promontory of Hvarf, by the maker of the old map. The position of this name on this map is a most remarkable evidence from a quarter where one would least expect it; viz., from the chance visit of a Venetian to the spot at the close of the fourteenth century, of the true site of the lost East Bygd. Its spelling is another example of the mode in which a Northern word can be represented by a Southerner, and its accordance with the native description of Ivar Bardsen is another proof of Nicolò Zeno junior's ignorant reading of the text when he places the convent of St. Thomas in the preposterous position in which we see it, on the remotest shores of the Frozen Ocean. Having first mistaken Bres, or rather Bressay, where his ancestor's brother wintered in the Shetland Islands, for a place in Iceland, and finding that in the spring he goes north to Engroneland, he places him up there.*

Another notable fact is that, in the Zeno map, all the settlements lie on the west and not on the east coast. While, therefore, these facts corroborate Ivar Bardsen's chorography and the site of the East Bygd derived therefrom, they also, in the most conclusive manner, prove the genuineness of the original narrative and map of the Zeno, and that the chief cause of the doubt of their authenticity has been Nicolò Zeno junior's blundering readings of the narrative represented upon the face of the map. This being so, we find ourselves in possession of an interesting description of the prosperous condition of the East Bygd, between the period of the destruction of the West Bygd and its own disappearance from man's knowledge, which we possess in no other document whatever. The description of the fishermen's boats and their contrivances for safety in those dangerous seas is truly admirable. The mode of constructing their houses in this strange country, related to us by an eyewitness, five hundred years ago, and the use of potstone, a true

* One of Admiral Zahrtmann's insinuations, entirely unsupported by evidence, is that Nicolò Zeno may have derived from priests in Rome information about Greenland which they had received from Archbishop Walkendorf during his exile. It is not likely, for Walkendorf died in Amsterdam when Zeno was eight years old. His main object was to learn the way to the East Bygd, and Ivar Bardsen's directions and chorography stood first and most important among the documents that he secured. If, then, Nicolò Zeno by any process gained possession of Walkendorf's information, it was quite impossible that he should place the monastery of St. Thomas where he has done on the map.

Greenlandic product, in their domestic utensils, have about them an interest of a very rare character; and the plan of heating their dwellings and cooking their victuals with the water of the natural hot springs, is but a curious early example of what has been done in later times at Chaudes Aigues, in the department of Cantal, where the water from the Par fountain conveys heat to some hundreds of houses, and is made otherwise serviceable for domestic purposes.

After the death of Nicolò, Sinclair would not allow Antonio to return to Venice, but being determined to make himself lord of the sea, wished to send him out to the westwards to verify the report of some fishermen who had discovered some rich and populous countries in that direction, which we shall presently see to be America. The narrative, which was embodied in a letter from Antonio to his brother Carlo, is in brief as follows.

Six and twenty years ago four fishing-boats put out to sea, and encountering a heavy storm were driven over the sea in utter helplessness for many days, and at length came to an island called Estotilandia, lying 1000 miles west of Frislanda. One of the boats was wrecked and its crew of six men were brought by the natives into a large and populous city and taken before the chief, who sent for many interpreters to speak with them. Only one of these, who spoke Latin and had also been cast by chance upon the island, could understand them. On learning who they were and where they came from, the chief desired that they should stay in the country, which they did perforce for five years, and learned the language. One of them in particular, having seen much of the island, reported that it was rather smaller than Iceland, but much more fertile, having in the middle a high mountain, whence flow four rivers which water the whole country. The inhabitants are very intelligent, and possess many arts. In the King's library were found several Latin books, which were not at that time understood. The people had their own language and letters, and in the south there was a great and populous country very rich in gold. Their foreign intercourse was with Engroneland, whence they imported furs, brimstone, and pitch. They sowed corn and made beer, which is "a kind of drink that north people take as we do wine." They had woods of immense extent and many towns and villages. They built small boats and sailed them, but knew nothing of the compass. Hence these fishermen were held in high estimation, and were sent southwards with twelve boats to a country called Drogio. They arrived there after a perilous voyage, but the inhabitants being cannibals, most of the crews were eaten. The fisherman and his companions were spared because they could catch fish with nets, and they were so much prized

on this account that a neighbouring chief made war on their master to get possession of them, and being the stronger, succeeded. In this way they spent thirteen years, being fought for and won by more than twenty-five chiefs in that time, and in the course of his wanderings the fisherman gained much information. He describes the country as very large, and, as it were, a new world, the people very rude and uncultivated. They go naked and suffer from the cold, but have not the sense to clothe themselves with skins. They live by hunting, but as they have no metal, they use lances of wood, sharpened at the point and bound with strings of hide. They fight fiercely, and afterwards eat the conquered. They have chiefs and laws which differ in the several tribes. They grow more civilised towards the south-west, where the climate is milder, and they have cities and temples to their idols, in which they sacrifice men and afterwards eat them. In those parts they have knowledge of gold and silver.

At last the fisherman determined, if possible, to return to his country, and finally succeeded. He worked his way to Drogio, where he stayed three years, when some boats from Estotiland came to the coast and received him on board as interpreter. Finally, he returned to Frisland, and gave an account of this important country to Sinclair.

This appears to have been, for the close of the fourteenth century, a pretty good description of the state of things in America as far down as Mexico. It is evidently a *résumé* of the knowledge acquired by the Northmen in their expeditions to the west and south-west. In addition to the information gathered by the fisherman during his own long stay in the country, he would, on his return to Greenland or Iceland, hear much from those who kept up mercantile connection with America, to add to the store of knowledge which he communicated to Sinclair.

One of the first achievements of the Greenland colonists was the discovery of North America by Lief, son of Eric the Red, in the year 1001. The tracts of country there discovered were called Helluland, *i. e.*, Slate Land, supposed to be Newfoundland; Markland, *i. e.*, Woodland, supposed to be Nova Scotia; and Vinland or Vineland. There is much uncertainty about the situation of the two former, but the site of Vinland is less problematical. One of the old writers says that on the shortest day in Vinland the sun was above the horizon from Dagmaal to Eikt, and as Dagmaal is known to have meant half-past seven o'clock A.M., and Eikt half-past four o'clock P.M., it follows that the length of the day was nine hours, which gives the latitude of 41°. This deduction is confirmed by a curious coincidence. Adam of Bremen, writing in the eleventh century, states on the

authority of Svein Estridson, King of Denmark, a nephew of Canute the Great, that Vinland got its name from the vine growing wild there, and for the same reason the English re-discoverers gave the name of Martha's Vineyard to the large island, close off the coast, in latitude $41^{\circ} 23'$.

The old documents also mention a country called Huitramannaland or Whiteman's Land, otherwise Irland it Mikla or Great Ireland, supposed to include North and South Carolina, Georgia and Florida. There is a tradition among the Shawanese Indians, who emigrated some years ago from Florida and settled in Ohio, that Florida was inhabited by white people who possessed iron instruments. It is further recorded in the ancient MSS., that the Greenland Bishop Erick went over to Vinland in the year 1121, and that in 1266 a voyage of discovery to the arctic regions of America was made under the auspices of some clergymen of the Greenland Bishopric. The next recorded discovery was made by Adalbrand and Thorwald Helgason, two Icelandic clergymen, in the year 1285, the country found being supposed to be Newfoundland. The last record preserved in the old Icelandic MSS. relates a voyage from Greenland to Markland, performed by a crew of seventeen men in the year 1347. The account written by a contemporary nine years after the event speaks of Markland as a country still known and visited in those days, and it was, until now, the latest document that spoke of the maintenance of intercourse between Greenland and America. In the Zeno document, however, we have the very latest evidence known in literature of the continued existence of that intercourse down to the close of the fourteenth century, a hundred years before the time of Columbus; for although the valuable *Codex Flateienseis*, preserved in Copenhagen, was completed at a period exactly contemporary with that of the Zeno, it does not record such late details on this interesting subject. The descriptions of the old Icelandic MSS. sufficiently explain how Latin books, which had been taken over by the priests, should be found in the chief's possession. The woods of immense extent tell their own story. The importance of catching the codfish with nets, the description of the natives and their habits, the report of a country to the south rich in gold, are points in the Zeno narrative in harmony with our present knowledge and the testimony of the Icelandic records. Perhaps the most interesting, as showing the existence of Scandinavian people and customs in America at that period, is the statement of their making beer, which, as Zeno says, is "a kind of drink that Northern people take as we do wine." Of the antiquity of beer-drinking in the North, we have proof from Sæmund the Learned, who in the eleventh century made that collection of

poems known as "the Poetic Edda." In the "Lay of the Dwarf Alvis" occurs the expression, "Ale it is called by men, but by the Æsir (gods) biorr." In the Copenhagen Museum are horns used of old by the Vikings for drinking beer. We have already had remarkable evidence that an inflated bombastic style may be used in the narration of a true story. When therefore in the description of a more remote country like America, we meet with such expressions as "the king's library," and "cities and temples," which might awaken misgivings as to the soundness of the story, we may revert to Zeno's account of the conquest of the Færøe Islands, and, recognising the same inflated style as common to the stories, acknowledge that it would be unreasonable on that score to throw more doubt upon the one than upon the other.

It will be observed that in the Zeno narrative "Estotiland" is described as an *island* and "Drogio" as a *country*. The former was somewhat less than "Islanda," and as the description of it very fairly agrees with Newfoundland, I have here rendered the word *Islanda* "Iceland" and not "Shetland" as it is translated in those other parts of the narrative, where the latter was obviously meant. That I am justified in this selection of the larger of the two localities bearing the name of "Islanda" to meet the comparison with Newfoundland as to size, will be seen by an expression near the end of the text, where it is shown that the book prepared by Antonio Zeno, but torn up by Nicolò Zeno, junior, contained descriptions of *both* Iceland and Shetland, although the former is left unnoticed in the text as we now have it, which was put together from the surviving letters of the ancient voyagers. Drogio, subject to such sophistications as the word may have undergone in its perilous transmission from the tongues of Indians *viâ* the Northern fisherman's repetition, to the ear of the Venetian, and its subsequent transfer to paper, appears to have been a native name for an extensive tract of North America.

At length the expedition is organised for the verification of the fisherman's statements, and as the story of its adventures is that part of the narrative which has caused the greatest perplexity, it is here given in full:—

"Our great preparations for the voyage to Estotiland were begun in an unlucky hour, for, three days before our departure, the fisherman died who was to have been our guide; nevertheless Zichmni would not give up the enterprise, but, in lieu of the fisherman, took some sailors that had come out with him from the island. Steering westwards, we discovered some islands subject to Frislanda, and passing certain shoals, came to Ledovo, where we stayed seven days to refresh ourselves and to furnish

the fleet with necessaries. Departing thence we arrived, on the 1st of July, at the Island of Ilofe; and as the wind was full in our favour we pushed on; but not long after, when we were on the open sea, there arose so great a storm that for eight days we were continuously kept in toil, and driven we knew not where, and a considerable number of the boats were lost. At length, when the storm abated, we gathered together the scattered boats, and sailing with a prosperous wind we discovered land on the west. Steering straight for it, we reached a quiet and safe harbour, in which we saw an infinite number of armed people, who came running furiously down to the water side, prepared to defend the island. Zichmni now caused his men to make signs of peace to them, and they sent ten men to us who could speak ten languages, but we could understand none of them, except one that was from Shetland. He, being brought before our prince, and asked what was the name of the island, and what people inhabited it, and who was the governor, answered that the island was called Icaria, and that all the kings that reigned there were called Icari, after the first king, who as they said, was the son of Dædalus, King of Scotland, who conquered that island, left his son there for king, and gave them those laws that they retain to the present time; that after this, when going to sail further, he was drowned in a great tempest; and in memory of his death that sea was called to this day the Icarian Sea, and the kings of the island were called Icari; that they were contented with the state which God had given them, and would neither alter their laws nor admit any stranger. They therefore requested our prince not to attempt to interfere with their laws, which they had received from that king of worthy memory, and observed up to the present time: that the attempt would lead to his own destruction, for they were all prepared to die rather than relax in any way the use of those laws. Nevertheless, that we might not think that they altogether refused intercourse with other men, they ended by saying that they would willingly receive one of our people, and give him an honourable position amongst them, if only for the sake of learning my language and gaining information as to our customs, in the same way as they had already received those other ten persons from ten different countries, who had come into their island. To all this our prince made no reply, beyond inquiring where there was a good harbour, and making signs that he intended to depart. Accordingly, sailing round about the island, he put in with all his fleet in full sail, into a harbour which he found on the eastern side. The sailors went on shore to take in wood and water, which they did as quickly as they could, for fear they might be attacked by the islanders; and

not without reason, for the inhabitants made signals to their neighbours with fire and smoke, and taking to their arms, the others coming to their aid, they all came running down to the seaside upon our men, with bows and arrows, so that many were slain and several wounded. Although we made signs of peace to them, it was of no use, for their rage increased more and more, as though they were fighting for their own very existence. Being thus compelled to depart, we sailed along in a great circuit about the island, being always followed on the hill-tops and along the sea-coasts by an infinite number of armed men. At length, doubling the northern cape of the island, we came upon many shoals, amongst which we were for ten days in continual danger of losing our whole fleet; but fortunately all that while the weather was very fine. All the way till we came to the east cape, we saw the inhabitants still on the hill-tops and by the sea-coast, keeping with us, howling and shouting at us from a distance to show their animosity towards us. We therefore resolved to put into some safe harbour, and see if we might once again speak with the Shetlander, but we failed in our object; for the people, more like beasts than men, stood constantly prepared to beat us back if we should attempt to come on land. Wherefore Zichmni, seeing that he could do nothing, and that if he were to persevere in his attempt, the fleet would fall short of provisions, took his departure with a fair wind and sailed six days to the westwards; but the wind afterwards shifting to the south-west, and the sea becoming rough, we sailed four days with the wind aft, and at length discovered land."

Icaria has been supposed by many commentators to represent some part of America. Johann Reinhold Forster was the first to suggest that it meant Kerry, and I am convinced that he was right, although for reasons that Forster has not adduced. The name, the point of arrival, the conduct of the natives, and the movements of the fleet after leaving the island, all lead to this conclusion. The expression in the original "*scoprimmo da Ponente terra*" is susceptible of two meanings, either that they came upon an island "to the westward" or "upon its western side." But as, when repulsed by the natives, they sailed round about the island, and came into a harbour on its eastern side, it is manifest that the harbour which they first entered was on the west, and in a position with which that of Kerry exactly corresponds.

The signals by fire and smoke, the pursuit along the hill-tops, and the howling of the strangers off the coast, are Irish all over. The sailing of the fleet six days to the westward with a fair wind after leaving the north point of the island without seeing

land, is a fact which accords with the situation of Ireland, but not with any part of America or any other country otherwise answering the conditions.

Admiral Zahrtmann says: "As to the fabulous parts of the narrative, it is difficult to select one passage in preference to another for refutation, the whole being a tissue of fiction."

Now it happens that there is no room for selection in the matter, for there is only one piece of fable in the whole story, and one cannot form a tissue out of a single thread. That one piece of fable (it must be understood that mere exaggerations of real events are not fables) is the story of the Kings of Icaria being called Icari after the first king, who was the son of Dædalus, King of Scotland, in memory of whose death by drowning that sea was called to this day the Icarian Sea. I am strongly of opinion that this excrescence on the narrative is the handy-work of Nicolò Zeno, junior, and for the following reason. The form of the name Icaria was a very reasonable one for a Southerner to give to the Northern name of Kerry, but the Northerners from whom Zeno received it, would be little likely to tell him such a story as that which we here have of Dædalus and the Icarian Sea, which manifestly takes its origin from the form which the word had taken under the Southerner's pen. On these grounds I suggest the reasonableness of the conclusion that Nicolò Zeno, junior, found in his ancestor's letter the name Icaria only, without the fable. But as, during the very time that intervened between his discovery of the letters when he was a boy and his publication of them, his fellow-citizen, Bordone, brought out two editions of his "Isolario," in which that well-known fable is told of the island of Nicaria (*olim* Icaria) in the Ægean Sea, it seems highly probable that this suggested to his mind the grafting of the story on the name which he had found transmitted by his ancestor under the same form.

After the fleet had sailed six days to the westward from Ireland, the wind shifted to the south-west and carried them to a harbour in Greenland. To this harbour and the headland near it they gave the name of Trin, and here Sinclair, being taken with the pureness of the atmosphere and the aspect of the country, conceived the idea of making a settlement, or, as Zeno calls it, "founding a city." As, however, his people were anxious to get home, he merely retained the row-boats and such of the men as were inclined to stay with him, and sent all the rest away under the command of Antonio. After twenty days' sail to the eastward and five to the south-east, Zeno found himself on Neome—a locality which I need not trouble myself to speculate upon—and in three days reached Frisland or Thorshavn, and so ends the story.

Now the question may be asked: *Cui bono* all this toil of analysis and research devoted to a document so unimportant in size and of such limited contents? The facts may answer for themselves.

1. If the realities which have been here laid bare had been detected any time during the last three centuries and a quarter, so that the site of the lost East Colony of Greenland had been proved to demonstration instead of being a matter of opinion,* the Kings of Denmark would have been spared the necessity of sending out a great number of unsuccessful expeditions: and

2. A number of learned disquisitions by some of the most illustrious *literati* in Europe would have been rendered superfluous.

3. The Zeno document is now shown to be the *latest* in existence, as far as we know, giving details respecting the important lost East Colony of Greenland, which has been so anxiously sought for.

4. It is the *latest* document in existence, as far as we know, giving details respecting the European settlers in North America—although a century before Columbus's great voyage across the Atlantic—and showing that they still survived at that period.

5. The honour of a distinguished man, whose only faults as regards this ancient story, fruitful in mischief as they have been, were that he did not possess the geographical knowledge of to-day, and that he indulged in the glowing fancies and diction of his sunny country, has been vindicated: and

6. The book which has been declared to be "one of the most puzzling in the whole circle of literature" will henceforth be no puzzle at all.

IX.—*Recent Surveys in Sinai and Palestine.* By Major C. W. WILSON, R.E.

[Read, June 23rd, 1873.]

THERE are few countries in the world which, within the same area, present so many features of general interest as Sinai and

* There can be no better proof of the correctness of this statement than the fact that while the true site was correctly believed in by Eggers in 1794, Captain Graah was sent out in 1828 to learn, if possible, whether the site were on the east or the west coast; and even though he himself correctly believed in the true site, his pleas, on behalf of his convictions, were so inconclusive, that the learned author of 'Iceland, Greenland, and the Farøe Islands,' in 1840, after well weighing the arguments, says: "For these reasons we are disposed to regard this point not only as still undecided, but one on which without more evidence it would be premature to come to any conclusion."