SOME TRADITIONAL TECHNIQUES IN MODERN SCOTTISH FARMING

Ian Whitaker *

The popular conception of the Scottish Gaidhealtachd—the Gaelic-speaking areas of the Highlands and Islands—is that of a backwater, still largely "unspoilt by civilisation", which is perhaps only now being brought "into line" with modern technological developments.[1] Such a view, in its over-simplification of a complex situation, is all too often coloured by a certain romanticism and is, of course, wide of the truth. The most prominent feature of life in the Gaidhealtachd is the crofting system. There are many sides to the present-day problems affecting crofting, and these can and should be studied from the viewpoints of several disciplines: in particular by the geographer, the economist, the rural sociologist and the anthropologist; each of them has a valid contribution to make. A paper of this nature, however, precludes a satisfactory investigation from all these angles. I propose, therefore, to limit myself to a study of one or two aspects of farming in the Gaidhealtachd and the Northern Islands from a strictly anthropological point of view.

At the outset it must be admitted that, seen from the strictest principles of agricultural economics, the crofting system is extremely uneconomic. Any system of smallholding which is not bolstered up by agricultural co-operatives, whether of the Scandinavian variety or like the Soviet *kolkhoz*, is bound to be wasteful to a greater or lesser degree; Scotland is no exception to this rule. The cost of modern agricultural machinery is beyond the means of the crofter, and in any case the size of the average holding could not justify the individual ownership of all the improved types of implement now in use on larger farms to the south.[2] The essential point is the absence of a co-operative system. The crofting economy is one of the

* Associate Professor of Sociology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada; formerly Research Fellow, School of Scottish Studies. This article is a verbatim transcript, with the addition of footnotes and references, of the first paper in a symposium on "Simple and advanced techniques in modern society" delivered to Section H of the British Association for the Advancement of Science at Glasgow on 2nd September 1958.

most individualistic forms of society still surviving, and it is important that there has never, with one brief exception (Crowley 1956), been any attempt to support it by the creation of an agrarian political movement devoted to the interests of the smallholder. The reasons for this lack of a political organ lie, in my view, in the system of values which distinguish the Gaelic crofter from, say, the smallholder of the Danish islands. Scottish crofting, in both the Gaidhealtachd and to a slightly lesser degree in Shetland and the Orkney Islands, appears to be founded on the principle that the crofter can manage perfectly well on his own without any governmental or other control of his activities although, of course, inducements in specific directions in the form of cash subsidies are not to be ignored. This value-system peculiar to the region pervades the whole crofting problem, yet it is frequently ignored by the Southron pedlars of panaceas who so often seize upon the crofter as requiring salvation at the hands of the planners.[3]

To an anthropologist it is a truism to suggest that the value-system of a community must be taken into account when considering the mechanics of the community's economy or its network of social relations; yet the innumerable people who every year refer to the "habitual or inherent laziness of the Hebridean" fail to realise that the same Hebridean's set of values differs from their own.[4] Time is not money in the Gaelic value-system, and money is anyway not necessarily the most desirable acquisition. For this reason the retention of implements that are technically less efficient than their mass-produced counterparts is not necessarily a reflection of laziness or conservatism or primitiveness or even of poverty: it is only that the benefits that their replacement by equipment that is technically more efficient might bring, are not benefits in the scale of values of the crofter. I must apologise if I labour this point, but it is, I think, the root of the so-called "crofting problem". As the historian Collingwood observed (1946:xii), ethical theories (and indeed value-systems) differ, but none is therefore erroneous, because any ethical theory is an attempt to state the kind of life regarded as worth aiming at, and the question always arises, by whom?

There are, therefore, specifically cultural reasons for the retention of implements and, indeed, of the whole crofting system. It is not my purpose here to discuss the extent to which they can be reconciled with the value-system which is generally accepted by the rest of the country; I merely wish to point to

its existence, which itself explains the retention of various farming techniques that elsewhere are considered outmoded, and as such have been replaced by the inventions of modern agricultural science.

Perhaps the most archaic implement still in use is the *cas chrom*, or crooked spade, used in some parts of the Hebrides instead of a plough. The use of the spade as the principal implement of tillage was universal throughout the peripheral parts of Scotland until the invention of improved types of plough, although latterly local types of wooden plough were evolved, and used side by side with the spade (Jirlow & Whitaker 1957:71-5). In the northern islands, that is in Orkney and Shetland, tilling with a spade, or delving, was frequently done by a team, which might vary from eight to four people, all standing shoulder to shoulder (Plate XIV: fig. 1; O'Dell 1939:59-60; Waterston 1946:115 and plate opp. p. 113; Jamieson 1949:193-5). The crofter of the land being tilled stood on the left, and he set the pace, the team working at an even speed and delving from right to left. The spade used was long in the shaft, and very light (Shirreff 1814:36). In 1804 it was estimated that some nine-tenths of the tillage of Shetland was performed with the spade, the plough being quite unknown in some parts of that county, such as Mid and South Yell and Foula (Friend 1804:12; Sinclair, Sir J. 1791:574; Low 1879:97). In Orkney it must be supposed that the plough was more widely used by that time, but in the eighteenth century delving was probably more common (cf. Hepburn, 1760:10). Even in the island of Stroma, technically in Caithness, the plough was unknown as late as 1774 (Low 1879:15; cf. Macfarlane 1906: 152; Pennant 1771:154).

On the mainland, as in the Hebrides, the *cas chrom* was used rather than a more orthodox type of spade.[5] The manual implement did, of course, allow the cultivation of much smaller plots of land than would a horse-drawn plough, and in addition more stony soil could be tackled without the danger of smashed mouldboards (Newte 1791:410). For this reason the *cas chrom* was still being used at the end of the last century in the steeper parts of Knoidart, Arisaig and Moidart, and it is questionable if even the most up-to-date ploughs could till some of these areas as effectively (Anon. 1898:67). In the past the *cas chrom* was used for the first two ploughings of land reclaimed from peat-mosses in Wester Ross, and even later when horse-drawn ploughs were used a man with a *cas chrom* might often follow

the plough, turning over those parts which the horse-drawn implement missed, or slices of earth which had fallen back into the furrow (Mackenzie, G. S. 1810:238, 249-50). Nevertheless the superiority of the *cas chrom* to the plough in rocky terrain cannot explain the almost complete absence of the plough in some areas: thus in Assynt in 1812 there were not above six horse-drawn ploughs (Henderson 1812:57); and in the parish of Uig and Lochs in Lewis there was not a single one (Macdonald, J. 1811:151; cf. Walker 1904:127). In later times when evictions were taking place and there was appreciable land-hunger, the crofter would not tolerate the wastage at the edges of fields ploughed by horses—the part known in the Gaelic of Bernera, Lewis, as *ceann-sguire* (Macdonald, D. 1946: 43). The principal economic advantage of the *cas chrom* is that it delves deeper than the plough, which seldom reaches more than four inches in some places, and therefore results in "an impenetrable solidity of ploughpan", remedied only by double ploughing or by the *cas chrom* (Mackenzie, W. 1930:31). This deeper tilling is alleged to result in appreciably better crops—the eighteenth-century economist Walker determined that a boll of bere, a grain akin to barley formerly much cultivated, yielded twelve-fold when raised with the plough, but sixteen-fold when raised with the *cas chrom*. At the same time he admitted that the third crop after the plough was always better than the third crop after the *cas chrom*, and he also calculated that the plough (at that time operated by three men) tilled the same area in a given time as twelve men working with the *cas chrom* (Walker 1918:119; cf. Wylie 1930:21).

This brings me back to the question of values. In the past time was not considered to be a commodity with any monetary worth, even assuming that it could in fact be realised in the form of wages, and this factor certainly accounts for the continuing use of the less efficient *cas chrom* or a more orthodox spade-type in the south right up to the period when a money-economy was introduced. In Midlothian delving with a spade is reported as late as 1706 in a field sown with hemp (Foulis of Ravelston 1894:422); in Renfrewshire the spade was generally used some eighty years previously [6] (Macdonald, A. 1835:193); whilst in Dunbarton, a county which retained several archaic forms of implement, such as the harrow, right into the nineteenth century, the isolated smaller patches of land were certainly still being tilled by spade to the very end of the eighteenth century (Ure 1794:39-40; Whyte & Macfarlan

1811:71; cf. Whitaker 1958:159). The spade in use was, however, not the *cas chrom*, but a more normal type akin to the *cas dhireach*,[7] which was recorded from more northerly parts into this century, but now seems to have fallen entirely out of use. The *cas chrom* has survived longest. Although the agriculturalist James Macdonald wrote in 1811 that "It would be cruel and unwise to insist upon tenants relinquishing this tool all at once" (1811:131), it seems to have survived in the Gaidhealtachd almost as long as the Gaelic language itself. Thus in Fortingall in Perthshire it was used in the wilder parts in the eighteenth century (Stewart, A. 1928:166, 177); only in Arran does it seem to have been lacking (Headrick 1807: 316-17). Of course in many parts where hand-tillage survives the *cas chrom* has been abandoned for the less effective orthodox spade—this is the case in Barra, Eriskay, probably also in South Uist, Benbecula, North Uist and Bernera, as well as in the greater part of Harris and Skye (Buchanan 1942:136; Hobson 1949:77; Pochin Mould 1953:83; MacNeice 1939:68, 70; Caird 1951:89; Mackenzie, W. 1930:93; cf. Martin 1703: 43). Nevertheless I have received three first-hand accounts of the use of the *cas chrom* in the spring of this year (1958) from Scarpay (Harris), from the north end of Raasay, and from Àrd Dorch, Strath, Skye.[8] I am sure that we are witnessing the death of this age-old implement, and with it is going one of the important features of the Gaelic value-system: the concept that time does not matter.

I must, however, pass on to another aspect of farming in this region, which is also on the verge of extinction: the transhumance cycle known in Scots as the shieling system. Basically speaking it is a movement of the cattle away from the infields round the settlement up into the hills, where they spend the larger part of the summer. This allows the grain crops to ripen without danger of being trampled down by cattle, and at the same time affords the cattle fresh untouched pasture away from the often overgrazed area near the crofts. In the period of extreme land-hunger, when the size of the croft was below subsistence level, there was some cultivation at the shieling as well (Mackellar 1889:141), but this was exceptional, and to some extent vitiated the purpose of the shieling.

In the historical period there is no doubt that the shieling system was widespread throughout the Gaidhealtachd. Earlier than 1500 documents do not give complete coverage for the whole country, although there is ample evidence that shielings

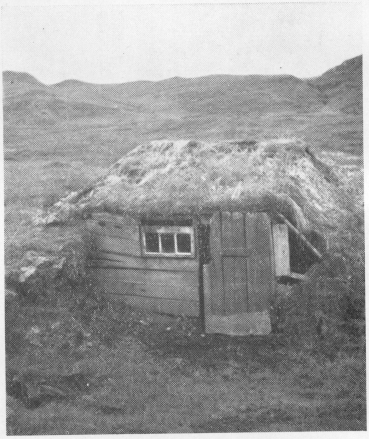

FIG. 1 (above)—Delving, Shetland, late nineteenth century.
FIGS. 2 and 3 (below)—Henhouses, Braes district of Skye.

were to be found over a much wider area than in the sixteenth and seventeenth centuries. Thus Ailred of Rievaux in his Life of St. Ninian mentions shepherds' huts, which he calls in Latin *tuguria*, in Galloway (1874:16, 148). Adamnan in his Life of St. Columba says that the cattle on Iona were grazed on the eastern part of the island, milk being taken by packhorse

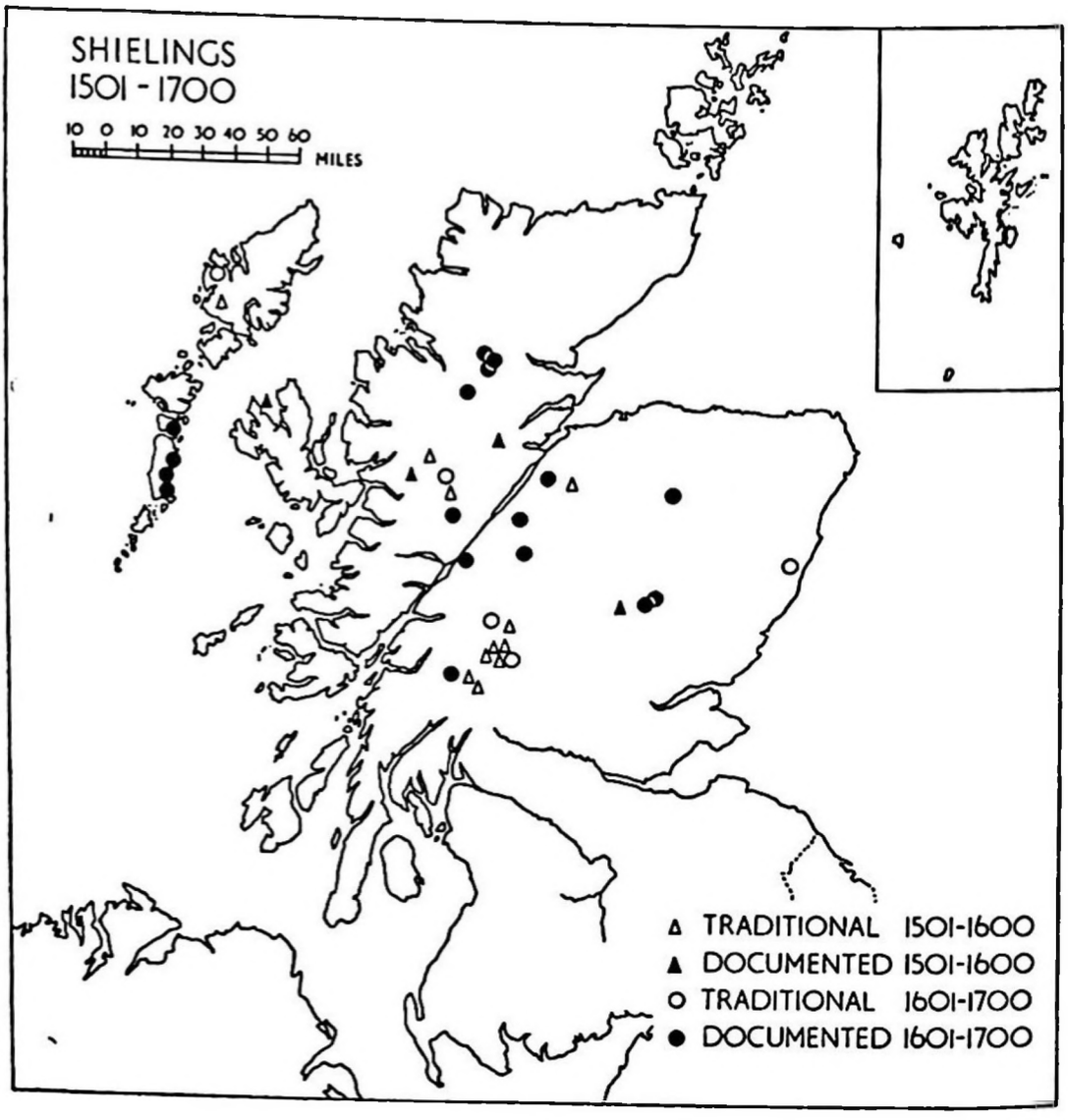

FIG. 1.

to the monastery (1874:96, 212). A shieling named Ásgrimserg —probably the modern Assery between Forsie and Loch Calder in Caithness—was the scene of a murder in 1158, according to the Orkneyinga Saga, and there was another in use at Þórsdalr (Thurso Dale) that same year (Taylor, A. B. 1938:333, 337, 402-3, 405). There are several Scottish charters of the 12th century relating to southern Scotland which mention among grants of land a unit or denomination called in Latin *scalinga*, which is believed to be either a shepherd's hut or a shieling

(cf. Innes 1837:101, 1843:18, 1846:259; Lindsay, Dowden & Thomson 1908:153); and indeed there are some signs of transhumance having been practised in the Pentland Hills outside Edinburgh (Fenton 1951*a*:89, 1951*b*:107).

Certainly there is scarcely an upland part of the historical Gaidhealtachd that does not have some tradition of use as a

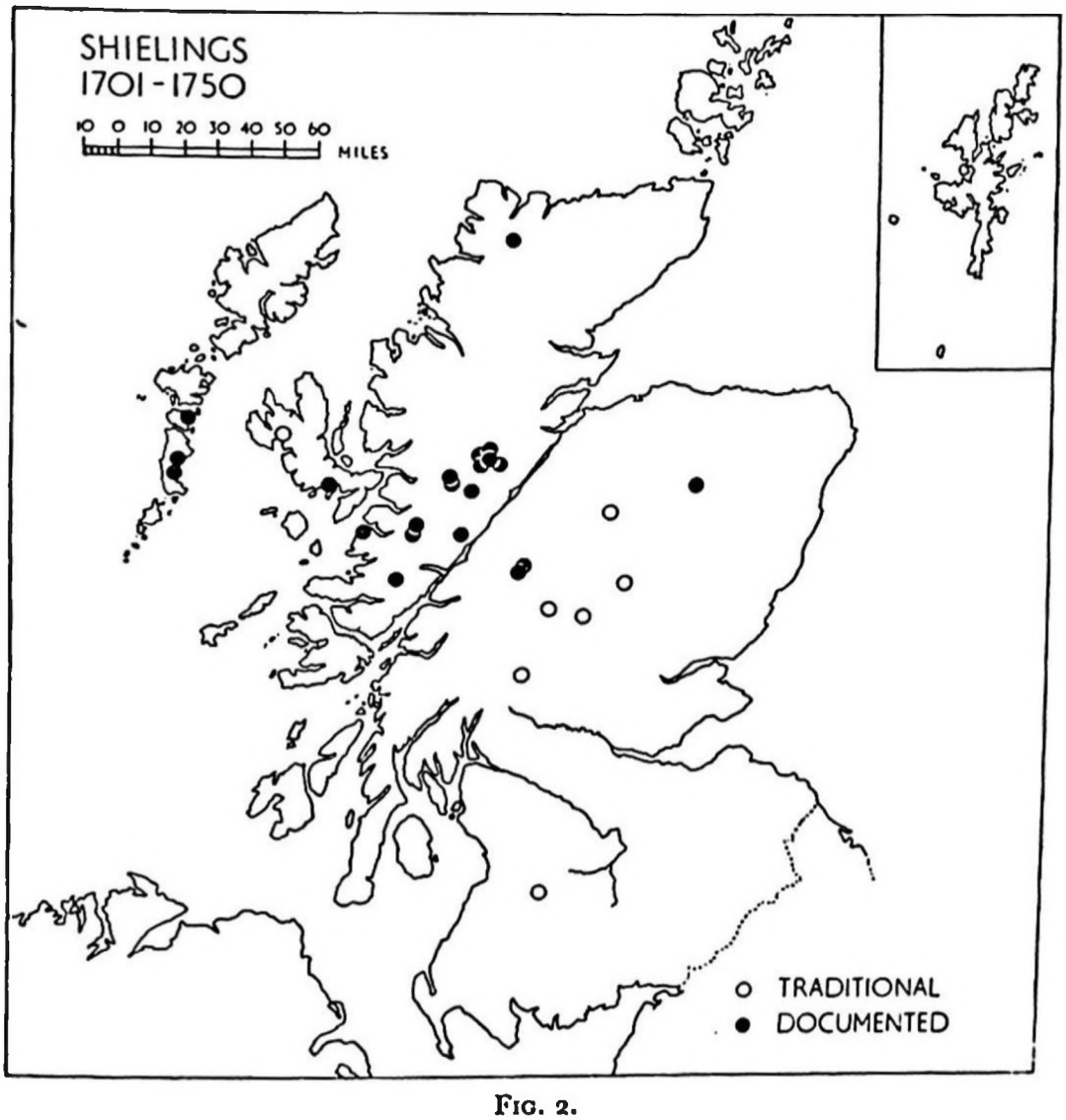

Fig. 2.

shieling associated with it. On our first map (fig. 1) [9] I have marked some of the sites for which we have definite traditions that can be dated to the sixteenth and seventeenth centuries by reference to some historical personage, and I think we can take these points as definite shieling-sites at this period. There are also marked other sites for which we have more legally acceptable documentation, from charters, grants of land and so forth. Of course our map is by no means complete. Precise references to the sites of shielings are comparatively rare, and for every datable instance we have six with no exact date, and for each

one with a precise geographical location we have several that cannot be placed on the map, being described as "in Glen Lyon" or "by the Moor of Rannoch" and so forth. This map, and the succeeding ones, are also restricted by the fact that they are drawn up from one man's reading; were the whole of Scottish topographical literature to be systematically scoured

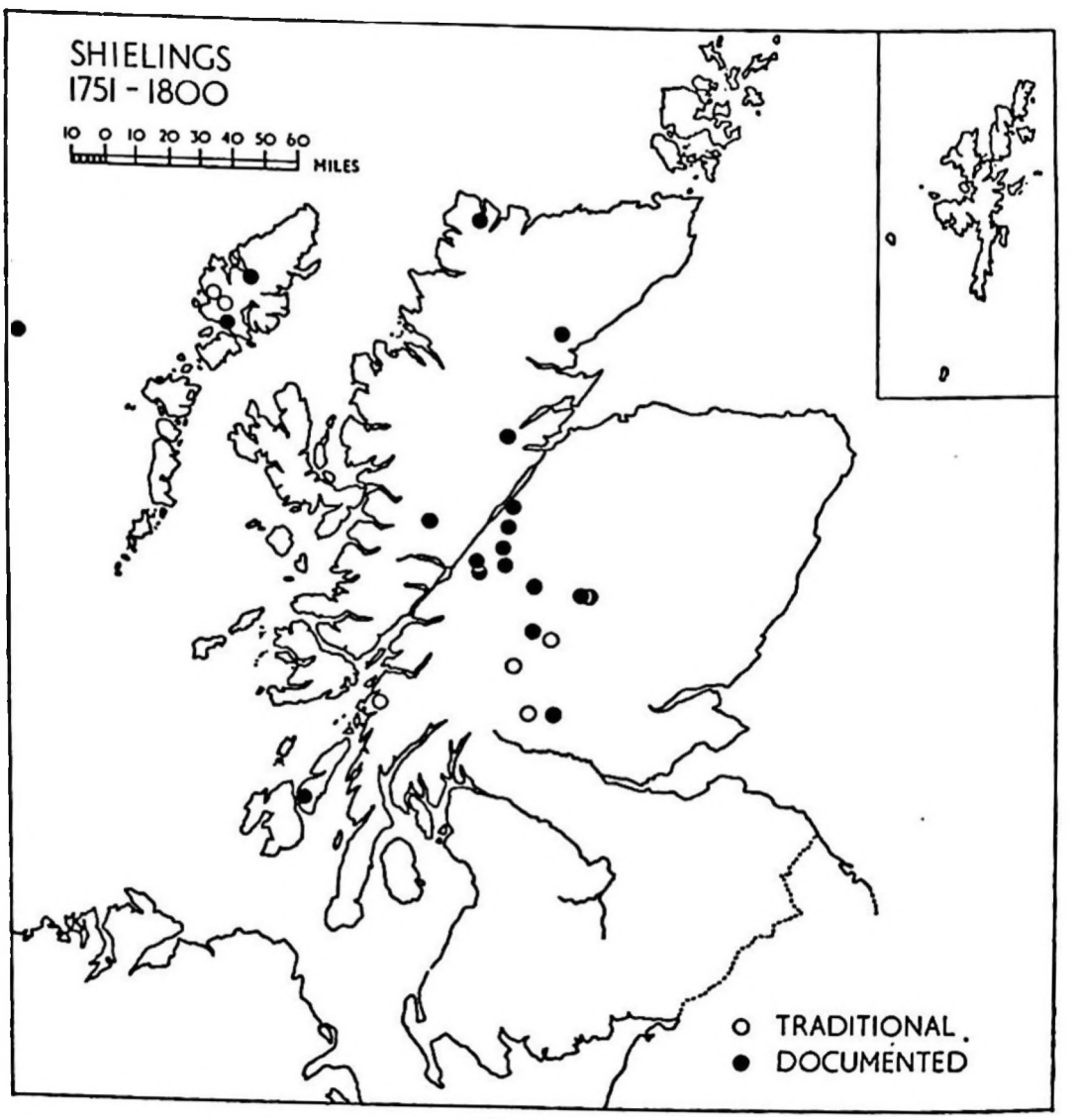

Fig. 3.

there would be many more sites marked on our map. These maps are therefore to be taken as indications of the scatter of shieling sites, and not as a final list of all such places. You will see that in the sixteenth and seventeenth centuries there were shielings in Perthshire and Angus, as well as a considerable concentration in central Inverness-shire.

In the period 1701 to 1750 (fig. 2), which is well documented because of the many accounts of experiences during the '45, there were still many shielings in use in Perthshire, and even

in Aberdeenshire, as well as one rather dubious instance reported from Ayrshire (Lebon 1952:105). Indeed, during the mopping-up process after the '45 the absence of the Highlanders at their shielings meant that they were not subject to Government coercion during the summer months (Dickson 1895:278).

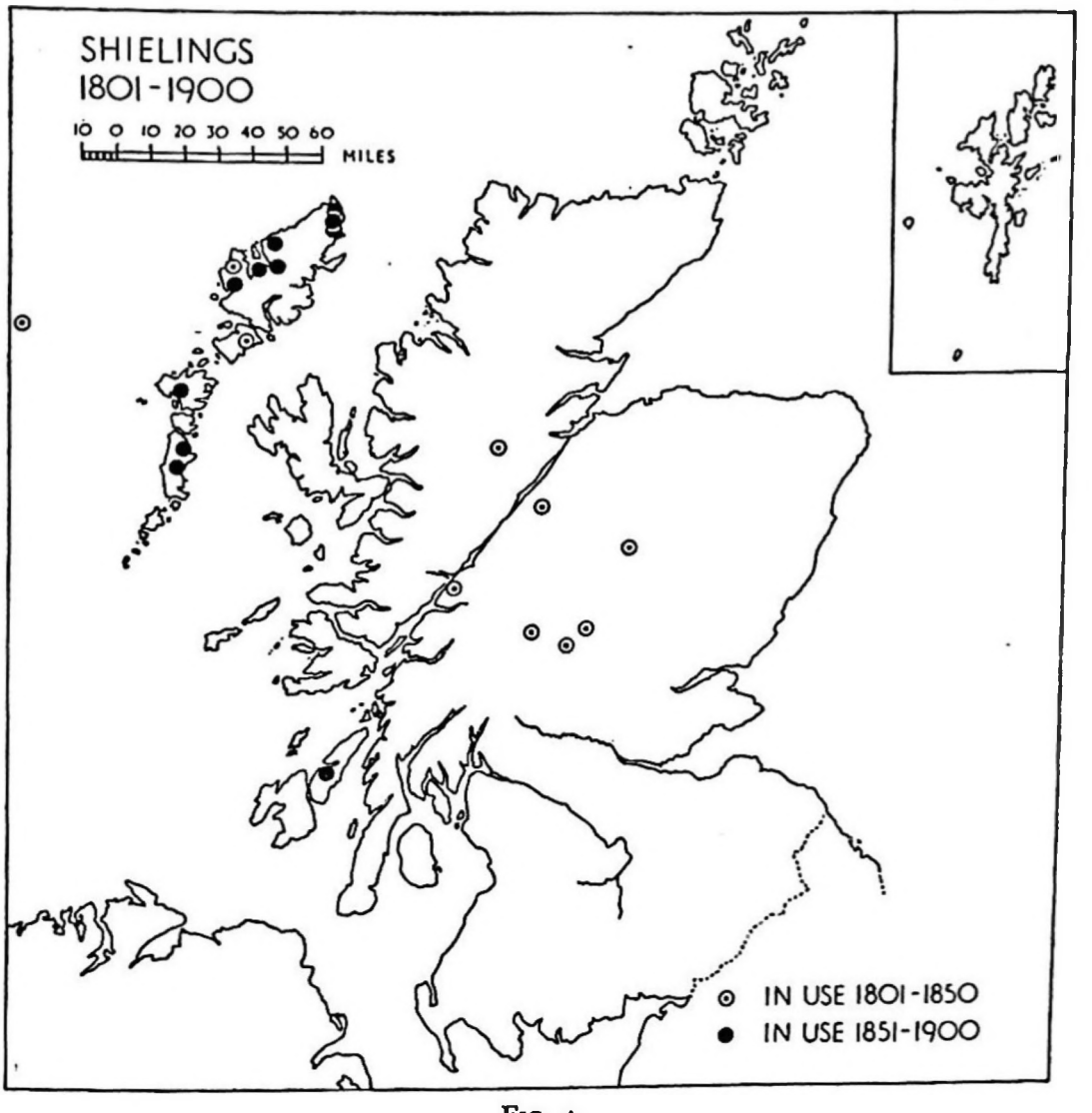

Fig. 4.

By the latter half of the eighteenth century, however (fig. 3), the scatter of shielings has begun to shrink appreciably, although there is better documentation from central Inverness-shire and Perthshire, explicable by the greater number of travellers' accounts relating to this period. In the nineteenth century (fig. 4) there are still some mainland shielings reported in the first half, but by the second half they are only to be found in the islands, and more particularly in the Outer Hebrides—the Long Island. In the first half of the present century (fig. 5) this trend has continued, although in fact there

has been a continual shrinkage of the shieling area not easily demonstrated cartographically, so that now only in Lewis is the transhumance cycle in operation at all. It is significant that in Lewis the shieling survives because it provides the opportunity for social intercourse—the move is still the occasion for some slight festivity. In Lewis shieling huts are still being built; I have seen one which was built as recently as

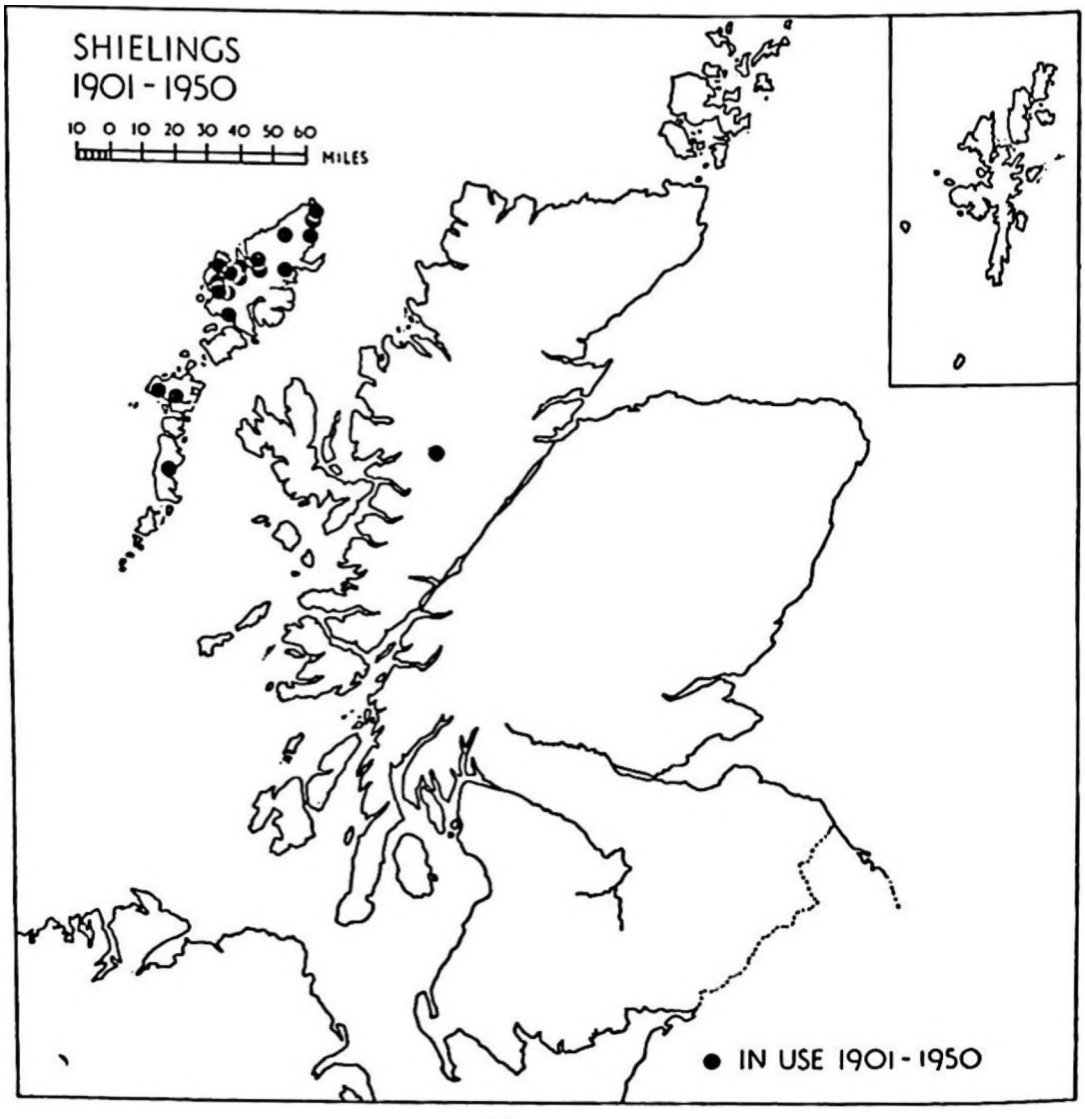

Fig. 5.

1950. With the abandonment elsewhere of the migration to the shielings there has been a parallel decline in the composition of songs associated with the shielings,[10] which cannot fail to be reflected in a changing song-culture; for as one writer has said, "The sheiling was the nursery ground of the love-song" (Gunn 1891:60). The absence of the people from their crofts in the cramped surroundings of the shieling must have played a significant part in the dissemination of their folk-lore,[11] a factor now absent from all but Lewis.

One form of modified migration does still survive to a much larger extent than the shieling system: I refer to the custom of pasturing cattle and sheep on otherwise uninhabited islands (fig. 6). This practice, of course, can only occur in the littoral regions. It is one that does, however, stretch back at least to the early sixteenth century, if not earlier (cf. Dowden 1903:3).

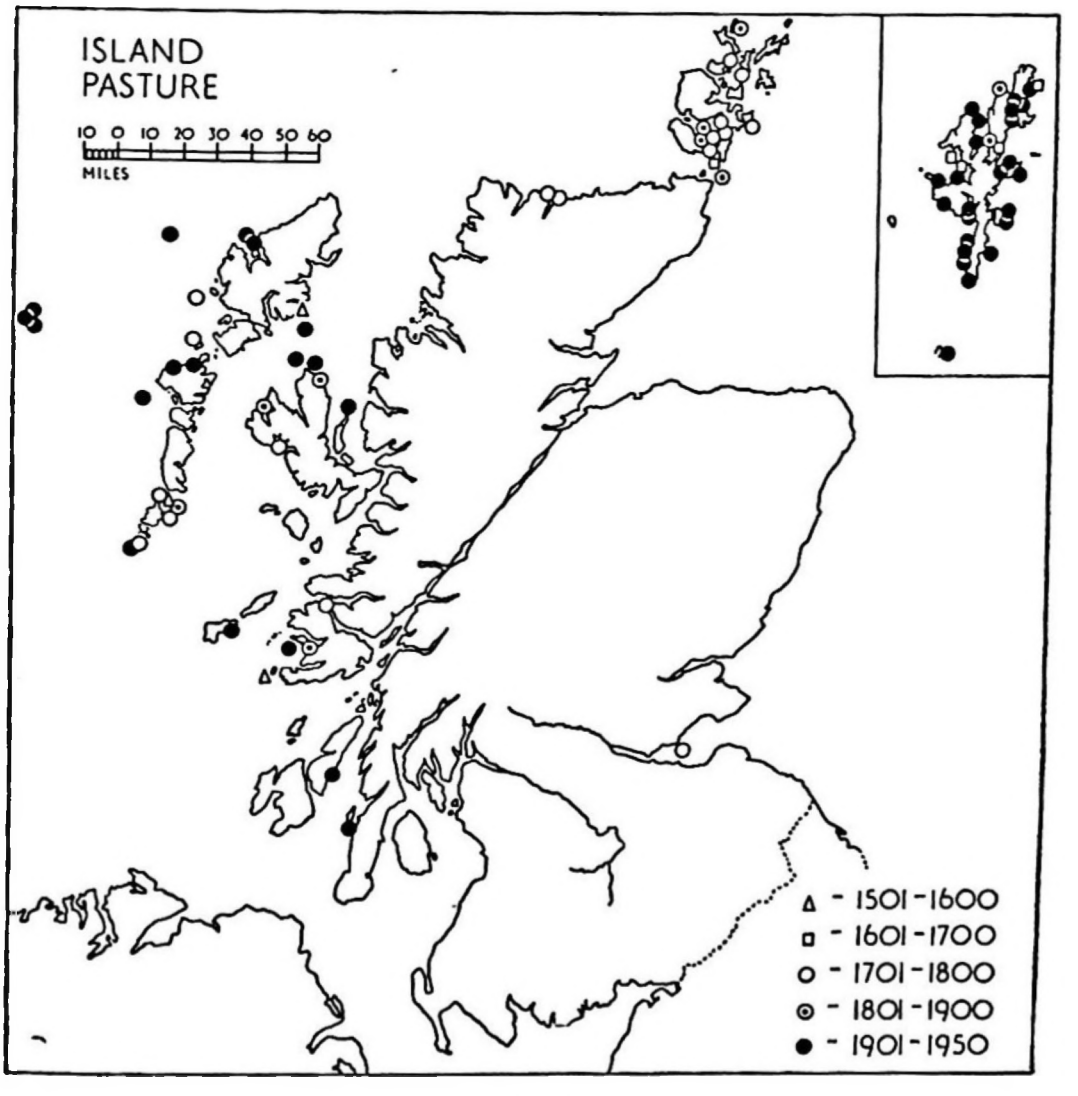

Fig. 6.

It has been particularly widespread in Orkney and Shetland, where in fact there is no evidence of a shieling system in later times, although it is well documented in place-names from the Norse period.[12] In Orkney and Shetland even quite small holms have been used for a very few cattle or sheep, generally placed there in the spring and removed, often with considerable difficulty and only after some excellent seamanship, towards the autumn. In areas where upland summer pasture such as was elsewhere used for shielings is not to be

found, it is an interesting alternative, and an important one since it obviates overstocking. Even in the Hebrides, however, where appropriate inland areas for summer pasture are to hand, the use of outlying islands has continued well into the present century, and in some parts to the present day. The retention of these islands for pasture, especially when more accessible inland pasture is available, is partly explained by the fact that whilst the livestock is on the islands no continual supervision is required, since there is no danger of straying. But some peninsulas might also satisfy this requirement. I think that here, as in Lewis, there is a better reason for their retention: the social factor. In this case it is the menfolk who superintend the transport of cattle or sheep to the islands, and usually the move affords them an opportunity to be away together, as a unit, for some days, in the same way that other communities in these areas are divided whilst the men depart for lobster-fishing, sealing or fowling. In fact maritime transhumance is probably as old as the shieling system itself. It is reported from Raasay in 1703, from Ailsa Craig in the Firth of Clyde in 1772, as well as from the Long Island (Martin 1703:163; Pennant 1790:217; MacLeod, D. 1895:172; Martin 1698:40). Sealers used huts on North Rona in the eighteenth and nineteenth centuries, and fowlers used the islands of St. Kilda, other than Hirta, until it was evacuated in 1930; Sula Sgeir is still used by the men of Ness to the present day (Darling 1940:261; Atkinson 1949:281-319).

Another form of transhumance, or rather of the movement of livestock, akin to the shieling system of which it is a mirror image, is the wintering of livestock in less inclement regions. This is probably also age-old, although the earliest reference I have come across myself relates to Melrose in 1669 (Romanes 1915:411). As a matter of fact it was not until the eighteenth century that it was discovered that sheep could be left out in the Highlands over the winter without being folded at night time. This discovery was apparently made by an incomer, said to be lazy (!), the landlord of an inn at Tyndrum (Ramsay of Ochtertyre 1888:222*n*.), and this did much to prepare the way for the ruthless introduction of extensive sheep-husbandry in the Highlands. Another form of livestock movement worth mentioning is the summering of hens in special henhouses, a mile or so from the croft, which is still practised in Lewis, Harris, North Uist, and the Braes district of Skye (Pl. XIV, figs. 2 and 3; MacGregor 1935:289; Jaatinen 1957:74; O'Malley 1948:94).

The retention of the blackhouse in the Scottish islands can also be explained by reference to the survival in those areas of a different value-system. In the corpus of Gaelic folk-song and poetry I do not think there is a single item eulogizing the humble homestead. Mary Macleod (Màiri Nighean Alastair Ruaidh) and others praised the glories of the chief's castle (Watson 1934:20-5), but there is a conspicuous absence of the cottage-panegyric type of writing which, for instance, characterises the English rural muse. In the traditional Gaelic value-system no special importance was attached to a neat well-built house; only the successive efforts of local health authorities have finally spelt the end of the open-hearthed house with mud floor, the living room of which might well be shared with cattle. The elegy of the seventeenth-century poet, Cathal MacMuireadhaigh in the Red Book of Clanranald, illustrates this point rather well:

> Be not erecting lime houses
> Let grass huts be your dwelling at the shore.
>
> Nar beithe ag tégar threabh naoil
> más férbhoith do thegh a ttráigh
> (Cameron, A. 1894:226-7).

I have tried to show you that we cannot examine the retention of outmoded implements without reference to the value-system of the people by whom they were used. A culture is much more than an assemblage of quaint artefacts, and the traditional Gaelic society was much more than a few backward old men and women, sitting by the open hearths of primitive mud hovels, spinning with outmoded distaff and spindle and mumbling their primeval runes. It was a way of life with its own code of values, its own purpose, its own ethical system. Once you modify the one by the introduction of a money-economy, truly one of the gifts of the Greeks, the collapse of the rest was probably bound to follow. I do not imply that these technically less efficient practices should be retained—the Hebrides are not a living museum of aboriginal folkways—but I merely wish to suggest that to study the one aspect of traditional Gaelic culture without reference to the other is impracticable, not to say unscientific.

[1] Cf. the title of an otherwise excellent paper (Curwen 1938): "The Hebrides: a cultural backwater".

[2] The specifically Orcadian aspects of this problem are covered in an interesting series of discussions: Hamilton 1926; Irvine 1927:16; Sinclair, J. 1927:21-2; Bain 1927:31-2. For a highly relevant pioneer analysis (of somewhat similar continental communities see Warriner 1939; cf. Ashby 1935:200-1; Bridges 1937:207).

[3] This aspect is entirely glossed over, for instance, in the exhaustive West Highland Survey: Darling 1955; it is, however, dealt with admirably by Collier, who wrote, "The 'problem' of the Highlands really arises out of a clash of social philosophies" (1953-4). The importance of examining differing value-systems has also been recognised by agricultural economists: Ashby 1953:413-14.

[4] E.g. Goodrich-Freer 1902:195: "It takes two men to do a day's work in the Highlands and two more to look on." A thoroughly unsympathetic discussion is that of MacGregor 1949:231-40, but he is unusual for this type of writer in that he does perceive the co-existence of two (or more) value-systems.

[5] For detailed descriptions of the *cas chrom* see Sinclair, Sir J. 1795:152*n.*; Robertson, J. 1808:102; Macdonald, J. 1811:151; Henderson 1812:57; Robertson, C. M. 1910:272. At Smearisary in Moidart delving by a team using spades survived at least until recently (personal communication from Mr. Raymond O'Malley); he describes the process thus:

"As many persons as can be collected stand in a straight line, 2 or 3 feet apart, each holding a spade. They score the turf lightly in front of them, dig in their spades, and at a given signal all together press. The whole furrow rolls over bodily. The next furrow is rolled into the trench thus created and so on. It is slow and laborious compared with ordinary ploughing, but gives a deeper tilth and (I imagine) a heavier crop" (O'Malley 1948:22-3).

[6] Middle Scots references to delving suggest that this practice co-existed with ploughing through a large part of Lowland Scotland, as well as in more northerly areas, where they were specifically bracketed together in Harris and Taransay in 1549 by Munro (1908:296, 300). In the south, however, it was only the man who had insufficient oxen to make up at least part of a ploughing team who had recourse to this method of tillage. Thus it was ordained by the first parliament of Alexander II in 1214:

"And al that hes les than 5 ky and wonnis in felde lande that may nocht eyr na mak teilth wyth oxin thai sal wyth thar handis and thar feit delf the erd til eyr and saw in al that thai may for til wyn thar sustinans to thaim and thairs" (*The Acts of the Parliaments of Scotland*: 1 (1814), 397 (red), col. 2.)

Similarly in an Act of the reign of James I (1424) the status of labourer was defined by possession of half an ox or by tillage each day of a specified area:

"It is statut & ordanyt that ilk man of sympil estate that of resone suld be a laborar haf other half ane ox in the pluch or ellis delff ilk

werk day 7 fut on lenth & 7 on breyd under the payn of ane ox to the king" (*ibid.*:2 (1814); 8, col. 2.)

From a somewhat later period the Asloan manuscript (written in the reign of James V) provides two interesting references to delving:

"With spaide and gavillok & mattok wicht
Thai delvit quhill thai the barrall gat" *The sevyne sagis*, ll. 1744-5 (Craigie 1923-5:2, 55).

"To delf the erd ane spaid in his richt hand" *The buke of the chess* l. 1370 (*ibid.*:1, 124).

[7] For a discussion of the *cas dhireach* see Henderson 1812:57; Jirlow & Whitaker 1957:73.

[8] I am indebted to my colleagues the Rev. Angus Duncan and Messrs. John MacInnes and Calum Maclean respectively for this information. In Skye the use of the *cas chrom* seems to have been localised for some decades, being reported from elsewhere in Strath in 1940 by Perry (1944:39), as well as from the neighbouring islands of South Rona and Soay somewhat earlier (MacGregor 1930*b*:212, Gordon, S. 1931:37). It was photographed in use in the 1930's in South Uist: cf. Quigley 1936, plate 79 opp. p. 71; Shaw 1955, plate 4*a*.

[9] Apart from material collected personally during fieldwork, the following literary sources were used in the compilation of the distribution maps:

Fig. 1 (*Shielings* 1501-1700): Bellesheim 1890:372; Blundell 1917: 125; Douglas 1826:65; Fergusson 1895:260, 269-71, 1899:91-2; Fraser 1905:179; Fraser-Mackintosh 1875:179, 1892:38; Gillies 1938:257; Gordon, J. 1907:534, 544, 563-4, 570; Gordon of Straloch 1907:234; Innes 1855:364; Macgill 1909:160, 272; Mackay 1896:72; Mackenzie, A. 1909:4; Macpherson, A. 1893:20; MacRa 1914:219; Martin 1698: 22-3; Millar 1909:66; Monro 1908:285; Morrison 1932:83, 137; Muir & Thomas 1862:226-7; Ochterlony of Guynd 1844:333; Stewart, A. 1928:60-1, 195-7, 356-8; Stuart & Stuart 1848:499.

Fig. 2 (*Shielings* 1701-1750): Buchan 1727:48; Cameron, J. 1895:92; Elphinston 1895:252-3; Fergusson 1904:200, Fergusson of Kilkerran 1951:235; Grant of Rothiemurchus 1911:187; Lebon 1952:105; Macbean 1916:87; MacDonald, Capt. A. 1895:329, 345-6; MacDonald, J. 1873:415; MacDonald of Glenaladale 1895:339; Maccachain 1916:250, 255; Macfarlane 1906:194; Macphail 1916:303-5; Mac-Pherson, D. 1896:39, 41; Martin 1703:85; Murray of Broughton 1898:290, 296; Stewart, A. 1928:193; Taylor, H. P. 1948:166; Tolmie 1946:206.

Fig. 3 (*Shielings* 1751-1800): Boswell 1936:107; Carnegie of Stronvar 1896:614; Forbes 1886*a*:143-4, 161, 1886*b*:298-9, 315; Fraser-Mackintosh 1890:273; Grant, A. 1809:75-9, 1811:47, 50; Grant, K. W. 1919: 150-1; MacLeod, D. 1892:161-2; Marshall 1794:46; Mason 1954:3; Millar 1909:127, 238; Morrison 1932:141, 204; Pennant 1771:102, 1790:246; Pococke 1887:127; Sinclair, Sir J. 1792:410; Sinton 1910: 326; Stewart, A. 1928:194; Thomas 1862*a*:128-9, 1870:161.

Fig. 4 (*Shielings* 1801-1900): Beveridge 1911:318*n.*-9; Caird 1951:89, 93, 95; Lauder 1873:4; Leslie 1958:40; Mackellar 1890:165; Muir 1861:188, 1885:43; Napier and Ettrick 1884:158-9, 368-9, 459; Scott-Moncrieff 1952:126; Stewart, A. 1928:194; Stewart, J. 1911:285; Thomas 1862*a*:130, 1862*b*:135-6, 139, 1870:162, 164.

Fig. 5 (*Shielings* 1901-1950): Beveridge 1911:318*n.*-9; Carmichael

1941:39; Curwen 1938:272, 278; Duff 1929:284; Geddes 1936:303, 1955:61-2, 83, 128; Gordon, S. 1941:119; MacGregor 1935:17, 28-9, 213, 252-4, 295, 1949:12, 298; MacIver 1934:48; MacNeice 1939: 203, 222; Pochin Mould 1953:265; Stevens 1925:76.

Fig. 6 (*Island Pasture* 1501-1950): Anon. 1908*a*:73-4, 1908*b*, 1908*c*; Beveridge 1911:52; Blundell 1917:18; Charlton 1913:191, 1936:59; Evans & Buckley 1899:11, 16-7, 32, 34, 50; Goodrich-Freer 1902:403, 407; Harvie-Brown & Buckley 1888*a*: li, 1888*b*:51; Hill 1890:200, 224; Johnson 1930:4, 53; Kay 1908:31-3, 38; Low 1879:12, 18, 20, 22, 39, 43-4, 48-9, 1915:139-40; Macfarlane 1906:190; MacGregor 1930*a*:221, 1930*b*:136, 1935:250-1, 286-7, 1937:101, 1953:70, 225, 281; Mackenzie, W. 1930:32, 71; Martin 1703:50, 98, 170, 253; Monro 1908:278, 289, 294; Monteith 1845:4, 6, 37-8, 42, 50, 57, 71-2; Morisone 1845:338; Nicolson 1930:299; O'Dell 1939:45; Stucley 1956:87; Venables & Venables 1955:39, 358-60.

This paper was already in proof at the time of publication of Dr. Gaffney's interesting survey of shielings in Banffshire and Western Aberdeenshire. He shows, for example, that the dissolution of the shieling system in Strathavon was completed by 1791, and he also discusses the process of bringing the shieling area into permanent cultivation: Gaffney 1959: 32-4.

[10] An analysis of other concomitants of diminishing transhumance (in a different cultural setting) is to be found in Whitaker 1956.

[11] Cf. Macdonald, A. 1889:27: "Than the circumstances in which the Highlanders of old lived while in the midst of such ideally pastoral conditions as their life on the sheilings essentially afforded none more productive of poetic sentiment can well be imagined. It is not too much to say now that passing a considerable portion of each year in such conditions must have tended to render the Highlander the contemplative, freedom-loving being he is."

[12] Cf. the place-names in *-ary* and other derivatives from Old Norse *erg* (itself probably a loanword : cf. modern Gaelic *àiridh*): see Marwick 1923:23, 1927:74-6, 80, 1947:88-9, 1952:165; Macbain 1911:10; Matras 1956. A national survey of shielings and their names is projected in collaboration with my colleague Dr. W. F. H. Nicolaisen.

REFERENCES

ADAMNAN

1874 *Life of Saint Columba, founder of Hy* (The Historians of Scotland 6) [ed. William Reeves]. Edinburgh.

AILRED [ABBOT OF RIEVAUX]

1874 "Life of S. Ninian". *Lives of S. Ninian and S. Kentigern compiled in the twelfth century* (The Historians of Scotland 5):3-26, 137-57 [ed. Alexander Penrose Forbes, Bishop of Brechin]. Edinburgh.

ANON.

1898 *The Highlands of Scotland in* 1750 [ed. Andrew Lang]. Edinburgh.

1908*a* "A description of the island of Unst". *Description of ye countrey of Zetland*:73-7. n.p.

1908*b* "A geographical description of Daleting 1684". *Ibid.*:78-82.

ANON. (*cont.*)
1908*c* "A geographical account of the parish of Northmaven in Zetland". *Ibid.*:82-4.
ASHBY, A. W.
1935 "The family farm". *Proceedings of the Third International Conference of Agricultural Economists* [1934]:193-206. London.
1953 "Interrelationships of the social sciences in rural welfare." *Proceedings of the Eighth International Conference of Agricultural Economists* [1952]:410-24. London.
ATKINSON, ROBERT
1949 *Island going*. London.
BAIN, R.
1927 "The most economic size of holding". *The Journal of the Orkney Agricultural Discussion Society* [2]:31-2. [Kirkwall].
BELLESHEIM, ALPHONS
1890 *History of the Catholic Church of Scotland* [trans. Oswald Hunter Blair] Vol. 4. Edinburgh.
BEVERIDGE, ERSKINE
1911 *North Uist: its archæology and topography*. Edinburgh.
BLUNDELL, Dom. ODO
1917 *The Catholic Highlands of Scotland* [Vol. 2]: *The Western Highlands and Islands*. Edinburgh.
BOSWELL, JAMES
1936 *The journal of a tour to the Hebrides with Samuel Johnson, LL.D.* (Private papers of James Boswell from Malahide Castle—Isham Collection) [ed. Frederick A. Pottle & Charles H. Bennett]. London.
BRIDGES, A.
1937 "Farm organization with special reference to the needs of technical, industrial and economic development of agriculture." *Proceedings of the Fourth International Conference of Agricultural Economists* [1936]:204-15. London.
[BUCHAN, ALEXANDER]
1727 *A description of St. Kilda, the most remote Western Isle*. Edinburgh.
BUCHANAN, DONALD
1942 *Reflections of the Isle of Barra*. London.
CAIRD, J. B.
1951 "The Isle of Harris". *The Scottish Geographical Magazine* 67: 85-100. Edinburgh.
CAMERON, the late Rev. ALEXANDER
1894 *Reliquiæ Celticæ Vol. 2: Poetry, history and philology*. Inverness.
CAMERON, JOHN
1895 "Journal by Mr. John Cameron, Presbyterian Preacher and Chaplain at Fort-William". *The Lyon in mourning* Vol. 1 (Publications of the Scottish History Society 20):83-101 [ed. Rev. Robert Forbes, Bishop of Ross and Caithness]. Edinburgh.
CARMICHAEL, ALEXANDER
1941 *Carmina Gadelica* Vol. 4. Edinburgh.
CARNEGIE OF STRONVAR, Mrs.
1896 "Place-names of Balquhidder". *The Scottish Geographical Magazine* 12:609-16. Edinburgh.

CHARLTON, EDWARD
1913 "A visit to Shetland in 1832—part IX". *Old-Lore Miscellany of Orkney, Shetland, Caithness and Sutherland* 6:188-92. London.
1936 "Journal of an expedition to Shetland in 1834—part V". *Old-Lore Miscellany of the Old Norse Earldom of Orkney Shetland Caithness and Sutherland* 10:55-71. London.
COLLIER, the late ADAM
1953 *The crofting problem* (Publications of the Department of Social and Economic Research, University of Glasgow. Social and Economic Studies 1). Cambridge.
COLLINGWOOD, R. G.
1946 *The idea of history*. Oxford.
CRAIGIE, W. A. (ed.)
1923-5 *The Asloan manuscript* (Scottish Text Society N.S. 14, 16) Vol. 1 (1923); Vol. 2 (1925). Edinburgh.
CROWLEY, D. W.
1956 "The 'Crofters' Party' 1885-1892". *The Scottish Historical Review* 35:110-26. Edinburgh.
CURWEN, E. CECIL
1938 "The Hebrides: a cultural backwater". *Antiquity* 12:261-89. [Gloucester].
DARLING, F. FRASER
1940 *Island years*. London.
(ed.) 1955 *West Highland survey*. London.
DICKSON, WILLIAM KIRK (ed.)
1895 *The Jacobite attempt of* 1719 (Publications of the Scottish History Society 19). Edinburgh.
DOUGLAS, FRANCIS
1826 *A general description of the East Coast of Scotland, from Edinburgh to Cullen* (2nd ed.). Aberdeen.
DOWDEN, the Right Rev. JOHN, BISHOP OF EDINBURGH
1903 *Chartulary of the Abbey of Lindores* 1195-1479 (Publications of the Scottish History Society 42). Edinburgh.
DUFF, IAN D.
1929 "The human geography of south-western Ross-shire". *The Scottish Geographical Magazine* 45:277-95. Edinburgh.
ELPHINSTON, JAMES
1895 "A genuine account of the Prince's escape from the time of the battle of Culloden to the 11th of July 1746". *The Lyon in mourning* Vol. 2 (Publications of the Scottish History Society 21):251-4. Edinburgh.
EVANS, ARTHUR H. & BUCKLEY, T. E.
1899 *A vertebrate fauna of the Shetland Islands* (A vertebrate fauna of Scotland). Edinburgh.
FENTON, E. WYLLIE
1951*a* "The influence of man on plant and animal life". *Scientific survey of south-eastern Scotland*:85-94 [ed. Alan G. Ogilvie *et al.*]. Edinburgh.
1951*b* "Vegetation and agricultural activities as shown by aerial photographs". *The Scottish Geographical Magazine* 67:105-9. Edinburgh.

FERGUSSON, CHARLES
1895 "Sketches of the early history, legends, and traditions of Strathardle and its glens—part III". *Transactions of the Gaelic Society of Inverness* 19:245-71. Inverness.
1899 "Sketches of the early history, legends, and traditions of Strathardle and its glens—no. V" *Ibid.* 21:69-105. Inverness.
1904 "Sketches of the early history, legends, and traditions of Strathardle and its glens—no. VIII". *Ibid.* 24:195-231. Inverness.

FERGUSSON OF KILKERRAN, Sir JAMES
1951 *Argyll in the Forty-five.* London.

FORBES, BISHOP ROBERT
1886*a* "Journal of Bishop Robert Forbes' episcopal journey and visitation of the dioceses of Ross and Caithness, 1762". *Journals of the episcopal visitations of the Right Rev. Robert Forbes,* M.A.: 137-248. London.
1886*b* "Journal of Bishop Robert Forbes' episcopal journey and visitation of the diocese of Ross, and parts of the dioceses of Moray and Argyll, 1770". *Ibid.*:265-326.

FOULIS OF RAVELSTON, Sir JOHN
1894 *The account book of Sir John Foulis of Ravelston* 1671-1707 (Publications of the Scottish History Society 16). [Ed. Rev. A. W. Cornelius Hallen]. Edinburgh.

FRASER, Master JAMES
1905 *Chronicles of the Frasers* (Publications of the Scottish History Society 47). [Ed. William Mackay]. Edinburgh.

FRASER-MACKINTOSH OF DRUMMOND, CHARLES
1875 *Invernessiana.* Inverness.
(ed.) 1890 *Letters of two centuries chiefly connected with Inverness and the Highlands, from* 1616 *to* 1815. Inverness.
1892 "Minor Highland septs—no. IV. The Camerons of Letterfinlay, styled 'Macmartin'". *Transactions of the Gaelic Society of Inverness* 17:31-45. Inverness.

FRIEND TO ZETLAND, A
1804 *An answer to "A letter respecting Zetland" addressed "To the Honorable the Highland Society of Scotland" signed "Vindicator".* London.

GAFFNEY, VICTOR
1959 "Summer shealings." *The Scottish Historical Review* 38:20-35. Edinburgh.

GEDDES, ARTHUR
1936 "Lewis". *The Scottish Geographical Magazine* 52:217-31, 300-13. Edinburgh.
1955 *The Isle of Lewis and Harris* (Edinburgh University Publications Geography and Sociology 2). Edinburgh.

GILLIES, the Rev. WILLIAM A.
1938 *In famed Breadalbane.* Perth.

GOODRICH-FREER, A.
1902 *Outer Isles.* Westminster.

[GORDON, JAMES (ed.)]
1907 "Noates and observations of dyvers parts of the Hielands and Isles of Scotland" in Macfarlane 1907:509-613.

GORDON, SETON
1931 *The Charm of Skye* (2nd ed.). London.
1941 "Isles of the Outer Hebrides". *The Scottish Geographical Magazine* 57:115-9. Edinburgh.

[GORDON OF STRALOCH, SIR ROBERT]
1907 "Adnota ad descriptionem duarum præfectuarum Aberdoniæ et Banfiæ in Scotia ultramontana" in Macfarlane 1907:224-67.

[GRANT, ANNE]
1809 *Letters from the mountains* Vol. 2 (4th ed.). London.
1811 *Essays on the superstitions of the Highlanders of Scotland* Vol. 2. London.

GRANT, K. W.
1919 "Peasant life in Argyllshire in the end of the eighteenth century". *The Scottish Historical Review* 16:144-52. Glasgow.

GRANT OF ROTHIEMURCHUS, ELIZABETH, afterwards Mrs. Smith of Baltiboys
1911 *Memoirs of a Highland lady* 1797-1830 (2nd ed.). [Ed. Lady Strachey]. London.

GUNN, Rev. ADAM
1891 "Unpublished literary remains of the Reay Country". *Transactions of the Gaelic Society of Inverness* 16:59-69. Inverness.

HAMILTON, SIR ROBERT W.
[1926] "Business methods in agriculture". *The Journal of the Orcadian Agricultural Discussion Society* [1]:5-9. [Kirkwall].

HARVIE-BROWN, J. A. & BUCKLEY, T. E.
1888*a* *A vertebrate fauna of the Outer Hebrides*. Edinburgh.
[1888*b*] *A vertebrate fauna of Sutherland, Caithness and West Cromarty*. Edinburgh.

HEADRICK, Rev. JAMES
1807 *View of the mineralogy, agriculture, manufactures and fisheries of the island of Arran*. Edinburgh.

HENDERSON, JOHN
1812 *General view of the agriculture of the county of Sutherland*. London.

[HEPBURN, THOMAS]
1760 *A letter to a gentleman from his friend in Orkney*. London.

HILL, GEORGE BIRKBECK
1890 *Footsteps of Dr Johnson (Scotland)*. London.

HOBSON, PEGGIE M.
1949 "The parish of Barra". *The Scottish Geographical Magazine* 65: 71-81. Edinburgh.

[INNES, COSMO (ed.)]
1837 *Liber Sancte Marie de Melros* Vol. 1 (Bannatyne Club). Edinburgh.
1843 *Registrum de Dunfermlyn* (Bannatyne Club). Edinburgh.
1846 *Liber S. Marie de Calchou* Vol. 2 (Bannatyne Club.) Edinburgh.
1855 *The Black Book of Taymouth with other papers from the Breadalbane Charter Room* (Bannatyne Club). Edinburgh.

IRVINE, JAS.
1927 "Debate: large versus small holdings in Orkney—large holdings". *The Journal of the Orkney Agricultural Discussion Society* [2]:15-27. [Kirkwall].

JAATINEN, STIG
1957 *The human geography of the Outer Hebrides* (Acta Geographica 16 No. 2). Helsinki.
JAMIESON, PETER
1949 *Letters on Shetland.* Edinburgh.
JIRLOW, RAGNAR and WHITAKER, IAN
1957 "The plough in Scotland". *Scottish Studies* 1:71-94. Edinburgh.
[JOHNSON, SAMUEL]
1930 *A journey to the Western Islands of Scotland* (Oxford standard authors) [ed. R. W. Chapman]. London.
KAY, JAMES
1908 "A description of Dunrossness". *Description of ye countrey of Zetland*:30-48. n.p.
LAUDER, SIR THOMAS DICK
1873 *The great floods of August,* 1829 *in the province of Moray and adjoining districts* (3rd ed.). Elgin.
LEBON, J. H. G.
1952 "Old maps and rural change in Ayrshire". *The Scottish Geographical Magazine* 68:104-9. Edinburgh.
LESLIE, RICHARD
1958 "Scotland's finest hill pass". *Scotland's Magazine* 54 (no. 6): 38-41. Edinburgh.
LINDSAY, WILLIAM ALEXANDER, DOWDEN, JOHN, BISHOP OF EDINBURGH and THOMSON, JOHN MAITLAND
1908 *Charters bulls and other documents relating to the Abbey of Inchaffray.* (Publications of the Scottish History Society 56). Edinburgh.
LOW, Rev. GEORGE
1879 *A tour through the islands of Orkney and Schetland.* Kirkwall.
1915 "Tour through the North Isles and part of the Mainland of Orkney in the year 1778". *Old-lore Miscellany of Orkney Shetland Caithness and Sutherland* 8:135-152. London.
MACBAIN, ALEXANDER
1911 *An etymological dictionary of the Gaelic language* (2nd ed.). Stirling.
MACBEAN, ALEXANDER
1916 "Memorial concerning the Highlands". *Origins of the 'Forty-Five* (Publications of the Scottish History Society 2nd Ser. 2):71-92 [ed. Walter Biggar Blaikie]. Edinburgh.
[MACDONALD, ALEXANDER (ed.)]
1835 *Reports on the state of certain parishes in Scotland* (Maitland Club). Edinburgh.
MACDONALD, Captain ALEXANDER
1895 "Journal". *The Lyon in mourning* Vol. 1 (Publications of the Scottish History Society 20):340-51 [ed. Rev. Robert Forbes, Bishop of Ross and Caithness]. Edinburgh.
MACDONALD, ALEXANDER
1899 "Scraps of unpublished poetry and folklore from Glenmoriston". *Transactions of the Gaelic Society of Inverness* 21: 22-36. Inverness.
MACDONALD, DUNCAN
1946 "Some rare Gaelic words and phrases". *Ibid.* 37:1-54. Inverness.

MACDONALD, JAMES
1811 *General view of the agriculture of the Hebrides, or Western Isles of Scotland.* Edinburgh.
MACDONALD, JOHN
1873 "Narrative of Prince Charlie's escape". *Blackwood's Edinburgh Magazine* 114:408-18. Edinburgh.
MACDONALD OF GLENALADALE
1895 "Journal". *The Lyon in mourning* Vol. 1 (Publications of the Scottish History Society 20):334-40 [ed. Rev. Robert Forbes, Bishop of Ross and Caithness]. Edinburgh.
MACEACHAIN, NEIL
1916 "Narrative of the wanderings of Prince Charles in the Hebrides". *Origins of the 'Forty-Five* (*Ibid.* 2nd Ser. 2):227-66 [ed. Walter Biggar Blaikie]. Edinburgh.
MACFARLANE, WALTER (ed.)
1906 *Geographical collections relating to Scotland* Vol. 1 (*Ibid.* 51) [ed. Sir Arthur Mitchell]. Edinburgh.
1907 *Geographical collections relating to Scotland* Vol. 2 (*Ibid.* 52) [ed. Sir Arthur Mitchell]. Edinburgh.
1908 *Geographical collections relating to Scotland* Vol. 3 (*Ibid.* 53) [eds. Sir Arthur Mitchell and James Toshach Clark]. Edinburgh.
MACGILL, W.
1909 *Old Ross-shire and Scotland as seen in the Tain and Balnagown documents.* Inverness.
MACGREGOR, ALASDAIR ALPIN
[1930]*a* *Summer days among the Western Isles.* Edinburgh.
[1930]*b* *Over the sea to Skye.* London.
1935 *The haunted isles.* London.
1937 *The peat-fire flame.* Edinburgh.
1949 *The Western Isles* (County Books series). London.
1953 *Skye and the Inner Hebrides* (*Ibid.*). London.
MACIVER, D.
1934 *Place-names of Lewis and Harris.* Stornoway.
MACKAY, WILLIAM (ed.)
1896 *Records of the presbyteries of Inverness and Dingwall* 1643-1688. (Publications of the Scottish History Society 24). Edinburgh.
MACKELLAR, MARY
1889 "The sheiling: its traditions and songs—part I". *Transactions of the Gaelic Society of Inverness* 14:135-53. Inverness.
1890 "The sheiling: its traditions and songs—part II". *Ibid.* 15: 151-71. Inverness.
MACKENZIE, ALEXANDER
1909 *The prophecies of the Brahan Seer* (*Coinneach Odhar Fiosaiche*). Stirling.
MACKENZIE, SIR GEORGE STEUART
1810 *A general survey of the counties of Ross and Cromarty.* London.
MACKENZIE, WILLIAM
1930 *Skye: Iochdar-Trotternish and district.* Glasgow.
MACLEOD, DONALD
[1892] *Gloomy memories in the Highlands of Scotland.* Glasgow.

MacLeod, Donald
1895 "Journal". *The Lyon in mourning* Vol. 1 (Publications of the Scottish History Society 20):154-85 [ed. Rev. Robert Forbes, Bishop of Ross and Caithness.] Edinburgh.
MacNeice, Louis
1939 *I crossed the Minch.* London.
Macphail, J. R. N. (ed.)
1916 "Papers relating to the estates of the Chisholm and the Earl of Seaforth forfeited in 1716". *Highland papers* Vol. 2 (Publications of the Scottish History Society 2nd Ser. 12):294-343. Edinburgh.
Macpherson, Alexander
1893 *Glimpses of church and social life in the Highlands in olden times.* Edinburgh.
MacPherson, Donald
1896 Account in *The Lyon in Mourning* Vol. 3 (Publications of the Scottish History Society 22):38-48 [ed. Rev. Robert Forbes, Bishop of Ross and Caithness]. Edinburgh.
[MacRa, Rev. John]
1914 "Genealogy of the MacRas". *Highland papers* Vol. 1. (*Ibid.* 2nd Ser. 5):198-239 [ed. J. R. N. Macphail]. Edinburgh.
Marshall, Mr.
1794 *General view of the agriculture of the central Highlands of Scotland.* London.
Martin, M.
1698 *A late voyage to St. Kilda.* London.
1703 *A description of the Western Islands of Scotland.* London.
Marwick, Hugh
1923 "Antiquarian notes on Sanday." *Proceedings of the Orkney Antiquarian Society* 1:21-9. Kirkwall.
1927 "Antiquarian notes on Stronsay". *Ibid.* 5:61-83. Kirkwall.
1947 *The place-names of Rousay.* Kirkwall.
1952 *Orkney farm-names.* Kirkwall.
Mason, John
1954 "Scottish charity schools of the eighteenth century". *The Scottish Historical Review* 32:1-13. Edinburgh.
Matras, Christian
1956 "Gammelfærøsk *ærgi*, n., og dermed beslægtede ord". *Namn och Bygd* 44:51-67. Uppsala.
Millar, A. H. (ed.)
1909 *A selection of Scottish forfeited estates papers* 1715; 1745. (Publications of the Scottish History Society 57). Edinburgh.
Monro, Donald, Deane of the Isles
1908 "A description of the Westerne Isles of Scotland" in Macfarlane 1908:262-302.
Monteith of Eglisha and Gairsa, Robert
1845 *Description of the islands of Orkney and Zetland* [ed. Sir Robert Sibbald]. Edinburgh.
Morisone, John
1845 "Description of the Lewis". *The Spottiswoode Miscellany* Vol. 2 (Spottiswoode Society) 337-42 [ed. James Maidment]. Edinburgh.

MORRISON, JOHN
1932 "Traditions of the Western Isles". *The Western Isles*:79-249 [ed. W. C. Mackenzie]. Paisley.
MUIR, T. S.
1861 *Characteristics of old church architecture &c. in the mainland & Western Islands of Scotland.* Edinburgh.
1885 *Ecclesiological notes on some of the islands of Scotland.* Edinburgh.
MUIR, THOMAS S., and THOMAS, Captain F. W. L.
1862 "Notice of a beehive house in the island of St. Kilda". *Proceedings of the Society of Antiquaries of Scotland* 3:225-32. Edinburgh.
MURRAY OF BROUGHTON, JOHN
1898 *Memorials of John Murray of Broughton sometime Secretary to Prince Charles Edward* 1740-1747 (Publications of the Scottish History Society 27) [ed. Robert Fitzroy Bell]. Edinburgh.
NAPIER and ETTRICK [FRANCIS, LORD] *et al.*
1884 *Report of Her Majesty's Commissioners of Inquiry into the conditions of the crofters and cottars in the Highlands and Islands of Scotland* (C-3980). Edinburgh.
NEWTE, THOMAS
1791 *Prospects and observations; on a tour in England and Scotland.* London.
NICOLSON, ALEXANDER
1930 *History of Skye.* Glasgow.
OCHTERLONY OF GUYND, JOHN
1844 "Account of the shire of Forfar, *circa* 1682". *The Spottiswoode Miscellany* Vol. 1 (Spottiswoode Society):317-50 [ed. James Maidment]. Edinburgh.
O'DELL, ANDREW C.
1939 *The historical geography of the Shetland Islands.* Lerwick.
O'MALLEY, RAYMOND
1948 *One-horse farm.* London.
PENNANT, THOMAS
1771 *A tour in Scotland MDCCLXIX.* Chester.
1790 *A tour in Scotland, and voyage to the Hebrides; MDCCLXXII* Vol. 1. London.
PERRY, RICHARD
1944 *I went a'shepherding.* London.
POCHIN MOULD, D. D. C.
1953 *West-over-sea.* Edinburgh.
POCOCKE, RICHARD, BISHOP OF MEATH
1887 *Tours in Scotland* (Publications of the Scottish History Society 1). Edinburgh.
QUIGLEY, HUGH
1936 *The Highlands of Scotland* (The Face of Britain). London.
RAMSAY OF OCHTERTYRE, JOHN
1888 *Scotland and Scotsmen in the eighteenth century* Vol. 2 [ed. Alexander Allardyce]. Edinburgh.
ROBERTSON, Rev. C. M.
1910 "Folk-lore from the west of Ross-shire". *Transactions of the Gaelic Society of Inverness* 26:262-99. Inverness.

ROBERTSON, JAMES
1808 *General view of the agriculture in the county of Inverness.* London.
ROMANES, CHARLES S. (ed.)
1915 *Selections from the records of the Regality of Melrose* Vol. 2 1662-1676 (Publications of the Scottish History Society 2nd Ser. 8). Edinburgh.
SCOTT-MONCRIEFF, GEORGE
1952 *The Scottish islands.* London.
SHAW, MARGARET FAY
1955 *Folksongs and folklore of South Uist.* London.
SHIRREFF, JOHN
1814 *General view of the Agriculture of the Shetland Islands.* Edinburgh.
SINCLAIR, J.
[1927] "Open discussion: agricultural co-operation". *The Journal of the Orkney Agricultural Discussion Society* [2]:21-3. [Kirkwall].
SINCLAIR, SIR JOHN
(ed). 1791 *The Statistical Account of Scotland* Vol 2. Edinburgh.
(ed.) 1792 *The Statistical Account of Scotland* Vol. 3. Edinburgh.
1795 *General view of the agriculture of the northern counties and islands of Scotland: including the counties of Cromarty, Ross, Sutherland, and Caithness, and the islands of Orkney and Shetland.* London.
SINTON, Rev. Mr.
1910 "Places, people and poetry of Dores in other days—No. I". *Transactions of the Gaelic Society of Inverness* 26:318-41. Inverness.
STEVENS, ALEX.
1925 "The human geography of Lewis". *The Scottish Geographical Magazine* 41:75-88. Edinburgh.
STEWART, ALEXANDER
1928 *A Highland parish.* Glasgow.
STEWART, JOHN, Junior
1911 "Notes on changes in the Highland district of Appin on Tayside." *The Scottish Geographical Magazine* 27:281-91, 359-68. Edinburgh.
STUART, JOHN SOBIESKI and STUART, CHARLES EDWARD
1848 *Lays of the deer forest* Vol. 2. Edinburgh.
STUCLEY, ELIZABETH
1956 *A Hebridean journey with Johnson and Boswell.* London.
TAYLOR, ALEXANDER BURT (ed.)
1938 *The Orkneyinga saga.* Edinburgh.
TAYLOR, HARRY PEARSON
1948 *A Shetland parish doctor.* Lerwick.
THOMAS, Commander (later Captain) F. W. L.
1862*a* "Notice of beehive houses in Harris and Lewis; with traditions of the 'each-uisge', or water-horse, connected therewith". *Proceedings of the Society of Antiquaries of Scotland* 3: 127-34. Edinburgh.
1862*b* "Description of beehive houses in Uig, Lewis, and of a Pict's house and cromlech, &c., Harris". *Ibid.* 3:134-44.
1870 "On the primitive dwellings and hypogea of the Outer Hebrides". *Ibid.* 7:153-195. Edinburgh.
URE, Rev. DAVID
1794 *General view of the agriculture in the county of Dumbarton.* London.

VENABLES, L. S. V. and VENABLES, U. M.
1955 *Birds and mammals of Shetland.* Edinburgh.
WALKER, JOHN
1904 "An Œconomical history of the Hebrides or Western Islands of Scotland". *Transactions of the Gaelic Society of Inverness* 24:120-39 [ed. Sir Kenneth J. Mackenzie of Gairloch]. Inverness.
1918 "The Isle of Skye in 1764". *Ibid.* 28:101-30 [ed. Ronald Macdonald]. Inverness.
WARRINER, DOREEN
1939 *Economics of peasant farming.* London.
WATERSTON, GEORGE
1946 "Fair Isle". *The Scottish Geographical Magazine* 62:111-6. Edinburgh.
WATSON, J. CARMICHAEL (ed.)
1934 *Gaelic songs of Mary Macleod.* London.
WHITAKER, IAN
1956 "Declining transhumance as an index of culture-change". *Arctica: essays presented to Åke Campbell* (Studia Ethnographica Upsaliensia 11):96-104 [ed. A. Furumark *et al.*]. Uppsala.
1958 "The harrow in Scotland". *Scottish Studies* 2:149-65. Edinburgh.
WHYTE, Rev. ANDREW and MACFARLAN, DUNCAN
1811 *General view of the agriculture of the county of Dumbarton.* Glasgow.
WYLIE, T. H.
1930 "Agricultural machinery". *The Journal of the Orkney Agricultural Discussion Society* 4:21-5. Kirkwall.

ILLUSTRATIONS

Plate XIV: Fig. 1. Delving, probably taken in Shetland at the end of the nineteenth century. Photo: the late Thomas Kent.
Figs. 2 and 3. Henhouses near Gedintailor, parish of Portree, Skye (Grid Reference: 18/523357). Photo: Ian Whitaker, 1958.