SHIELINGS AND THE UPLAND PASTORAL ECONOMY OF THE LAKE DISTRICT IN MEDIEVAL AND EARLY MODERN TIMES

Ian D. Whyte

We know relatively little about the progress of colonization and exploitation of the Lake District in the centuries after the Norse settlement. The place-name evidence is difficult to interpret and documentary sources are both fragmentary and late compared with other parts of England. Charters and pipe rolls give some indications of the patterns of economic development in the area from the twelfth and thirteenth centuries onwards but for many topics, such as the nature and extent of open field systems, historical records do not become informative until the sixteenth century.

Due to the limitations of available sources and a lack of detailed research some generalized impressions regarding the development of the Lakeland economy in medieval and early-modern times have become established. These may be at best misleading and at worst myths. A recent paper on settlement in the Lake District, for instance, refers to the 'Norse sheep-farming colonists whose direct descendants in time became the "Statesman" farmers'.[1] The assumption that the Norse settlers were primarily sheep farmers may be linked to the supposed Scandinavian origins of the Herdwick breed,[2] but it has yet to be adequately demonstrated. The present importance of hill sheep farming in the Lake District and the area's specialization in the production of coarse woollens in late-medieval and early-modern times has perhaps encouraged the significance of sheep in the Lakeland economy to be projected further back in time than is strictly warrantable. Other evidence suggests, however, that the economy of this upland area was more diversified and less dependent on sheep-rearing in the early medieval period and even during the sixteenth and seventeenth centuries than has sometimes been supposed. The varied resources of this region, more complex in its physical geography than, say, the Pennines, were exploited in a complex integrated system. This chapter examines some facets of the development of settlement and economic activity in the Lake District in the period from the eleventh to the sixteenth centuries, in an attempt to form a bridge between the Norse colonization and the present Lakeland landscape.

AN OUTLINE CHRONOLOGY

A broad outline of the history of settlement and land use in this area from Norse times to the later Middle Ages can be established using a combina-

tion of palaeobotanical evidence and documentary sources. The former is particularly useful for the earlier period when manuscript material is lacking. The vegetational history of the Lake District has been reconstructed by Oldfield, Pennington and others from the analysis of pollen deposits in peat bogs.[3] The evidence indicates a major phase of oak wood clearance in the interior valleys coinciding with the Norse colonization. Recent work by Higham[4] on the continuity of settlement from Romano-British times in the Eden and Solway lowlands has suggested that Norse settlers moved into less fertile areas around the more densely settled zones. The apparent extent and rapidity of the deforestation may indicate a rapid penetration of the upland valleys as well as occupation of areas immediately peripheral to the main population centres. The number of settlers involved in this phase of clearance need not have been large: the ecological effects of a small population with a pastoral economy, especially practising transhumance, could have been considerable.

Following this there was a brief phase of woodland regeneration which may indicate some abandonment of settlement during the unsettled political conditions around the time of the Norman Conquest. Although the Domesday survey does not cover the area, large numbers of vills in north Lancashire and the Pennines were waste at this time.

The next phase has been interpreted as a resumption of pastoral farming though at a subdued level. Chronologically this corresponds to the two centuries or so after the Norman Conquest when much of the Lake District, the lower hills as well as the high fells, was designated as royal and private hunting forest. Both royal forests and free chases were subject to controls on land use and colonization. Activities such as settlement, assarting and the cutting of timber were regulated but it is important to note that these forests were nevertheless available as pasture. For example, in the Forest of Inglewood, whose main grazing areas included parts of the North Lakeland fells, the pasturing of livestock was the largest source of revenue in the thirteenth century.[5] The implication is that while permanent settlement within the forest areas was restricted, the use of temporary summer shielings was permitted. Indeed, this period may have seen the operation of upland shielings at its greatest extent.

The vegetation record indicates that this phase was followed by extensive woodland clearance for settlement and grazing. For the southern Lake District, Oldfield has linked this to the development of commercial sheep farming by the Cistercians.[6] More generally, however, the period from the later twelfth to the early fourteenth century was one in which landowners permitted, even encouraged, major inroads upon the areas of waste contained within their hunting forests. This movement, probably under the impact of population pressure as well as the desire of landlords to increase their rents, is manifested in historical records by evidence of assarting in the forests with the enclosure and improvement of much land which had formerly been rough grazing or woodland. Many temporary shielings in the upper parts of the Lakeland dales may have become permanently occupied at this period.

SHIELING SYSTEMS: THE PLACE-NAME EVIDENCE

The former existence of shielings as an important element in the pastoral economy of this area after the Norse settlement is manifest from place-names. Yet although there has been a good deal of work on some aspects of the place-name evidence relating to shielings,[7] little is definitely known about the chronology and character of their use in this area.

Five place-name elements may be indicative of former shielings — the Old Norse loan-word *ærgi*, whose origins some writers have placed in Ireland, others in Scotland, meaning a shieling or hill pasture; the Old Norse *sætr* and *skáli* which the volumes of the English Place Name Society treat as being broadly synonymous with *ærgi*; and Middle English versions, *skaling* and *schele*. The last of these, although frequent as 'shiels' and 'shield' in the Northern Pennines, is rare in the Lake District. While there has been some discussion of the significance of *ærgi* and *sætr* in this area,[8] *skáli* and *skaling* names, which are far more frequent, have received little attention. Their distribution in the Lake District is shown, as far as is possible, in Figure 8.2.

A high proportion of the *ærgi* names [Fig. 8.1] are located outside the main mountain areas, in the lowlands and lower fells of West Cumbria, the Kent Valley and the fringes of the Northern fells.[9] *Sætr* names have, as Pearsall has noted, a more marked inland distribution within the mountain core, though lowland examples also occur,[10] while the distribution of *skáli* and *skaling* is similar to that of *sætr*, though possibly with a greater concentration on northern Cumbria [Fig. 8.2]. *Skáli* names tend also to occur in more inland locations and at higher altitudes than *ærgi*, with some bias towards higher, more remote locations than *sætr*.

The location of shieling names can be grouped into nine environmental categories under three broad headings [Fig. 8.3]. This highlights the contrast between the location of *ærgi* names around, but not within, the higher mountains and the situation of places incorporating *sætr* and *skáli*. The lowland distribution of *ærgi* has prompted Mary Higham to suggest that these did not represent former shielings at all but permanent cattle farms, forerunners of medieval vaccaries,[11] while Gillian Fellows-Jensen has postulated that they may have functioned as *heimseters*, intermediate shielings located close to the main settlement areas. Pearsall, noting their tendency to occur on marginal sites, believed that they were 'residual' settlements established in a largely settled arable countryside and that they may have been established to exploit summer pastures.[12] Certainly the marked contrast in their distribution with that of other elements suggests a different chronology and probably also a different function from places with *sætr* or *skáli* names.

The main difference in location between *sætr* and *skáli* names occurs within the higher fells, *sætr* predominating at lower levels within the main dales with *skáli* more frequent at a higher altitude, in small tributary valleys or on the slopes of the fells themselves. Pearsall has postulated an early Norse occupation of High Furness and upland Westmorland based

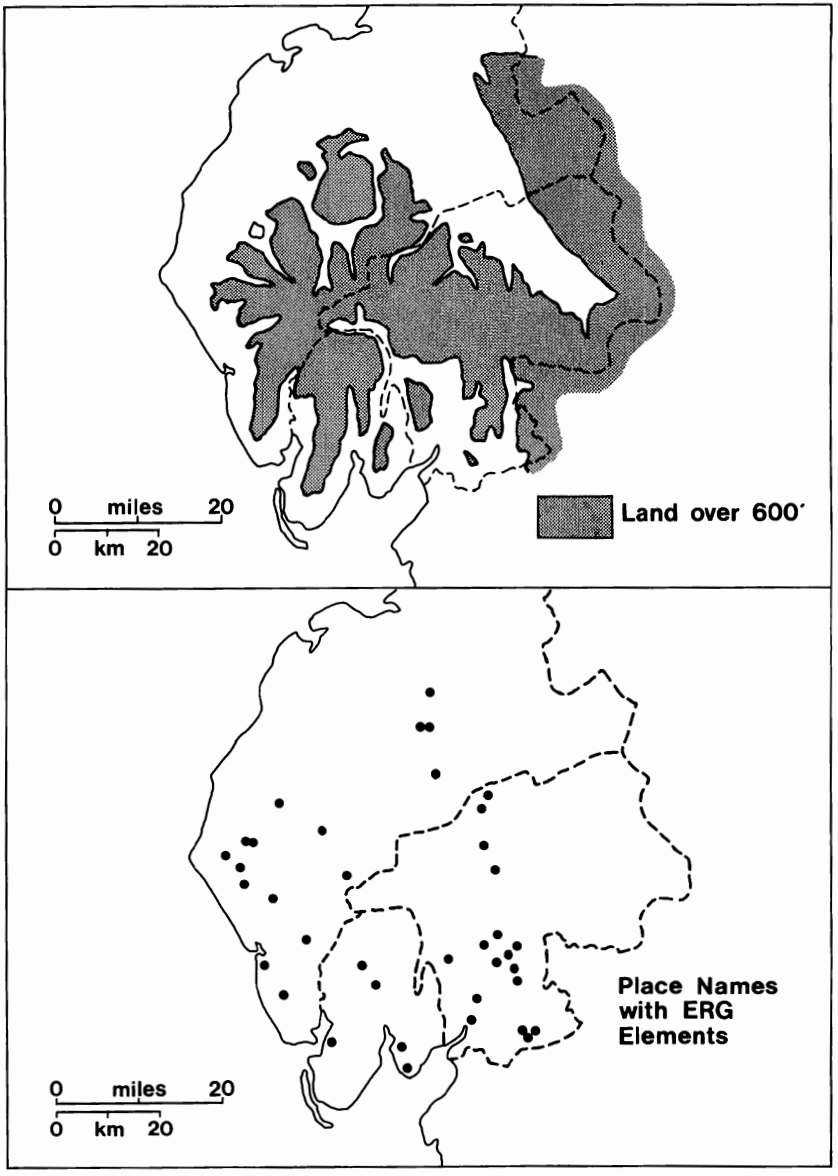

Fig. 8.1 Cumbria: relief and distribution of place-names with *-erg* elements.

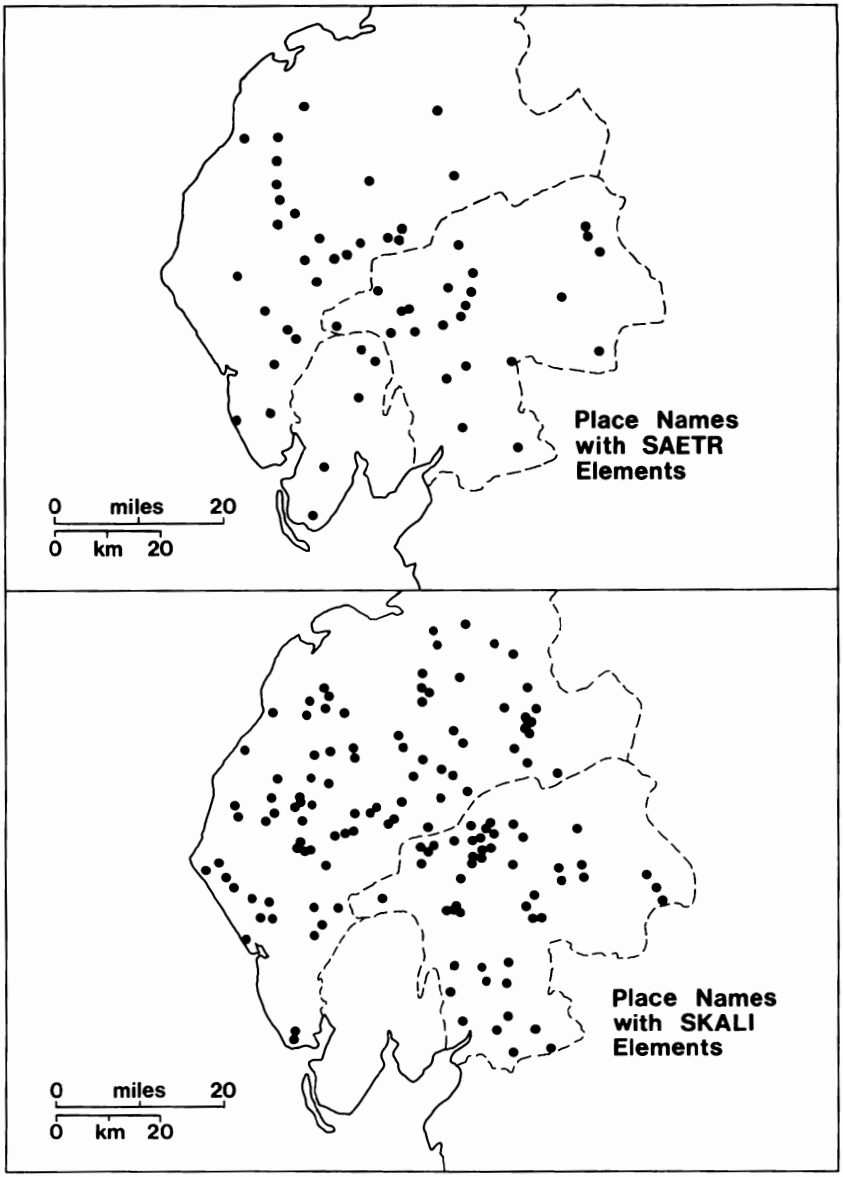

Fig. 8.2. Cumbria: distribution of place-names with *-sætr* and *-skali* elements.

	ÆRGI %	SÆTR %	SKÁLI %
LOWLAND			
Coastal: low level	13.3	5.9	2.8
Lowland: valley side or valley floor up to *c.* 500 ft (152 m)	24.5	20.6	16.9
Lowland: not in valley location, up to *c.* 500 ft (152 m)	21.7	5.9	14.0
PERIPHERAL FELLS			
Slopes of outlying fells *c.* 600–950 ft (183–290 m)	21.7	26.4	19.8
Summits of outlying fells *c.* 750–1100 ft (228–336 m)	18.8	8.8	4.3
CENTRAL FELLS			
Main interior valleys *c.* 300–600 ft (91–183 m)	0	20.6	11.3
Heads of main interior valleys *c.* 500–700 ft (152–213 m)	0	5.9	1.5
Minor valleys *c.* 500–900 ft (152–274 m)	0	5.9	8.6
Slopes of high fells: to *c.* 1200 ft (336 m)	0	0	19.8

Fig. 8.3. Environmental distribution of shieling place-names. (Because of the problem of differentiating *skaling* from *skáli*, the former is subsumed under the latter.)

on the occurrence of *sætr* names with personal elements, as well as a later phase of occupation by people with Goidelic Scandinavian names in lowland locations which were marginal to existing settlements.[13] This seems equally likely for *skáli* names so that, taken together, a relatively early penetration of the main Lake District dales, particularly in High Furness and the Keswick area, and possibly corresponding with the phase of clearance identified in the pollen record, is suggested by the occurrence of *sætr* and *skáli* linked to Old Norse and Old Irish personal names. While many of the names concerned can be shown from Domesday Book and early charters still to have been current in northern England in the late eleventh century,[14] such sites are at least unlikely to have been named in later medieval times.

Overall the distribution patterns suggest a broad evolutionary sequence in which shieling sites were pushed further into the mountains and to higher altitudes as the margins of permanent settlement advanced, with a

tendency first for *ærgi* and then *sætr* to go out of general use, leaving *skáli* as the name which was generally attached to later shielings.

The term 'scale' was in current use in Denton's time (*c.* 1610)[15] to describe a shieling, and 'scaling' was the standard way of referring to shielings in thirteenth- and fourteenth-century charters.[16] The fact that so many 'scale' names first appear on nineteenth-century tithe maps, however, suggests that some of them were formed comparatively recently, after shielings had been abandoned throughout the Lake District. An enclosure of late eighteenth- or early nineteenth-century date was named Scale Close, for instance, from the remains of an apparent shieling hut of unknown age within its walls.[17]

It should be remembered that the use of summer pastures did not necessarily involve a great altitudinal difference between permanent settlement and shieling. The distance may have been largely horizontal as in the northern and western isles of Scotland where nearby moorland and uninhabited islands were used in summer in this way.[18] The difference might have reflected only a contrast in land capability at a time when the density of settlement was low, as in the use of coastal marshes and sand dunes for summer pasture elsewhere in Britain.

SHIELING SYSTEMS: THE HISTORICAL EVIDENCE

The great range of environments in which present-day settlements whose names contain shieling elements occur, shows that settlement margins have expanded through time. The process by which shielings became permanently colonized and new shielings established further into the uplands, sometimes to become permanently colonized in turn, is known from later times in Scotland,[19] but has hardly been examined for the Lake District. It is possible to date some of the phases of this evolution from historical sources, though establishing a chronology of the use and eventual conversion of shielings to farmsteads is difficult from documentary material. There are indications that many shielings in lowland areas had become permanently settled before the period of more detailed documentation from the thirteenth century onwards. Even after this time references to functioning shielings are infrequent, probably because in most extents and charters they were subsumed under general references to pasture.

To a limited extent one can work negatively by establishing from documents the earliest date at which a settlement with a shieling name was recorded as permanently occupied. Many early references to such places in charters are, however, vague and ambiguous. Using evidence of this type one can show that many former shieling sites at low altitude in the Kent and Lune valleys were permanently settled by the later eleventh or early twelfth centuries. Thus Mansergh appears in Domesday Book as a vill assessed at three carucates. By the early thirteenth century, when more detail is available, places like Scalthwaiterigg and Skelsmergh, north-east of Kendal, were also permanently colonized.[20] If such a process were

widespread in the Lake District, then a considerable expansion of settlement must have occurred between the creation of places with early shieling names following the Norse settlement, and the thirteenth century. If we accept the evidence of the vegetation record regarding the reversion to woodland around the eleventh century, possibly associated with some abandonment of settlement, then we have two relatively brief periods preceding and post-dating this phase during which this expansion is likely to have occurred. At present it is impossible to say how much of the spread of permanent settlement may have occurred before or after the eleventh century.

Despite the expansion of settlement and cultivation limits a shieling tradition survived in the Kendal area into the thirteenth century. References to a shieling in an extent of 1274, following mention of the settlements of Scalthwaiterigg, Hoton (New Hutton), Schoureschale (itself a former shieling which may not have been long occupied at this date) and Oxenholme, suggest that it may have been located in the moorland north-east of Kendal, perhaps on Hay Fell.[21] In the more remote interior valleys of the eastern fells, shielings continued in use at least into the late fourteenth century. In Longsleddale, Sadgill (*sætr-gil*), now the highest farm in the valley, was the site of a group of shielings (*scalingae*) in 1307, and references to shielings in Longsleddale as late as 1360 may relate to Sadgill or to a location even closer to the valley head.[22]

On the northern fringes of the Lake District, rapid assarting and encroachment was occurring in the royal forest of Inglewood during the twelfth and thirteenth centuries. Denton, writing in the early seventeenth century, dated the conversion of shielings like Gaitsgill to the reign of Henry II.[23] A shieling was still functioning in 1317 at Hazelsprings, at an altitude of about 700 ft (213 m), but the context in which it was mentioned indicates that it was in imminent danger of becoming incorporated within the assarted area.[24]

In the western coastal lowlands shielings such as Seascales had probably been converted to permanent settlements at an early date and by the late twelfth century the use of land for summer pasture had been pushed into the upland massif, particularly in the south where the coastal plain was narrower. A grant of *c.* 1210 exists for shielings by Crookley Beck, a stream draining the north side of Black Coombe behind Bootle and the site has been linked to remains at an altitude of *c.* 650 ft (198 m).[25] Further north, another charter of *c.* 1210 granted to the borough of Egremont the right to build shielings on Long Barrow, the fell which projects into the coastal plain south of Ennerdale. These shielings were still in use at the end of the thirteenth century.[26]

In the country south of Penrith former shielings like Tirril were the centres of estates with demesnes of their own by the thirteenth century, active shielings having been pushed back far into the mountains. Documents concerning a dispute over grazing rights show that in the 1260s and 1270s shielings were operating in the remote valleys of the Martindale area south of Ullswater. One reference locates a shieling on or below Steel Knots between Boardale and Bannerdale.[27]

It is difficult to determine, however, when the custom of sending livestock with a substantial part of the community to temporary settlements on the summer pastures actually ceased. The historical evidence suggests that the use of shielings had become confined to the central mountain core of the Lake District by the fourteenth century. The Percy survey of 1578, covering large areas of north-western Lakeland, contains only one specific reference to shielings. This is to two 'scale steads' in 'Hussacre (Uzzicar) Dale', presumably one of the smaller valleys west of Derwentwater.[28] Given that the survey listed squatter encroachments, which were charged rents, it is unlikely that it would have omitted to record the existence of groups of shieling huts, particularly if they were accompanied by any enclosed meadows or improved in-bye land, though individual herdsmen's huts may have gone unmentioned. The conclusion must be that while vestiges of a shieling tradition continued into the sixteenth century, it was probably confined to a limited number of sites in remote areas.

SHIELING SYSTEMS: THE ARCHAEOLOGICAL EVIDENCE

Rollinson[29] has commented on the rarity in the present landscape of structures which can be interpreted as the remains of shieling huts in any way comparable with the well-preserved ones which survive in parts of the northern Pennines.[30] This, and the lack of references to the practice in the later documentary record, suggests that the use of shielings in the Lakeland mountains died out at an earlier date than in areas like the upper Tyne where they continued to function into the seventeenth century.

A limited number of structures have been identified by the Royal Commission for Ancient Monuments and others as being the remains of possible shielings.[31] Some of these have affinities with the shielings of the North Pennines; others are markedly different like the rectangular huts in Ennerdale closely surrounded by outer enclosures which have been associated with iron working rather than pastoral farming.[32] The sites identified by the Royal Commission are concentrated within the central fells, only one group east of Gosforth and a structure at Crosby Ravensworth being peripheral. It may be significant that four of the nine sites are closely associated with *skáli* place-names and only one, loosely, with a *sætr* name. The location and altitude of most of these sites within the central fells, well above present settlement limits in most cases, suggests that if they are shielings then they must have been relatively late in date: similarly remains such as those identified by Cowper in Little Langdale and the Troutbeck area.[33]

It is questionable, however, whether these structures truly reflect the distribution and character of former shieling sites above the limits of present settlement and cultivation within the Lake District mountains. First, it may be significant that five of the nine sites discussed by the Royal Commission (including the structure at Crosby Ravensworth, the examples cited by Cowper in Little Langdale and at Troutbeck, and the

remains at Seat Sandal)[34] consist only of single structures. If the Ennerdale huts are omitted as a special case, then only three groups of huts have been identified and discussed in detail. By analogy with shieling systems elsewhere one would have expected most sites to have been occupied by groups of huts belonging to communities rather than by single structures. Indeed, some of the documented examples, such as the ones at Sadgill, clearly refer to groups of huts.[35] In addition, if it be accepted that shieling systems were operating in the Lake District from at least the eleventh century until the sixteenth, then one might have expected the construction and plan of shieling huts to have varied through time. The isolated character, therefore, and substantial construction of some of the rectangular stone structures which have been tentatively described as shielings may indeed suggest that their function was more permanent and that they may have been marginal squatter homesteads dating from the sixteenth century when population pressure was mounting, expanding the margins of settlement.[36]

THE SHIELING ECONOMY

When the land capability of areas bearing shieling names is examined, it is not surprising that very few are on or adjacent to the limited areas of highest quality land in the region. This Grade 2 land is located mainly in the middle Eden valley and the northern part of the coastal plain. While many former lowland shielings were located within areas of Grade 3 land, as one moves towards the uplands there was a marked tendency for them to be sited at the Grade 3–4 boundary or, further into the mountains, the Grade 4–5 boundary. In the Keswick area, for example, many former shielings were located close to the margins of the limited spreads of better-quality (Grade 4) land [Fig. 8.4]. This suggests that sites were chosen not only for access to the hill and mountain pastures, but also for proximity to more fertile bottom land which initially may have provided hay for winter fodder and grass for autumn or spring grazing. Under pressure of population, and maybe improved drainage, such sites were obviously liable to become permanent farms with the bottom land brought into cultivation.

The use of shielings for the collection of hay is explicit in the case of Sadgill in Longsleddale which, in 1246, was leased along with three and a half acres of meadow. By analogy with the medieval Norwegian economy, however, winter fodder may also have been obtained from small scattered patches of richer grass in streamside locations or in flushes. Given careful herding during the summer, together with appropriate enclosure, this may help to explain the association of shieling names with streams — there are some 30 *skáli* and *sætr* names linked with 'beck' and 'gill' — though access to fresh water was always a key factor for people and for animals at the summer pastures.

Another possible reason for locating shielings in the valleys may have been to tap a further source of grazing or winter fodder, leaves from the valley-side woodlands. References in the records of Furness Abbey during

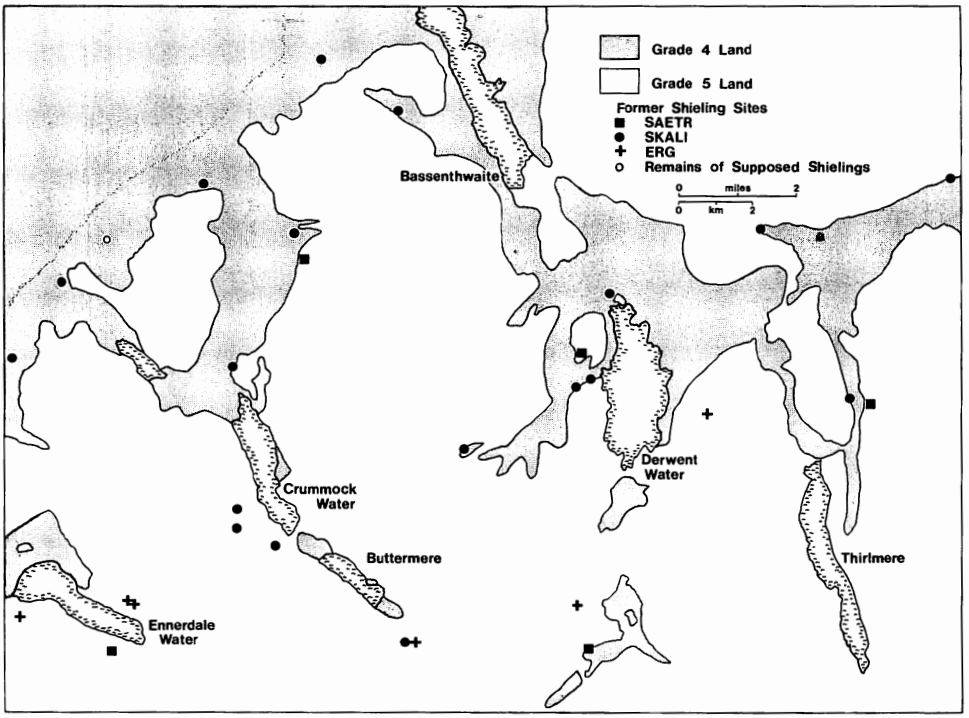

Fig. 8.4 Distribution of shieling names and land capability in part of the Lake District.

the sixteenth century show that it was customary to use leaves for fodder.[37] Again, by analogy with Norway, the preferred trees may have included birch and alder,[38] common species in the higher dales.

In many parts of the Lake District there are indications of the survival of substantial areas of woodland into the later Middle Ages. This is often emphasized by the importance of pig-keeping in the economy, and the importance of pannage may explain the frequency of former shielings with swine names. There are at least seven Swinesides and Swinesetts in the area, by far the most common livestock name attached to shieling elements. This may indicate that *sætr* and *skáli* names were applied to sites relating to different types of pastoral activity, and that the places referred to as swine *sætrs* may have held a hut for a single herdsman rather than groups of structures accommodating a substantial proportion of the community and linked to the milking of cattle, sheep and goats. Pigs could have been integrated with other woodland uses to a greater degree than other livestock as they did less damage to young trees and even promoted woodland regeneration by treading acorns and eating small vermin which attacked young seedlings.[39]

THE CHANGING PASTORAL ECONOMY

The evidence for the existence of shieling systems in the Lake District during the early medieval period suggests that the pastoral economy of this area, if not concerned solely with cattle, at least contained a substantial cattle element. This is also shown by Pearsall's study of ecological indicators in Lake District place-names,[40] where it is demonstrated that names referring to cattle and swine recorded before 1400, were far more numerous in the central mountain area than names referring to sheep. The earliest examples of names containing sheep elements occurred in lowland districts containing Anglian settlement names. Pearsall considered that large-scale sheep farming in the central Lake District only developed when predators such as wolves had been eliminated, allowing the free ranging of livestock. It has been further postulated that it was the monastic orders rather than lay landowners that introduced large-scale sheep farming, producing the ecological changes which have led to the present denuded appearance of the Lakeland fells.

If the monastic orders were responsible it was neither an immediate nor universal transformation. The records of the 1292 taxation of a tenth for the lands of Furness Abbey, describe granges such as Brotherilkeld in Eskdale and the one centred on Grange in Borrowdale as 'vaccaries' or cattle farms similar to ones which have been recorded from other upland areas in northern England.[41] By 1537, however, Brotherilkeld was described as a 'herdwick' or 'sheepcote' indicating that a major change had taken place in its economy; and the lordship of Borrowdale, instead of a single vaccary staffed by lay brethren, contained forty-one customary tenants practising a mixed arable and pastoral economy.[42]

The existence of vaccaries in the late thirteenth century does not preclude the existence of sheep farming as well. It is sometime forgotten that cattle rearing in the lower Lakeland valleys is integrated with hill sheep farming at the present day.[43] Nevertheless, it has been suggested that cattle rearing may have better suited the use of grazings in royal and private hunting forests than sheep farming.[44] The spread of sheep rearing may then have been linked to the decline of hunting forests in this area, as well as to the spread of commercial wool production throughout the northern Cistercian estates in the thirteenth and early fourteenth centuries.

J. D. Marshall's study of the inventories of Lake District farmers also shows that even in the seventeenth century sheep were less important in the Lakeland economy than has been sometimes supposed.[45] The average size of flocks was small and in most inventories the value of cattle was higher than that of sheep, even in hill areas. While many smaller farmers owned cattle but no sheep, it was less common to find yeomen who had sheep but not cattle.

It has already been suggested that the frequency of place-names referring to swine in the central Lake District implies the survival of substantial woodland cover, despite clearance from Norse times onwards. A charter of 1279, for instance, granted to Richard, son of Henry of Tirril, rights of

pannage for the swine of the Tirril demesnes in woodlands covering a wide area south of Ullswater including the lower slopes of Barton Fell, Fusedale, Hallin Fell, Bannerdale, Place Fell, Boardale and Birk Fell.[46] The terms of the grant show that virtually all the valleys and lower slopes of the fells in this area still contained a substantial woodland cover, and even as late as the sixteenth century the court rolls of High Furness are full of references to pasturing swine.[47] This suggests that there must still have been substantial woodland pasture in Furness, though the fact that the references mainly concern stinting argues that the resource was under pressure and required careful management. Much of the woodland was probably scrub, whose character had been heavily influenced by grazing and other land uses, with little mature timber. Customary tenants of Furness Abbey had a traditional right to take timber for fuel and construction, and to let cattle and sheep browse on the leaves.[48]

A reference to the woods of High Furness in 1537 records little mature timber of any value, but much underwood.[49] Some of this may have been managed coppice woodland. Iron had been produced in Furness from medieval times and the smiths had the right 'to cut down and use wood . . . sufficient to keep up the said smythes'.[50] Pollen analysis of deposits from lowland sites in the southern Lake District[51] points to the development of managed oak coppice from relatively undisturbed deciduous woodland during the mid-sixteenth century, but this trend may have started earlier elsewhere. A decree of 1570 mentioned that woodland was sufficiently plentiful in the Furness Fells to enable the setting aside of 160 acres of it at Garthwaite, 60 acres at Elterwater Park and 60 acres in Satterthwaite and Grizedale to supply charcoal to the Company of Mines Royal.[52]

There are indications that by this time the woodlands were coming under heavy pressure from competing demands. Early sixteenth-century court rolls contain abundant references to fines for 'greenhew' or the unauthorized cutting of green wood, while a decree banning the use of bloomeries for iron making in High Furness demonstrates a conflict of interest between iron workers and customary tenants.[53] In the long term though, the development of strict coppice management in association with the iron industry, far from depleting the existing woodlands, may actually have increased the area under coppice.

Sixteenth-century rentals of the lands of Furness Abbey and the 1578 survey of the Percy estates give good impressions of the character of upland settlement and farming at the close of the period under consideration.[54] The granges of Furness had ceased to be settlements of lay brethren and had developed into communities of customary tenants, scattered in small hamlets surrounded by limited areas of improved in-bye land but possessing extensive hill grazings.

The economy of the central Lake District was predominantly pastoral but the importance of cereals as the dietary basis of the population, combined with transportation difficulties, meant that arable farming was carried out even in the more remote dales. Although settlements were small, open field systems developed even in isolated locations such as

Wasdalehead and Buttermere. Such field systems were probably established at a relatively late date and were still expanding in the sixteenth century.[55] Around the core of these open fields, as well as around isolated steadings and former shielings, the enclosure of land in severalty occurred. This produced a patchwork of small irregular closes of arable, pasture and meadow, detailed acre by acre in the Percy survey, interspersed with small areas of woodland. Encroachment from the common grazings was still proceeding as squatters or existing tenants improved small portions of land. At a later date the common fields themselves were enclosed into individual parcels, but the landscape of the Lake District and its settlement pattern had evolved so that it had many features in common with the one which can be seen at the present day.

Notes

[1] R. Hogg, Factors which have affected the spread of early settlement in the Lake Counties, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* 2nd series (1972) LXXII. 30.

[2] M. L. Ryder, The history of sheep breeds in Britain, in *Agricultural History Review* (1964) XII. 65–82.

[3] F. Oldfield, Pollen analysis and the history of land use, in *Advancement of Science* (1965) 298–311; W. Pennington, Vegetation history in the north west of England: a regional synthesis, in D. Walker & R. G. West (eds), *Studies in the vegetation history of the British Isles* (1970) 41–79.

[4] N. Higham, Continuity studies in the first millennium A.D. in North Cumbria, in *Northern History* (1978) XIV. 1–18.

[5] F. H. M. Parker, Inglewood Forest, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*. 2nd series (1909) IX. 24–37.

[6] F. Oldfield (1965) op. cit. 302.

[7] E. Ekwall, *Scandinavians and Celts in the north west of England* (1918); E. Ekwall, *The place names of Lancashire* (1922); A. H. Smith, *The place names of Westmorland*. English Place Name Society. 2 vols (1967); A. M. Armstrong, A. Mawicer, F. M. Stenton, B. Dickens, *The place names of Cumberland*. English Place Name Society. 3 vols. (1950–52).

[8] M. C. Higham, The 'erg' place names of Northern England, in P. Davey (ed.), *Man and environment in the Isle of Man*. British Archaeological Reports (1978) LIV. 347–55; W. H. Pearsall, Place names as clues in the pursuit of ecological history, in *Namn Och Bygd* (1961) XLIX. 72–89.

[9] M. C. Higham (1978) op. cit.

[10] W. H. Pearsall (1961) op. cit.

[11] M. C. Higham (1978) op. cit.

[12] W. H. Pearsall (1961) op. cit.

[13] Ibid.

[14] O. von Feilitzen, *The pre-Conquest personal names of Domesday Book* (1937).

[15] J. Denton, *An account of the estates and families of the county of Cumberland* (1887) 108–09.

[16] J. F. Curwen (ed.) *Records relating to the Barony of Kendale* (1923) I. 300, 302.

[17] H. G. Ramm, R. A. McDowall, E. Mercer, *Shielings and Bastles*. Royal Commission on Historical Monuments (England). (1970) 35.

[18] I. D. Whyte, *Agriculture and society in seventeenth-century Scotland* (1979) 85.

[19] Ibid. 84–86.

[20] J. F. Curwen. (1923) op. cit. 176–77, 251–52.

[21] Ibid. 10.

[22] Ibid. 300, 302.
[23] J. Denton (1887) op. cit. 108–09.
[24] F. Grainger & W. G. Collingwood, *The register and records of Holm Cultram* (1929) 47.
[25] Ibid. 31.
[26] Ibid.
[27] F. W. Ragg, De Lancaster, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.* 2nd series (1910) X. 450–53, 466, 477.
[28] Survey and valuation of the estates and privileges of Henry, Earl of Northumberland in the County of Cumberland. Cockermouth Castle.
[29] W. Rollinson, *A history of man in the Lake District* (1967) 69–70.
[30] Royal Commission (1970) op. cit.
[31] Ibid. H. S. Cowper, A Contrast in architecture, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.* 2nd series (1901) I. 129–43.
[32] Royal Commission (1970) op. cit. 36.
[33] H. S. Cowper (1901) op. cit.
[34] Ibid.
[35] J. F. Curwen (1923) op. cit. 300, 302.
[36] A. B. Appleby, Agrarian capitalism or seigneurial reaction? The North West of England 1500–1700, in *American History Review* (1975) LXXX.
[37] T. Brownbill (ed.), *The coucher book of Furness Abbey.* Vol. 2 part 3. Chetham Society (1919) 663–88.
[38] A.-B. Ø. Borchgrevink, The 'seter' areas of rural Norway: a traditional multi-purpose resource, in *Northern Studies* (1977) IX. 15–17.
[39] A. G. Tansley, *Britain's Green Mantle.* 2nd ed. (1968) 35.
[40] W. H. Pearsall (1961) op. cit.
[41] T. A. Beck, *Annales Furnesienses* (1844) 232.
[42] Coucher book of Furness Abbey op. cit. 643, 645.
[43] W. H. Pearsall & W. Pennington, *The Lake District* (1973) 267.
[44] R. A. Donkin, *The Cistercians: studies in the geography of medieval England and Wales* (1978) 68–69.
[45] J. D. Marshall, The domestic economy of the Lake District Yeoman 1660–1749, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society,* 2nd series (1973) LXXIII. 190–219.
[46] F. W. Ragg (1910) op. cit.
[47] Coucher Book of Furness op. cit. 664–88.
[48] A. Fell, *The early iron industry of Furness and district* (1908) 100.
[49] Ibid. 104.
[50] Coucher Book of Furness op. cit. 618.
[51] F. Oldfield (1965) op. cit. 309–10.
[52] A. Fell (1908) op. cit. 110.
[53] T. West, *The antiquities of Furness* (1774) app. 9.
[54] Coucher book of Furness op. cit. 614–39; Percy Survey op. cit.
[55] G. Elliot, The system of cultivation and evidence of enclosure in the Cumberland open fields in the sixteenth century, in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society,* 2nd series (1959) LIX. 85–104.