BRUNO BERSON

A CONTRIBUTION TO THE STUDY OF THE MEDIEVAL ICELANDIC FARM: THE BYRES.

Since the end of the nineteenth century numerous farm sites dating from the middle ages have been excavated in Iceland. More than 50 have now been partially or fully excavated (Margrét Hermanns-Auðardóttir 1989). The focus has always been primarily on the dwellings, and while a number of animal shelters have been excavated their characteristics, development and significance remains poorly understood. This paper gives an overview of archaeologically investigated medieval byres in Iceland, discussing the nature and limitations of the evidence, the principal characteristics of the buildings and their value for research into medieval Icelandic society and economy.

Bruno Berson, 60 rue Jules Charpentier, 37000 TOURS, France
(Email: bbno@wanadoo.fr)
Keywords: byres, mediavel Iceland, animal husbandry

The sites

The first excavation of a byre took place in Lundur in Borgarfjörður in 1884. The antiquarian Sigurður Vigfússon took interest in the ruin when he heard local traditions to the effect that it was a heathen temple. He carried out a hasty excavation and became convinced that he had found the ruins of a Viking age temple (Sigurður Vigfússon 1885). More than fifty years later, in 1939, a Scandinavian archaeological expedition investigated a number of sites in Þjórsárdalur and Borgarfjörður. The site at Lundur was chosen for re-excavation, led by the Finnish archaeologist Jouko Voionmaa (1943). Voionmaa came to the conclusion after carefully excavating the structure that it was not a temple but an ordinary farmstead dwelling. Based on the excavation of a similar structure at Gröf, which clearly was a byre with attached barn, Kristján Eldjárn proposed in 1964 that the structure at Lundur was neither a temple nor a dwelling, but a byre connected to a barn (Kristján Eldjárn 1964). This identification has since been generally accepted.

The structure was built of stone-lined turf walls and divided into four rooms. The byre was in the south part of the building, measuring 9 x 3,5 m

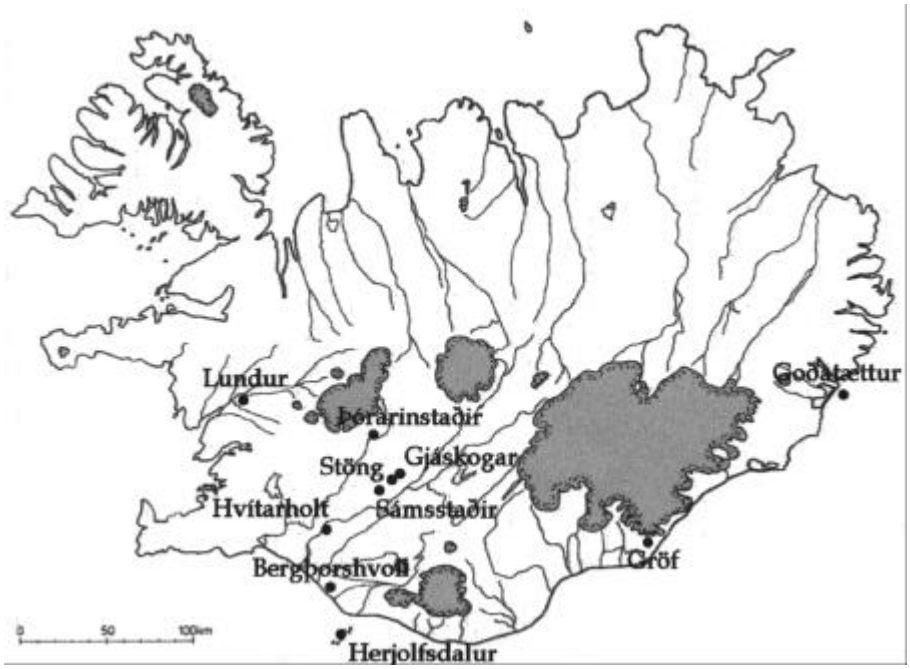

Fig. 1: Sites discussed in the text. (Bruno Berson)

on the inside. It had three aisles, the central one being fully paved from the north to the south and sloping toward a doorway on the south end gable. The stalls were along the walls on each side of the paving, but divisions between individual stalls were not clearly visible. At the northern end the byre was divided from a smaller room by a turf and stone wall. This room measured 3,8 x 2,2 m, opening into the barn to the north. The barn floor was sunken, cut directly into the sloping hillside. It measured 9,75 x 3 m on the inside. It had two rows of post-holes dividing it into three aisles. In contrast to the byre the floor-surface in the barn was flat. An additional room was to the side of the small central room, through which a second entrance lay into the building. The whole structure was built on a slope with a marked sloping of the floor from the north end of the small room in the middle to the doorway on the south end of the byre. This doorway opened on to a slope dropping steeply from the gable-end of the building. The sloping of the floor in the byre, the location of the building on the top of a steep hill-side overlooking the farm-site proper, the doorway on the gable end and the lack of a fire place – and the very small number of objects retrieved – all support the interpretation of this building as a byre with an attached barn. The dating of this site as medieval is based on its

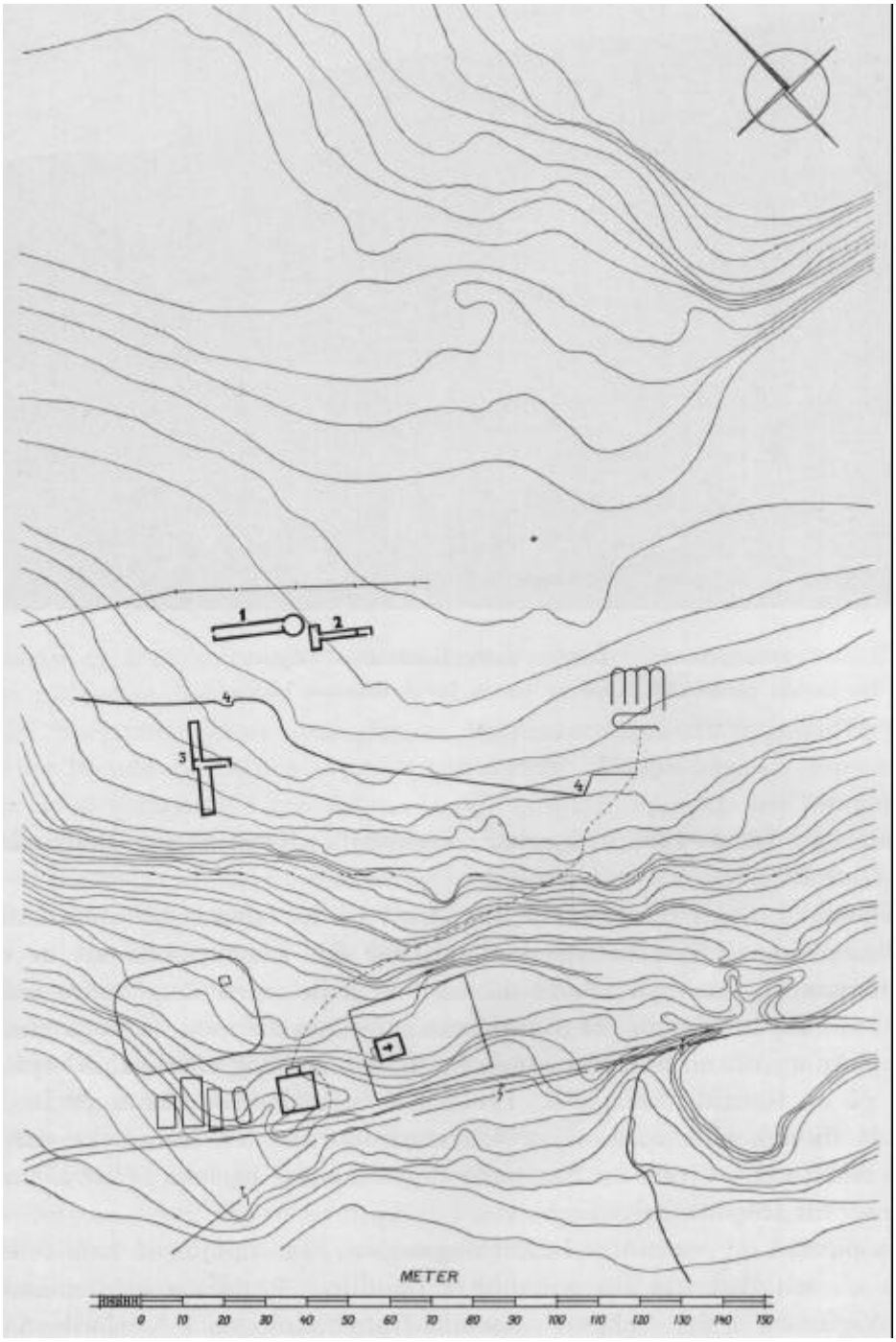

Fig. 2: Layout of the farm at Lundur. After Voionmaa, 1939.

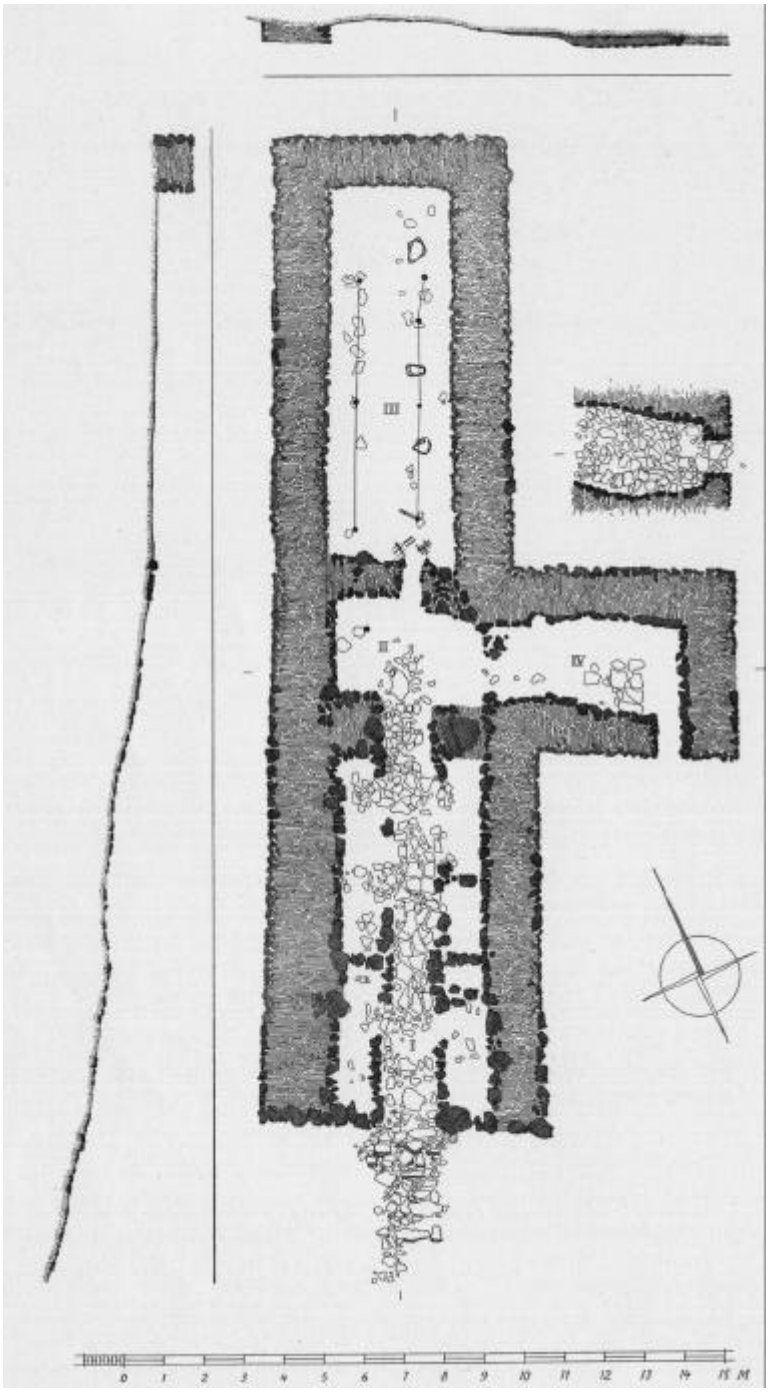

Fig.3: The byre and the barn built together at Lundur. After Voionmaa, 1939.

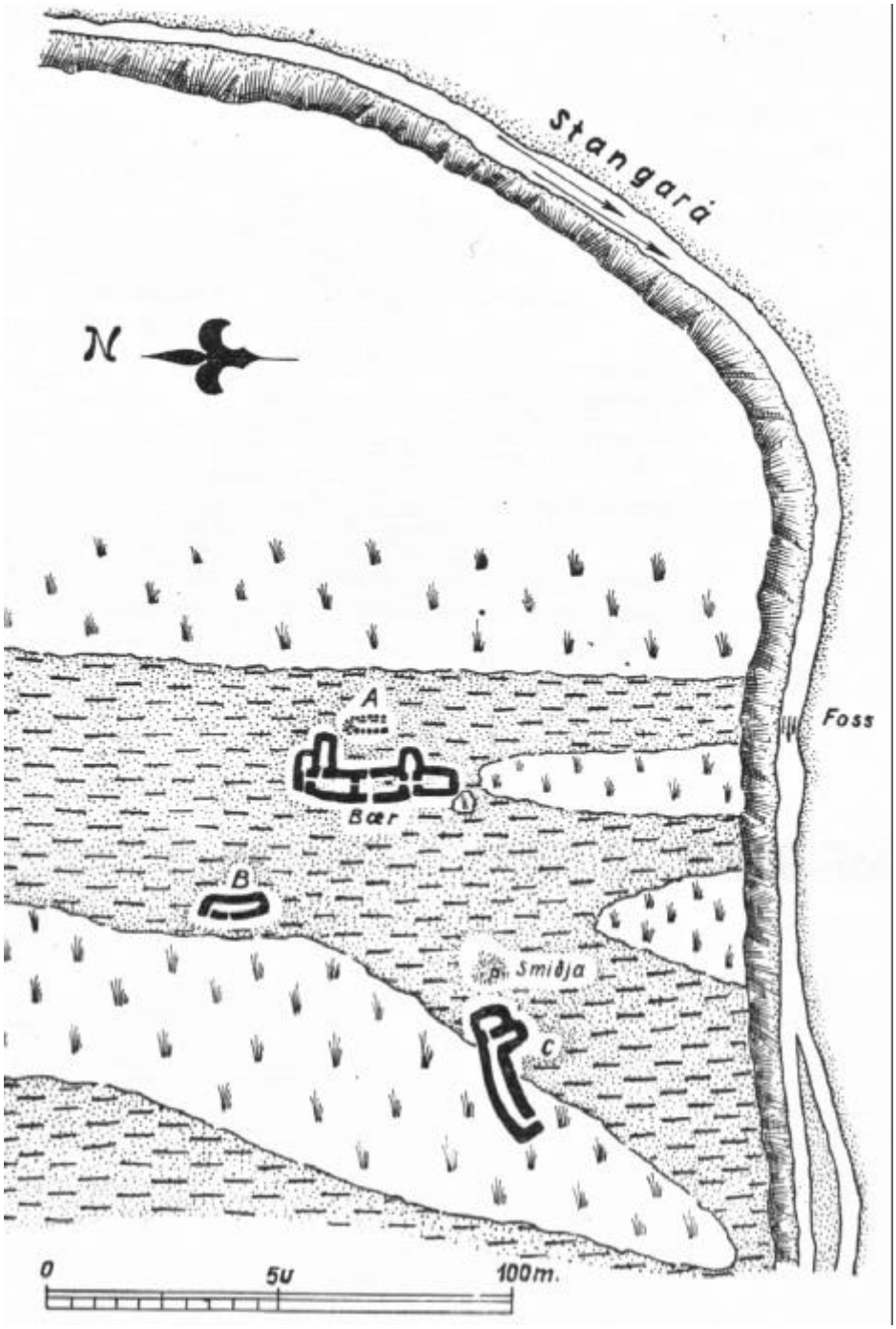

Fig. 4: Layout of the farm at Þórarinstaðir. After Eldjárn 1949.

shape, in particular by analogy with the 14th century farm of Gröf, but no other dating evidence has been retreived.

In 1945 Kristján Eldjárn carried out an excavation at Þórarinsstaðir in Hrunamannaafrétt (Kristján Eldjárn 1949). This site, which is in the highland margins, some 300 m above sea level, was first described in 1895 and was partly excavated by Daniel Bruun in 1897 (Bruun 1928). Unusually for its time the 1945 excavation revealed not only the dwelling complex but also several detached animal shelters and a smithy. It appeared that the dwelling had been covered by a thick tephra layer before the roofs collapsed into the individual rooms and this was considered to account for the remarkable preservation of the ruins. The dwelling complex is unique among medieval farmsteads in Iceland in that a byre and a possible barn are connected directly to and accessed from the inside of the complex.

The byre measured 8 x 3,80 m on the inside and was divided into three aisles. The central aisle was paved and extended from a doorway leading to a hall in the south to another doorway leading to an entranceway and a small cell at the north end of the complex. The rows of stalls were clearly visible, demarcated by large upright slabs. On the western side 9 stalls were identified but only 5 on the eastern side where a doorway lead to a barn measuring 6,2 x 2,2 m. In the field surrounding the dwelling remains of three buildings identified as sheep-sheds were excavated. One was badly eroded, situated at the back of the dwelling, at least 4 m long and 1,25 m wide on the inside. Slabs which had made up a manger along the eastern long-wall were observed. A second sheep shed was 20 m northwest of the dwelling complex, also orientated north-south. It measured 10,5 x 2,4 m on the inside and had slightly curved long walls. Remains of mangers made of vertical flat slabs were found along both walls. The third sheep shed was by far the largest, measuring 22 m in length. It was divided into three rooms, an 18x2 m sheep stall, another 4,5x1,3 m stall and a 4,75x2,1 m barn. The stalls both had mangers made of slabs along one side. Kristján Eldjárn calculated that some 160 sheep could have been sheltered in these buildings. Þórarinsstaðir is the only site where medieval sheep sheds have been excavated in Iceland. The location of the farm in the snow-heavy Icelandic highlands will certainly have forced the farmer to build shelters for all his livestock, but the 1945 excavation was also unusually thorough in investigating all visible structures at the site. The ruins were full of a tephra layer, which was later identified as the ash from the eruption of Hekla in 1104, suggesting an 11th century date for these ruins. While the largest sheep-shed seemed to have been enlarged at least twice, the structures did not otherwise show signs of repair

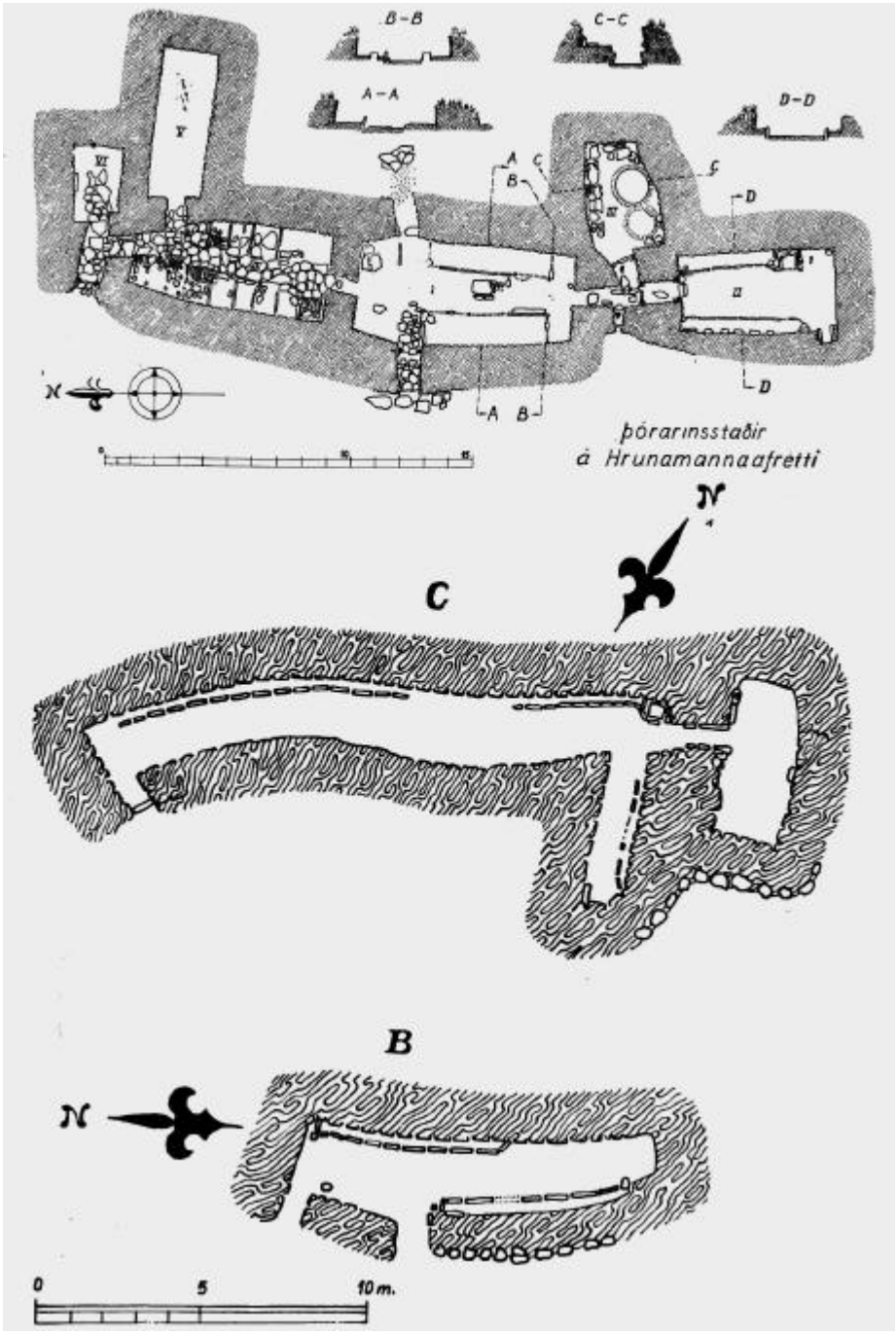

Fig. 5: Plan of the centralised farm and the two sheepsheds. After Eldjárn, 1949.

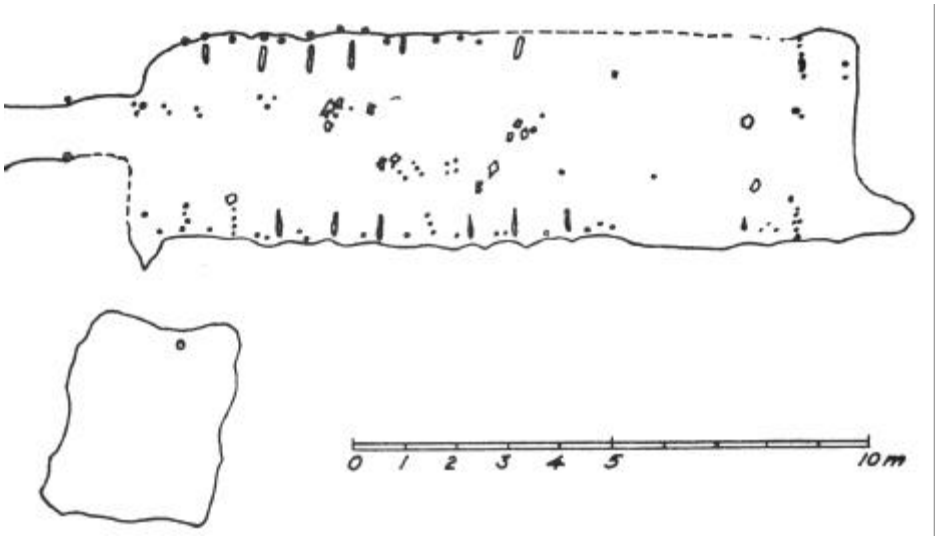

Fig. 6: Plan of the byre Bergþórshvoll. After Eldjárn K. & Gestsson, G., 1951.

or rebuilding and the excavator concluded that the site had only been occupied for a matter of decades.

The farm Bergþórshvoll has become famous as the scene of the burning of Njáll and his family described in Njáls saga. According to the saga's chronology the farm was destroyed by fire in 1011. Njáls saga has long been considered the masterpiece of medieval Icelandic literature and it was interest in the saga which led to the excavation of the farm mound in 1927-1928. The results of the excavation were not published until 1952 and then only in summary form. The original excavation had not revealed any traces of fire and in 1951 an additional trench was added to the west of the main farm mound. The mound is situated on a small rise in an otherwise flat marshland cloase to the south-coast. The 1951 trench revealed much less building remains than the larger area excavated in the 1920s. Underneath a succession of three floor-layers interpreted as dwellings a floor bearing traces of fire was found. This structure was identified as a byre. It was divided into three aisles by wooden posts. The central aisle was not paved but was lower than the side-aisles. Along the sides remains of stall-divisions were found in the form of wooden stakes and postholes. Some of the stall divisions were indicated by depressions made by rows of wooden stakes. Like other buildings at Bergþórshvoll this one was built entirely of turf, but the farm is situated far away from outcrops of stone. An entranceway was on the western gable end and a possible doorway

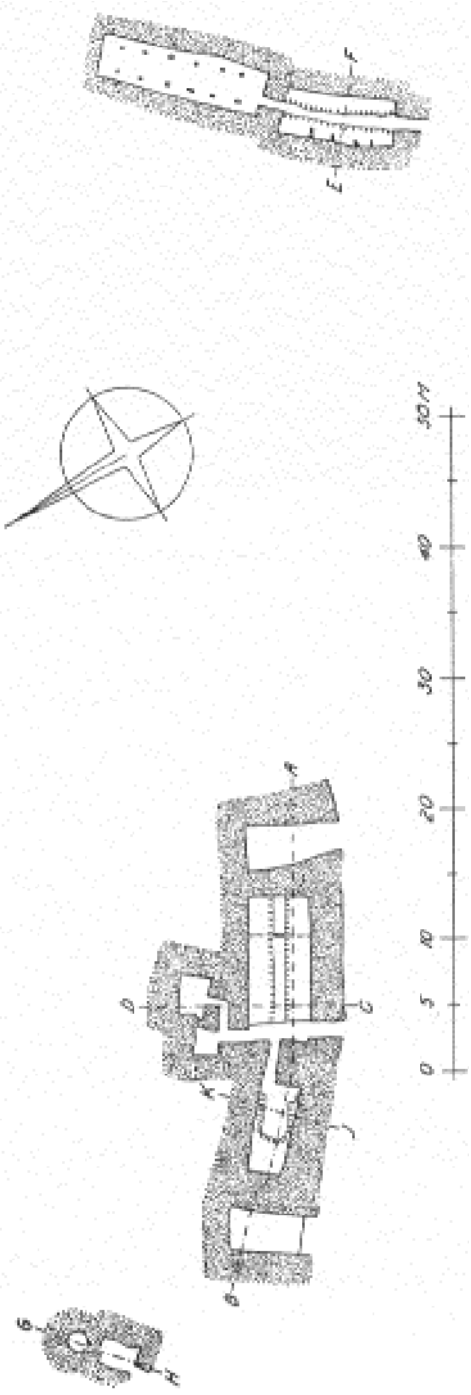

Fig. 7: Plan of the farm at Gröf. After Gestsson, 1959.

leading to other, as yet unexcavated buildings, could also be seen on the eastern gable end. The roof supports and some of the divisions between the stalls were made of birch wood. The eastern part of the floor was level but the western part sloped considerably so that the entrance on the western gable was 0,8 m lower than the eastern part of the floor. The structure measured 14,2 x 4,2 m and was estimated to have sheltered about 30 heads of cattle. An adjacent floor was excavated to the south of the byre, masuring 4x3,3 m and this was interpreted as a barn which seems to have had a separate entrance (Kristján Eldjárn & Gísli Gestsson 1952).

A few years after the Bergþórshvoll excavation Gísli Gestsson started archaeological investigations at Gröf in Öræfi (Gísli Gestsson 1959). This region had been densely settled in the Middle Ages but was devastated by an eruption in Öræfajökull in 1362, leaving only a handful of farms. One of the farms which were abandoned completely as a result of the eruption was Gröf. The ruins were buried under a thick layer of pumice and were remarkably well preserved. Three buildings were excavated, a dwelling complex with 6 rooms, a kiln-house and a byre with barn situated some 50 m east of the dwelling.

The byre and the barn were built together on a northeast-southwest axis. The entrance was on the south end gable and lead to the byre. This was divided into three aisles and along the west wall 5 stalls were still visible, divided by 4 upright slabs. No stall divisions could be seen along the eastern wall. The byre measured 8 x 3,70 m on the inside. The aisle in the centre part was fully paved and lead from the entranceway to the barn in the northern part of the structure. The barn was also divided into three aisles by two parallel rows of postpads. It measured 12,6 x 3,8 m on the inside. The floor of the structure sloped some 2 m from the northern end of the barn to the entrance of the byre.

The site of Gjáskógar in Þjórsárdalur was excavated in 1949, 1952 and 1960 by Kristján Eldjárn (Kristján Eldjárn 1961). It is situated in the upper reaches of the valley at 300 m above the sea level – high above the main settlement area on the valley floor. Like Þórarinsstaðir, Gjáskógar was a real mountain farm which must have been snow-bound for many months during the winter.

The ruins were in a good state of preservation and the excavation brought to light a dwelling complex, a part of the homefield and a byre. A separate barn was not found. The dwelling complex is of the same type as commonly found at medieval farms in Þjórsárdalur. Underneath the farmhouse traces of smelting debris were found, suggesting that this was originally an ironworking site. The byre was situated 10 m to the east of the dwelling complex. Its inside measure-

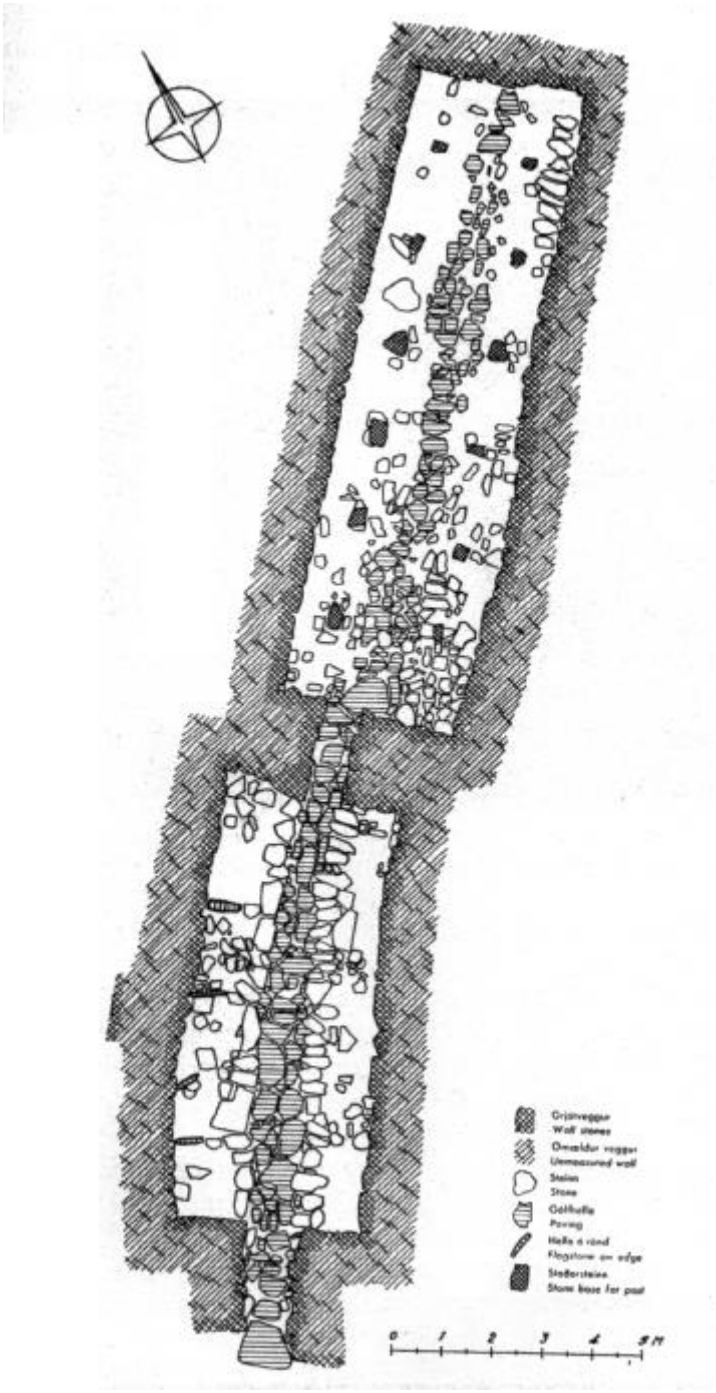

Fig. 8: Plan of the byre and the barn at Gröf. After Gestsson, 1959.

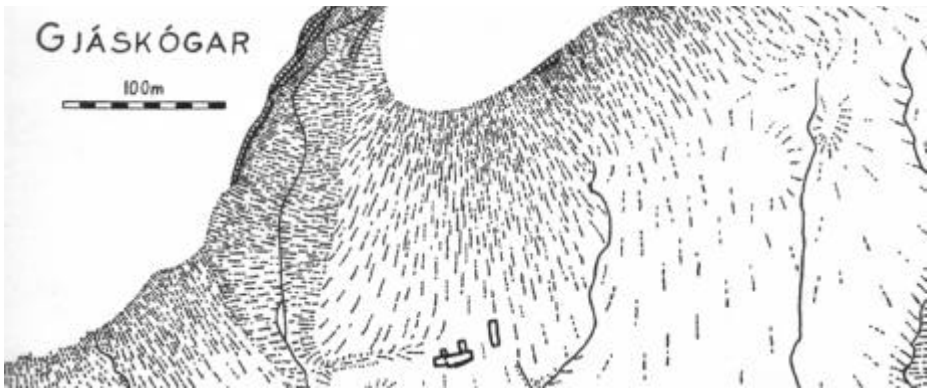

Fig. 9: Layout of the farm at Gjáskógar. After Eldjárn, 1961.

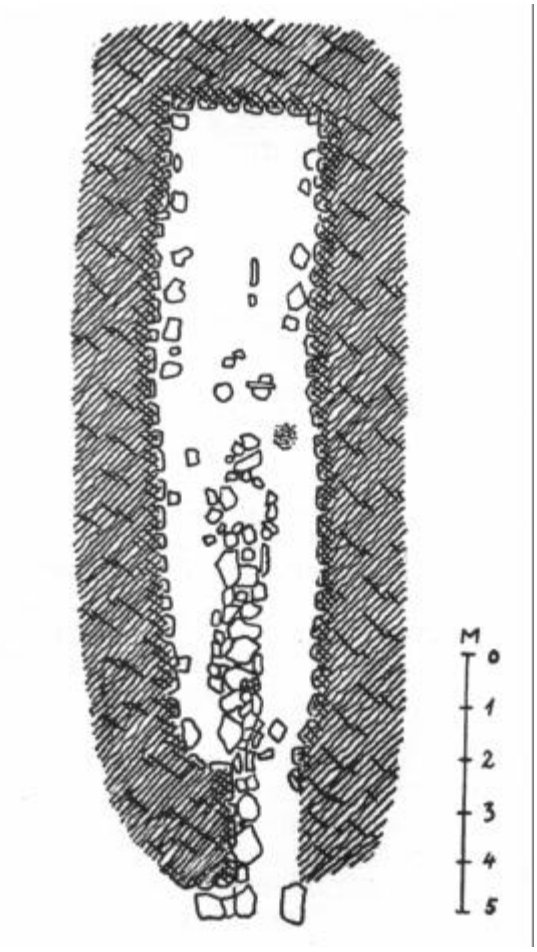

Fig. 10: Plan of the byre at Gjáskógar. After Eldjárn.

ments are 10,2 x 3 m. The structure was divided into three aisles, the central one paved from the door to the middle of the room, 6,3 m in length in all. Traces of stall-divisions were seen in the form of fallen slabs on the western side of the paving. The floor of the whole building sloped considerably, with a 1,25 m differnce in height between the innermost part and the entrance on the southern gable. The function of the inner half of the building – north of the end of the pavement – was unclear. In the middle of the house remains of ironworking were found, not necessarily coterminuous with the use of the rest of the building as a byre. Like Stöng and Þórarinsstaðir the ruins were full of pumice from the 1104 eruption of Hekla and the excavator concluded that the farm had been abandoned as

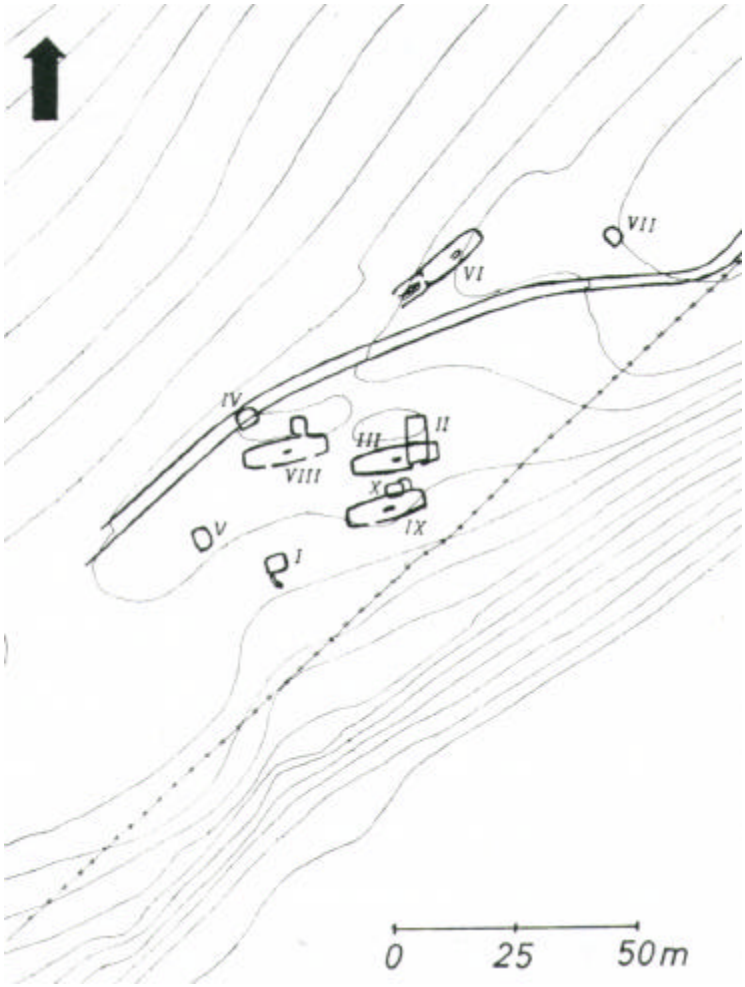

Fig. 11: Layout of the farm at Hvítarholt. After Magnússon, 1967.

result of this eruption and had only been occupied for a short period before that. However, a section through the byre shows that 20-30 sm of aeolian soil had accumulated on the floor before the pumice was deposited, suggesting a similar set-up as at Stöng, where the 1104 pumice has been shown to have infilled the abandoned structure in the 13th century as a result of erosion (Vilhjálmur Örn Vilhjálmsson 1989).

From 1962 to 1967 Þór Magnússon excavated the site Hvítarholt in Hrunamannahreppur. It is situated on a rise just south of River Hvítá, in the upper parts of the southern lowlands. Some 10 structures were uncovered, among them three longhouses of Viking age type. Five sunken huts were also excavated, some predating the longhouses. The two others buildings were a byre with a barn (VI) and a supposed barn (II) postdating one of the longhouses.

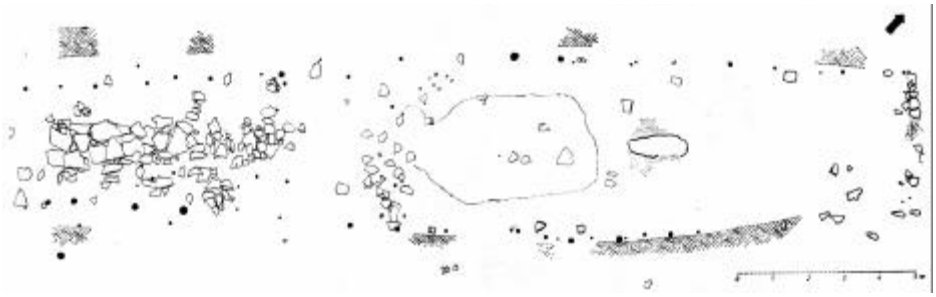

Fig. 12: The byre and the barn at Hvítarholt (structure VI). After Magnússon, 1967.

The byre was situated some 30 m from the main cluster of buildings at Hvítárholt. It measured about 10 x 5 m on the inside, but precise measurements could not be made as the walls were very indistinct. They were made of turf which contained the so-called Landnám tephra from 871±2. The byre was divided into three aisles, the central one partly paved with flat stones. Along the walls the stalls had been separated by wooden planks evidenced by traces of postholes. The other room was the barn. It measured 14 x 5 m and no traces of internal architecture could be detected. Strangely enough a hearth was found in the middle of the barn, indicating that the room had had several phases of use. The excavator suggested that the room had been used as a dwelling during the construction of the other longhouses and was maybe not a barn at all.

On top of one of the longhouses a smaller building had been erected. It had three distinct floor layers, all fatty with grass remains embedded in them. This led to the interpretation of the structure as a barn. It meaured 9,9x3,8 m but the north end was indistinct. In the earliest floor layer a row of irreg-

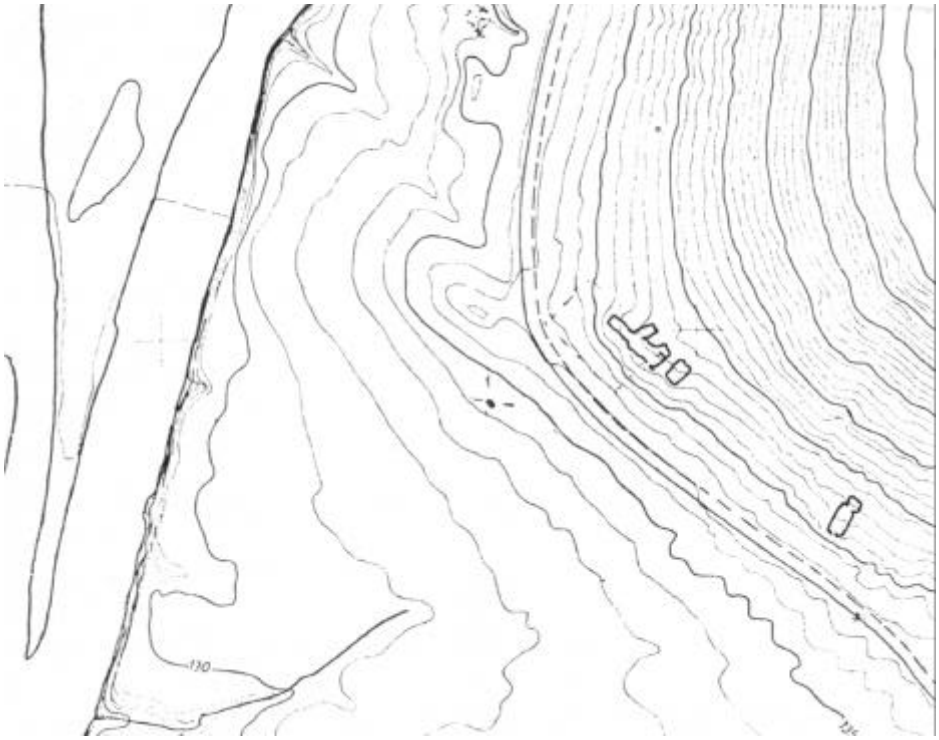

Fig. 13: Layout of the farm at Sámsstaðir. After Rafnsson, S., 1972.

ularly placed slabs and stones had been placed along the middle of the southern part of the building. The excavator considered them to be too irregular to be a proper pavement but suggested that they had been laid on the floor to keep it from getting too muddy. The floor sloped somewhat from north to south but no distinct entrance could be discerned on the southern gable. Although this building clearly post-dates one of the long-houses it seems nevertheless to be of Viking age date, evidenced by the finds of steatite sherds, a glass bead and a pig's tooth (Þór Magnússon 1972).

In 1971 and 1972 Sveinbjörn Rafnsson carried out an excavation at the farm Sámsstaðir in Þjórsárdalur (Sveinbjörn Rafnsson 1976). The site had been partially ecavated earlier, by Þorsteinn Erlingsson in 1895 (Þorsteinn Erlingsson 1899). Like the other sites in Þjórsárdalur Sámsstaðir has been believed to date from the eleventh century, as it was infilled by tephra from the Hekla 1104 eruption, but remains of an older house were discovered below the main structure thought to date from the tenth century. A bridle fragment from the eleventh century was found in the dwelling supporting an 11th century date for the site. In light of more recent inves-

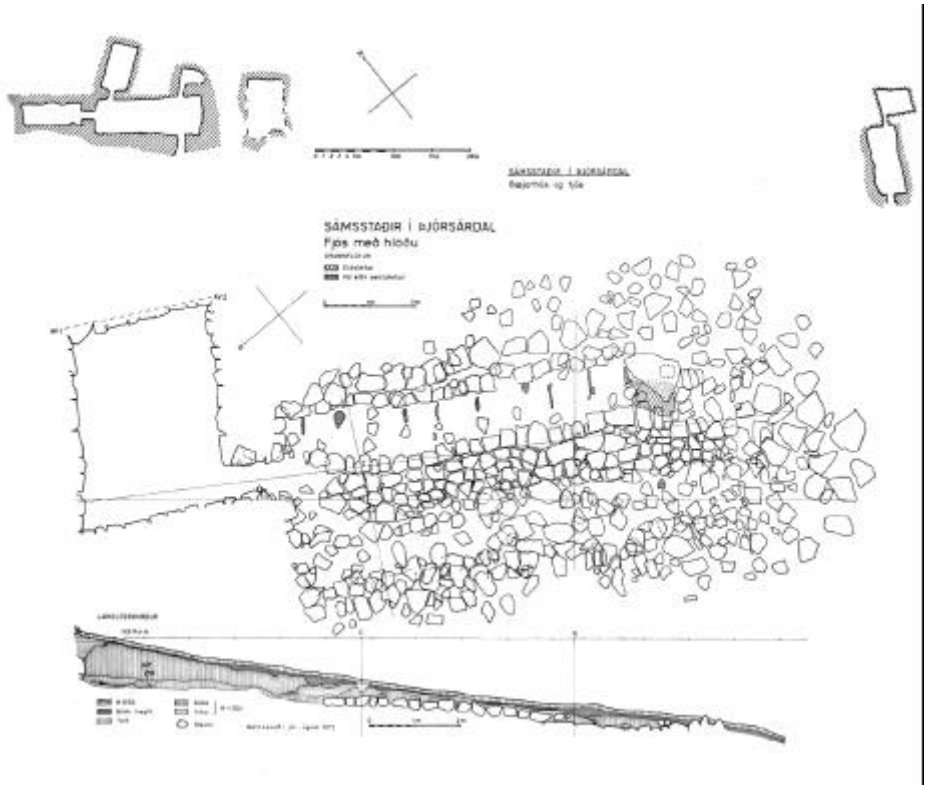

Fig. 14: The byre and the barn at the site of Sámsstaðir in the Þjórsárdalur. After Rafnsson, S., 1972.

tigations at Stöng the dating of Sámsstaðir has however been thrown into question, allowing for the possibility that the buildings were in use into the 12th or even 13th centuries.

The byre at Sámsstaðir was situated about 80 m to the east of the dwelling complex and was built together with the barn. The byre had been badly damaged by erosion but the walls could be seen to have been made of turf, lined with stone on the inside. The byre measured 9 x 3,6 m and is presumed to have sheltered about 20 head of cattle. The room was divided into three aisles and sloped towards the doorway on the south end gable. On the eastern side 9 slots from upright slabs separting the stalls were observed. The central aisle was fully paved from the doorway to the barn at the north of the structure. The barn was about 4,2 x 3 m and was much better preserved than the byre, with stone lined turf walls standing up to 0,6 m.

Between 1967 and 1981 Kristján Eldjárn carried out a series of excava-

tions on the island of Papey, off Iceland's east coast. The project aimed to verify traditions that the island had originally been settled by Irish monks but no unambiguous traces of such a settlement were found (Kristján Eldjárn 1988). The island is only 2 km² but many ruins of turf houses were still visible on the surface. Among these is the site Goðatættur, with two buildings. One was a typical Viking Age longhouse, aligned north-south. 17 m the south of it was another building which measured 12 x 4,4 m and followed a north-east-southwest orientation. The entrance was on the west end gable and a pavement extended from it about two thirds of the way in to the room. Two thirds of the structure were thus divided into three aisles and in this part of the building the floor sloped towards the doorway. No stalls were visible along the walls. The surface in the northern one-third of the building was covered with peatash and a hearth was visible in the middle. A substantial number of artifacts was found in the structure which was interpreted as a byre which later had been used for human habitation. It is however not inconceivable that the northern most third of the building was used as a dwelling at the same time as cows were stalled in the southern two-thirds.

An axe of K type dating from the tenth century was found in the byre. Tephra from the 1362 eruption of Öræfajökull covered the ruins, which had clearly been long abandoned and were completely collapsed before it was deposited. The excavator con-

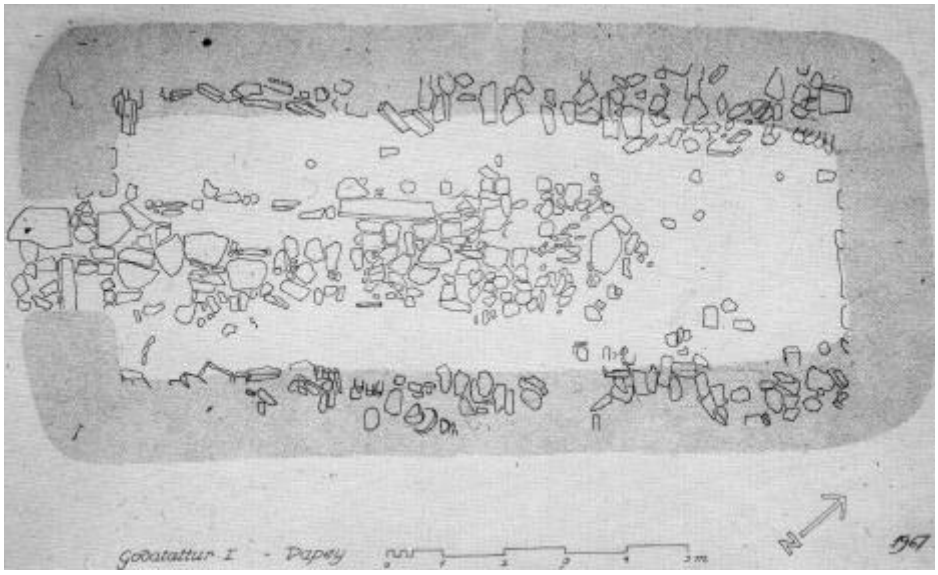

Fig. 15: Byre at Goðatættur on the island of Papey. After Eldjárn K., 1981.

Fig. 16: Layout of the farm Herjólfsdalur. After Margrét Hermanns-Auðardóttir 1983.

cluded that the site had been occupied in the 10th century.

The last site in Iceland where a byre has been excavated is Herjólfsdalur on the island of Heimaey in the Vestmanneyjar archipelago off Iceland's south coast. The site was ecavated by Margrét Hermanns-Auðardóttir in a series of campaigns between 1972 and 1983 (Margrét Hermanns-Auðardóttir 1989, 1992).

There were 11 structures on the site, among them two byres. Building VIII which is considered to be the earliest at the site combined a byre and a human dwelling, measuring 9,8 x 3,4 m in all. The byre took up a half of this space or 4,5 m, and was divided

into three aisles, the central one fully paved. Some sloping of the flours towards the entrance on the gable end was observed. Upto 15 stalls were identified, ranging from 0,6 m to 1,6 m in width. Stake holes associated with the stalls were intepreted as the remains of stakes to tether the animals. The other byre (Building IV) was considered to belong to a later phase of the site. It measured 8 x 4 m and was divided into three aisles. The paving of the central aisle sloped toward the door in the northern end gable and continued outside the building. Two rows of stalls were on either side of the paving, easily identifiable from slots left by the flat slabs separating the stalls. 16 stalls were identified, measuring between 0,6 and 1,7 m in width, and as in Building VIII stakeholes were found interpreted as

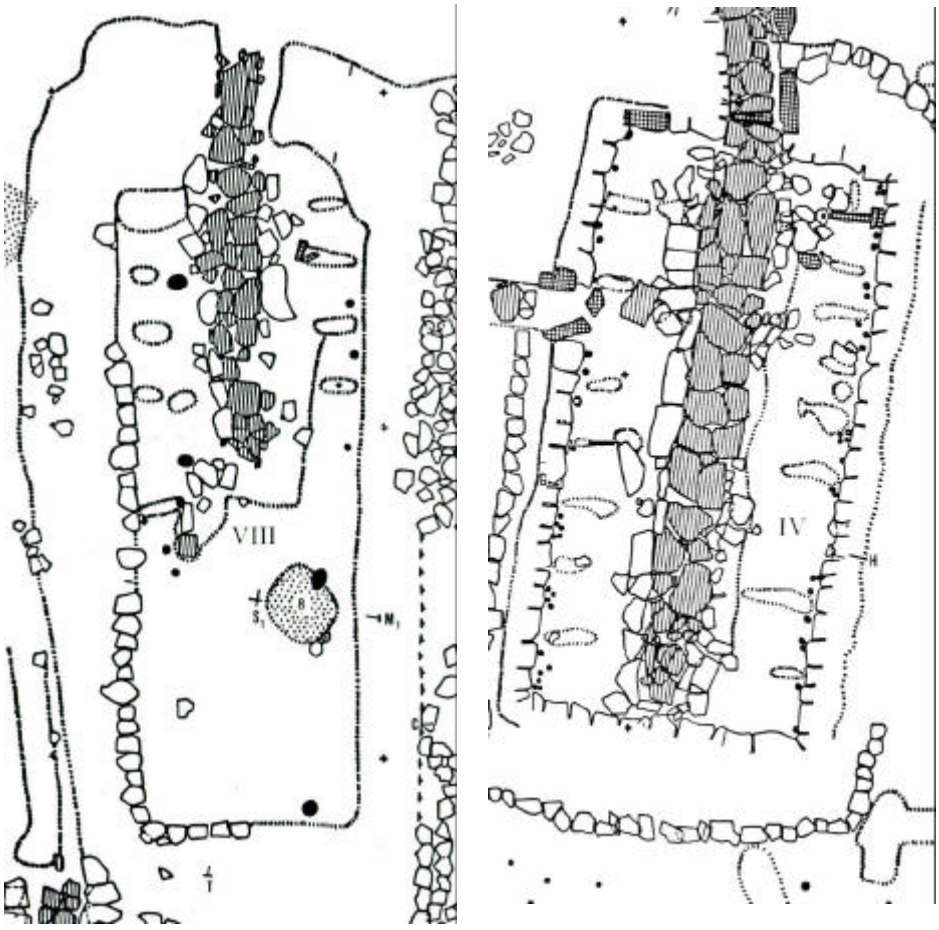

Fig. 17: The two byres at Herjólfsdalur. To the left byre nº VIII corresponding to the first period. To the right byre nº IV. After Margrét Hermanns-Auðardóttir, 1983.

tethering stakes. No barn was associated with this byre but it had a passage on the western wall leading to an adjacent dwelling (Building V).

Finally a byre at the wellknown farm Stöng in Þjórsárdalur should be mentioned (Roussell 1943). Unfortunately the byre and the barn had been damaged by erosion before the excavation, so that the eastern end of both buildings has disappeared. Unusually the barn was built along sode the byre, sharing one long-wall but having its own entrance. This small complext is situated 20 m east of the dwelling. The byre was 4 m wide and at least 11 m long. It was divided into three aisles, the central one neatly paved and somewhat lower than the stalls. Five upright slabs were still in evidence when the excavation took place

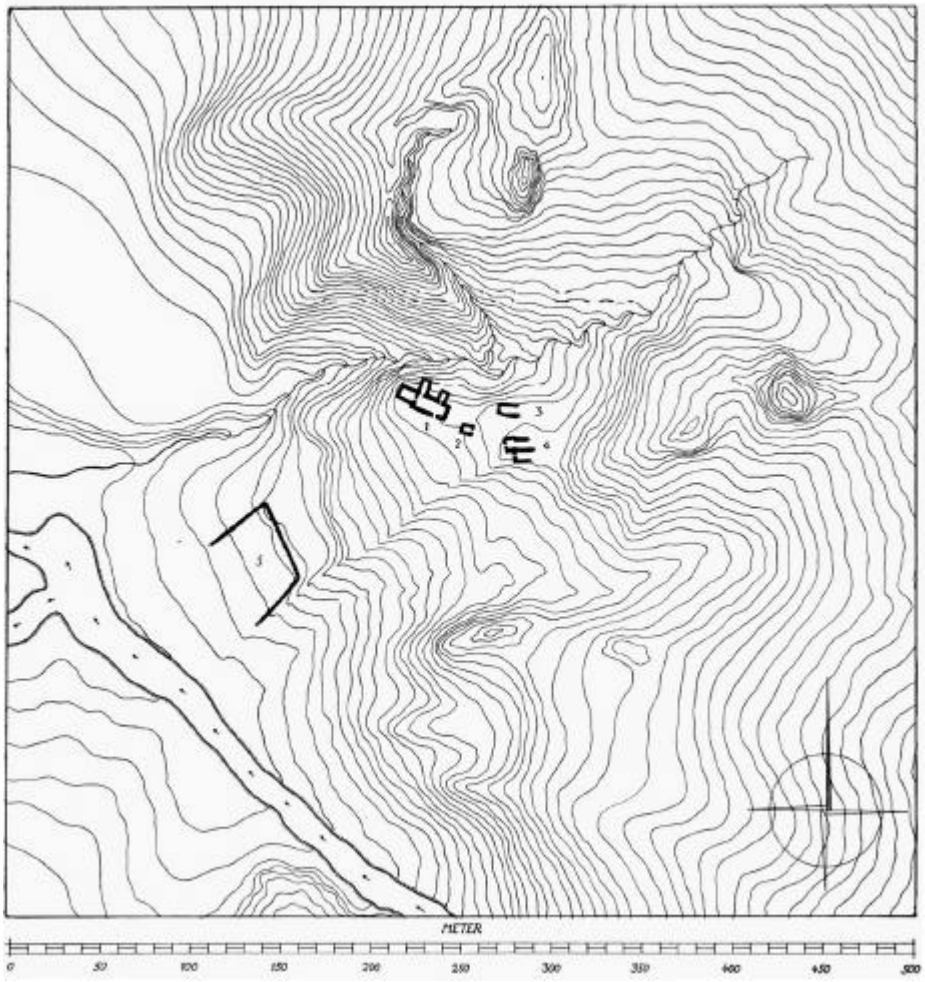

Fig. 18: The layout of the farm at Stöng, after Roussell A., 1939.

but upto 20 stalls could be counted, 10 on each side. The abandonment of Stöng and other sites in Þjórsárdalur was originally dated to 1300 but Sigurður Þórarinsson's dating of a white pumice layer which infilled most of the ruins in the valley to 1104 set the abandonment back some two centuries. Recent work at Stöng by Vilhjálmur Örn Vilhjálmsson has cast doubt on this dating, as the 1104 pumice may be redeposited, infilling the abandoned ruins as a result of erosion in the 13th century. The implications of this re-examination of the evidence for other Þjórsárdalur sites than Stöng are not yet clear, but it does cast doubt on the dating of the Gjáskógar, Sámsstaðir and Þórarinsstaðir byres.

In addition to these excavated byres there are a few sites where erosion has laid bare the foundations of buildings intepreted as byres by investigators. Reasonably accurate descriptions of byres at this kind of site exist for Laugar in Hrunamannaafrétt – close to Þórarinsstaðir – and Áslákstunga innri and undir Lambhöfða, both in Þjórsárdalur. At Laugar the byre was a part of the farm complex, like nearby Þórarinsstaðir, set at right angles to the dwelling and entered from it as well as from the outside (Þorsteinn Erlingsson 1899). The byre measured 12,5 x 4 m on the inside and remains of some 20 stalls were observed. A room interpreted as a barn was entered from the back of the building but was set at right angles to it. There is no dating avidence for this site but it is generally considered to be medieval, probably from the same period as Þórarinsstaðir. At Áslákstunga innri the byre is some 45 m from the dwelling. It measures 14 x 4 m on the inside and has an entrance on the southern gable end, Upright slabs partitioning the stalls were still in evidence when the site was investigated in 1895 and it was estimated that there was room for some 30 heads of cattle in it – no doubt a slight exaggeration (Þorsteinn Erlingsson 1899). At undir Lambhöfða the byre was also some 40 m from the dwelling. It measured 10 x 4 m on the inside and had entrances on each gable end. It is sitated on a slight incline and the entrance on the upper end leads into a very small room – too small to be a barn – which opens to the side into what could have been a large enclosure where hay was stacked. Here also could uprighrt slabs be observed and it was estimated that the byre had room for 18 heads of cattle (Þorsteinn Erlingsson 1899). Both Áslákstunga innri and undir Lambhöfða exhibit the same arrangement of buildings as the more fully excavated sites in Þjórsárdalur, i.e. Stöng, Gjáskógar and Sámsstaðir, and from this typological resemblance it has been inferred that these sites must also be from the middle ages, abandoned either in the 11th or the 13th centuries.

Limitations of the assemblage

Out of some 50 excavated medieval sites in Iceland, byres have only been investigated or observed in 13 cases.

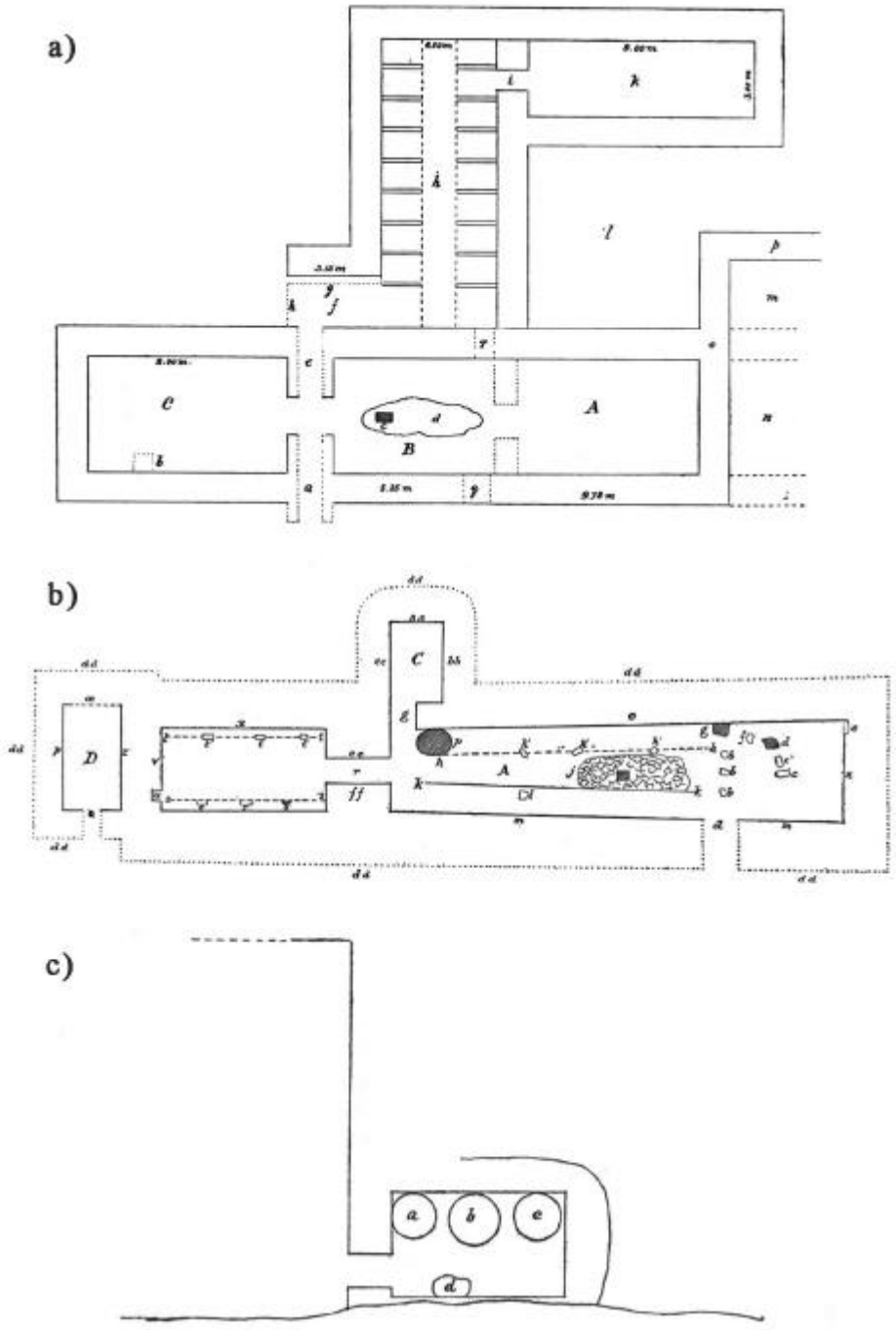

Fig. 19: a) Laugar, b) Áslákstunga innri and c) Undir Lamböfða. After Þorsteinn Erlingsson, 1899.

Three of these were not really excavations and the byre at Stöng is only partially preserved, leaving only 9 sites with fully documented byres. This limited number is not an indication that byres were not used as universally as one might think. On the contrary there is every reason to believe that byres were found at every farm. The relative scarcity of exavated byres is due mainly to research conditions. On the one hand investigators have always been interested primarily in the dwellings and have in many cases failed to excavate ruins which almost certainly are the remains of outhouses. Examples of this are found at sites like Skallakot, Ísleifsstaðir, Grelutóttir, Granastaðir and Klaufanes. On the other hand the frequent arrangement of locating the byre some distance from the dwellings has meant that the byres either cannot be found because of aeolian deposition or subsequent building activity or they have disappeared through erosion. Examples of the former are e.g. Reykjavík, Bessastaðir, Hofstaðir, Viðey, Kúabót and of the latter Stóraborg is the prime example.

Another limitation of the data is related to the uneven distribution of the byres. All the excavated byres are found in the southern part of the country, a large part in a small area in upland Árnessýsla. Again this reflects the choices of excavators more than anything else – it reflects the central position of Þjórsárdalur in Icelandic arecaheology as well as the state of communications in Iceland for much of the 20th century which made large scale excavations far from Reykjavík difficult or well nigh impossible. For this reason the analysis of Icelandic byres presented here really only holds for the southern part of the country.

Plan and shape of the byre

In discussing the byre he had excavated at Gjáskogar, Kristján Eldjárn commented that it had the typical shape of a medieval Icelandic byre (Kristján Eldjárn 1965). What is this typical shape?

All the byres know from Iceland share a range of similarities. They are always oblong structures ranging in width from 3,5 m to 4 m. The only exception is Hvítarholt where the byre was 5 m in width, altough the excavator did warn that the line of the walls was quite indistinct. A division into three aisles is also a characteristic shared by all the excavated byres. The central aisle is almost always paved and in at least 5 cases it slopes down towards the entrance which is always in one of the end gables. This central paving allowed for easier removal of the dung and urine. On either side of the central aisle there are rows of stalls which in most cases have some evidence of division into stalls, either by upright slabs or wooden partitions. In some cases the excavators comment that the surface of the paved central aisle was lower than the stalls. Where such evidence survives it seem that the roof was supported by a double row of posts situated along both sides of the central aisle.

While there is remarkable uniformity in the basic shape and construction of the byre there are some differences as to its relationship with the barn which is the building most closely associated with the byre.

The most common type of arrangement can be seen at Hvítarholt, Gröf, Sámsstaðir and Lundur. At these sites the byre and the barn form a long building in which the two rooms are built end to end. There is only one door leading to the byre abd the barn can only be accessed through the byre, except at Lundur where there was a small room with a side entrance between the byre and the barn. A subtype is found at Þórarinsstaðir and Laugar where the barn is also only acessed through the byre but is set at right angles to it. In neither of those cases is there sufficient evidence to show that the barn was roofed and these two sites are the only ones where the byres form a part of the dwelling complex. The other main type is found at Herjólfsdalur, Gjáskógar, Goðatættur, Áslákstunga innri and undir Lambhöfða. At these sites there is no distinct barn, either connected to or independent off the byre. At some of these sites, esp. Herjólfsdalur (VIII) and Goðatættur, it cannot be precluded that hay was stored in that part of the byre where the central aisle was not paved. In the cases where no barn has been found it is possible that hay was stored differently, i.e. in turf-covered stacks (Orri Vésteinsson 1989). At Stöng the byre and the barn are built side by side and each room had its own door facing the farm. It is possible that there was a passage between the two buildings at the back – which has now eroded away. Bergþórshvoll may also belong to this type although the nature of the small room to one side of the byre is really not well established.

Hvítarholt is the only example of a separate purpose-built barn but it is not certain whether the barn is really cintemporaneous to the rest of thse site, nor indeed whether it is really a barn.

The layout of the farm

There are two basic types of relationship between byre and dwelling. More commonly the byre is situated some distance from the dwelling, typically 20-40 m and usually slightly upslope. Lundur and Sámsstaðir stand out because of the great distance between the dwelling and the byre, 70 and 80 m respectively.

In all these cases the byre seems to have been inside the homefield and one explanation that suggests itself for this arrangement is that the inconvenience of having to walk a long way to the byre was offset by the benefits of not having to carry the manure a long distance from the byre to spread it on the field. In those cases where the byre may have been at the edge or even just outside the homefield it is possible that keeping the animals' grazing and trampling away from the homefield may have been a consideration.

At Herjólfsdalur and Bergþórshvoll the byres are closely associated with the dwelling and at Þórarinsstaðir and Laugar the byres actually form a part of the dwelling complexes. The latter sort of arrangement is common on Norse sites in Greenland and was also prevalent in many parts of Iceland in early modern times. At Herjólfsdalur the byre (IV) and the dwelling (V) were connected by a passage and at Bergþórshvoll the byre may have been connected to the dwelling complex. The benefits of this arrangement are mainly ease of communication between byre and dwelling, allowing easy access for milk maids and cowboys to go about their tasks. It is also possible that the preservation of heat from the animals played a role, especially if there were second storeys on these buildings – an eventuality which the evidence cannot preclude but does not support either.

Related to this may be those byres, both those connected to the dwelling like Herjólfsdalur VIII and those far removed from it like Goðatættur and Hvítárholt, where there is evidence for human habitation in one end of the byre. In none of these cases is the evidence for human habitiation extensive and on all these sites are there other more substantial dwellings for the humans. It would therefore be rash to interpret these houses as combined dwellings and byres of the type commonly found in Iron and Viking age contexts in Scandinavia. The similarities are however striking and they suggest a degree of affinity and/or continuity of a construction heritage between the Icelandic settlements of the Viking and high middle ages and the Scandinavian Iron age. It is possible that the phasing of the Herjólfsdalur site could be seen as an indication of a development from a combined byre-dwelling (as in structure VIII) to separate but connected byre and dwelling (as in structures IV and V). As most of the sites where the byre is separated by scores of metres from the dwelling are dated to the 11th century or even later it might be argued that this represents an even more recent development. If that is so, some particular Icelandic conditions must have dictated this development – the importance of manuring infields being the one that springs most readily to mind. The exceptions – Þórarinsstaðir and Laugar – would then be explained by their marginal locations and high altitude which meant that the farms were snowbounds for many months every year making it troublesome in extreme to locate the byres far away from the dwellings.

It must be stressed however that this idea of a gradual distancing of byres from dwellings in the course of the first centuries after the settlement of Iceland is not based on extensive or sound evidence. For most of the sites the datings are insecure and in some cases there is dispute over the age to a degree of more than 200 years.

Phases of occupation

Many archaeological sites in Iceland

and especially farm sites have evidence of several periods of occupation. Different phases of dwellings are evidenced by thick floor layers and signs of repair and rebuilding of individual houses. Unlike the dwellings there are no known cases of different phases of use of a byre. Is this difference significant?

It is true that in many cases the inattention or lack of interest on behalf of the excavators may be the explanation. Many of the excavated byres received only the most cursory investigation – in most of the Þjórsárdalur sites the excavators let it suffice to brush loose sand and tephra off the byre ruins but did not really excavate the buildings in such a way that eventual earlier phases would have come to light. It should also be pointed out that the assemblage is biased towards sites with a short occupation. However at sites like Bergþórshvoll and Lundur, both with continuous occupation for 1000 years or more, the byres seem only to have a single phase.

This might indicate that byres were – unlike the dwellings – not as a rule rebuilt in the same place but a new place was found for it everytime a rebuilding became neccesary. This might tie into the idea that the location of byres some distance from the dwellings was occasioned by the need to spread manure over the homefield. This would make perfect sense if the byres were moved regularly around the homefield in order to intensively manure new parts of the field.

It should also be considered that byres were may not have been regular or permanent features of every farmstead. It is possible that the byres signify periodically intensive dairy farming but that in different times and places purpose-built byres were not neccesary because the milch-cows were few in number and could be stalled in other buildings and the rest of the cattle was able to graze outside for the majority of the year and/or had different sorts of shelters.

This also raises the question of how the herds developed. Zooarchaeological studies at Hofstaðir in Mývatn (McGovern et al. 1998) suggest that the numbers of cattle increased relative to sheep and goats in the 10th and 11th centuries and also that the overall the number of sheep and goat bones decreased. These changes should be reflected in the animal shelters – which have as yet no been found at Hofstaðir.

Future work

It is clear that the number of excavated byres in Iceland is too small to base any firm conclusions on and that most of the questions posed here need to be further researched. The first task is to increase the reliability of the data by opening new excavations of byres, not least in the north part of Iceland where no byres have yet been investigated. Such investigations would need to throw light on all the issues raised here, i.e. the form of the byre, its relationship with the barn and other buildings, its location in the

home-field and its development through time. In fact the last issue could be dealt with by small scale investigations of some of the sites already excavated, as many of the Þjórsárdalur byres are still accessible and it would take only minor trenching to establish if they are indeed single phase buildings or not. A fullrer understanding of the Þjórsárdalur data compared to a detailed study of a region in the North would undoubtedly go a long way of resolving some of the issues raised here, as well as generating new questions.

As mentioned above the detailed anaylisis of faunal assemblages at intensively investigated sites like Hofstaðir pose many questions about herd sizes, herd management and grazing strategies, some of which could be illuminated if the animal shelters can be found. The collaboration of zooarchaeology and excavation of byres is therefore very important. Zooarchaeological analysis present data on the relative numbers of different animal species present in the archaeological deposits. Such results immediately gain more meaning when they can be compared to the buildings the animals were housed in. At Herjólfsdalur, which is the only Icelandic site which has both byres and an analysed faunal assemblage, the cattle to Sheep/goat ratio was about 1:1, indicating a heavy emphasis on cattle raising, supported also by the large and alaborate byres. Does this mean that those farmsites which have large byres were equally dedicated to cattle raising and that at sites like Hofstaðir where the ratio is more like one head of cattle to 5 or 6 sheep or goats, the dairy farming was so marginal that we should not expect to find a purpose-built byre. Or does it only mean that Hofstaðir had so much many more sheep?

In order to better understand the economic and social structure of medieval Iceland we need to understand these sort of questions better. Livestock formed the base of the Icelandic economy and without paying attention to the structural evidence for its keeping we will not be able to appreciate its role in the economy, and with out such an understanding our grasp of medieval Icelandic society will remain poor.

References

Unpublished references:

Berson, Bruno (1998), *L'élevage en Islande au Moyen Age,* Master, University of Tours, Tours.

- (1999) *L'élevage en Islande au Moyen Age, les textes et l'archéologie,* DEA, University of Lille III, Lille.

Published references:

Bruun, Daniel (1928) *Fortidsminder og Nutidshjem paa Island,* København.

Gísli Gestsson (1959) "Gröf í Öræfum", *Árbók hins íslenzka fornleifafélags 1959,* 5-87.

Kristján Eldjárn (1949) "Eyðibyggð á Hrunamannaafrétti", *Árbók hins íslenzka fornleifafélags 1943-48*, 1-143.

- (1961) “Bær í Gjá-skógum í Þjórsárdal”, *Árbók hins íslenzka fornleifafélags 1961*, 7-46.
- (1964) “Athugasemd um fornar tóftir á Lundi í Lundarreykja-dal”, *Árbók hins íslenzka fornleifafélags 1964*, 102-110.
- (1965) “Two Medieval Farm Sites in Iceland and some Remarks on Tephrochronology”, *The Forth Viking Congress, York, August 1961*, (Aberdeen University Studies 149):10-19.
- (1988) “Papey, Fornleifarannsóknir 1967-1981”, *Árbók hins íslenzka fornleifafélags 1988*, 35-188.
- & Gísli Gestsson (1952) “Rannsóknir á Bergþórshvoli”, *Árbók hins íslenzka forn leifafélags 1951-52*, 5-75.

Margrét Hermanns-Auðardóttir (1989) *Islands tidiga bosåttning*, (Studia Archaeologica Universitatis Umensis 1), Umeå.

Margrét Hermanns-Auðardóttir (1992) “The beginning of settlement in Iceland from an archaeological point of view”, *Acta Borealia 2*

McGovern, Thomas, Mainland, Ingrid & Amorosi, Thomas (1998) ”Hofstaðir 1996-1997. A Preliminary Zoo-archaeological Report” *Archaeologia islandica 1*, 123-28.

Orri Vésteinsson (1989) “Mygluskán og hálf blautur ruddi. “Mygluskán og hálfblautur ruddi. Hvernig geymdu menn hey til forna?”, *Sagnir 10*, 18-26.

Roussell, Aage (1943) “Stöng, Þjórsárdalur”, in *Stenberger* ed. 1939, 72-97.

Sigurður Vigfússon (1885) ”Rannsókn í Borgarfirði 1884.” *Árbók hins íslenzka forn leifafélags 1884-1885*, 61-138.

Stenberger, Mårten ed. (1939) *Forntida gårdar i Island. Nordiska arkeologiska under sökningen i Island 1939*, København.

Sveinbjörn Rafnsson (1976) “Sámsstaðir í Þjórsárdal”, *Árbók hins íslenzka forn leifafélags 1976*, 39-120.

Vilhjálmur Ö. Vilhjálmsson (1989) ”Stöng og Þjórsárdalur-bosættelsens ophør.” *Hikuin 15*, 75-102.

Voionmaa, Jouko (1943) “Lundur”, in *Stenberger* ed. 1939, 171-90.

Þorsteinn Erlingsson (1899) *Ruins of the Saga Time: Being an Account of Travels and Explorations in Iceland in the Summer of 1895*, London.

Þór Magnússon (1972) “Sögualdarbyggð í Hvítárholti”, *Árbók hins íslenzka forn-leifafélags 1972*, 580.