PATTERNS OF SETTLEMENT IN ICELAND: A STUDY IN PREHISTORY

By ORRI VÉSTEINSSON

FOR THE BETTER PART OF THIS CENTURY the settlement of Iceland, the *landnám*, has received surprisingly limited attention from scholars, considering its significance for our understanding of the Viking Age and Icelandic history.[1]

The reason for this is clear enough. When it began to be realised, by the middle of the century, that the Book of Settlements and the Sagas of Icelanders could not be used as accurate descriptions of persons and events in the ninth, tenth and eleventh centuries, this period, which previously had been full of exciting history, was suddenly plunged into an impenetrable darkness.[2]

The retreat was sounded by Björn Þorsteinsson (1953) and Jón Jóhannesson (1956) who laid the foundations of the modern view of the history of medieval Iceland in the 1950s. Both attempted to build a general picture of developments based on Ari fróði's Book of Icelanders and to some extent on what each considered could plausibly be extracted from the Sagas. This left little more than an approximate date for the beginning of the *landnám* and an outline of constitutional developments garnished with the limited information provided by Ari on the early development of the Church in the eleventh century (*Íslenzk fornrit* I, 3–28). There was, as a result, too little meat left on the bones for there to be much opportunity for historical inquiry and for the past two generations of Icelandic historians the period before 1100 has been, to all intents and purposes, pre-historical, with a historical period beginning only with events described in the contemporary sagas of the twelfth and thirteenth centuries. It is also fair to say that the anthropological approach to the interpretation of the Sagas has only contributed to this inattention to the early period, allowing as it does for an atemporal view of the society of the Sagas, a society which belongs no

[1] This article is based on a paper given to the Viking Society in London, 7 March 1997, under the title 'New approaches to the Settlement of Iceland.'

[2] Melsteð 1903–30 is the last serious historical work making use of the Sagas as sources for actual events.

more to the tenth century than it does to the thirteenth (e. g. Sørensen 1977, 1993; Miller 1990).

It has therefore been left to a handful of archaeologists to worry about the settlement of Iceland, but while considerable work has been done in this field in the last fifty years, and we have now far more data to play with, it has not resulted in a significantly greater understanding of developments in Iceland in the ninth, tenth and eleventh centuries.[3] The reason for this is that until quite recently Icelandic archaeologists have, by and large, considered their task to be to retrieve objects and structures to illustrate studies of the texts and they have treated their results as capable of only very limited observations about the past (Eldjárn 1966, also Adolf Friðriksson 1994a, 1994b). In addition the principal issues that have occupied archaeologists, the dating of the *landnám* and the origins of the settlers, have not proved fruitful avenues of research in as much as nothing has turned up contradicting the long held view that Iceland was settled by Norsemen around and shortly after AD 870.

The dating of the landnám

Regarding the dating of the *landnám*, archaeological investigations continue to support Ari fróði's date of 871. In fact it now seems that his calculation was so accurate that it is almost uncanny. Traditionally, the evidence provided by archaeology has been based on artifact typology, in particular the typology of grave goods from pre-Christian burials. More than 300 such burials are now known in Iceland and a stylistic analysis of the grave-goods puts them squarely in the tenth century with only a handful of objects with a late ninth-century date and a single pair of brooches with an early or mid ninth-century date (Eldjárn 1956, 297–98, 394–96). While artifact typology cannot provide accurate dating for the *landnám* the sheer mass of this evidence makes all suggestions of an earlier *landnám* very implausible. Much stronger and more accurate evidence is provided by tephrochronology, the dating of geological and occupational deposits through the study of volcanic ash, or tephra. When volcanoes erupt they often emit large quantities of ash

[3] The exceptions come mainly from the natural sciences, where pollen analyses have produced a more detailed picture of the changes in vegetation following the *landnám* (Þorleifur Einarsson 1962; Margrét Hallsdóttir 1982, 1984, 1987; see also articles in Guðrún Ása Grímsdóttir 1996) and analyses of fauna remains in early archaeological deposits have contributed to a better understanding of diet and farming practices (Amorosi 1989; McGovern *et al.* 1988).

which can be carried by winds over large areas. When the tephra sets, it forms a blanket which can be used as a chronological marker. The mapping of different tephra layers provides a relative chronology but when individual eruptions, or tephra layers associated with them, can be given a date, such layers become markers for absolute dates (Sigurður Þórarinsson 1944). For late medieval and modern times contemporary documentation provides accurate dates for many of the major tephra layers, but for the period before 1100 no such aids are available, and the dating of the tephra layers has to a large extent been dependent upon radiocarbon analyses. In the context of the settlement of Iceland, the dating of a tephra layer normally called the *Landnám*-tephra is of crucial importance. The *Landnám*-tephra is found all over Iceland except in the far West and Northwest and is commonly observed directly beneath the earliest indications of human habitation at early archaeological sites. A large number of radiocarbon analyses from early archaeological deposits associated with this tephra have given very early dates, back to the seventh and eighth centuries even.[4] Needless to say this has resulted in considerable confusion and speculation about the possibility of a much earlier settlement date than the traditional late ninth-century one. The majority of scholars have, however, remained sceptical of these radiocarbon results and several factors have been suggested which could cause a systematic error in radiocarbon dates from Iceland (Vilhjálmur Ö. Vilhjálmsson 1990; Páll Theodórsson 1993). While this remains to be proved, a much more reliable and accurate method for dating the *Landnám*-tephra has been developed. This comes from the study of ice-cores from the Greenland ice cap. An annual cycle of freezing and thawing leaves horizons in the ice-cap which can be counted in a similar way to tree-rings. Recently traces of the *Landnám*-tephra have been found in the ice-cap and this produces the date 871, with a margin of error of less than two years, for the deposition of the *Landnám*-tephra (Grönvold *et al.* 1995). There can as a result be no doubt any more regarding the date of the *Landnám*-tephra and any claim for human habitation in Iceland predating 871 must therefore be based on finding actual human deposits underneath this layer. Claims for traces of human activity beneath the *Landnám*-tephra have been made for at least three sites, all in southern Iceland. The

[4] Particularly from the early settlement sites in Reykjavík (Nordahl 1988, 32, 39, 55, 57, 62–63, 83, 113–14) and in Herjólfsdalur (Margrét Hermanns-Auðardóttir 1989, 45–54). See also Vilhjálmur Ö. Vilhjálmsson 1991.

claim for Reykjavík has recently been refuted in the light of further excavation in the long-house in question (Einarsson 1995) and the claims for Herjólfsdalur in the Westmann Islands off the south coast and for Bessastaðir just outside Reykjavík are as yet lacking proper documentation and cannot be verified. More significant is the by now substantial body of evidence for human occupation just above the *Landnám*-tephra, that is from soon after 871. At almost every medieval site which has been investigated, both coastal and inland, and in all parts of the country where the *Landnám*-tephra can be found, there are signs of building activity just above the layer. This strongly suggests that not only did the settlement of Iceland commence shortly after 871 but that the process was a rapid one with some sort of human occupation established in all inhabitable regions of the country by some point in the first half of the tenth century.

The origins of the settlers

Regarding the origins of the settlers, no traces of any Irish presence have been uncovered in the archaeological record, despite quite a considerable effort to locate them (Eldjárn 1989), and the whole 'Irish question' is still unanswered and likely to remain so (Gísli Sigurðsson 1988; Jakobsen 1988). While there can be no good reason to distrust the accounts of Dicuil and Ari fróði, in particular because the two can hardly be connected, the fact that no traces of hermits in the eighth and ninth centuries have been found suggests that their presence was very limited and sporadic, possibly only seasonal as described by Dicuil, and that it had no discernible impact on the Norse settlements. Celtic elements, most notable in place-names (Hermann Pálsson 1965), are quite reasonably ascribed to contacts between the Norse and the Celtic peoples of Ireland and Scotland made prior to the settlement of Iceland. Evidence for continued contacts is surprisingly rare, which suggests that while a significant proportion of the settlers of Iceland may have come via the British Isles, their descendants looked to Scandinavia and the wholly Scandinavian colonies, Orkney in particular, for trade and cultural and political contacts.

For quite some time it also seemed reasonable to pinpoint a specific region in Scandinavia as the place of origin of the Icelandic settlers. West and Southwest Norway has always been the favourite, but this is based more on the Book of Settlements than any sound archaeological evidence (Roussell 1943, 194; Hörður Ágústsson 1982, 255). Recently Northern Norway has also been named, but this also is not supported

by any archaeological evidence (Einarsson 1994, 17–39, 107–19, 139–40). In general it is safe to say that most scholars shy away from speculations concerning the precise origins of the settlers of Iceland.

How was Iceland settled?

It turns out then that what was known with reasonable certainty half a century ago is now known with more reasonable certainty, but the considerable work which has been put into obtaining these results has not turned up any new research questions or new aspects of the settlement process for further study. This is a big problem, not only because knowledge of early Icelandic society will continue to be incomplete as long as new subjects for research are not identified, but also because expensive excavations will fail to record vital information if the contexts in which this information may be meaningful are not known to the excavator. As long as this is allowed to happen it is not likely that new data will emerge which can significantly increase our understanding of the settlement and early society in Iceland.

Although the lack of raw data is the principal reason for the lack of interest in the *landnám*, it is not the only reason. There are data-sets available, the grave goods in particular, which can clearly be made to answer a series of important questions, but have not been subjected to analysis or discussion. It is therefore a lack of ideas, as much as lack of data, which has held back research into the *landnám.*

Instead of the question of when and where from, the aspect of the *landnám* most in need of study is how. While we can be fairly certain when Iceland was settled, we can only hope to understand where the settlers came from and, possibly more importantly, why they came, if we can appreciate how they went about colonising the country and what sort of society they built for themselves in the tenth century. Research into this aspect of the *landnám* also has the potential to increase our understanding and appreciation of the Sagas.

The following discussion represents a collection of observations made in preparation for a research project about land use and territorial division in medieval Iceland.[5] The sources used are on the one hand the landscape itself, the vegetation and indications about vegetation change, and on the other late medieval and early modern records relating to land use and patterns of land-ownership. The documentary evidence can at

[5] Institute of Archaeology, Iceland, Landnýting og landamerki á Íslandi á miðöldum.

best be stretched back to the twelfth century, but it only becomes abundant in the fourteenth. By studying patterns of land use and the division of the land into farming units in the fourteenth century the aim is to extrapolate backwards into the *landnám* period on the basis that these late medieval patterns must ultimately derive from choices made at the beginning of the *landnám.* In this context the reconstruction of boundaries between farms is vital because it is often the only way to understand the relationship between major and minor farms and to differentiate between primary and secondary settlements. Maps of farm-boundaries are not available for Iceland and the investigation has therefore been limited to areas where fieldwork has been carried out allowing modern boundaries to be compared with medieval ones. The regions used as examples here are Eyjafjörður in the north, a very densely populated region with good hay-fields and rich meadows but restricted access to summer grazing for sheep, and Borgarfjörður in the south-west, an area of more varied conditions, with farms ranging from huge lowland estates to small inland cottages. This is not an ideal choice, in particular because these regions have only limited access to the sea, and it is therefore not possible at this stage to relate these observations to those important parts of the country like the north-west and far east where the economy was based on marine resources as much as on animal husbandry.

The basic aim is to get an idea of social stratification by looking at differential access to resources and to identify issues in this context which can be debated fruitfully on the basis of archaeological and environmental data.

Where did people settle?

The first issue that needs to be discussed is the location of the first settlements. That is, in what sort of environment did the first settlers choose to place their farms and to what extent was this significant for later developments? The obvious place to start looking for answers to this question is in restraints imposed by the environment and by the economic practices of the settlers.

Ari fróði's claim that the whole country between the shore and the mountainsides was covered in woods when the first settlers arrived is well known ('Í þann tíð vas Ísland viði vaxit á miðli fjalls ok fjǫru', *Íslenzk fornrit* I, 5). It is also supported by pollen analyses which show that birch dominated the Icelandic vegetation prior to the *landnám* but declined rapidly in its aftermath. Birch will grow virtually anywhere

and it is believed that much of the country as high up as 400 metres above sea level was covered in birch forest at the time of the *landnám* (Margrét Hallsdóttir 1996; Þóra Ellen Þórhallsdóttir 1996). That is, all the inhabitable areas of the country were covered in wood when the first settlers arrived. The conditions least favourable for birch are very wet bogs and estuaries where flooding occurs periodically, and very sandy and gravelly soils such as are commonly found on beaches and at the outlets of smaller rivers. It is natural to expect that the first settlers sought out clearings of this sort to build their farms in. Not only were they thus spared having to clear the forest for the time being but it is questionable if forest clearance would have solved any of the problems facing the settlers in their first years. The forest was a resource in itself, both as pasture for sheep, cattle and pigs and as a source of firewood, charcoal and even construction timber. A more immediate problem than the need for open spaces will have been the need for winter fodder, for the cows in particular. Sheep, horses, pigs and calves can be grazed almost the whole year round in southern Iceland and need little extra fodder to help get them through the winter. Furthermore that fodder need not be of high quality; dried leaves from the forest would suffice. Cows on the other hand need to be kept indoors for a long period over the winter months and they need good quality fodder, especially if they are expected to produce milk. Dairy products were a central part of the Icelandic economy in the later Middle Ages and it is reasonable to expect that they had been so from the beginning. This is to some extent supported by the fact that very early sites like Herjólfsdalur in the Westmann Islands and Granastaðir in Eyjafjörður have produced a much higher number of cattle bones, relative to sheep bones, than later medieval sites (Amorosi and McGovern 1994). Large byres are also commonly found at early sites—examples are Herjólfsdalur, Hvítárholt and Papey—which indicates the importance attached to dairy products. In late medieval times and to the present day, hay as fodder for milch-cows has been produced on improved hay fields surrounding each farm. Little is known about the formation of these fields but the indications are that it must have been a slow process and that the early settlers would not have been able to prepare such fields and expect them to produce hay of markedly better quality than ordinary meadows for the first years of the *landnám*, possibly not even for the first generation. The only alternative to hay from improved fields, as fodder for milch-cows, is hay from meadows which are permanently or periodically submerged by water, usually in

spring flooding. Several species of grass and sedge, which are nutritious enough to keep cows alive and milking, thrive in such conditions. As wetlands of this sort are also the type of area least likely to be covered in woods, it is reasonable to assume that it was precisely in these conditions that the earliest farms were established. Flooded wetlands occur most commonly close to or on the coast in the estuaries of large rivers. Large rivers not only often provide excellent harbours, and we know that many of them were used as such in the Middle Ages, but they are also the easiest route along which to explore the country. Following this line of reasoning, we should expect to find the very earliest settlements in or near estuaries of large rivers and other early settlements in a string along the river as far inland as any wetland is associated with it (see Fig. 1, Land types in Borgarfjörður, opposite). The type of settlement this applies to is one which is likely to have become permanent and to have dominated later stages of the settlement process when it came to large-scale forest clearing and the occupation of less favourable land. Access to flooded wetlands was a valued resource in the late Middle Ages and a high proportion of the major estates based their economy partly on flooded meadows. It is quite reasonable to assume that many of these major estates owed their extensive landholdings and access to diverse and valuable resources to the fact that they were the first settlements in their respective areas. This is supported to some degree by the place-name evidence. It has long since been pointed out that among the largest farms in the country, farms which had churches on them and came to be centres of parishes, names describing natural features are much more common than among less important farms, and conversely that the place-name ending *-staðir*, the most common in Iceland, is relatively rare for the major estates (Olsen 1926, 63–76; Vigfús Guðmundsson 1926; also Þórhallur Vilmundarson 1971; Svavar Sigmundsson 1992, 133–37). While the majority of the place-names describing natural features, names like Hólar (Hills), Höfði (Headland), Nes (Peninsula), add little to our knowledge of the environment at the time of the *landnám*, a fair number refer to the vegetation. Among these, there are many that refer to wetlands, and names like Saurbær, Keldur, Mýri, Seyla and Fitjar are common on major church farms. As a group of names on major estates they are rivalled only by names indicating dry grassland, like Vellir, Grund and possibly Eyri. This latter group of names may point to clearings in the woodlands that were already there when the first settlers arrived, but this is much more difficult to verify than the existence of the woodless wetlands. In many

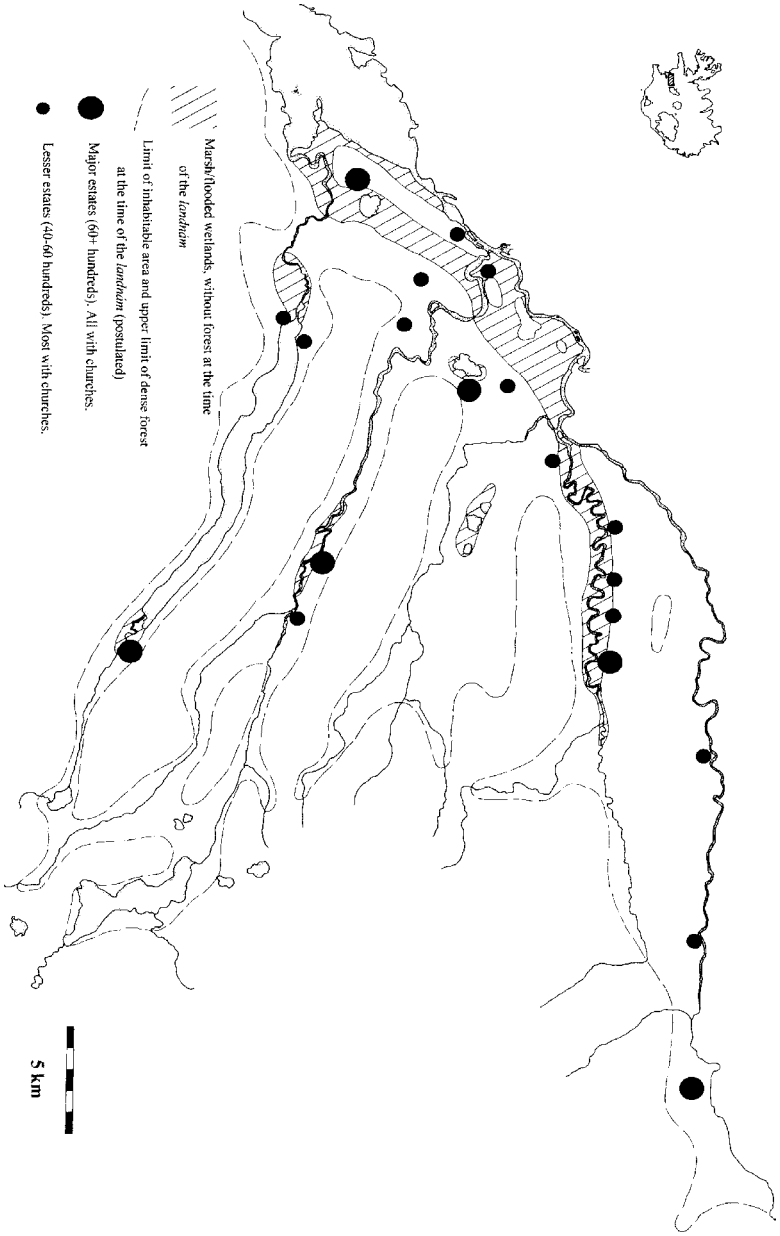

Fig. 1. Land types in Borgarfjörður. The map showes five districts (*hreppar*) south of the river Hvítá. Source: Orri Vésteinsson 1996b.

cases it can be shown, however, that farms with such names are situated close to flooded wetlands, where the dry grassland may have formed a belt between the wetlands and the woods. Such conditions would presumably have been ideal for building a farm and may be the reason behind the later importance of major estates like Grund in Eyjafjörður, Möðruvellir in Hörgárdalur and Vellir in Svarfaðardalur.

It is perfectly possible that there were in the early stages of the settlement process different kinds of settlements which would have relied primarily on hunting, subsidised with light animal husbandry. There are places in Iceland where small populations could be sustained by hunting and fishing the whole year round. These are primarily islands off the coast like the Westmann Islands and the numerous islands in Breiðafjörður, where there is ready access to a variety of marine resources both in winter and summer. The large and well built byres at Herjólfsdalur in the Westmann Islands speak, however, against such a suggestion, and indicate that even where it was possible to rely on hunting as the main source of nutrition people chose to base their livelihood primarily on animal husbandry. It is possible that the first settlers began seeking out areas where animal husbandry could easily be subsidised by hunting and fishing, that they settled first on the coast and on off-shore islands and that when people began to search for places to settle inland they sought out rivers and lakes where fish could be caught throughout the winter. This could explain the very early settlement at Hofstaðir near Mývatn, which was occupied in a matter of years after the *Landnám*-tephra was deposited (Adolf Friðriksson and Orri Vésteinsson 1995). While the Mývatn area is far from ideal cattle country, it has good sheep grazing all year round, uniquely for its altitude and the north of Iceland in general, and the lake is rich in trout and bird-life. A midden currently under excavation at Hofstaðir has turned up all the normal domesticated mammals, sheep, cattle, horse and pig, but also large quantities of trout, bird bones and egg-shell fragments (McGovern *et al.* 1996) . This is suggestive of an economy based on animal husbandry but heavily subsidised by the local wildlife. Interestingly, bones from salt-water fish have also been recovered from this midden, and this is also the case with another early inland site in the north, Granastaðir in Eyjafjörður. This reminds us that people were capable of acquiring resources over very long distances, as Hofstaðir is more than 40 kilometres inland and Granastaðir little less, and this may also suggest that the inhabitants of these farms had a preference for marine foods, possibly because they originally came from a marine environment.

It will probably always be difficult to provide archaeological evidence for the different ages of the earliest settlements. It is notoriously difficult to estimate the time elapsed between the deposition of the *Landnám*-tephra and the first signs of building activity at a site. It is a greater problem, however, that the majority of early settlement sites which have been investigated are unsuccessful ones, that is, sites that were abandoned within decades of the original occupation. This is of course not surprising; one would expect a period of trial and error at the very beginning of the colonisation of an uninhabited country. An example of this is the site of Grelutóttir in Arnarfjörður in the north-west (see Fig. 2, Plan of Grelutóttir, below). The small long-house on this site was situated close to the beach by the outlet of a stream. It is likely that when the builders of this house settled here this shore-line was the only area not covered in birch forest. They therefore built their first dwelling near the beach but one or two generations later they moved it, presumably to the site of the farm Eyri which later became an important church-farm. The relocation of the farm was probably occasioned

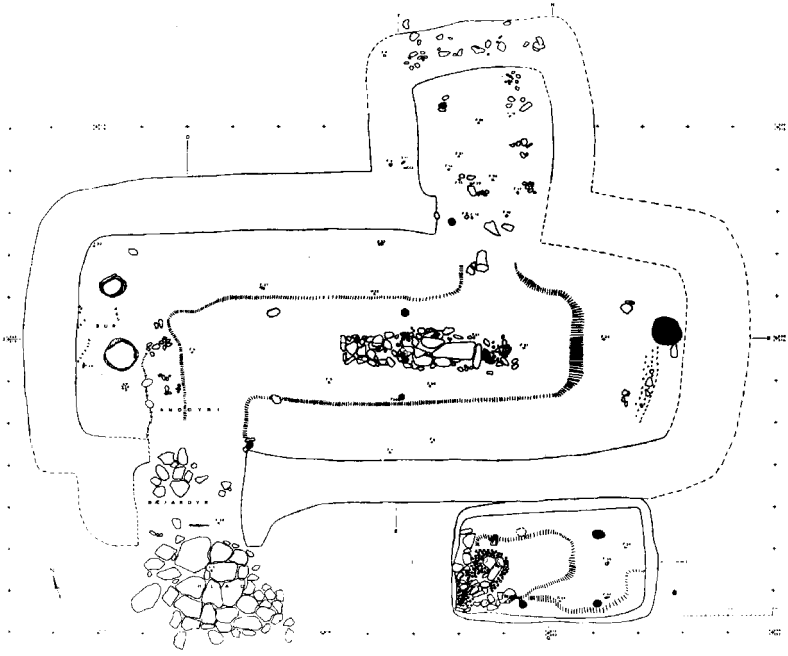

Fig. 2. Plan of Grelutóttir in Arnarfjörður. A tenth-century farmhouse with an adjacent pit-house (bottom of picture). Source: Guðmundur Ólafsson 1980, 32–33.

by the effects of forest clearance. The clearing of the forest made better farmland available higher up on the slopes, but it may also have caused instability in the soils in the overhanging mountainside, resulting in floods in the stream by which the original farm had been built; the site was covered with rubble from such floods (Guðmundur Ólafsson 1980). Such relocations of farms over short distances seem to have been common (several traditions to this effect are recorded in the Book of Settlements) but they will not have greatly altered the resource strategies or the land claims of the farmers in question.

The social organisation of the settlers

Another issue that needs to be addressed is the composition of the groups of people that came to settle in Iceland. It has always been assumed that each settlement consisted of a single family with relatives, servants and slaves and opinions have differed only as to the number and significance of the slaves. The Book of Settlements and the Sagas of Icelanders seem always to envisage that even if people sailed to Iceland in large groups of several families, each family would then establish its own farmstead with little or no economic or political links with the others. This of course is entirely in accordance with the general view of medieval Icelandic society that it consisted of isolated farmsteads controlled by independent farmers. It can, however, be reasonably suggested that this is an erroneous view and that the basis for it goes no further back than the nineteenth century when Icelandic farmers saw themselves exactly so, isolated and independent, and that the sagas can be read very differently. That would, however, require a discussion of the sagas which will not be attempted here. Instead it must suffice here to analyse the archaeological evidence, and this suggests that the earliest settlers sailed to Iceland in large groups of more than one family and that initially at least they stayed together. This is suggested most clearly by the site of Herjólfsdalur in the Westmann Islands off the south coast of Iceland (see Fig 3, Plan of Herjólfsdalur, opposite). It is one of the most complete early settlement sites excavated to date. This site has two long-houses with long-fires and raised benches along the sides, each accompanied by a byre with room for more than ten cows in each. In addition there are two smaller houses which were interpreted by the excavator as human dwellings on account of the cooking pits found in both, but it is of course not possible to see if these houses were occupied by different people from the inhabitants of the long-houses or if they had some specialised

Fig. 3. Plan of Herjólfsdalur in the Westmann Islands, off the south coast of Iceland. II and V are the long-houses (upper right-hand corner and lower left-hand corner respectively), each with an associated byre (VIII and IV). In one of the byres (VIII) there is a cooking pit indicating that it may also have been used for human habitation. Houses I and III have cooking pits and may have been used for habitation in addition to the long-houses. Source: Margrét-Hermanns-Auðardóttir 1989.

function, for instance in food preparation and storage. Furthermore, the inner half of one of the byres showed signs of human habitation (Margrét Hermanns-Auðardóttir 1989, 108–11). This is by no means the only early settlement site with more than one long-house. At Hvítárholt in Árnesþing three large long-houses were excavated along with five small pit-houses (Þór Magnússon 1973; see Fig 4, Plan of Hvítárholt, opposite, top). In Reykjavík the urban excavation found traces of two small long-houses side by side and a third larger one which was considered to be more recent (Nordahl 1988). At Bessastaðir south-west of Reykjavík an ongoing excavation has so far uncovered the remains of two long-houses (Sigurður Bergsteinsson, personal communication). At Goðatættur in Papey off the east coast a long-house with an accompanying byre with a habitation area was uncovered, remarkably similar to the set-up in Herjólfsdalur (Eldjárn 1989, 128–57). At Granastaðir there is an unexcavated house besides the one uncovered (see Fig 5, Plan of Granastaðir, opposite, bottom). A test trench led the excavator to suggest that this house was a byre, but judging from the section he has produced it could just as well be a long-house. At Granastaðir there is also a large pit-house which was clearly inhabited by humans (Einarsson 1994, 75–79, 92–94). In fact there is only a single early settlement site, that of Grelutóttir in Arnarfjörður discussed on pp. 11–12 above, that seems to consist of only a single long-house, though that house was in fact accompanied by two small pit-houses. All other early settlement sites have been investigated too incompletely for it to be safe to assume anything about the number of buildings at each site.

Excavations of late-medieval sites always turn up a single long-house, usually with adjacent rooms, suggesting a single household, presumably a nuclear family with relatives and servants. This and the ideas mentioned earlier on isolation and independence have led all the excavators of the early settlement sites with more than one long-house to suggest that the long-houses were not occupied contemporaneously, but that when one building was abandoned or fell into ruin another was built beside it. There is, however, nothing to suggest this in the stratigraphy of any of these sites and this is not the way in which people rebuilt their houses in later centuries. Excavations of Icelandic farm-mounds have shown that people normally rebuilt their houses on top of the earlier ones, often preserving both the shape and size of the earlier building. In fact, complete rebuilding was very rare; houses were repaired and rebuilt piecemeal for centuries on end, ensuring that the farmhouses occupied the same limited patch while accumulating into high mounds

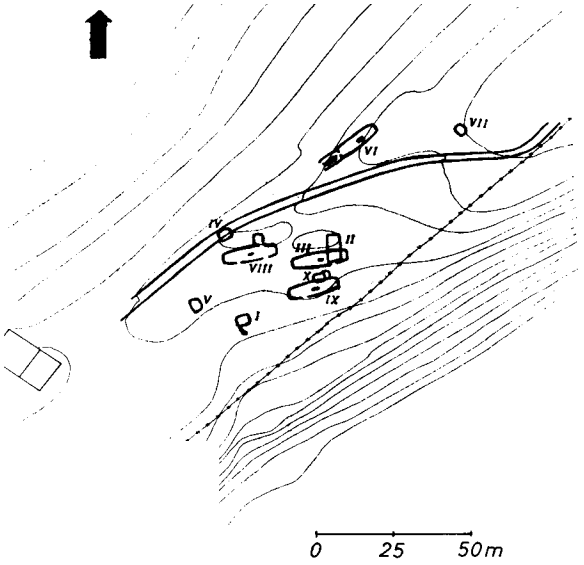

Fig. 4. Plan of Hvítárholt in Árnessýsla, S-Iceland. Nos III, VI, VIII and IX are long-houses, II is thought to have been a barn and the smaller buildings are pit-houses. Source: Þór Magnússon 1973, 11.

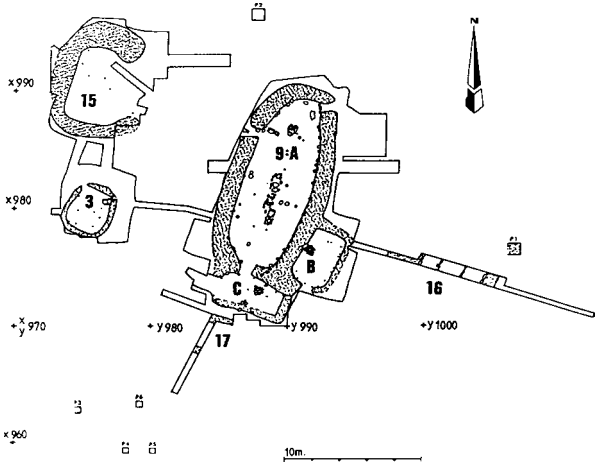

Fig. 5. Plan of Granastaðir in Eyjafjörður, N-Iceland. No. 3 is a pit-house which is believed to have been a dwelling, 9 is the long-house and 16 is a partially excavated building which the excavator suggested was a byre but which may equally plausibly be suggested to be a second long-house. Source: Einarsson 1994, 75.

of discarded building material and refuse (Mjöll Snæsdóttir 1991).[6] It is difficult to see why this pattern should not have been followed in the settlement period, especially as farm mounds are well known in both Norway and Orkney from the period prior to the Icelandic *landnám* as well as in later times (Bertelsen and Urbanczyk 1989). In the absence of any stratigraphic proof to the contrary, therefore, it is much more reasonable to believe that these early sites were occupied by more than one household at the same time.[7]

It is easy to see why this might have been preferable at the initial stages of the *landnám.* The first years in a new and unknown country will have been difficult for any group and there must have been obvious advantages in co-operating in the reconnaissance and initial clearing of the country. We may in this context be reminded of the three long-houses at L'Anse-aux-Meadows, a pioneer site if ever there was one. The abandonment of sites like Herjólfsdalur and Hvítárholt might suggest that once this initial stage of settlement was over, the ways of individual households parted and each household chose a new site some distance from the others. In these cases the original site was then abandoned completely, while at sites like Bessastaðir and Reykjavík a single household remained on the original site while others presumably moved away. This sort of scenario would be based on the presupposition that people either preferred to live in single households and abhorred the company of others or that the economy somehow dictated that the same site could not in the long run sustain more than a single household. This line of reasoning could prove treacherous, especially when it is considered that in late medieval and early modern times it was quite common for more than one household to share the same site and the same home field. In some cases these were independent households forming small hamlets, a pattern especially common in the coastal areas of the southern plains. Much more frequently, groups of households were made up of a single independent household, normally of high status, and a number of dependent and usually much smaller households on the same site or close by. Such groups of households often made up the core of the late medieval estates and suggest that it was advantageous for the running of large farming units to have more than one household working together. From looking at the two long-

[6] Compare also the farm mound at Bergþórshvoll where deposits are found all the way back to the tenth century (Eldjárn and Gísli Gestsson 1952).

[7] I am indebted to Mjöll Snæsdóttir for this interpretation of the early sites.

houses at Herjólfsdalur it is not apparent that one household was of higher status than the other; the slightly smaller long-house has for instance a much larger byre attached to it. Much the same picture emerges at Hvítárholt; no one long-house is significantly larger than the others. In these two cases it seems therefore that the households occupying the sites were of equal status.

The proximity of households at these early sites must surely imply economic co-operation, and if we also accept that the earliest and most successful settlements were those in the wetland regions, those which later appear as great estates with multiple households, it becomes reasonable to suggest that the people who sailed to Iceland settled together in groups of two or more households and that this pattern formed the basis for the Icelandic economy for centuries to come.

Estates and church lands

There is relatively abundant documentation on the great estates from late medieval times, as each normally had a church with a priest on it and the churches often owned parts of the estates. This property was listed in charters drawn up for each church and these give a comprehensive overview of the distribution of church lands among the great estates by the beginning of the fourteenth century. The indications are, however, that most of the major churches were endowed with most of their landed property back in the twelfth century (Orri Vésteinsson 1996a, 145–46, 151–73).

Churches could own land in several different ways, but those that concern us here are four (see Fig. 6, Churches and church lands in Borgarfjörður, overleaf). Firstly, a church could own a cottage on the estate where it was situated. Such cottages did not normally have defined boundaries and only a fixed proportion of the home field, meadows and pasture of the estate belonged to them. An example of this is the church at Hvanneyri which owned a single cottage situated in the home field of the main farm (*DI* I, 592). Secondly, a church could own one or more outlying properties, that is, cottages or small farms which were considered a part of the whole but were situated on the periphery of the farmland. An example of this is the church at Bær, which in the late twelfth century was endowed with three cottages, called ‘útlönd’, around the farmland proper (*Biskupa sögur* I, 284–87; *DI* V, 401–02). In this case the evidence gives an indication of the extent of the lands originally belonging to the estate. Thirdly, a church could own a fixed proportion of the whole estate, usually a third or a

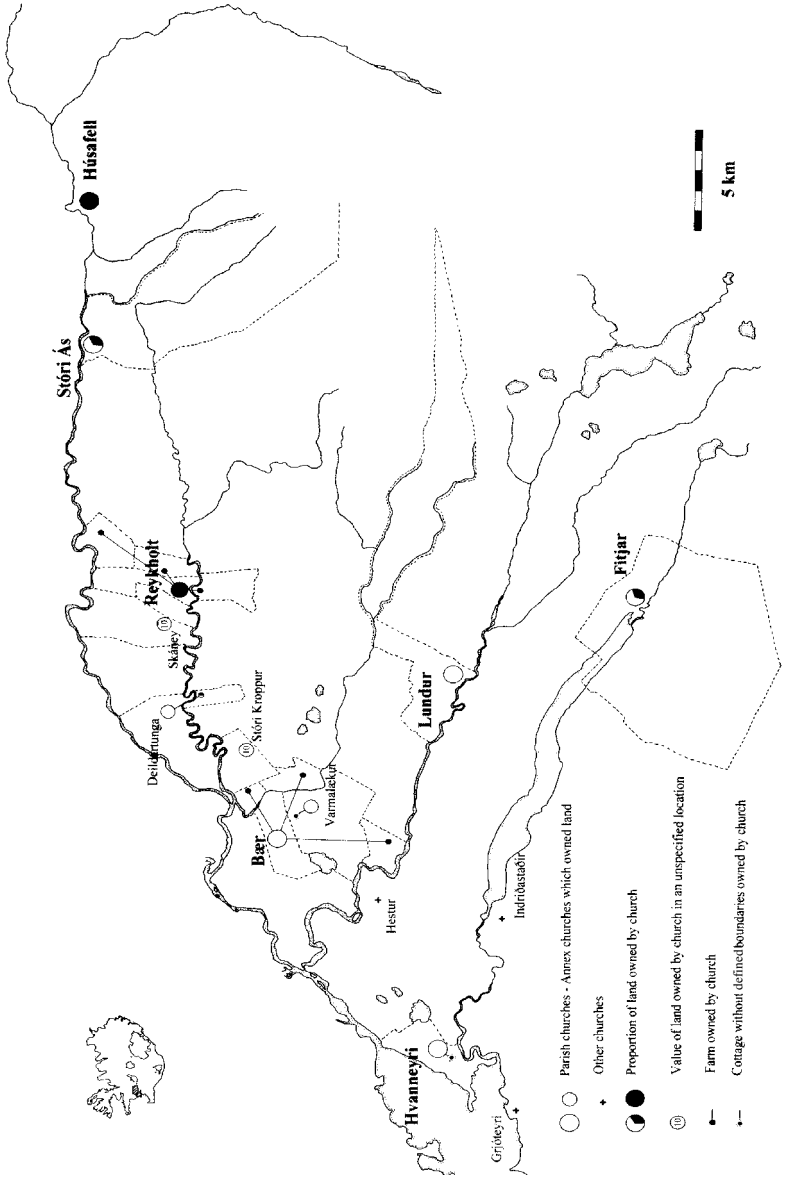

Fig. 6. Churches and church lands in Borgarfjörður. The map showes five districts (*hreppar*) south of the river Hvítá. Source: Orri Vésteinsson 1996b.

half. The charters often list all the farms and cottages which belonged to the church in this way and this can give an idea of the extent of the original estate. An example of this is the church at Fitjar which owned a third of the land it was situated on. It is clear from the charters that this included the farm Vatnshorn which *Laxdæla saga* would have us believe was the core holding of the estate (*DI* III, 124; IV, 119; *Íslenzk fornrit* V, 184). Fourthly, a church could own the whole estate. An example of this is Reykholt which already by the late twelfth century owned not only the land of Reykholt itself but also a number of smaller farms immediately adjacent to it (*DI* I, 279–80, 350–51). The boundaries of these suggest that this compact chunk of land formed the original estate.

If we compare this information with the boundary map, a distinct pattern emerges. Firstly, the estates themselves always occupy the best land in their respective areas and they also have the widest range of access to different resources. They tend to have direct access to upland pastures and if not, then they own defined pieces of uplands for summer grazing. They also tend to own forests and fishing rights and have more than one shieling. These holdings are not always concentrated in one area and the manpower needed to make use of the scattered holdings must have been considerable, a fact often commented upon by early modern priests who did not have the resources to make use of all the property belonging to their churches (e. g. *Jarðabók Árna Magnússonar og Páls Vídalíns* IV, 231). Secondly, the estates tend to be made up of two or three different types of holding: there is the main farm itself (it might even be called the manor), and there is a small and often fluctuating number of cottages in or around the home field of the manor. These did not have defined boundaries and sometimes not even defined areas of activity. Their inhabitants were economically and politically dependent on the estate owner and it is likely that the cottagers could easily have been called upon when the estate needed extra manpower and that this was their main usefulness to the owner. Thirdly, we often find a number of quite small but independent holdings on the periphery of estates. Holdings of this type were only independent in the sense that they could be bought and sold irrespective of the ownership of the estate. Their often quite limited access to resources and the poor quality of the land ensured that their farmers were both politically and economically dependent on the landowners and/or their powerful neighbours. It is possible that these peripheral holdings were originally shielings or some form of out-stations from the main farm which later developed

into independent farming units and may therefore represent a relatively late stage in the settlement process.

Immediately surrounding the large estates it is common to find medium sized or large single farms with a respectable access to resources (see Fig. 7, Andakíll and Bæjarsveit, below). This type of holding tends to occupy good quality land in regard to hay-making and pasture but may lack access to important resources like fish or peat or fire-wood. It is reasonable to suggest that this sort of holding represents latecomers among the settlers arriving from abroad. Possibly they were able to seize good quality land in between the already large estates because the estate farmers could not make any reasonable claim to such lands on account of a lack of manpower.

A secondary phase of settlement

The large estates occupy a significant, but nevertheless small, part of the inhabitable area of Iceland. The rest of this area is dominated by coastal and valley environments where farms are by and large medium or small in size and have all more or less similar access to resources. This is the sort of landscape which was covered in thick forest when the first settlers arrived and was initially not as ideally suited for settlement

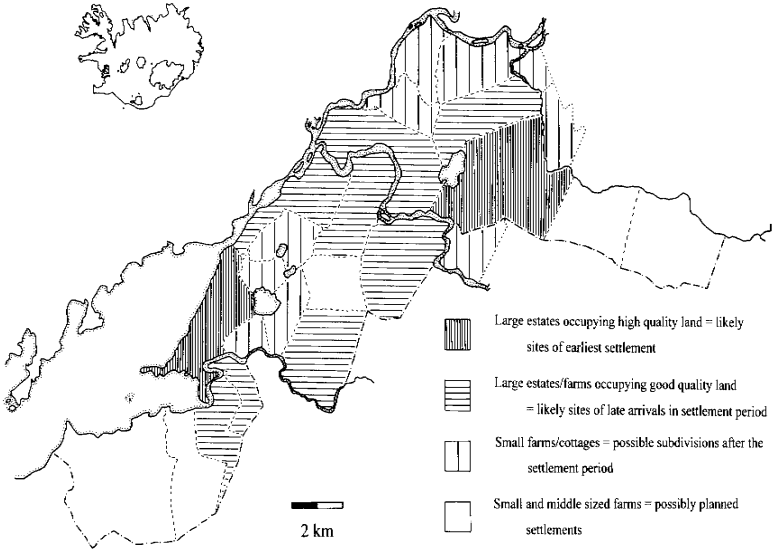

Fig. 7. Andakíll and Bæjarsveit in Borgarfjörður (part of larger area shown in Figures 1 and 6). Source: Orri Vésteinsson 1996b.

as the wetland areas. It is striking that in both Borgarfjörður and Eyjafjörður there is a large number of farms in areas of this kind which are almost exactly identical in size and shape and all have somewhat limited access to resources. In both regions farms of this type tend not to have enough land attached to them to have a shieling and many also lack access to peat or fire-wood (see Fig 8, Planned settlements in the parish of Hrafnagil in Eyjafjörður, overleaf). It is unlikely that any farmer would have occupied the land in this way if he had had a choice in the matter, and this pattern of landholding must surely suggest planned settlements. This is probably what one of the authors of the Book of Settlements had in mind when he said of the settler Blund-Ketill that he was a very wealthy man and that he had forests cleared in many places and established farms in the clearings ('Blund-Ketill var maðr stórauðigr; hann lét ryðja víða í skógum ok byggja', *Íslenzk fornrit* I, 84). This presupposes that Blund-Ketill had previously laid claim to the forests he later had cleared and also that this was something befitting a great and wealthy man. Huge land-claims were well known to thirteenth-century scholars and whatever the truth behind individual stories of such claims it is inherently likely that the owners of great estates somehow tried to control the settlement of those neighbouring lands which they could not make use of. It was for them a natural precaution to keep these settlements small; nobody likes a rival in his back garden, but a large number of politically, as well as probably economically, dependent smallholders can always come in handy. This must be the reason behind the general pattern of Icelandic settlement which has the largest units, in terms of land, people and yields, in the most productive areas and the smallest units on lands least favourable for agriculture.

It seems, then, that there were two distinct phases in the settlement of Iceland. First was the establishment of great estates mainly in wetland areas, and this was followed by a planned settlement of less accessible areas. But how can we date these processes? One way might be to look at the distribution of cemeteries in the later Middle Ages. Iceland's ecclesiastical landscape was unusual in that chapels and minor churches were found at every second to third farm in the country and all of them seem to have had cemeteries attached to them. A chapel cemetery was normally only used for the household of the farm where the chapel was situated and this seems to have been the main function of these buildings. The simplest explanation for the high number of chapels and lesser churches in Iceland is that they were the successors to the pre-

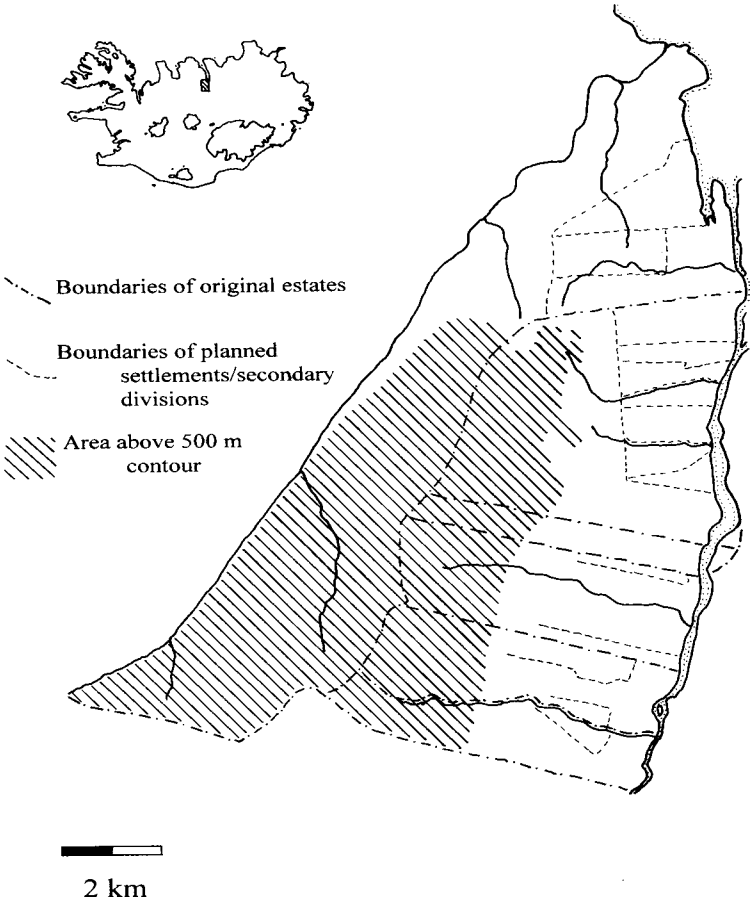

Fig. 8. Planned settlements in the parish of Hrafnagil in Eyjafjörður, N-Iceland. Source: Adolf Friðriksson and Orri Vésteinsson 1994, 1996a, 1996b.

Christian grave-fields which were normally situated just outside the home field of each farm. It seems that following the conversion in the year 1000 Christian cemeteries were established in different locations from the pre-Christian grave-fields, but on the same principles, that is, outside the home field and one for each farm. It follows from this that farms which have cemeteries or chapels associated with them are likely to have been established before the conversion, whereas farms without such a feature were probably only established after that event. This hypothesis still needs to be tested, but as a rule of thumb it seems to be useful. If it is applied to the smaller holdings which have been ascribed here to the second phase of settlement it emerges that this had only just got under way by the year 1000. Some of the larger farms in these less favourable areas had chapels, but the majority of such farms did not. This is in sharp contrast to concentrations of farms with much greater access to resources as for instance the cluster of church and chapels at Lundur, Gullberastaðir and Oddastaðir in Lundarreykjadalur. These three farms form a cluster and to them belong most of the highland pastures available to the inhabitants of the valley (see Fig. 9, Lundarreykjadalur, overleaf). The other farms in the valley are all much smaller and only two out of nineteen had chapels associated with them. The conclusion that the second phase of settlement was only partly under way by the year 1000 may be qualified by the likelihood that grave-fields were only established for independent farms and that outstations of different kinds could have a permanent settlement with all corpses brought back to the estate grave-field. This means that many of these settlements may have been long established by the year 1000 but that they were still being considered a part of some other farming unit, most likely a wetland estate. The majority of them must have got their independence in the eleventh century because by the end of that century the number of farmers paying assembly tax had reached the figure it would stay at for much of the Middle Ages and early modern times (*Íslenzk fornrit* I, 23; *DI* IV, 9–10).

Highland settlement

There is an aspect of the settlement which has intrigued many and needs to be discussed. This is the statement in the Book of Settlements that some of the settlers preferred to live high in the mountains because of the abundant pasture available there for sheep (‘Sumir þeir, er fyrstir kómu út, byggðu næstir fjǫllum ok merkðu at því landskostina, at kvikféit fýstisk frá sjónum til fjallanna’, *Íslenzk fornrit* I, 337). To many this

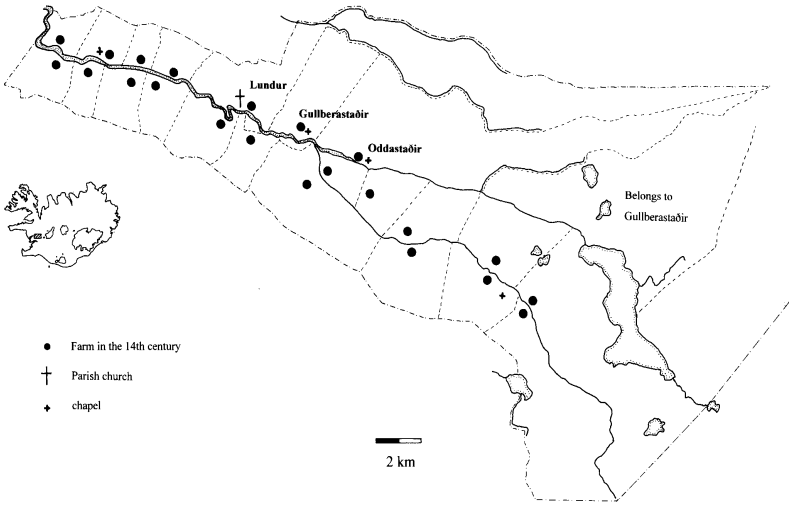

Fig. 9. Lundarreykjadalur in Borgarfjörður (part of larger area shown in Figures 1 and 6). Source: Orri Vésteinsson 1996b.

statement has seemed validated by the high number of early sites high up in the mountains, many of them further inland than any modern settlement has ever reached. In actual fact secure tenth-century dates can be found for only a handful of these sites and for the majority of them it is impossible to ascertain whether they were shielings or independent farms (Brynjúlfur Jónsson 1885; Bruun 1898; Eldjárn 1949; Sveinbjörn Rafnsson 1990; Guðrún Sveinbjarnardóttir 1992). In fact, only three sites are known from such highland areas which can with certainty be identified as tenth-century farms. Two of these are in Þórsmörk[8] and one in Bárðardalur.[9] Both these areas have been the scene of heavy erosion since medieval times and this has changed the landscape beyond recognition as well as revealing these early sites. It seems inherently unlikely that people would have preferred to become snowbound over winter with their sheep and nothing else to eat when there was still land available at lower altitudes. It is on the other hand

[8] Steinfinnsstaðir, dated by association with a pre-Christian burial, and Þuríðarstaðir efri, dated by artifact typology to the ninth/tenth to eleventh/twelfth centuries (Guðrún Sveinbjarnardóttir 1992, 41–46).

[9] Undir Sandmúla, dated by artifact typology, in particular a large silver hoard (Matthías Þórðarson 1910; Erkes 1911).

quite likely that the large estates would from an early stage establish shielings from which the upland pastures could be made use of. At some later stages in the settlement process independent cottages may have been set up in these areas but it seems that as soon as the forest had been cleared from the lowlands, these marginal areas became valued for their forest resources, both as pasture for pigs and cattle and more importantly as a source of charcoal. These marginal areas were by and large owned by the great estates and the rich churches associated with them and in some cases it can be shown that such property rights were quite ancient. An example is Geitland, which belonged to the church at Reykholt and was clearly associated with the farm in the *landnám* myth of the Reykhyltingar family.[10] As soon as forests became a valuable asset it is likely that the estate owners removed the cottagers from such marginal areas in order to preserve the woodlands and use them more efficiently.

Long after 1000 there were still pockets here and there which seem not to have been cleared and which were used by neighbouring farms as well as faraway estates for pasture and charcoal making. These are invariably the very worst areas for agriculture, with poor soils where erosion has invariably set in when the forest finally disappeared. In Borgarfjörður there are two areas of this kind. In Skorradalur a large number of estates and churches owned rights to pasture and woodcutting; here the last stage of the *landnám* was only accomplished in the sixteenth century with the establishment of four new farms, Grund, Grafardalur, Ytri Svangi and Eystri Svangi (*Jarðabók Árna Magnússonar og Páls Vídalíns* III, 160–61, 170). In Hálsasveit inland from Reykholt there seems to have been a swathe of forest separating the parishes of Reykholt and Gilsbakki on the other side of Hvítá; by the thirteenth century a large number of very small cottages had been established in this forest that seem to have specialised in ironworking (Smith 1995, 334–36), but they had disappeared along with the forest by the late fourteenth century.

[10] According to this the son of Grímr, who had settled at Hvanneyri in the wetlands at the mouth of Hvítá, was Úlfr, who took land in Geitland, and amongst his descendants was Þórðr Sǫlvason the ancestor of the Reykhyltingar (*Íslenzk fornrit* I, 77–79). The family's ancestry is, however, reckoned differently in *Melabók*, an incomplete version of *Landnámabók* which contains much material directly from the early thirteenth century *Styrmisbók* (*Íslenzk fornrit* I, 78 n. 1).

Conclusions

It has been suggested here that the very first settlers preferred to locate their farms in areas of flooded wetlands; that such settlements were inhabited by large numbers of people and quickly formed into large estates with a wide and varied economic base. Latecomers had to make do with slices of land in between these large estates. When all the really good and easily occupied land had been seized, a second phase was entered wherein land of lesser quality was chopped up into small units and sold or rented out to new arrivals or second-generation Icelanders. While the initial phase seems to have taken only a few decades the second phase may have stretched into the eleventh century.

The sheer size of the original estates and the number of households they sustained in later centuries suggests that they were from the beginning worked by large groups of people. How these groups of people were organised can only be guessed at. The long houses at Herjólfsdalur and Hvítárholt would suggest that there could be several households of equal standing whereas the later medieval pattern suggests that the situation was somewhat more unequal. It is possible that at such sites there were many households of different status, for instance one main household with a large number of servants and slaves and a number of smaller and dependent households. But it is just as plausible that they consisted of a single household with many families of different status, or a single household with a very large number of slaves. What can be maintained is that the successful wetland settlements which later appear as great estates were from the beginning worked by a large number of people, at least enough to fill two or more long-houses and probably always consisting of several families. The principal reason why a large number of people were required on each estate seems to have been the perceived need to maximise the utilisation of the greatest variety of resources. This probably far exceeded the bare minimum needed to survive, especially after the initial phase of settlement, and may suggest an economy geared towards equipping a chosen few with the means to eat, drink and show off.

If these suggestions are taken seriously, and should they be proved not far wrong by future research, it will have a serious effect on our understanding of medieval Icelandic society. Instead of being a land of isolated and independent farmers of equal status, it becomes a land of several hundred powerful farmers each in control of a considerable number of people on his own estate and having political authority over up to three thousand lesser farmers and cottagers bound to the estate

farmers by ties of ownership, and by the twelfth century also through church attendance and the payment of tithes.

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