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SOME OF THE EVIDENCES THAT NORTHMEN WERE IN MASSACHUSETTS IN PRE-COLUMBIAN DAYS.

BY

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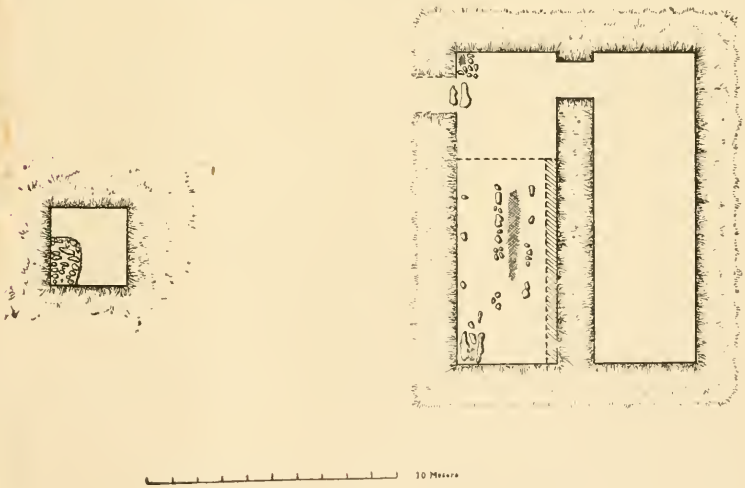
VINLAND AND ITS RUINS.

SOME OF THE EVIDENCES THAT NORTHMEN WERE IN MASSACHUSETTS IN PRE-COLUMBIAN DAYS.*

By CORNELIA HORSFORD.

THE evidences that Northmen were in Massachusetts in pre-Columbian days are drawn from two sources, geography and archæology. The archæological evidence is found by comparing certain ruins in Massachusetts with ruins of the Saga-time in Iceland, and also with the native and early European ruins on the



Plan of the House of Eric the Red in Iceland.

coast of North America. The geographical evidence is found by comparing the descriptions of the country called Vinland in Icelandic literature with the coast of North America.

* A paper read before the Viking Club of London on December 16, 1898; also before the Section of Anthropology of the American Association for the Advancement of Science at the Boston meeting, August, 1898.

The geographical data for this paper are taken from each and all of the three oldest manuscript versions of the story of Vinland, because they complement each other where the descriptions vary

An Indian Fireplace in Massachusetts.

in detail. These are called the Flat Island Book, Eric the Red's Saga, and Thorfinn Karlsefni's Saga.

If the coast of North America should repeat the same geographical features, it would obviously be impossible to determine the site of Vinland by geography alone. Let us see if this is so. It is stated in Eric the Red's Saga that Karlsefni's party, which consisted of one hundred and sixty men and their live stock in three vessels, after sailing southwest from Greenland for a number of days and seeing two new countries, came to a certain cape. "They cruised along the land and the land lay on the starboard. . . . There were there an open, harborless coast and long strands and sand banks. And they went in boats to the land and found there the keel of a ship, and they named it Keel Cape. And they gave a name to the strands and called them Wonder Strands, because they were long to sail by. Then the land became scored with bays, and they steered the ships to the bays.* They remained here for some time, but they had not yet seen the Vinland which Leif Erikson had found a few years before.

Thorhall started to seek for it "northward round Wonderstrand and westward off Keel Cape." Therefore we must first look for a cape, the trend of whose shore is north and south, with open water west of it, and beyond that again land. This cape must have a long, sandy, harborless coast, with sand banks on the east, and it must be broken up into bays farther to the south, and one of these bays must be large enough and deep enough for three vessels, one of which could carry at least fifty men across the

* The translations are from the Icelandic texts in The Finding of Wineland the Good, by Arthur Middleton Reeves. Henry Frowde, London.

Atlantic. The Icelandic word "örœfi" which is used in this text means "harborless," and is the descriptive local name of the convex, sandy, unsheltered coast of southern Iceland (Orœfa), the present Skaptafells district, from Stokksnes to Dyrhólaey. This gives a clear idea of what we ought to look for along the coast of North America.

The eastern coast of North America * shows us that, south of rock-bound Labrador, the only places north of New York where capes are to be found jutting northward from the land are northern Newfoundland, Cape Breton Island, the southern shores of the Gulf of St. Lawrence, Cape Ann, and Cape Cod.

There is no stretch of open, harborless, sandy coast from Cape Bauld to Cape Spear, with its steep, sterile, rocky shores.† There are two or three stretches of unbroken coast from three to five miles long, north and south of Canada Bay, northwest of Conception Bay, and northeast of Bonavista Bay, but these are not the shores of capes jutting to the north, with long strands and sand banks.

If we begin with Cape Breton and follow the coast northward we find no extensive stretch of harborless coast until we reach Island Point. From this point to Cape Smoke there is a comparatively unbroken coast about thirty miles in extent whose "headlands are composed of primary and metamorphic rocks, principally granite, with clay slate in nearly vertical strata, while sandstone, conglomerate, shale, limestone, and occasionally beds of gypsum and red and yellow marl occur on the intervening shores." ‡

Icelandic Fireplace in supposed Norse Ruin in Massachusetts.

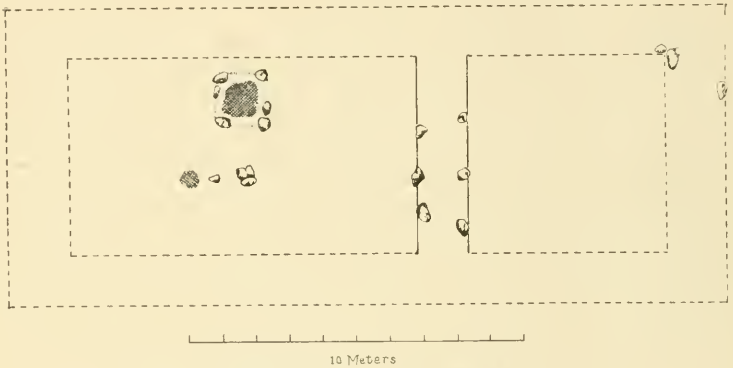
Here, then, there are not long strands and sand banks. Cape North is a headland of slate one thousand feet high.# Dr. Gustav Storm, of the University of Christiania, in his well-known book, *Studier over Vinlandsreiserne, etc.*, page 42, points out a resemblance between Cape Breton and Keel Cape, and states that the eastern shores of Cape Breton Island are "specially described as low-lying and sandy." According to the United States Hydrographic Office

* Chart of North Atlantic, No. 98. Norie & Wilson, London.

† Belle Isle to Boston, No. 102. Norie & Wilson, London.

‡ United States Hydrographic Office Report, No. 99, 1897, p. 315. # Ibid., p. 314.

Report, No. 99, page 289, the southeast coast of Cape Breton Island from Michaux Point to Cape Gabarus "is low and has a barren and rocky appearance, and the shore is broken into numerous lakes and ponds, protected from the sea by beaches of gravel and some small rocky islands and ledges. . . . From Cape Gabarus to Cape Breton, a distance of fifteen miles, the land is of moderate height and the shore broken into coves and small harbors." Between Louisburg and Cape Breton, eight miles beyond, "there are three small harbors, too intricate and rocky in their entrances to admit vessels of any burden," and Cape Breton itself is "low and rocky and covered with grassy moors." This is unlike the open, harborless coast with long strands and sand banks of the Sagas. Within the Gulf of St. Lawrence the capes which jut to the north are Cape St. George,* with rocky, precipitous cliffs six hundred feet above the sea; North Point,† on Prince Ed-



PLAN OF SUPPOSED NORSE RUIN IN MASSACHUSETTS.

ward Island, which is broken about five miles down the coast by Tignish River, and beyond that by the red sandstone cliff of Cape Kildare; Escuminiac Point,‡ at the entrance to Miramichi Bay, a broken coast with low sandstone cliffs; and Birch Point,# on Miscou Island, with a steep cliff of sandstone ten feet high.

Campobello is a rocky island, and Cape Ann is rocky and has no long, harborless coast.

Cape Cod || juts to the north with open water west of it, and beyond that again land. It has also a long, harborless coast on the east, with strands and sand banks, and is scored with bays toward the south.

Cape Cod, then, is the only cape north of Sandy Hook which

* United States Hydrographic Office Report, No. 100, 1897, p. 70.
† Ibid., pp. 130, 152. ‡ Ibid., p. 157. # Ibid., p. 173.
|| United States Coast and Geodetic Survey, General Chart of the Coast, No. VII.

corresponds to the description in the Saga, and near here we should look for Vinland, leaving the southern shores until later.

Vinland, which was discovered by Leif Erikson, is only described as *Vinland* in the Flat Island Book. This account states that Leif Erikson's party "came to a certain island which lay north of the land." That Leif Erikson should have thought that Cape Cod was an island is obvious, because it is impossible from the cape

East Wall of a supposed Norse Ruin in Massachusetts, showing Layers of Turf between the Stones.

to see the southern shore of Massachusetts Bay twenty miles away. There is no need to explain why he also believed it to lie north of the land, as no one and final answer can be given, although several can be easily suggested; that water and land again lay to the west is clearly stated in all three accounts.

Afterward "they sailed into that sound which lay between the island and the promontory which jutted northward from the land; they steered in westward past the promontory. There was much

shallow water at ebb tide, and then their ship stood up and then it was far to look to the sea from the ship." Across the water which lies between Cape Cod and the mainland is Rocky Point, a high and therefore noticeable promontory jutting northward from the land. Past this one can only continue westering to the north, and thence we must now look along the land to find the place where, in the words of the Flat Island Book, "a certain

West Wall of a supposed Norse Ruin in Massachusetts, showing Layers of Turf between the Stones.

river flowed out of a certain lake," having, as was said before, great shallows at its mouth at ebb tide, whence it was far to look to the ocean.

Following round the inner coast of Cape Cod, we pass Plymouth and on to Boston before we find in the Charles River and Boston Back Bay a river flowing through a lake into the sea, where great shallows at its mouth are a conspicuous feature and it is far to look to the ocean.

At this point we may add one more feature to the description of Keel Cape—that it appears to be an island when approached from the north. Now we can continue our search down the North Atlantic coast, noting that Sandy Hook is not scored with bays at the south, and that Cape Henlopen and Cape Henry could not have been mistaken for islands.*

There is one event described in all three versions of the Vinland story—the battle with the natives. According to the Flat Island Book, this battle took place in Vinland; according to the other two Sagas, Vinland was supposed to be north of Keel Cape. But in these Sagas it is said that this battle took place *south* of Keel Cape, where Karlsefni had found a river flowing through a lake into the sea.

It was this word south which led the Danish archæologist Carl Christian Rafn to think that Vinland was in Rhode Island. Although there is no land south of Cape Cod (with the exception of Nantucket Island) between Cape Cod and Santo Domingo, it is only fair to look once more at Mount Hope Bay † (Rafn's Vinland) to see whether it really corresponds to the description before us. The Taunton River flows through Mount Hope Bay to the sea, but there are no shallows here, and the mouth of the river looks directly out, southward and not eastward, to the open ocean. In Boston Harbor, moreover, are great tongues of land and islands such as are described in Eric the Red's Saga. There is perhaps cause for comment in the use of the word "fjöll," fells or mountains (according to Vigfusson ‡), applied to the hills about Boston, of which the highest, "Blue Hill," is seven hundred and ten feet high. If "fells" is a correct translation, it would be unobjectionable.

One morning Karlsefni saw the natives in their skin boats rowing toward his house, from the south, past a promontory. It is not difficult to find the only promontory past which canoes could have come from the south between the mouth of the river and Watertown, the head of navigation. Here, then, Leif Erikson and Thorfinn Karlsefni should have built their houses, if this history be true, because this place corresponds with the description of Vinland, and also because we can find no other place on the coast like it.

Having found what appears to be the site of Thorfinn Karlsefni's houses, it is well to inquire next what the characteristic features of the Norse houses of the Saga-time were, and what traces one might hope to find after nearly nine hundred years.

* Chart of North Atlantic, No. 98. Norie & Wilson, London.

† United States Coast and Geodetic Survey Chart, No. 13. Cuttyhunk to Block Island.

‡ Icelandic-English Dictionary. R. Cleasby. Enlarged and completed by Gudbrand Vigfusson.

Icelandic homesteads of that period usually consisted of a main house, composed of three or four apartments and one or two outhouses, built on the surface of the ground.

The walls were one and a half metres thick, and from one to one and a half metres high, built of alternate layers of turf and

Ancient Wall in Iceland, showing Layers of Turf between the Stones.

stones on the inside and on the outside, the space between being filled in with earth. Often, however, the walls were built entirely of turf and earth, or with only disconnected rows of stones at the base. Wood also was sometimes used. It is stated in Thorfinn Karlsefni's Saga that some of the trees in Vinland were "so large they were laid in a house."

A long, narrow fireplace usually extended through the middle of the principal room, and an essential feature was the cooking fireplace, which was about one metre square. These were either paved or surrounded by upright stones. The plan is of the ruin of the house of Eric the Red in Haukadalr, Iceland. It shows the different forms of fireplace, and that the walls, which were built of turf, were one and a half metres thick. Outhouses were often dug into the hillside, and were sometimes walled up on the inside with stone and turf. Ruins of such old settlements in Iceland are usually low, grass-grown ridges and hollows.

When Professor Horsford first visited the site which his study

of maps and literature had led him to believe was Vinland, he found a few hollows in the hillside and also some broad, low ridges on the level ground, indicating that a building about twenty metres long by five metres broad had once stood there. There was also a mound some distance away which has since proved to be of modern construction.

No digging was done here until after Professor Horsford's death, with the exception of a few trenches across the supposed site of Leif Erikson's house on the other side of the creek. In 1896, during a visit of Dr. Valtyr Gudmundsson and Mr. Thorsteinn Erlingsson, of Copenhagen and Iceland, extensive excavations were made, leaving practically nothing unexamined at this site.

Three kinds of earth were revealed. The upper layer was of black loam from thirty to forty centimetres deep: below this was a yellow soil of sand and clay thirty centimetres deep; and below that again the sand and gravel which had remained undisturbed since the close of the Glacial epoch.

Old Wall in a Cellar in Fort William Henry, Maine.

The ruins were at the junction of the black and yellow earth. Throughout the black loam to the bottom, wherever we dug, within or away from the ruins, were scattered fragments of china, glass, glazed pottery, nails, pipestems, broken bricks, etc., all belonging to the period of the occupation of this region by the English. None of these were found in places where their presence would show that they belonged to or preceded these ruins. In the paved pathway, which will be described later, a few pieces of brick lie between the stones, but not deeper than similar fragments of brick were found in the undisturbed earth near by, apparently trodden in by the cattle which have been pastured there for years. There were also objects of aboriginal manufacture, such as stone implements, pottery, pieces of flint, etc. Occasionally, at different levels, remains of fires were found, some of which were merely thin layers of charcoal and ashes. There were, however, two well-built fireplaces, in good condition, entirely unlike each other. One of these

was an Indian clambake, neatly paved and piled with ashes and unopened clam shells. This lay sixty-three centimetres below the sod. The photograph is not of this fireplace, but is a good example of all Indian fireplaces or clambakes in Massachusetts.

The second fireplace, which was about one metre square, surrounded by upright stones at the four corners and filled with oak charcoal, but no ashes, was the distinctive feature of this ruin, and resembled the cooking fireplaces of the Icelanders. The absence of ashes has been accounted for by absorption in the soft clay soil. Ashes often disappear in this way, but can be detected with acids.

Old Wall at Fort William Henry, Maine.

Although the outline of the walls of the long house can only be suggested, the few stones which were found at the base of the old walls were placed about a metre and a half apart, as in the walls of the Saga-time. This, so far as is known, is peculiar to that period and race. Iroquois long houses were constructed for communal use, and were usually from one hundred to three hundred feet long. The chief traces left are fire rows and kitchen middens. They are not known to have used stone foundations, nor to have made any attempt at regularity of outline. The drawing shows the method of construction of these long houses, which were built only by the Indians of the Iroquois tribe.

Depressions which appeared to be the sites of old huts were in the hillside back of the terrace on which the long house stood, but the roadway in front had apparently destroyed all but one of these, and had also carried away the front wall of this.

This hut was four metres across the front, and may have been five metres deep. When the sod, stones, and the clearings, which had been thrown in from the cultivated field above, were all removed, the remains of two side walls were found, supported and protected by the upper portions of these same walls which had slipped down from above and lay close to them, forming a compact mass of earth and stones. None of the stones in this wall were

in contact with each other, being separated by two or three inches of dark earth such as results from the decay of vegetable matter. There was no fireplace. The manner of constructing these walls was the counterpart of Icelandic work. I shall now show you how this differs from post-Columbian cellars.

This is a photograph of a ruin in the Thjór's River Valley, in Iceland. It shows the sod between the stones closely packed but

Supposed Norse Pathway in Massachusetts.

distinct. The stones in our early English and French cellars practically touch each other, as in the old cellar in Fort William Henry, in Maine. Sometimes broken stones fill the interstices, as in another example of stonework at Fort William Henry. Mortar has been used here more or less since the beginning of the seventeenth century.

Although European or post-Columbian walls and cellars differ considerably among themselves, it is within certain limits. Post-

Southern Turn of supposed Norse Pathway.

Columbian walls, or foundation walls when built on the surface of the ground, were practically homogeneous in character, the French only attaining to one metre in thickness, whereas Icelandic walls were disposed in three distinct parts, the inner and outer sides being constructed in layers and the space between being filled in with closely packed earth, while they were never less than a metre and a half thick.

A Pavement at Fort William Henry, Maine.

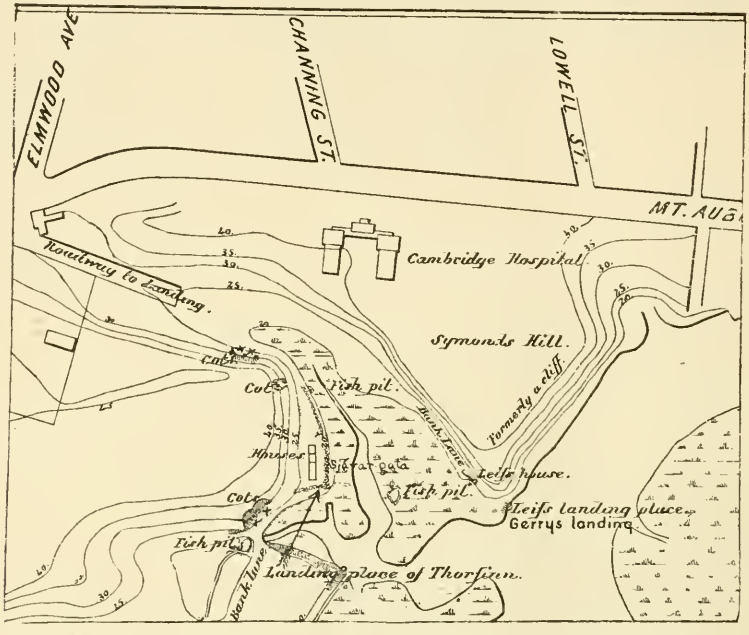
Icelandic outhouses when dug into a hillside dispensed with the triple wall at the back and on the sides, and thus when stone-faced partially resemble our cellars. But even then they still retain one characteristic feature, in their alternate layers of turf and stone.

While this hut was being dug out, our attention was called to stones protruding through the turf a short distance away and nearer to the water. When the earth was cleared away, it proved to be a rude stone-laid pathway leading along the margin of the old creek to the river. Here at the landing place a similar pathway branched away in another direction, stopping suddenly a few metres south of the supposed house of Thorfinn Karlsefni. This pathway is called in Iceland a *sjávargata*, or path to the sea. Ancient pavings have been found at Fort William Henry, near Pemaquid, Maine. They are, however, similar to many street pavements still to be found in our Eastern cities. There is also a remarkable paved gutter at the Lewis Farm, in

A Pavement at Pemaquid, Maine.

Maine, which has long interested historians. But none of these resemble the *sjávar-gata* in its peculiar construction, especially where it broadens and divides with a wide margin of pebbles on one side and small heaps of stones on the other.

This map was made for Professor Horsford about ten years ago. It shows the site of the long house, in which the Icelandic fireplace was found, and the cot, in which Icelandic walls were found. The paved path ran along the shore in front. Professor Horsford fixed Thorfinn's landing place a short distance south of this, on solid ground. Geologists are unable to say how long ago



Map of the supposed Norse Ruin in Cambridge, Massachusetts.

the salt marshes were formed. They are on Winthrop's map of 1634, but the *sjávar-gata* could hardly have been accessible as a landing place after their formation.

In summary, it may be said that at the only point of land on the coast of North America which we have found to correspond with the description of the site of Thorfinn Karlsefni's houses, ruins have been dug out which bear peculiar features characteristic of the period in Iceland known as the Saga-time, and differing in certain essential features from the handiwork of all the native races of North America, and, as far as is known at present, from all other races in Europe or in America in post-Columbian days.

Extracts from the Reports of Dr. Gudmundsson and Mr. Erlingsson.

The following extracts, from reports by Dr. Gudmundsson and Mr. Erlingsson, refer to the ruins described in the preceding paper. The plan for these researches was first to compare the aforesaid ruins with the work of the native races supposed to have inhabited or visited these shores, next with that of the Norsemen of the eleventh century, and later, if necessary, with the earliest English, French, Spanish, and Dutch ruins on these shores. Dr. Gudmundsson and Mr. Erlingsson noted the points of resemblance between these and Icelandic ruins, and in their reports by request wrote everything they could think of in opposition to, as well as in favor of, their being of Norse origin.

When these gentlemen left Cambridge the characteristic features of the early post-Columbian ruins on this coast had not been ascertained, and these researches were not finished satisfactorily until a year and a half after the Icelanders returned to Europe.

From Dr. Gudmundsson's Report.

The next place into which we dug was a depression or hollow in the hillside in a northerly direction from the above-mentioned place. Here we found unquestionable remains of a house which had been dug into the hillside, with walls constructed of stones, and layers of earth between the single rows of stones. The foundation and the lower parts of the two side walls were solid and well preserved, but the whole back wall, with the exception of a single row (the foundation), had fallen down. The stones from this and the upper parts of the side walls covered the whole bottom, so that they at the first glance seemed to form a pavement. When carefully examined, it was evident, however, that most of the stones which covered the bottom belonged to the walls, though some might have rolled down from the hill above the house. Thus it could clearly be seen how some of the stones had fallen down from the walls and some were just sliding down, without having as yet reached to the bottom, as some stones underneath had hindered them from gliding farther. The front wall of the house was wanting, and must either have been of wood or—which seems most likely—have been spoiled when the road which runs close past the house was made. When the bottom was cleared of the stones which had fallen in it proved to consist of a level black floor.

The construction and situation of this house are *quite* Scandinavian, built in the same way as houses in Iceland and Greenland. I would therefore not have had the least hesitation to declare it to be a ruin of a house built by Scandinavians in the pre-Columbian period if between and under the stones which covered the bottom we had not found some pieces of glazed pottery and bricks, of which some small pieces were found trodden down even into the floor itself. This seems to indicate that the house must be post-Columbian, or at least have been occupied by the first English or French colonists. As in the meantime several American scholars, with whom I have had an opportunity to discuss this matter, positively declare that the post-Columbian colonists never would have built such walls of stones without mortar, and it must be regarded as *quite* certain that Indian people could not have built it, there seems

to be no other explanation possible than that this ruin must be Scandinavian, and, having been found by some of the first post-Columbian colonists (e. g., some fishermen), had been repaired and occupied by them for a shorter or longer time. If it can be proved that such a building as this could not have been built by the post-Columbian colonists nor by Indians, it can hardly be anything else than Scandinavian. This, however, must be left to American scholars, who have sufficient knowledge in these matters. But so long as this is not proved, the pieces of pottery and bricks which were found in it rather seem to speak for its post-Columbian origin, as those pieces must have been there when the house fell down, and such a house as this built in the beginning of the eleventh century could not have stood five hundred years before its roof and the upper parts of the walls fell down.

On the other side of the road we found an end of an old path paved with small stones, running from the house in the hillside along the edge of the old river bank down to a kind of promontory which in olden time, when the water stood much higher than it now does, seems to have served as a landing place. In the middle of this path, which was from about six to ten inches under the surface, was a hollow as trodden down by the feet of men and (perhaps) horses. This path is very like Icelandic paths, such as may still be found in many places in Iceland. But as we in some places in this path found some bricks between the stones which formed its pavement, it must be regarded as doubtful whether it is Scandinavian. The bricks seem rather to speak for a post-Columbian origin, though the whole path is so primitive that it hardly can be suggested that so advanced a people as the first post-Columbian colonists should have made such a path. To settle the question whether it could belong to those colonists must be left to American scholars. This path seems, at any rate, to have been made by the same people who built the house in the hillside, so either both of them must be regarded as post-Columbian or they both are Scandinavian. Another path runs from this landing place in a westerly direction along the old river bank, where it stops very abruptly on a certain spot a very short distance east of the supposed "Thorfinn's house." As I could not find any other reason for its stopping on this spot than that near it stood a building, I examined the river bank beside it, and here I found the earth, about eight inches under the surface, mixed with charcoal, which could indicate that some refuse from a house had been thrown there. This seems to lead to the conclusion that there at the end of this path really has stood a building, of which we could not now expect to find any traces, or even a building constructed of turf only (turf walls), which also might have wholly disappeared, as earth walls on an elevated ground like this perhaps might have blown away.

The result of these researches is briefly, according to my opinion, this: As far as concerns the construction, both the house in the hillside and the two paths, or the two branches of the path, could be of Scandinavian origin, but I am not so well acquainted with the life and customs of the first post-Columbian colonists as to be able to decide whether they could not have been made by them. This, therefore, must be left to American scholars.

Very respectfully yours,

VALTYR GUDMUNDSSON.

CAMBRIDGE, MASS., *July 16, 1896.*

From Mr. Erlingsson's Report.

It is not uncommon in Iceland that houses, especially small outhouses, are dug into small hills, hillsides, or sloping ground, just as this house is. It is, in fact, built very like what I have seen in outhouses in many places in Iceland, and what is left of the walls here nobody could distinguish from Icelandic walls. The size and the whole form is also very like an outhouse, but as most frequently in outhouses either all the four walls are made of stones or none of them, it would seem strange that one of the walls here is completely wanting. But those stones which were used in it could have been used in the road which has been made past the house, or, besides, it is possible that the front wall of the house has been a wooden one, and, although this is very rare in outhouses certainly, yet it must be taken into consideration that here it is much easier to procure wood than in Iceland. The whole form, the method, and the condition of the house itself seemed like nothing else than that it was built by Icelandic hands, although some of the stones seem to be rather small, but, as pieces of pottery and bricks have been found beneath the stones which had fallen down from the walls and on the floor itself, it seems to prove sufficiently that the house can not belong to the old Icelandic period; but as nobody has expected such a house here, the discovery is very remarkable.

This path is so like paths in Iceland, for which there have been gathered stones and which later on have been trodden down by the feet of horses and men, that I would not have hesitated to declare that it might be Scandinavian if in it there had not been found bricks beside the other stones, which seems to indicate that the path must belong to the same period as the house which was dug into the hill. This discovery must therefore, too, be regarded as very remarkable. . . .

Respectfully,

THORSTEINN ERLINGSSON.

CAMBRIDGE, MASS., *July 12, 1896.*