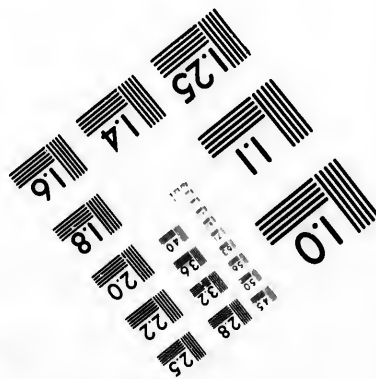
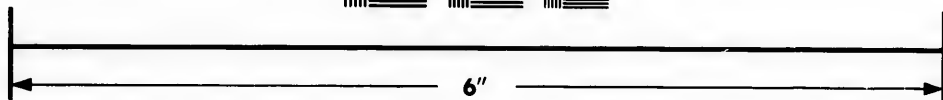
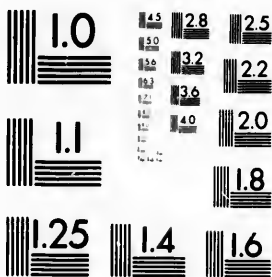


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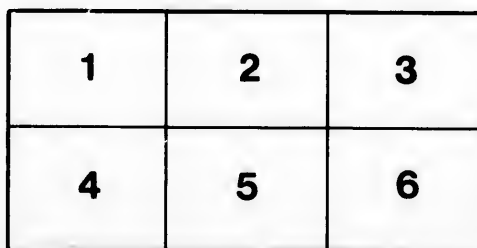
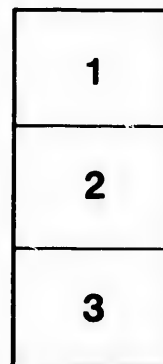
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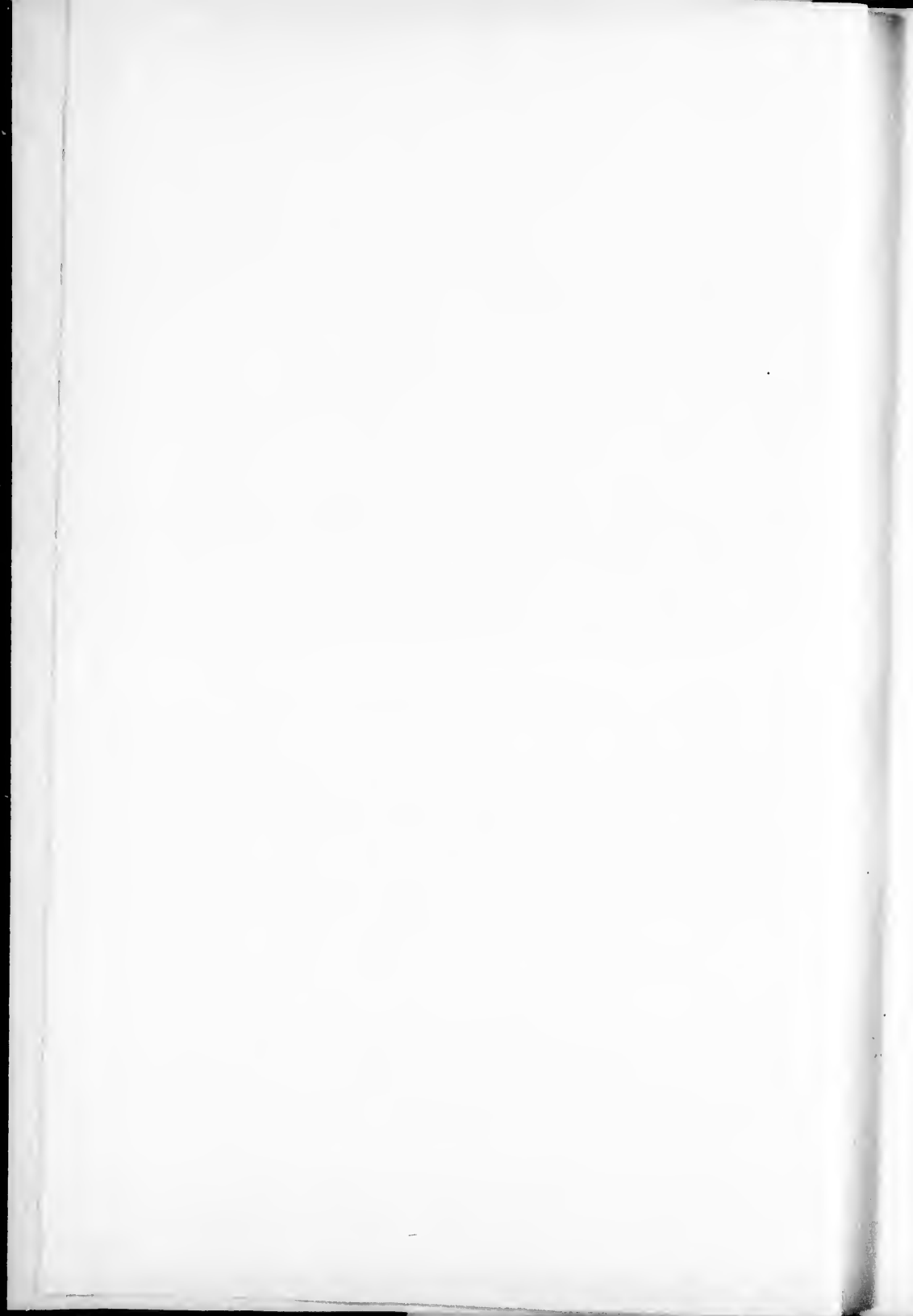
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THE WHEREABOUTS OF VINLAND

BY

L. G. POWER

NEW ENGLAND MAGAZINE, OCTOBER 1892.



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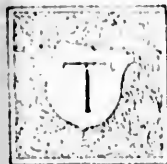
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THE WHEREABOUTS OF VINLAND.

By Hon. L. G. Power, Halifax, N. S.

INTRODUCTORY.



THAT the Northmen of Iceland or Greenland, about the close of the tenth century of our era, discovered a region, which they believed to lie to the southward of Greenland and to be separated from it by a fairly large expanse of water, and to which they gave the name of Vinland or Wineland, is now denied by few who have made inquiry into the matter. When, however, we attempt to go beyond this vague and general proposition and try to locate the region in question with any degree of precision, we are met by a surprising conflict of opinion. There are, to begin with, two somewhat inconsistent accounts of the discovery given in the old Icelandic records; and, when we have made our choice between those, we find that the story, though short and simple, is indefinite enough to involve the subject in a haze of uncertainty such as seems to accompany the dawns of most histories. Beyond the Saga of Erik the Red, as contained in the manuscripts numbered 544 and 557 in the Arna-Magnæan collection, and the Saga of Olav Trygvason, as given in what is known as the Flatey Book, and a few scattered passages in other old writings, chiefly Icelandic, we have no sources of information with respect to Vinland. There is, consequently, abundant scope for speculation.

The prevailing opinion in earlier days seems to have been that the Vinland of the Northmen was in Newfoundland or on the great peninsula of Labrador. Torfæson, or, as he is generally called, Torfæus, a learned Icelandic who lived from 1636 to 1719 and was for many years royal historiographer of Norway, may be regarded as the most distinguished representative of those who adopted this opinion. His "History of Ancient Vin-

land" was published at Copenhagen in 1705, and has recently been placed within reach of the ordinary reader by the Catholic Historical Society of the United States, who in 1888 published a translation by Prof. Charles G. Herbermann, with an introduction by the late John Gilmary Shea, as an appendix to their magazine for that year. Every reader of Torfæus must be impressed by his clear and comprehensive vision, his moderation of statement, and his philosophical caution in drawing conclusions. These qualities were not conspicuously shown in the work which revolutionized opinion on the subject of Vinland, and caused Torfæus and those who shared his views to be for many years depreciated and overlooked. Professor Rafn, author and compiler of the "American Antiquities," published at Copenhagen in 1837, identified Vinland with Rhode Island and the southeastern part of Massachusetts. There was a positiveness, a precision and a minuteness of detail about Rafn's development of his theory which secured for it prompt and general acceptance. The Norse Tower at Newport, the Runic inscription on the Dighton Rock, and the identification of Buzzards Bay with Straumfiord and of Mount Hope with Hóp of the northern voyagers, seemed to most people to remove the locality of the Vinland settlement, once for all, from the region of speculation. There were always, as might have been expected, some dissatisfied ones, like the late Edward Everett, who, writing in the *North American Review* for January, 1838, very shortly after Rafn's work had reached this continent, intimated grave doubts as to the soundness of the author's view; but the voices of these doubters were not distinctly heard amid the general chorus of assent with which the publication of the Danish professor's theory was received. For nearly forty years that theory was generally accepted; but of late strong expressions of dissent have made them-

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selves heard, and a tendency to revert to the views entertained before 1837 has shown itself. Prof. H. Diman, a native and resident of the district where Rafn had located the site of the Northmen's settlement, declared that the identification of places in that district with those described in the Sagas was altogether mistaken. In *Harper's Magazine* for September, 1882, there appeared an article by T. W. Higginson, entitled "The Visit of the Vikings," in which that acute and graceful writer made it clear to any unprejudiced mind that Vinland was not where Rafn had placed it. Colonel Higginson, speaking of Professor Diman's views, says, "Having myself lived for fourteen years in that region, I may venture modestly to indorse his conclusions; and they have the weightier indorsement of Professor Henry Mitchell of the Coast Survey, in a manuscript report which lies before me." The colonel did not himself indicate that he had any very definite theory as to the locality of the Northmen's settlement; but it is clear from his language that he believed it to be considerably to the northward of Rhode Island.

Mr. Arthur James Weise of Troy, New York, published in 1884 a work entitled "Discoveries of America to the year 1525." This author had evidently studied most carefully the authorities bearing upon the subject-matter of his work, and upon the question of the Northmen's voyages, compressed much valuable information into a small space. In his book we find the reaction against Rafn's theory carried to an extreme; for Mr. Weise holds, as did Murray — the author of "Discoveries and Travels in North America," published at London in 1829 — that Vinland was situated on the peninsula of Greenland, and not elsewhere. In 1888, there appeared amongst the publications of the Copenhagen Society of Northern Antiquarians, a paper by Professor Gustav Storm of the University of Christiania, under the title "Studies on the Vinland Voyages." This essay may be regarded as marking an epoch in the literature of its subject, and it supplied a want which had been keenly felt ever since the appearance of Rafn's elaborate and pon-

derous work under the auspices of the same royal society in 1837. Professor Storm is a man of distinguished ability, familiar with the language in which the original accounts of the Vinland voyages are written; and, having made a careful and critical study of the several versions of those accounts, has given a well-considered opinion as to their relative values and a skilful interpretation of that selected as the most reliable. In dealing with the question of the length of the day in Vinland, he has had the assistance of the well-known Norwegian astronomer, Geelmuyden. Professor Storm, while calling attention to the fact that there are, as has been already intimated, two independent and more or less conflicting accounts of the discovery of Vinland, one contained in the Saga of Erik the Red, both versions of which were written between the years 1270 and 1334, and therefore in the most flourishing era of Saga literature, and the other in the edition of the Saga of Olav Trygvason in the Flatey Book brought out by Jón Thordarsón about 1387, adduces very strong reasons for preferring the former and for distrusting the latter account, except where it is confirmed by independent testimony. The professor's advice as to the mode of dealing with the Grœnlendingathatt (the account in the Flatey Book) had better be given in his own words:

"Weighing all that has been said, it will, I certainly think, be safest henceforth to treat the account in Grœnlendingathatt with great circumspection. Whatever has its only origin from Grœnlendingathatt must be rejected as doubtful, and whatever is there found at variance with early tradition as wanting historical foundation. Bjarn Herjulfsson's voyage should accordingly, no doubt, be omitted to make room for Leiv Eriksson's voyage, and the voyages of Thorvald Eriksson and of Freydis be comprised in the great exploratory expedition under Thorfinn Karlsefne. Geographical data and descriptions relying for support solely on Grœnlendingathatt must be sifted with great care, and never admitted save when borne out by the Saga of Erik the Red. Not till this has been done, can we venture on a critical investigation of the geography of Vinland."

Professor Storm's conclusion as to the whereabouts of Vinland is that —

"Kjalarnes, the northern extremity of Vinland, becomes Cape Breton; the Wonder-Strands, those

long stretches of sandy beach on the east coast south of Kjalarnes, are the eastern shores of Cape Breton Island, specially described as low-lying and sandy. The 'fjord' into which the Northmen steered, on the contrary, becoming 'fjord-indented' (Straumsfjord) may have been one of the bays in Guysborough, the county of Nova Scotia lying farthest to the northeast, possibly indeed Canso Bay or some one of the bays south of it. Therefore, much farther to the south in Nova Scotia must we seek the mouth of the river where Karlsefne made his abortive attempt at colonization ('Hófp,' *i. e.*, creek); a matter of greater difficulty is to choose among the river-mouths on this coast, the description in the Saga doing equally well for several of them."—P. 345.

In 1890, there was published in London "The Finding of Wineland the Good," by the late Arthur Middleton Reeves. In this magnificent volume, Mr. Reeves gave translations — with commentaries and notes — of almost all the known records relating to Vinland, together with the Icelandic texts and phototype plates of the vellum manuscripts of the Sagas. While not undertaking to express any very decided opinion as to where Vinland was, he indicated his concurrence with Professor Storm.

The placing within easy reach the "Ancient Vinland" of Torfæus, previously to be found in the original Latin in a few libraries, the publication of the ancient records as edited by Mr. Reeves, and Professor Storm's able critical discussion of them — all within the past four years — have done much to remove uncertainty upon various points, and to enable the ordinary reader to form an intelligent opinion. Unless some old record, at present unknown, is brought to light — which is unlikely — one can hardly see what further information can be made available to the student; and the present would, therefore, seem to be an appropriate time for a new attempt to answer the question, "Where was Vinland?" The writer made a humble attempt, in a paper read before the Nova Scotia Historical Society in January, 1887; and, as the great additional light since thrown upon the subject has tended rather to strengthen than to change the opinion then expressed, he ventures, with a keen sense of his own want of qualification for the task, to place his impressions before the readers of this magazine.

Much as he would be pleased to believe that the first settlement of the Northmen on this continent was situated in his native province, the writer finds himself unable to do so, and is obliged to say with regret that, in his humble opinion, the probabilities are strongly against Professor Storm's view. It may look somewhat ungracious — but it is not intended to indicate a lack of appreciation of Professor Storm's great ability and valuable services to the cause of historical truth — to make use of the suggestions and information to be found in his admirable paper, and then to draw the conclusions which appear to flow naturally from the authorities, even though they be not the same as those at which the professor has arrived.

The best course will probably be to follow the example of Professor Storm and take as a text the story of Thorfinn Karlsefne's expedition, as given in the Saga of Erik the Red — supplementing it, of course, with hints and information drawn from other sources — and try to gather from it the impression which it would make upon the mind of one who had no preconceived theory of his own to sustain, as to the whereabouts of Helluland, Markland and Vinland. After this has been done, it may be well to devote some space to other authorities, and to the consideration of objections to the conclusions arrived at. The extracts from the Saga are taken from the translation by Mr. Reeves, which is based upon a collation of the two manuscripts in the Arna-Magnæan collection already mentioned. It may be premised that Professor Storm makes the expedition set out in the spring of the year 1003, and also gives strong reasons for believing that by "day" the Saga means twelve hours, and not twenty-four.

THORFINN'S EXPEDITION.

HELLULAND.

We are told, of Karlsefne and his comrades, that:—

"They had in all one hundred and sixty men when they sailed to the Western Settlement, and thence to Bear Island. Thence they bore away to the southward two days. Then they saw land and launched a boat and explored the land, and found there large, flat stones, and many of these

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were twelve ells wide; there were many Arctic foxes there. They gave a name to the country and called it 'Helluland.'

All authorities agree that Biarney or Bear Island was identical with the modern Disko. Instead of sailing southwardly or westwardly from Eriksfjord, or some other port in the Esterbygd or Eastern settlement, as might have been expected, Karlsefine first sailed northwestwardly along the coast to the Vesterbygd or Western settlement, and thence to Disko Island between 69° and 70° North, which he made his point of departure on the voyage of discovery. It is to be presumed that Thorfinn, in undertaking his expedition, availed himself of all the experience gained by Leif and Thorstein — the alleged voyages of Biarne Heriulfsson and Thorvald Eriksson, Professor Storm gives good reasons for regarding as apocryphal — and was thereby led to adopt a route which one would at first look upon as circuitous in the extreme. Thorstein Eriksson had made Eriksfjord his starting place on the abortive expedition of 1001, and failed to cross Davis's Strait, or, as it was called by the Northmen, Ginnungagap; and Thorfinn was probably somewhat influenced by that fact. At the present time, a strong current runs northwardly from Cape Farewell along the western coast of Greenland, growing gradually weaker until it reaches the neighborhood of Disko, from which the passage to the western side of the strait can probably be better made than from points lying further south. If one takes a map he will find that Cape Dyer, the north-eastern promontory of Baffin Land, lies on the western side of Davis's Strait about two hundred and twenty miles nearly south from Disko, and almost opposite the modern Danish town of Holsteinborg. According to Professor Storm and other authorities, one hundred and ten miles would be an average day's sail for the Norwegian vessels of that time; so that, if there is no serious objection to our doing so, we may conclude that the first land seen by Thorfinn after leaving Disko was that part of Baffin Land known as Cumberland Peninsula. In the account of Leif's voyage given in the Flatey Book, we are told that:—

"They sailed out to sea, and found first that land which Biarne and his shipmates found last. They sailed up to the land and cast anchor, and launched a boat and went ashore, and saw no grass there; great ice-mountains lay inland back from the sea, and it was as a (table land of) flat rock all the way from the sea to the ice-mountains, and the country seemed to them to be entirely devoid of good qualities. Then said Leif, 'It has not come to pass with us in regard to this land as with Biarne that we have not gone upon it. To this country will I now give an name and call it Helluland.'"

In the story of Biarne's mythical voyage, the Helluland of Leif is described as "high and mountainous, with ice-mountains upon it," and as not offering any attractions.

Does Cumberland Peninsula answer to the foregoing descriptions of Helluland? As far as one can judge, in the absence of a satisfactory description of its eastern coast by any modern voyager, it does. In July, 1860, Charles Francis Hall, an intrepid American explorer, who afterwards perished in the far north in an attempt to learn the history of the fate of Franklin's expedition, crossed Davis's Strait from Holsteinborg in the ship *George Henry*. The ship experienced very heavy weather, and took two days and a half to make the passage to Cumberland Peninsula, when Hall saw "the mountains covered with snow."

John Davis was probably the first European, after the Northmen, who saw the shores of Baffin Land. In the account of his first voyage, as given in Hakluyt, we learn that on the western side of the strait, on the 6th of August, 1585,

"we discovered land in 66 degrees 40 minutes of latitude altogether voyde from ye pester of yee: we ankered in a very faire rode, under a very brave mount, the clifes whereof were as orient as gold. This mount was named Mount Raleigh: the rode where our ships lay ankered was called Totnes Rode. The sound which did compass the mount was named Exeter Sound: the foreland towards the north was called Dyer's Cape: the foreland towards the south was named Cape Walsingham."

Davis had crossed from Godhaab in latitude 64° 15', and had taken six days in the passage. A little farther on, we are told that, "The coast is very mountainous, altogether without wood, grasse or earth, and is only huge mountaines of stone."

On his second voyage, Davis took two days to cross from Old Sukkertoppen, in latitude $66^{\circ} 33'$ north, to the neighborhood of Cape Walsingham.

Dr. Franz Boas, of Berlin, spent two years—1883 and 1884—on Baffin Land, and contributed an elaborate paper on its Geography and Geology to Petermann's *Mitteilungen* for 1884-5. At page 53 the following general description of Cumberland Peninsula is to be found:

"Penny Highland stretches continuously from the valley Pangnirtung (on Cumberland Sound) to Nudlung in Home Bay (north and west of Cape Dyer) and reaches to the coast of Davis's Strait with its ice-crowned heights. . . . One perceives from the heights of Davis's Strait nothing but an immense district of glaciers with softly rounded summits void of any point. There is no doubt but that this whole elevation is totally covered with inland ice, which on the south western side, beginning at Kingua (on Cumberland Sound), approaches to within twenty-five kilometres of the sea as a continuous high wall, and sends forth large glaciers into the valleys. The greatest number of most striking glaciers are in Penny Highland. . . . It is remarkable that glaciers are formed much more largely on the northeastern coast than on the southwestern."

In reply to questions asked by the writer, Dr. Boas, in a letter from Clark University, in January, 1890, says:

"Setting aside the Norse and the question where they may have been, I have been the only white man who ever set his foot on the coast between Cape Mercy (south-eastern Cape of Cumberland Peninsula) and Cape Walsingham. On this part of the coast the mountains are exceedingly steep, leaving only very narrow strips of flat land in a few places. The low land is hardly anywhere a plain. Even the rivers emptying at the heads of fiords generally cut their way through deep narrow gorges. Farther north, in Exeter Sound, a few fairly level spots are found, which might be described, as compared to the rugged character of the land, as 'a plain of flat stones.' Farther north flat gravelly land is found on every one of the long projecting peninsulas; C. Kater, C. Roper, C. Hooper, and some of them might be described as plains of flat stones. Foxes abound in Baffin Land."

The Cumberland Peninsula satisfies all the requirements of the Sagas and other Icelandic authorities which speak of Helluland: it is a land of no grass, a land of glacier-covered mountains, abounding only in ice, snow, and arctic foxes, a land of no good qualities; and it is the only land which could be reached

in two days by sailing southwardly from Thorfinn Karlsefne's place of departure, Disko Island.

Rafn and those who agree with him, identify Helluland with Labrador or Newfoundland, ignoring the fact that the description which we get of Helluland does not in any particular apply to either. There have been in historical times no glaciers in Labrador or Newfoundland, and, according to Professor Hind, the evidence of glacial action in the former region in prehistoric ages is by no means general. The Newfoundland *Pilot*, published by the English Admiralty, shows that the coast of neither Labrador nor the great island lying southward of it is characterized by large flat stones, but that, where the coast is not high and bold, as it generally is, there are beaches of sand, gravel or mud.

A resident of Greenland, sailing from the now sterile shores of Disko Island, would not look upon Labrador or Newfoundland as "a land of no good qualities"; on the contrary, he would regard either as a well-wooded region, with a milder climate than his own and possessing many advantages. It must be borne in mind that within historic times the coasts of Labrador and Newfoundland have been much better wooded than they are at present, and also that the shore of the former region has probably risen some fifty feet since the date of Thorfinn's expedition. The distances involved are also totally out of harmony with the language of the Sagas. From Disko Island to Cape Chidley, the nearest point of Labrador, is about seven hundred miles, being a greater distance than from Norway to Iceland; while from Disko to Cape Hauld, the northernmost point of Newfoundland, would be a voyage of about one thousand four hundred miles. It may be looked upon as morally certain that the Helluland of Thorfinn Karlsefne was neither Labrador nor Newfoundland.

Professor Storm, apparently overlooking the statement of the Saga that Thorfinn began his voyage from Disko, devotes considerable space, learning and ingenuity to showing that the place in the Vesterbygd from which the expedition sailed was Lysefiord, which he believes

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is morally certain
horfinn Karlsefne
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ch the expedition
hich he believes

to be identical with the modern Fisker-
fjord, in latitude 63° and longitude 50°
 $30'$. Forgetting also that he had stated
that, in dealing with the directions in
which the Northmen are reported to have
sailed, we would be justified in admitting
a maximum variation of forty-five de-
grees, the professor tries to identify the
course which a due south line from Fisk-
erfjord would follow, and finds that it
would lie in the Atlantic Ocean, east
of Newfoundland. He is impressed by
the excessive distance from the Vester-
bygd to either Labrador or Newfound-
land, and by the fact that neither of the
latter regions at all corresponds to the
descriptions of Helluland; but, influ-
enced by his initial mistake as to the
point of departure, he concludes that the
descriptions in question must be fictitious,
and that—

"Helluland having been clearly the land near-
est Greenland, we shall doubtless not be far out
in taking Labrador, though as yet the northern
peninsula of Newfoundland is not wholly ex-
cluded."

Professor Storm also sees the absurdity
of Rafn's theory, that Helluland—great
and little—embraced Labrador and
Newfoundland, and points out that "if
Labrador has no glaciers, there are, as
a matter of course, none in Newfound-
land." Rafn would give Helluland a
coast line of about 1,200 miles, a suppo-
sition which is utterly at variance with
the language of the Sagas and other old
authorities. Had Professor Storm taken
the point of departure for Thorfinn's ex-
pedition given in the narrative, which he
has himself almost demonstrated to be
the most reliable, as well as in other ac-
counts, he would have seen that Cumber-
land Peninsula fulfilled all the conditions
called for by the description of Hellu-
land. That no other region does, he has
actually made clear.

Professor Storm tells us that the author
of the Saga of Orvarodd, writing proba-
bly in the fourteenth century before the
Northmen had abandoned Greenland,
makes his hero go in search of Helluland
in the Greenland sea, southwest of Green-
land, and regards Helluland as a desert
region, an opinion in which the Sagaman
is followed by later Icelandic folk-lore.

If we assume Helluland to be iden-
tical with Cumberland Peninsula, this
statement of the Saga in question will be
found substantially accurate, as the pen-
insula lies southwestward of a portion
of the Vesterbygd, and is a desert and
uninhabitable region. So that these old
romances furnish additional evidence in
support of the writer's theory.

MARKLAND.

Having mentioned the partial explora-
tion and the naming of Helluland, the
account of Thorfinn Karlsefne's expedi-
tion in the Saga of Erik the Red goes on
to tell that—

"Then they sailed with northerly winds two
days, and land then lay before them, and upon it
was a great wood and many wild beasts; an island
lay off the land to the southeast, and there they
found a bear, and they called this Biarne (Bear
Island), while the land where the wood was they
called Markland (Forest-Land)."

In the account of Leif Eriksson's voy-
age from the Flatey Book, given at page
65 of Reeves, we are told of Markland
that, "this was a level, wooded land, and
there were broad stretches of white sand,
where they went, and the land was level
by the sea."

In the story of Biarne's accidental
discovery, given in the Flatey Book, it is
said of the second land which he saw
that "it was a flat and wooded country."
If this land was Markland, it took Biarne
two days to reach it from Vinland, and
he sailed three days, with a southwesterly
wind after leaving it before he came to
the "high and mountainous land, with
ice-mountains upon it," presumed to be
Helluland.

Where then are we to find a region to
be identified with Markland? Assuming
that Helluland was Cumberland Penin-
sula, and that Thorfinn's vessels sailed
along the eastern coast to Cape Mercy
its southern extremity, two days sail, if
calculated from Cape Dyer, would bring
them either to Cumberland Sound or the
mouth of Frobisher Bay, if calculated
from Cape Mercy would enable them to
reach the interior of Frobisher Bay or
the coast of Labrador. For reasons that
will appear hereafter, Labrador is ex-
cluded. Davis, on his first voyage, when
proceeding slowly, took two days to go

from Totnes Road, south of Cape Dyer, to Cape Mercy; but, on his third voyage, in 1587, he saw Mount Raleigh at one o'clock in the afternoon of the nineteenth of July and at midnight was off Cape Mercy, after which he sailed into Cumberland Sound. From Cape Mercy to the entrance of Frobisher Bay is about one hundred and thirty miles, and the depth of the Bay from Lok's Island to Jordan River about one hundred and twenty. The approximate latitude of Cape Dyer is $66^{\circ} 40'$, of Cape Mercy $64^{\circ} 50'$, and of the entrance to Frobisher Bay $62^{\circ} 50'$. Is the land around Frobisher Bay such as to fairly answer the description given in the Sagas? Markland is described as being low, flat, wooded and containing many animals. It must be acknowledged at the outset that there is now no wood to be found growing close to Frobisher Bay; but there is reasonable ground, as can be shown, for supposing that, at the date of Thorfinn's expedition, the condition of things in this respect was different. In other respects, much of the country surrounding the interior of the Bay tallies with the description given above. Near the mouth of the Bay, on its southern side, is Kingaita, the high land of Meta Incognita, on which there are glaciers, and, even on the northern side of the entrance, the land is somewhat rough; but, farther in, the character of the country alters. In the account of Frobisher's third voyage, made in 1578, we are told that, "the northern lands have lesse store of snow, more grasse, and are more playne countreys."

In the same account we are told, of the Eskimo of Frobisher Bay, that, "they have great store of deere, beares, hares, foxes, and innumerable numbers of sundry sortes of wilde foule." It may be well to notice that it is also said that "the countrie seemeth to be much subject to earthquakes."

Charles Francis Hall spent two years — from the summer of 1859 to that of 1861 — at Frobisher Bay, and published an account of his experience and observations in a work of two volumes called "Life with the Esquimaux." He speaks of reindeer, foxes, bears, rabbits and

other animals as being very abundant, and of the first named as having been formerly even more numerous than at present. From various statements with respect to the character of the surface of the land and of the vegetation, it will perhaps be enough to quote the following. Speaking of the southwestern side of the Bay near its head, Hall says (Vol. 2, p. 105) —

"Mountains near the shore on that side of the Bay had disappeared, the land being comparatively low and covered with verdure. I was delighted to find this such a beautiful country; the waters of the Bay were teeming with animal life, and I thought that here was indeed the place to found a colony, if any one should ever renew the attempt in which Frobisher failed."

As to Sylvia Grinnell River, near the head of the Bay (lat. $63^{\circ} 43' 30''$ N. Long. $68^{\circ} 25'$ W.), he says (Vol. 2, p. 110) —

"This certainly is a fact, that here, at the head of Frobisher Bay, a milder climate prevails than at Field Bay and elsewhere, or the luxuriant vegetation that is around here could not be. The grass plain, the grass-clothed hills, are abundant proof of this. I never saw in the States, unless the exception be of the prairies of the West, more luxuriant grasses on uncultivated lands than are here around, under me. There is no mistake in this statement, that pasture land here, for stock, cannot be excelled by any anywhere, unless it be cultivated, or found, as already excepted, in the great West."

A little further on he speaks of a plain of "scores and scores of acres." Of the view from the head of the Bay, Hall says (Vol. 2, p. 125) —

"Before me were long and wide plains, meadows of grass, smoothly sloping hills, and a range of mountains beyond, which, parting in one particular spot, formed, as it were, a natural gateway, that might almost lead in fancy, to some fairy land beyond."

Baffin Land, from Lancaster Sound to Hudson's Strait and Fox Channel, appears to possess in a greater degree than even Labrador the characteristic of having its highest land, composed of Archean rock, very near the eastern coast, and the surface of the country sloping westward, where in Baffin Land, limestone takes the place of granite and similar rock. Hall observed the fossiliferous limestone at the head of Frobisher Bay. Dr. Boas notices the facts that the hori-

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zontally lying limestones extend to the east coast at the head of Frobisher Bay and that the coast at the heads of Frobisher Bay and Cumberland Sound is very low. The limestone might help to account for the white appearance attributed to the shore of Markland in the description of Leif's voyage.

Of Thorfinn Karlsefne's return after a stay of three years in Vinland, we are told in the Saga of Erik the Red, that—

"When they sailed away from Wineland, they had a southerly wind and so came upon Markland, where they found five Skraelings of whom one was bearded, two were women, and two were children. Karlsefne and his people took the boys, but the others escaped, and these Skraelings sank down into the earth."

The shores and islands of Frobisher Bay have long been a favorite resort of the Eskimo; and there is little doubt but that the apparent sinking down into the earth of the three adult Skraelings was really a retreat into one of the subterranean dwellings, some of which still remain. In the account of Frobisher's second voyage, in 1577, we are told, at page 137, that—

"Upon the maine land over against the Countess's Island (near the northern shore of Frobisher Bay), we discovered and beheld to our great marvel, the poor caves and houses of these countrie people which serve them (as it should seem) for their winter dwellings, and are made two fadome under ground, in compass round, like to an oven, being joined fast by one another, having holes like to a fox or conny berrie to keepe and come together." . . . "From the ground upward they build with whale bones, for lack of timber."

Hall found many of these Eskimo dwellings in the neighborhood of Frobisher Bay, and his description of them tallies with that given by the historian of Frobisher's voyages, distinct traces of which, it may be mentioned, Hall found on two islands in the Bay, and in the traditions of the Eskimo.

The island which lay out from the land to the southeast and upon which the explorers killed a bear, may possibly have been Lok's Island, which lies southeast of the peninsula between Cumberland Sound and Frobisher Bay, now known as Hall's Peninsula, but was more probably Resolution Island. Thorfinn going out of Frobisher Bay would sail southeastwardly, and would find this island lying

out from the land to the southeast. Resolution Island lies at the northern side of the eastern entrance to Hudson's Strait, and is a very conspicuous object. It also plays a prominent part in the accounts of the voyages of the earlier modern navigators. It is placed at the meeting of the Davis's Strait and the Hudson Strait currents, and is often a landing place for polar bears, which are being carried into the Atlantic Ocean by drifting ice. The writer of the account of Baffin's fourth voyage—which took place in 1615—gives its distance from Labrador as forty-eight miles and from Meta Incognita—the peninsula south of Frobisher Bay—as eight miles, and tells us that "upon this island we went on shore, but found no certain signe of inhabitants, but only the tracke of bears and foxes."

As in the case of Cumberland Peninsula and Helluland, it will be difficult to indicate any island other than Lok's or Resolution, which will even approach to a fulfilling of the terms of the description given in the Saga of the island which lay off Markland to the southeast. Rafn and his followers undertake to identify Bear Island with Cape Sable Island in the county of Shelburne, Nova Scotia; but that island, instead of lying out from the land to the southeast, lies close to the shore to the southward or southwest, and could not be reached by a vessel sailing from the northward in a southeastwardly direction, the trend of the Nova Scotia coast being southwestwardly. Nor is Cape Sable Island a place where a voyager would be particularly likely to see a bear, above all a polar bear, which would be probably the animal indicated by the word "bear" when used by a denizen of Greenland. Then, there is no reason to suppose that if Vinland were in southern New England, Karlsefne on his return would have found Eskimo in Nova Scotia dwelling in the yurts or underground houses described by Frobisher and Hall as existing at Frobisher Bay. Nor does Professor Storm's identification of Newfoundland with Markland seem well founded. It is true that Newfoundland lies southeastward of Labrador; and, if there were any

reasonable certainty that Labrador was Helluland, there would be good ground for supposing that the great island south of the Strait of Belle Isle was Markland. But it has been shown that Labrador does not at all answer to the description of Helluland; so that the one argument in favor of Newfoundland's being Markland disappears. The map of Newfoundland does not show any island lying out from the land to the southeast; nor, if there were any such island, would it be likely to be the habitat of polar bears. True, Cartier saw in Newfoundland a bear, but it was near Funk Island over two hundred miles north of Cape Race, the southeastern extremity of the island. It is true that, like the greater part of Labrador, the eastern coast of Newfoundland was formerly well wooded and abounding in game; but the shores of Newfoundland are not low, nor are white sands one of their marked features. On the contrary, the Newfoundland *Pilot*, as already stated, describes them as being generally high and bold, with exceptional beaches of sand, gravel, or mud. So far as the writer's information goes no subterranean dwellings nor any remains of them have been discovered in Newfoundland; and, although the Eskimo occasionally crossed the strait separating the island from Labrador, there seems no reason to believe that they ever made their homes on Newfoundland as they did on Markland.

VINLAND.

The account of Thorfinn's voyage given in the version of the Saga contained in the manuscript numbered 544 in the Arna-Magnæan collection (AM. 544), and usually called Hauk's Book, from which Mr. Reeves took the bulk of his text, after describing the visit to Markland as above, continues as follows:

"Thence they sailed southward along the land for a long time and came to a cape; the land lay upon the starboard; there were long strands and sandy banks there. They rowed to the land and found upon the Cape there the keel of a ship, and they called it there Kjalarnes (Keelness); they also called the strands Furdustrandir (Wonder-Strands), because they were so long to sail by."

In the other ancient version of the

Saga, AM. 557, the discovery of Vinland is described thus:

"Then when two days had elapsed they described land, and they sailed off this land; there was a cape to which they came. They beat into the wind along this coast, having the land upon the starboard side. This was a bleak coast, with long and sandy shores. They went ashore in boats and found the keel of a ship, so they called it Keelness there; they likewise gave a name to the strands and called them Wonder-Strands, because they were so long to sail by."

The story goes on to say:

"Then the country became indented with bays, and they steered their ships into a bay. It was when Leif was with King Olaf Trygvason, and he bade him proclaim Christianity to Greenland, that the king gave him two Gaels; the man's name was Haki and the woman's, Hakia. The king advised Leif to have recourse to these people if he should stand in need of fleetness, for they were swifter than deer. Erik and Leif had tendered Karlsefne the services of this couple. Now when they had sailed past Wonder-Strands, they put the Gaels ashore and directed them to run to the southward and investigate the nature of the country, and return again before the end of the third half day."

Meanwhile,

"Karlsefne and his companions cast anchor, and lay there during their absence; and when they came again, one of them carried a bunch of grapes and the other an ear of new-(self-) sown wheat. They went on board the ship, whereupon Karlsefne and his followers held on their way until they came to where the coast was indented with bays. They stood into a bay with their ships. There was an island out at the mouth of the bay, about which there were strong currents, wherefore they called it Straumey (Stream Isle). There were so many eider-ducks on the island that it was scarcely possible to walk for the eggs. They sailed through the firth and called it Straumfirth (Streamfirth), and carried their cargoes ashore from the ships and established themselves there. They had brought with them all kinds of live stock. It was a fine country there. There were mountains thereabouts. They occupied themselves exclusively with the exploration of the country. They remained there during the winter, and they had taken no thought for this during the summer. The fishing began to fail and they began to fall short of food."

In AM. 557, instead of the last two sentences, we read:

"There was tall grass there. They remained there during the winter, and they had a hard winter, for which they had not prepared, and they grew short of food and the fishing fell off. Then they went out to the island in the hope that something might be forthcoming in the way of fishing or flotsam. There was little food left, however, although their live stock fared well there."

Then we are told the incident of the whale, which Thorhall, the hunter, said came from his deity Thor, upon which

"None of them would eat, and they cast the whale down into the sea and made their appeals to God. The weather then improved, and they could now row out to fish, and thenceforward they had no lack of provisions, for they could hunt game on the land, gather eggs on the island, and catch fish from the sea."

In the Flatey Book story of Thorfinn's expedition, no reference is made to Helluland or Markland, and it is said in a summary way that, "They sailed out to sea with the ship, and arrived safe and sound at Leif's-booths, and carried their hammocks ashore there." A much more detailed account is given of Leif's voyage. We are told that after the naming of Markland—

"They returned to the ship forthwith and sailed away upon the main with north-east winds, and were out two days before they sighted land. They sailed toward this land and came to an island which lay to the northward off the land. There they went ashore and looked about them, the weather being fine; and they observed that there was dew upon the grass, and it so happened that they touched the dew with their hands, and touched their hands to their mouths, and it seemed to them that they had never before tasted anything so sweet as this. They went on board their ship again and sailed into a certain sound, which lay between the island and a cape which jutted out from the land on the north, and they stood in westerling past the cape. At ebb-tide there were broad reaches of shallow water there, and they ran their ship aground there, and it was a long distance from their ship to the ocean; yet were they so anxious to go ashore that they could not wait until the tide should rise under their ship, but hastened to the land, where a certain river flows out from a lake. As soon as the tide rose beneath their ship, however, they took the boat and rowed to the ship, which they conveyed up the river, and so into the lake, where they cast anchor and carried their hammocks ashore from the ship, and built themselves booths there. They afterwards determined to establish themselves there for the winter, and they accordingly built a large house. There was no lack of salmon there either in the river or in the lake, and larger salmon than they had ever seen before. The country thereabouts seemed to be possessed of such good qualities that cattle would need no fodder there during the winters. There was no frost there in the winters, and the grass withered but little. The days and nights there were of more nearly equal length than in Greenland or Iceland. On the shortest day of winter the sun was up between 'eyktarstad' and 'dagmalastad.'"

It must be admitted that there is much

difficulty in finding any place to which the language of the Saga of Erik, as transmitted to us, will exactly apply; but the general impression conveyed seems to be, as stated by Professor Storm—

"From the Saga of Erik the Red, it appears that Vinland was found to end towards the north as a peninsula, Kjalarnes being its northeastern extremity. The explorers first made sail along the sandy expanse of the eastern shore, till the country became intersected with fiords ('fjord skorit'), and here they ran into the Straumsfjord."

And he summarizes the subsequent proceedings of the explorers correctly in the next succeeding sentence.

"From thence Karlsefne set off south along the east coast, and reached the bay where the collision took place with the Skraelings (Hóp); and subsequently the expedition sailed round the northern peninsula to a small river, supposed to be as far distant from Straumsfjord as was Hóp from Straumsfjord."

If Professor Storm's general view, which the writer shares, is correct, and if Helluland and Markland both lay north of Hudson's Strait as above contended, then Vinland must have been situated on the great peninsula of Labrador; and, if the land which Karlsefne's men saw, and found to be a cape, was Kjalarnes and the northeastern extremity of the peninsula, Kjalarnes and Cape Chidley are identical. From Resolution Island to Cape Chidley is only about forty-eight miles; and the fact that the voyage took two days seems to tell against this view. It must be borne in mind, however, that the crossing of Hudson Strait at its mouth is often slow and difficult navigation. In the account of Davis's third voyage we read under date of the 31st July, 1587, that, having on the day before passed Frobisher's Inlet, "this day and night we passed by a very great gulfe, the water whirling and roing as if it were the meeting of tides;" and of the first of August we read, "Wee fell with the southernmost cape of the gulfe, which we named Childlei's Cape, which lay in 60° and 10' of latitude." It may perhaps be worth mentioning that, on his second voyage, Davis passed the entrance of Hudson's Strait without noticing it. The language of the Saga is not very clear, and, taking the story of Leif's voyage

along with that of Thorfinn's, it would almost seem as if the land had been first approached in Ungava Bay, where would be found the "bleak coast with long and sandy shores," and that, after rounding Cape Chidley, the voyagers had coasted the Atlantic shore of Labrador.

It is stated in the story of Thorfinn that they found on the cape the keel of a ship, from which they gave it the name of Keel Cape. This story of the discovery of a vessel's keel may be true, or it may have been invented after the discovery to account for the name given to the cape. In this connection the following short extract from Dr. Robert Bell's "Observations on the Geology, Mineralogy, Zoölogy, and Botany of the Labrador Coast, Hudson's Strait and Bay," published in the report of the Geological and Natural History Survey of Canada for 1882-3-4, may not be without interest:

"At the west end of the southeastern island of the Button group a great rock has been excavated into the form of a half arch, which rises out of the water and rests, at its summit, against the cliff which forms the extremity of the island."

In the course of conversation, Doctor Bell informed the writer that the rock in question resembles the keel of a vessel, and that when the water was higher the resemblance was stronger. South Button Island is close to Cape Chidley, being separated from Kikkertaksoak Island, on which it stands, by Gray's Strait, which is only four miles wide. Is it not possible that the name Kialarnes was due to this keel-shaped rock?

As to the exact locality of Straumfiord and Straumey it is impossible to pronounce an opinion. Supposing that Kialarnes, as seems probable, was identical with Cape Chidley, we do not know how far Thorfinn, leaving the land upon the right side of the ship, proceeded along the Atlantic Coast of Labrador before he came to the bay, which he seems to have selected as the site for his settlement, upon the report of his two Scots runners, Haki and Haekia. Nearly the whole of that coast south of Nachvak is indented with fiords or bays, in many of which islands and strong currents are to be found; and any attempt at identification is rendered still more impractic-

able by the fact that during the past nine hundred years the shore has risen considerably; so that, while the general features of the numerous bays to be found on the seven hundred and sixty miles of coast from Cape Chidley to the Strait of Belle Isle remain, the changes in the details of appearance are many. Hóp, which appears to have been identical with the site of Leif's Booths, lay a considerable distance to the southward of Straumfiord. The same reasons against any attempt at exact identification exist in the case of Hóp as in that of Straumfiord. There is this further difficulty existing in both cases, that comparatively few of the many inlets on the Atlantic Coast of Labrador have been accurately surveyed, and many of those which are represented on maps and charts as being short, are in reality many miles long.

At page 69 of a paper submitted to the Fishery Commission which sat at Halifax, in 1877, by Professor H. Y. Hind, author also of a work in two volumes, entitled "Explorations in the Interior of the Labrador Peninsula," we are told that—

"As in Norway, soon the Labrador, the whole coast, from the Straits of Belle Isle to Hebron, is deeply cut by profound fiords penetrating the land from thirty to seventy miles. These fiords have been mapped as far as Hamilton Inlet by the officers of Her Majesty's vessels, but beyond that point no surveys have been made and published, with the exception of those before mentioned. As an illustration of one of the unsurveyed fiords, I append a sketch plan made this summer of Kypokok Bay, the next bay north of Aillik. It is fifty-three miles deep, estimated from Aillik Head, and has an average breadth of three miles. Opposite the Hudson Bay Company's post, thirty-five miles from Aillik Head, the water is more than fifty fathoms, although not above a mile across."

Thorfinn's story as given in the Saga of Erik the Red tells us that after passing Kialarnes and Furdustrandir, "then the country became indented with bays, and they steered their ships into a bay." As the fiord-indented coast begins at Nachvak, some distance to the northward of Hebron, this would go to show that there or thereabouts Karlsefne landed and sent out his Scots runners, and, if so, Straumfiord was not very far south of this point. At the present time, the coast between

Cape Chidley and Nachvak is generally uninventing to the mariner. The Newfoundland *Pilot* (notice No. 6, p. 4) says that —

"From the latitude of Davis Inlet ($55^{\circ} 51\frac{3}{4}'$) to that of Nachvak ($59^{\circ} 4'$) the outer islands and coast line appear to be singularly free from sunken rocks; but from Nachvak to Cape Chidley the coast is fringed with small islands and sunken rocks to an estimated average distance of five miles. The land about Port Manvers attains a considerable elevation, and is conspicuous from seaward; it is then low as far as Cape Mugford, and thence to Cape Chidley is high, with few exceptions, attaining its greatest elevation midway between Nachvak and Cape Chidley, where the hills near the coast are estimated to be five or six thousand feet high."

Professor Hind, in the paper already quoted from, says of the coast northwest of Aillik, that —

"The shore line is deeply serrated by a constant succession of profound and narrow fiords stretching from thirty to fifty miles into the interior. It is fringed with a vast multitude of islands forming a continuous archipelago from Cape Aillik to Cape Mugford, averaging twenty miles in depth from the mouths of the fiords seawards." (P. 68. See also Dr. Bell's report already quoted.)

With respect to the name of Furdustrandir, which is translated Wonder-Strands, it may have been given as the Saga says, "because they were so long to sail by," or possibly for the reason indicated in the following passage from the Newfoundland *Pilot*:

"During the voyage in August, the refraction and mirage off the coast of northern Labrador, and especially off Davis inlet, caused great difficulty in the attainment of correct sextant altitudes at sea. This state of the atmosphere is said to be characteristic of the few fine days of summer."

If the fiord in which Thorfinn's vessels lay awaiting the return of the messengers, Haki and Haekia, was Nachvak, then the next bay which intersected the land was Saglek Bay, in latitude $58^{\circ} 43'$, which may perhaps have been the firth which they called Straumfiord, or Straumfiord may have been the bay lying next to the southward where the Moravian Missionary Station of Hebron, latitude $58^{\circ} 13'$, is now situated.

From the account of Leif Eriksson's voyage, given in the Flatey Book and quoted above, it would appear that, if

Leif did not make the land in Ungava Bay, and if, as one would gather from the wording of the account, he landed and made his settlement close by his landfall, Leif's Booths were situated on the Atlantic Coast of Labrador, some distance southward of Straumfiord, and at a place identical with or resembling the Hóp of Karlsefne. This place it is impossible to identify merely from the description given in the Sagas. There may be several fiords on the coast where nine hundred years ago a river ran out from a lake to the sea.

There is nothing in the description of Thorfinn's expedition to lead us to believe that the climate of Straumfiord was much superior to that of Greenland, and we are distinctly told that "they had a hard winter." This unfavorable impression is heightened by a perusal of the verses sung by Thorhall the hunter when about quitting Straumfiord. The abundance of eider-ducks and their eggs indicates a high northern latitude.

There is good reason to believe that Saglek Bay—a deep bay with a large island near the entrance—or one of the bays not far to the southward from it, was the Straumfiord.

The account of Thorfinn's expedition given in the AM. manuscript 557, continues as follows:

"Now they took counsel together concerning their expedition and came to an agreement. Thorhall the huntsman wished to go northward around Wonder-Strands and past Keelness, and to seek Wineland; while Karlsefne wished to proceed southward along the land and to the eastward, believing that country to be greater, which is farther to the southward, and it seemed to him more advisable to explore both."

This extract from what is, according to Professor Storm, the earliest and presumably the most correct version of the Saga, shows that the coast-line of Vinland, like that of Labrador, ran from northwest to southeast, or nearly so.

In accordance with the agreement, Thorhall prepared for his voyage out below the island, having only nine men in his party, for all the remainder of the company went with Karlsefne. And one day when Thorhall was carrying water aboard his ship, and was drinking, he recited this ditty:

"When I came, these brave men told me,
 Here the best of drink I'd get,
 Now with water-pail behold me,—
 Wine and I are strangers yet.
 Stooping at the spring I've tested
 All the wine this land affords;
 Of its vaunted charms divested,
 Poor indeed are its rewards."

And when they were ready, they hoisted
 sail, whereupon Thorhall recited this
 ditty:

"Comrades, let us now be faring
 Homeward to our own again,
 Let us try the sea-steed's daring,
 Give the chafing courser rein.
 Those who will may bide in quiet,
 Let them praise their chosen land,
 Feasting on a whale-steak diet,
 In their home by Wonder-Strand."¹

Thorhall evidently felt that the realities of Vinland life fell not a little short of the expectations raised by the reports of Leif and his followers, and that his Greenland home offered greater attractions. His verses certainly indicate that the northern part of Vinland was little, if at all, superior in natural gifts to the southern portion of the Greenland peninsula. The narrative goes on to tell what befell Thorhall and his companions after leaving Straumey:

"Thereupon they sailed away to the northward past Wonder-Strands and Keelness, intending to cruise to the westward around the cape. They encountered westerly gales and were driven ashore in Ireland, where they were grievously maltreated and thrown into slavery. There Thorhall lost his life, according to that which traders have related."

We are told that, after Thorfinn's return from his excursion to the southward and stay at Hóp—

"Karlsefne then set out with one ship in search of Thorhall the huntsman, but the greater part of the company remained behind. They sailed to the northward around Keelness, and then bore to the westward, having land to the larboard. The country there was a wooded wilderness as far as they could see, with scarcely an open space, and when they had journeyed a considerable distance, a river flowed down from the east toward the west. They sailed into the mouth of the river and lay to by the southern bank."

If we take Kialarnes to be Cape Chidley both these incidents will be intelligible. When Thorhall rounded the cape and would cruise to the westward he was

¹ Reeves, p. 45.

met by a strong west wind such as often blows through Hudson's Strait, was driven far to the eastward and made his way to Ireland. This does not seem improbable, although Ireland is some five degrees further south than Hudson's Strait, when we remember that in 1611 the survivors of Hudson's mutinous crew, sailing from the last-named place, came to land at Galway in the west of Ireland. Such a fate would be much less likely to befall a vessel after rounding Cape Cod—the Kialarnes of Rafn and those who adopt his theory.

If Kialarnes was Cape Chidley, Karlsefne, after rounding it from the southward, sailed into Ungava Bay, the shores of which are even yet fairly well wooded, and, at a distance of about one hundred and ten miles from the Cape, came to the George River, in the mouth of which a vessel could lie, and which runs into the sea from the eastward. No such river is to be found in New England. That the river in which Karlsefne's vessel lay was south of Kialarnes is clear from the facts that it flowed from east to west, and that in returning from it "they sailed away back toward the north."

Mr. Lucien M. Turner, in a paper on the physical and zoölogical character of the Ungava District, in the transactions of the Royal Society of Canada for 1887, speaking of the rivers, says (p. 80):

"The most easterly and the second in size is George River, lying near the foot hills of the Labrador coast range. This stream is navigable for twelve miles by a vessel drawing not more than fifteen feet;"

and he adds, "The limit of trees is at the mouth of George River."

We are further informed by Mr. W. H. A. Davies, in his "Notes on Ungava Bay and its Vicinity," quoted by Mr. Hind in his "Explorations in the Interior of the Labrador Peninsula" (p. 141), that this river is navigable for two hundred and twenty miles by the Hudson Bay Company's barges. Returning to our text, at the point where Thorhall's mishap is related, we read that—

"It is now to be told of Karlsefne, that he cruised southward off the coast with Snorre and Biarre, and their people. They sailed for a long time, and until they came at last to a river, which

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flowed down from the land to the lake, and so into the sea. There were great bars (in another version 'islands') at the mouth of the river, so that it could only be entered at the height of the flood-tide. Karlsefne and his men sailed into the mouth of the river, and called it there Hóp (a small land-locked bay). They found self-sown wheat-fields on the land there, wherever there were hollows, and wherever there was hilly ground there were vines. Every brook there was full of fish. They dug pits on the shore where the tide rose highest, and when the tide fell, there were halibut in the pits. There were great numbers of wild animals of all kinds in the woods. They remained there half a month, and enjoyed themselves, and kept no watch. They had their livestock with them. Now one morning early, when they looked about them, they saw nine skin-canoes, and staves were brandished from the boats, with a noise like flails, and they were revolved in the same direction in which the sun moves. Then said Karlsefne: 'What may this betoken?' Snorre, Thorbrand's son, answers him, 'It may be that this is a signal of peace, whereupon let us take a white shield and display it.' And thus they did. Thereupon the strangers rowed toward them, and went upon the land, marvelling at those whom they saw before them. They were small men, and ill-looking, and the hair of their heads was ugly. They had great eyes, and were broad of cheek. They tarried there for a time looking curiously at the people they saw before them, and then rowed away, and to the southward around the point.

"Karlsefne and his followers had built their huts above the lake, some of their dwellings being near the lake, and others farther away. Now they remained there that winter. No snow came there, and all their live-stock lived by grazing. And when spring opened they discovered, early one morning, a great number of skin canoes, rowing from the south past the cape, so numerous that it looked as if coals had been scattered broadcast out before the bay, and on every boat staves were waved."

The Saga then gives a detailed account of the bartering with the Skraelings and of the subsequent hostilities which led to the abandonment of Hóp and a return to Straumfiord.

As already stated, the Hóp of Karlsefne was either identical with, or much resembled, the site of Leif's Booths, as described in the Flatey Book. Where are we to look for this, the most southern—as far as we know—of the Northmen's settlements in America? Apparently upon the eastern coast of Labrador, at a considerable distance to the southward of Straumfiord; for the Saga states that they cruised southward and that "they sailed for a long time," before they came to the river of Hóp. From Cape Chil-

ley to the Strait of Belle Isle is seven hundred and sixty miles. Saglek Bay, which has been suggested as a not improbable Straumfiord, is about one hundred and forty-three miles from Cape Chidley, so that the explorers would have had to sail more than six hundred miles before getting clear of the Atlantic Coast of Labrador. There is nothing in the record to indicate a transit to a new region or a marked change of direction, either of which, looking at the distance to be traversed before it could take place, is in itself highly improbable. Is there any clew which will enable us to form an idea as to where in this long distance the Northmen's resting place was? Can such a clew be found in the statement made in the Flatey Book with respect to the length of the day at Leif's Booths, supposing it to be the statement of an actual fact? That statement as given above is that "The days and nights there were of more nearly equal length than in Greenland or Iceland. On the shortest day of winter the sun was up between 'eyktarstad' and 'dagnalastad.'" Commenting upon this passage, Professor Storm says (p. 307):

"The difficulty of explaining these words came from *eykt*, in Iceland and Norway, denoting a point of time in the afternoon, varying with the latitude. In Iceland the point of time called *eykt* was held rather early to correspond with *Nón* (3 P. M.), so that *eykheilagr* and *Nónheilagr dagr* were synonymous terms. Arngrimr Jónsson could therefore take the passage in the Flatey-jarbók to signify—"the sun at the winter solstice keeps about six hours above the horizon, accordingly from 9 A. M. to 3 P. M. This view Torfæus endorses in his 'Vinlandia' (1705); he does not fail to remark, however, that, if so, the observation must be incorrect, determining, as it does, a latitude of 58° 26'."

Professor Storm adds in a note that, according to Mr. Geelmuyden's computation, this latitude would be 59° 6'. It may be observed that the latitude of Nachvak Bay is 59° 4', that of Saglek Bay 58° 43', and that of Hebron 58° 13'. Professor Storm then tells us that by an erroneous construction of an interpretation of *eykt* given in the old Ecclesiastical Law of the Grágás, Torfæus made it four o'clock in the afternoon, the day's length eight hours, and the resulting latitude 49°, and adds that "This new

exposition, thanks to the high repute enjoyed among scholars by the writings of Torfæus, was the one most generally received in the last century." The professor shows that the passage from the Grágás makes *eykt* 3.30 P. M. and the latitude 53°. He then points out that the theory adopted by Rafn, Finn Magnusson, and other advocates of a New England site for Leif's Booths, that *eykt* was the interval between 3.30 P. M. and 4.30 P. M., is untenable, concluding his observations upon this theory with the following passage (p. 310) :

"But a heavier blow to the theory comes from the refusal of lexicographers to accept the explanation of *eyktarstafr* as 4.30 P. M. and of *eykt* as the interval 3.30-4.30 P. M. Dr. Vigfusson and Dr. Finsen agree that *eykt* signifies a point of time (not an interval of time) in the afternoon, corresponding therefore with *eyktarstafr*, and they both cite numerous passages to show its identity with *Nón*, or at least some point of time hardly later than 3.30 P. M., thus making the latitude of Vinland 53° N."

He adds: "It stands to reason that, if such be the case, the passage in question is worthless as a guide, and some other meaning must be sought for," and then goes on to set forth an ingenious theory constructed by Mr. Geelmuyden under which he satisfies himself that the exact latitude of Vinland cannot be determined, but that it was not farther north than 49° 55'. Upon this theory, it may be remarked that the statement in the Saga was intended to convey a definite impression to the minds of the hearers or readers, and that although, owing to the fact that Leif Eriksson had no chronometer, his observation may not have been accurate enough to show the exact latitude in which it was taken, we may be sure that he knew the time of day pretty well, and that he was not many minutes astray. A calculation of the latitude based on Leif's observation might be incorrect to the extent of a degree, or possibly two, but not beyond that. According to Professor Storm's interpretation of the language of the Grágás and to the meaning given by the two distinguished lexicographers whom he cites, and having regard to the normal meaning of *eykt* given by Arngrimr Jónsson and by Torfæus in the text of his work on

Vinland, *eykt* must be held to mean a point of time in the afternoon not earlier than three and not later than half past three o'clock, and the place where the observation was taken could not have been farther north than 59° 6' or farther south than 53°. The former latitude is that of Nachvak, the latter that of Hawke Bay; and, if the writer's theory is correct, the site of Leif's Booths is to be sought between those two points on the coast of Labrador. Thus, although Leif's observation of the length of the day in Vinland does not enable us to decide with accuracy the latitude of his settlement, it goes to confirm the view taken by the writer of the whereabouts of Hóp. In the Hank's Book version of the Saga of Erik, we are told that, when Karlsefne was at the place which has been taken to be the mouth of George River in Ungava Bay, the explorers "concluded that the mountains of Hóp, and those which they had now found, formed one chain, and this appeared to be so because they were about an equal distance removed from Streamfirth in either direction." (Reever, p. 50.) In a version given by Mr. De Costa, this passage reads that they "looked upon the mountain range that was at Hóp, and that which they now found, as all one; and it also appeared to be equal length from Straumfiord to both places." Roughly speaking, the distance from George River to Cape Chidley is 110 miles; from Chidley to Saglek Bay—the northernmost probable equivalent for Straumfiord—about 143. Hóp should therefore be a place some 253 miles south of Saglek Bay, or about latitude 54° 30', and one where the Labrador coast range forms part of the landscape. Is there any place of which this can be said, and to which the description of Hóp given in the Saga applies? There are probably more such inlets than one. The entrance of Hamilton Inlet, Ivuktoke or Esquimaux Bay, as it is variously termed, is in latitude 54° 23' north, and therefore so far as regards its position in that respect is within the limits fairly indicated by Leif Eriksson's observation. Of this inlet Professor Hind says. (Explorations, II., p. 186) :

"It is by far the largest of the many inlets

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Anne Whitney's Statue of Leif Erikson, Commonwealth Avenue, Boston.

which indent that part of the coast. At its entrance it is upward of thirty miles in breadth, thence decreasing, until at the port of Rigolette, about fifty miles from the sea, it is reduced to about a mile in width, after which it again expands, and about ninety miles from the sea forms a magnificent salt-water lake, upwards of twenty miles in breadth and fully thirty in length. At the western extremity of the lake it again contracts to a narrow width for a short distance, above which it forms another lake about seven miles wide and twenty long, when the head of the inlet is reached."

The Newfoundland *Pilot*, already cited speaks of this inlet as (p. 4)—

"Easily distinguished by the islands at the entrance (at Hóp there were great bars or islands at the mouth of the river). It extends in a westerly direction thirty-five miles to the Narrows, the intervening space containing several islands, and then after contracting to a third of a mile in breadth, extends ninety miles farther west, expanding to eighteen miles in width at Lake Melville, and narrowing again at the head into which Hamilton River, a large stream, empties itself."

The Labrador coast range runs from Hamilton Inlet to Cape Chidley, drawing nearer to the Atlantic as it goes northward, and is plainly visible from the shores of Ungava Bay; so that if Hóp was at Hamilton Inlet, the mountain range which Thorfinn and his companions saw from about the mouth of George River was the same as that at Hóp. Upon this point it may perhaps be well to cite the authority of Dr. Bell.

"From what I have seen of the Labrador, and from what I have been able to learn through published accounts, Hudson Bay Company's officers, and the natives, and also judging from the indications afforded by the courses of the rivers and streams, the highest land of the peninsula lies near the coast all along, constituting, in fact, a regular range of mountains parallel to the Atlantic sea-board. In a general way, this range becomes progressively narrower from Hamilton Inlet to Cape Chidley." (to DD.)

And the Newfoundland *Pilot*, speaking of the voyage from Gray Strait near Cape Chidley to the mouth of Koksoak River in the southwestern part of Ungava Bay, says: "In ordinary weather the high land of the Labrador Shore may be seen towering above the scarcely discernible coast of Ungava Bay, while traversing the first sixty or seventy miles of the course."

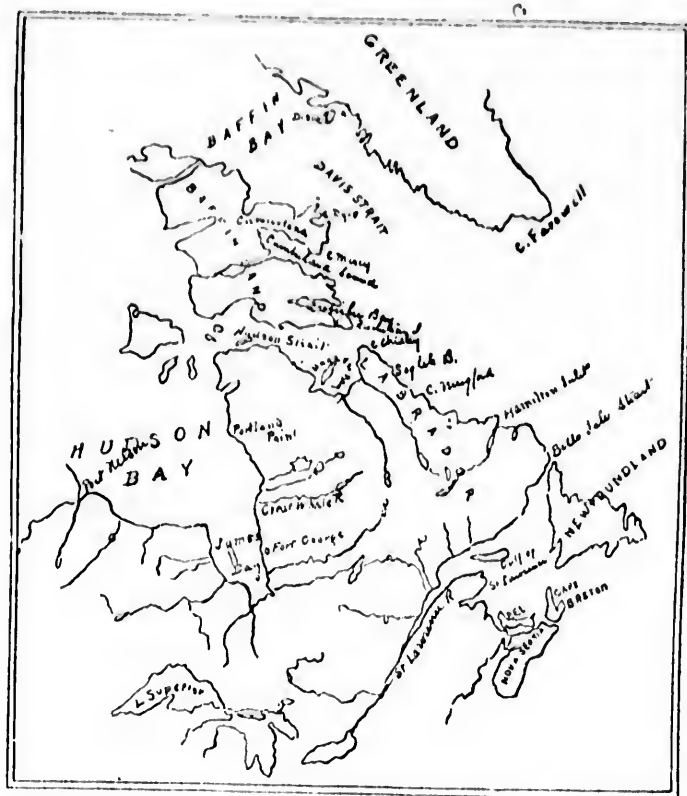
There is a statement made in the Flatey Book with respect to Leif Eriksen's homeward voyage, which, if reliable, is of more consequence than might at

first sight appear. We are told of him and his companions that, upon quitting Leif's Booths, "They sailed out to sea (in one version 'the open sea'), and had fair winds until they sighted Greenland and the fells below the glaciers." Upon looking at the map one will see that, to get from Hamilton Inlet or any other point on the Atlantic Coast of Labrador to Eriksfiord, the shortest and best course would be to sail directly out into the open sea, in an eastwardly and more or less northwardly direction. This course could not be adopted were Leif's Booths in Nova Scotia or New England.

The statement that in the neighborhood of Hóp, "every brook was full of fish," would be particularly true of Hamilton Inlet; and halibut have in recent years been taken on the Labrador coast in the manner described in the Saga, by digging pits in the sand at low tide in which the fish are found after the tide has risen and again fallen.

Apart from the apparent difference of climate, which can be satisfactorily dealt with, Hamilton Inlet or some fiord in its neighborhood would seem to meet all the requirements called for to identify it with Hóp; and this inlet is one which would more than any other attract the attention of an explorer, suggesting as it does a passage to another large body of salt water rather than a mere bay. In the account of Davis's second voyage we are told, in reference to this inlet (p. 28.): "We had a perfect hope of the passage, finding a mighty great sea passing between two lands west." . . . "The south land, to our judgment, being nothing but isles, we greatly desired to go into this sea, but the winde was directly against us. We ankered in four fathome fine sand. In this place is foule and fish, mighty store." Mr. Hind's description of the valley of the Hamilton or Ashwanipi River is calculated to strengthen the claim of the inlet to be regarded as a probable site of Leif's Booths. He says. (Explorations, Vol. 2, p. 139) :

"It is well timbered, and some of the trees are of large size; intermixed with the spruce is a considerable quantity of white birch, and a few poplars are also to be seen. A light, loamy soil is



also frequently to be found on the points of the river. There is a difference of twenty days in favor of this valley in the spring and fall of the year. This difference of climate is to be attributed, in a great degree, to its favorable aspect to the south and west, and also in some measure to the warmth of the (river) water coming from the westward. The head of Hamilton Inlet may be termed the garden of the Atlantic Coast of Labrador. At the Hudson Bay Company's post, Rigollette, there are about seven acres 'under crop'; and the farm boasts of twelve cows, a bull, some sheep, pigs, and hens."

If asked to indicate the particular place on Hamilton Inlet which might, without much help from imagination, be regarded as the probable site of Leif's Booths and of Karlsefne's southern settlement — the place "where a certain river flows out of a lake," where "a river flowed down from the land to the lake and so into the sea," and where there

were "great bars at the mouth of the river" — the writer would be tempted to point to the neighborhood of Northwest River House, a Hudson Bay Company's post at the northwestern angle of Lake Melville. This post is situated at the mouth of the Northwest River, in latitude $53^{\circ} 32'$ and longitude $60^{\circ} 10'$. The river, which is a large one, flows out of a lake of considerable size at a point distant about a mile from tide-water; and at its mouth are bars or banks formed by silt brought down by the stream.

Enough has been said to show that, if we assume Helluland to be identical with Cumberland Peninsula, Markland with some part of Baffin Land southward of Cumberland Sound, Kialarnes with Cape Chidley, Straumfjord with Saglek Bay or one of the adjoining fiords, and Hóp

with Hamilton Inlet or some bay in the neighborhood, we shall find the language of the Erik Saga, taken in its obvious and natural sense, fully and directly applicable. The single exception is the statement that no snow came at Hóp during the winter of Thorunn's stay; and this com-

paratively trifling objection can be easily dealt with. The establishing, from what is submitted as a fair and reasonable interpretation of the Saga narrative, of a strong *prima facie* case in favor of placing Vinland on Labrador, is felt to be enough to attempt in a magazine article.

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