



**Eva Crane Trust**

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Bee shelters and bee boles in Cumbria

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## 1. The Significance of Cumbria in the history of bee-keeping in Britain

THE earliest beehives in north-west Europe, including Britain, were probably skeps (baskets) made of woven wicker, and these were used at least 2000 years ago (Crane, 1983). They were gradually superseded by skeps made of coiled straw, by lipwork; a straw skep is shown in Plate 2. Straw skeps were introduced from the continent into the east of England in Anglo-Saxon times (Fraser, 1958), and their use gradually extended westward; the last record of wicker skeps was in Herefordshire in the 1880s. No evidence remains of them in Cumbria, but we do know that straw skeps were used here.

Skeps needed some protection from the weather, and a straw skep placed on a stand or bench out in the open was often covered with a hackle, as in Plate 8. A hackle is a bundle of straw gathered together near the top within an iron ring (two in the Plate), and spread out to cover the skep below; it sheds the rain and keeps the skep dry.

A more substantial form of protection was a *bee shelter*, usually an open-fronted roofed structure (Plate 1) fitted with one or more shelves on which skeps were placed. Bee shelters were built against a wall, or were sometimes free-standing. They were probably the most usual type of structure specially built for housing bees in many parts of Europe. Whereas skeps from past centuries have disintegrated long ago, some stone bee shelters



PLATE 1. Typical small Cumbrian bee shelter with drystone end walls and slate roof and shelf, at Heathwaite, Grizebeck [IBRA Register no. 210]. Photographer unknown, c. 1953.

have survived, providing a rather rare insight into past beekeeping. Over the centuries, outbuildings of farms and houses have suffered less war-time and other disturbance in Britain than in continental Europe. Within Britain, those in Cumbria have been subject to less disturbance than in many other regions. It is partly for this reason, perhaps, that 50% of the bee shelters recorded in England are in Cumbria: this county has 37, but no other has more than 6 (see Appendix B). Examples of shelters can still be found in parts of continental Europe, including Switzerland (Sooder, 1952) and the Spanish Pyrenees (Chevet and Chevet, 1987). The former were for straw skeps, and the latter for woven wicker or cane hives that were horizontal cylinders.

A second type of protection for skeps, that seems to have been built almost only in Britain and Ireland, was a row (set) of recesses incorporated into an outdoor wall when this was built (Plate 2); they are known as *bee boles*, and each usually accommodated a single skep. Their characteristics have been described in detail elsewhere: Britain and Ireland (Crane, 1983), Scotland (Walker, 1988a), and Wales (Walker and Linnard, 1990). Counties with the most sets of bee boles are all in England: Cumbria has 105 sets, Yorkshire 102 (Walker, 1987) and Devon 101. The best dated bee boles, some of them quite early, are mainly in brick walls in Kent (Walker, 1988b).

In 1952 the International Bee Research Association\* started a Register of Bee Boles and Other Beekeeping Structures, and the 855 sets of bee boles now on the IBRA Register provide a substantial archaeological record relating to beekeeping in Britain and Ireland. Cumbria has over 12% of the total.

In 1981 we made a general analysis of all beekeeping structures known at the time, and published brief details for each (Crane, 1983). Since then, more data have been obtained

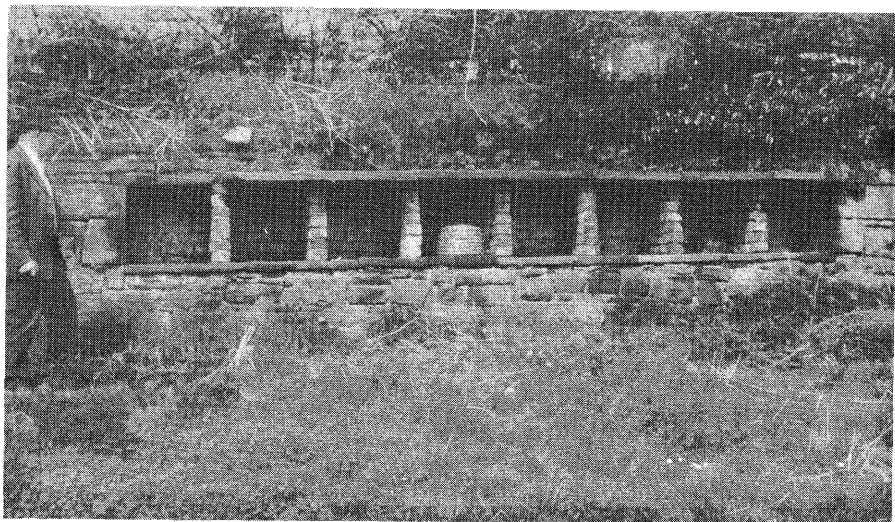


PLATE 2. Eight bee boles at Abbey Farm, St Bees [610]; the straw skep is new. Photographer unknown, 1973.

\* International Bee Research Association of Bee Boles and other Beekeeping Structures, c/o Woodside House, Woodside Hill, Gerrards Cross, Bucks. SL9 9TE.

for Cumbria, and Appendix A lists sites reported since 1981. The county's sites now comprise (October 1990):

bee boles	105 sets (including 2 possible)
bee shelters	37
alcoves	5 sets
bee houses	3
winter storage structures	2
<hr/>	
<i>Total</i>	152
<hr/>	

Rather little has been published about these structures. Tyson (1982) wrote an illustrated account of several of them, and those in and near Kendal were featured in a newspaper article (Satchell, 1987).

In this paper, Section 2 describes the bee shelters in Cumbria, and Section 3 the bee boles; Section 4 discusses both bee shelters and bee boles in relation to their surroundings. Cumbria is the only county for which it is possible to make some comparisons between the two. Section 5 presents evidence of their use for beekeeping, and Section 6 mentions certain other protective beekeeping structures in Cumbria. Section 7 gives some examples of the part bees played in the life of the family and the community. Appendix A lists recently recorded sites in the county, and Appendix B presents numerical data for Cumbria, together with some comparative data for other parts of Britain. For each site mentioned in the text, the IBRA Register number is given in square brackets.

## 2. Characteristics of the Cumbrian bee shelters

These 37 shelters constitute the largest regional group (see Appendix B), and the only one which can be usefully compared with shelters in the rest of Britain.

### 2(a) *Material and construction*

Except in part of the Solway plain, stone has been available throughout Cumbria, and local stone was commonly used for buildings and other walls. As expected, stone was used for making bee shelters, although a few in other parts of Britain have been built of brick. Bee shelters have also been made of wood. In general wooden structures do not survive nearly as long as those of stone, but two Cumbrian shelters of brick and wood [IBRA Register nos 73, 74] have lasted 130 years.

Many Cumbrian bee shelters are of the simple sturdy type shown in Plate 1, and some look remarkably similar to each other. However, ten of them are subdivided internally – by vertical walls or slabs – into large compartments, each holding more than one skep. An example is shown in Plate 3. Only three shelters of this type have been recorded in other counties.

The Cumbrian shelters of both types usually have drystone end walls. Most have, or had, a slate tile roof sloping down towards the front. It is commonly supported by oak





PLATE 3. Bee shelter with two compartments, at Light Hall, Rusland [632a]. On the upright dividing stone, the metal pegs held a shelf, and the metal fixture at the top was for a door. Photo P. Walker, 1990.

joists, and the tiles in some roofs are held with wooden pegs. A reporter described the roof on the shelter at Sykeside, Grasmere [513b] Plate 4, as ‘Westmorland wrestler slates, notched and “clicked” together’. Occasionally, for example at Fellside, Kendal [671], the roof consists of one large slab of slate, and the shelter in Plate 1 has single slabs of slate for its roof and shelf.

In some of the shelters the bottom (or only) shelf is the upper surface of a solid base about 2 feet above the ground. Or a slate or wooden shelf might be fixed at this height, supported by metal pegs (Plate 3), by slots cut in the end walls, or by ledges provided by end walls that were wider up to shelf level than above it. In four shelters the shelf is set back from the front by 6 to 9 inches. At least eight shelters have, or had, a second shelf about 24–30 inches above the lower one.

Although the bee shelters have probably not been used for beekeeping since about 1900, some have been well cared for, especially if the owner understood their past use. At least two shelters have been restored: one at Grasmere [513b] (Plate 4), and one at Troutbeck [845]. The only bee shelter in Britain known to be the subject of a preservation order is also at Grasmere [883].

When recording was started in 1953, some of the shelters were already collapsing, and several more have since become ruinous. A few have been demolished, for example, the one at Townend Farm, Troutbeck [610].

## 2(b) *Size, and number of skeps held*

Most of the undivided shelters reach a height between 4 feet and 7 feet externally. Their external width ranges from about  $5\frac{1}{2}$  feet to 11 feet, including two end walls that



PLATE 4. Two bee boles and a bee shelter at Sykeside, Grasmere [513]. Photo P. Walker, 1990.

may each be 1–2 feet thick. Their internal depth from front to back ranges from 17 inches to 48 inches (average 29 inches).

There are also five shelters with two compartments, and two with three. They are similar to undivided shelters in height and depth, but most of them are wider, each compartment being 3 to 4½ feet wide internally, with internal division(s) up to 2 feet thick. The largest shelter, at Well Know, Cartmel [156], was over 20 feet wide; it had two tiers of five compartments, each for two skeps, accommodating twenty in all. In 1953 it still had part of its slate-tiled roof, but was in a poor state of repair. The two unusual brick and wood shelters in Lorton, near Cockermouth [73, 74], dating from about 1860, have five compartments, each for a single skep.

Beekeeping books in Britain recommended the use of skeps with an external diameter between 10 inches and 15 inches. When arranged on a shelf they did not touch each other, and if we allow 18 inches per skep, the smallest Cumbrian shelters would accommodate three skeps and most of them four to six. The average number per shelter (both types together) is 5.4; a set of bee boles held an average of 4.5 skeps (see Appendix B).

### 3. Characteristics of the Cumbrian bee boles

Plates 2, 4, 5 and 6 show examples of bee boles (recesses in a set or, occasionally, singly, in a garden or other wall). Cumbria has 105 sets of bee boles, more than in any other county (see Appendix B).

### 3(a) *Material*

In Cumbria, as in other areas with building stone, almost all bee bole walls were built of stone. Some bricks were used in constructing eight sets in stone walls: for the base, the back or the surround of a recess, or for the piers between adjacent ones. The bee bole walls were usually built from the local stone: carboniferous limestone, sandstone, slatestone or millstone grit. A slate slab was often used to form the bottom (and sometimes also the top) of bee boles in a wall of a different type of stone. This was also done in Wales, Devon and Cornwall.

Field walls, and many garden walls, are normally drystone (Brunskill, 1974), and at least forty bee bole walls in Cumbria are recorded as drystone; this may also be true of many others.

Over half the sets of bee boles were in a good state of repair when visited (since 1953); a few have been repaired when this became necessary. However, many sets were in a poor condition, and some recesses have disappeared due to wall collapse. At least six sets have gone completely, through neglect or demolition.

### 3(b) *Shape, and use of projecting surround stones*

A recess built in a wall, and especially in a drystone wall, is likely to have a rectangular opening, since this is the easiest to construct. Bee boles in eighty sets are rectangular; in eight other sets they have a plain curved arch at the top, in one set a pointed arch, and in three a triangular top. More arched bee boles are found in other parts of the country, usually in mortared walls.

The back wall of a bee bole is usually flat, but may be rounded. One of the five sets in



PLATE 5. Five bee boles in two tiers, with projecting lintel stones, Thurston, Coniston [636]. Photo B. Tyson, 1981.

Cumbria with this feature is in the garden of an Elizabethan house in Finsthwaite [622], where eight bee boles have the picturesque local name of 'bee shells'.

In at least thirty-three sets the base and/or lintel projects in front of the wall surface: in twelve the base only, in eight the lintel only (for instance, in the set in Plate 5), and in another ten both base and lintel. In three further sets the whole surround of each bee bole, or the whole row, projects forward. Most projections are only 2–3 inches, but in an early pair at Bampton [187] the lintel projects by 12 inches and the base by 3½ inches. In four triangular-topped bee boles at Long Marton, near Appleby [710], the slate base and top stones project by 12–15 inches. At Elliscales Farm, Dalton-in-Furness [1049], a row of thick slates is set 2 inches above the top of the six bee boles; the slates project by 8 inches and slope down to shed rain.

Projections are less usual in England (except Cumbria) than in Scotland, where it is not uncommon for a whole row of closely spaced bee boles to project forward from the wall as a unit (Walker, 1988a). Some bee boles in Wales also have projecting surround stones (Walker and Linnard, 1990).

A projection above a recess would provide extra shelter for the skep against rain. A projecting base would extend the depth of a shallow recess, but in fact very few Cumbrian bee boles were less than 14 inches deep.

### 3(c) *Size and arrangement*

A bee shelter could be made as deep as required, and some are 4 feet deep. But the depth of a bee bole is limited by the thickness of the wall, and most of the Cumbrian bee boles are between 14 inches and 25 inches deep. The usual height is 15–30 inches (minimum 12 inches), and the usual width 17 inches or more (minimum 14 inches). Beekeeping books published in Britain between 1593 and 1851 recommended the use of skeps with an external diameter between 10 inches and 15 inches and a height between 7 inches and 15 inches (Crane, 1983); the bee boles in Cumbria would have held such skeps comfortably. A few bee boles were wide enough for two skeps (Plate 6), or even for three.

Cumbrian bee boles, like those in stone walls in Yorkshire and Scotland, are larger than stone bee boles in southern England and Wales. We use average base area (sq. inches) to compare sizes:

central + southern England	312
Wales	328
Cumbria	387
Scotland	393
Yorkshire	415

In Scotland some beekeepers packed bracken or sacking round their skeps in winter, and it seems likely that bee boles were sometimes built extra large to allow for such packing. This may also have been true in Cumbria. A record for two bee shelters at Rusland [632a, b] (Plate 3) includes evidence of winter packing (see Section 4g), and a large recess near Bouth [754] is described by the recorder as a 'winter bee bole'.

As elsewhere, most bee boles in Cumbria were built 2–3 feet from the ground. A few are higher; for example, those in an orchard at Renwick [540] are more than 5 feet up.



PLATE 6. Two bee boles, each for two skeps, in a south-facing house wall, Raw Head, Great Langdale [636].

Photo B. Tyson, 1981.

In a wall that runs uphill, bee boles may be built stepwise and are all about the same height from the ground. Examples include sets of five at Spark Bridge [841a], eight at Finsthwaite [622], and six at High Tilberthwaite [85].

The bee boles of any one set are usually fairly regularly spaced, but the spacing may be anything from a few inches to several feet. Bee boles in eleven sets are arranged compactly in two or three tiers. Vertical divisions may then be as narrow as  $4\frac{1}{2}$  inches, and the horizontal division is often a single course of stones (Plate 5). The largest set (very dilapidated by 1979) is at Greta Grove, Keswick [40], with two tiers that once had seven recesses each. All the other tiered sets have only one to three recesses in each tier.

### *3(d) Number of bee boles at a property*

Two-thirds of the sets consist of one to four bee boles, and almost all others have five to eight. There are only two large sets: fourteen bee boles at Keswick [40], mentioned above, and fifteen at Hill Farm, Heathwaite, Grizebeck [217], which also has sets of four and three bee boles in other walls (as well as a bee shelter). Altogether, there was accommodation here for twenty-five skeps. Some other properties in Cumbria have sets in two or three different walls; this is uncommon in other counties. Great Hartbarrow Farm, Winster [674], had a total of eleven bee boles in three sets, although one has now gone, and Nettleslack Farm, near Ulverston [605], has three sets, holding a total of ten skeps or more.

At Lowick Green [604], an orchard wall with seven bee boles also contains a row of sloping slates 4-4½ feet above the ground, projecting by 14 inches. This and another similar 'roof' in the same wall might well have helped to protect other skeps, bringing the total number accommodated to thirteen. Bridge Field, Spark Bridge [841], could house ten skeps in bee boles and about five in a bee shelter. Light Hall, Rusland [532, 632], might have had seven skeps in two sets of bee boles and a further nine in two shelters; we were told 'there used to be bees everywhere'.

Appendix B gives 4.5 as the average number of skeps at a property that could be accommodated in bee boles.

#### 4. The bee shelters and bee boles in relation to their surroundings

##### 4(a) *Distribution: Cumbria as a whole*

Figure 1 shows that the highest concentration of sites is in Furness, and just to the north and east of it in Westmorland. There are scattered sites in the east and north of Cumbria, a number in the Eden valley and two small clusters in the west. Almost all sites are at altitudes below 600 feet, as are almost all dwelling houses. However, Brinn's Farm, Shap [675], which is 950 feet above sea level, has three bee boles. In contrast, several sets in Wales are at higher altitudes, and one is at 1200 feet.

Possible reasons for building structures to shelter skeps, and for their distribution, have been discussed (Crane, 1983). It was suggested that such structures were built in areas where beekeeping could be worth while, but only if extra protection against bad weather were provided. Aggregations of bee boles occur within wetter areas (parts of Cumbria, the Pennines, Wales and Devon) and within areas subject to cold east winds (parts of Kent, east Yorkshire, Fife and Tayside). In Cumbria winds can be very strong and average rainfall is high. The presence here of beekeeping structures may also be linked with the activities of the abbeys and priories.

Reports published two hundred years ago on agriculture in Cumberland and Westmorland (Bailey and Culley, 1794) noted that in Cumberland: 'Bees are found through every part of the county, and in some situations are very profitable.' Bees were also said to be common in Westmorland. It seems unlikely that bees were kept in areas above 600 feet, which include all the mountains of the dome and, for example, Cross Fell and Shap Fell. The climate was probably too harsh and wet for beekeeping, as it was for human habitation and farming. The highlands of Scotland and of Wales are similarly without evidence of beekeeping. No bee shelters or bee boles are found in any of these high areas.

In the Solway plain, where no beekeeping structures have been found, it may well have been satisfactory to keep skeps in the open, as in other more favourable areas.

In the east there are about a dozen sites altogether in the Eden valley, much of which is in a slight rain shadow. The annual rainfall here and on the Solway plain is less than 35 inches. And, by the time the cold helm wind that blows in late spring and autumn round Alston and Cross Fell reaches the Eden valley, it has lost much of its strength (Brunskill, 1974). Like the plain of York, parts of the valley would have been rather favourable for beekeeping, and less shelter needed for skeps.

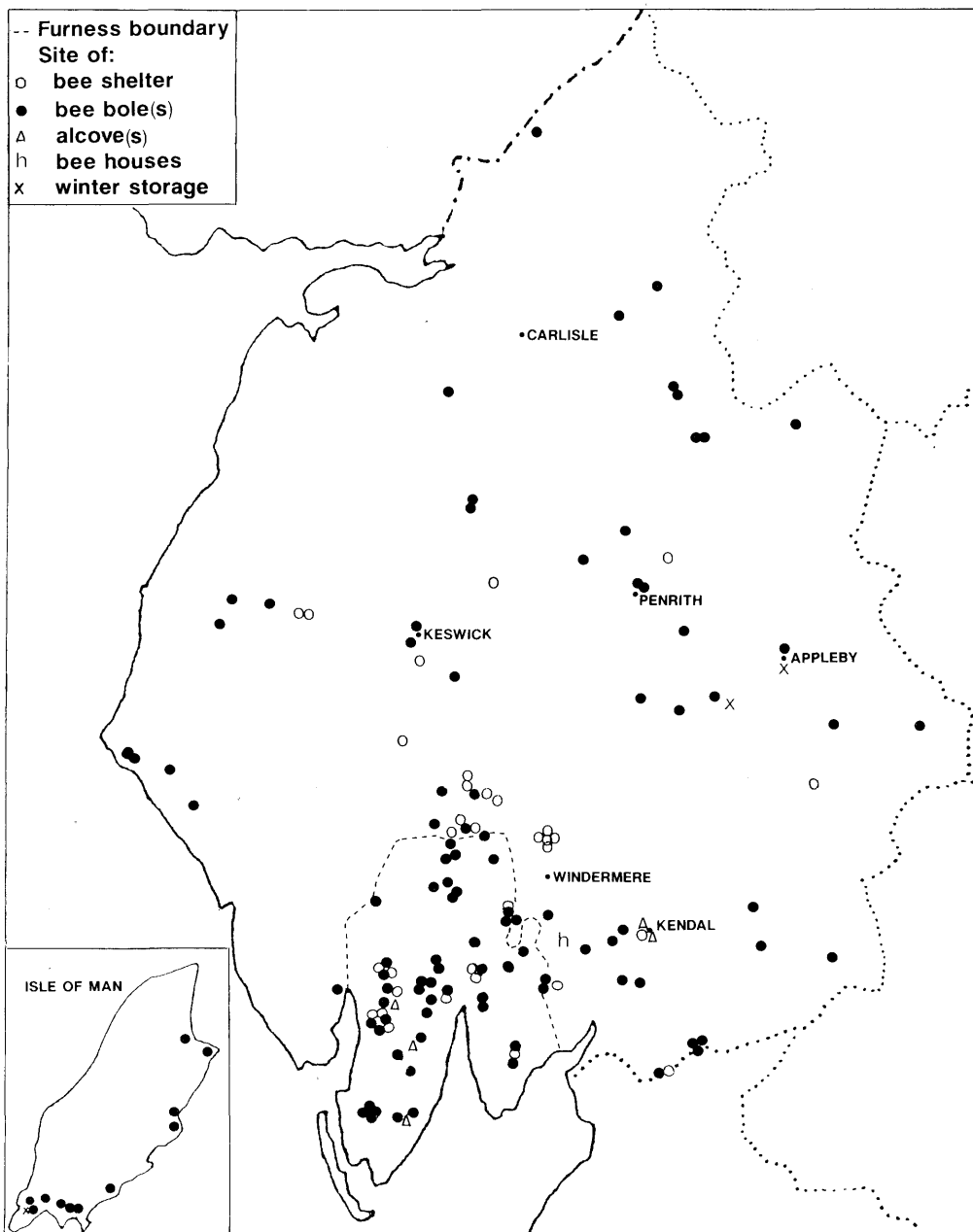


FIG 1. Distribution of bee shelters, bee boles and other protective structures in Cumbria (October 1990). Inset: Isle of Man, on smaller scale (70%).



The cluster of five bee shelters in and around Troutbeck near Windermere suggests that some beekeepers copied a shelter that was used successfully by a neighbour; examples of such local copying occur elsewhere.

#### *4(b) Distribution: the special case of Furness*

The most interesting area is Furness, because it contains so many bee boles and also many of the bee shelters. Its density of beekeeping structures is higher than anywhere else in Britain; the only comparable concentrations are around Settle in North Yorkshire, and in the coastal belt of Tayside and Fife.

The climate of Furness is more favourable than farther north. Its southern valleys have considerable hours of sunshine in summer and are remarkably mild in winter, with little snow (Brunskill, 1974). The area was suitable for fruit growing; see the end of Section 7.

Much of the land in Furness was once owned by Furness Abbey, a Cistercian monastery which, in England, was second only in importance to Fountains Abbey, Yorkshire. Furness Abbey had over twenty granges and many other properties, as far north as Borrowdale (Cumberland). The Augustinian priories of Conishead and Cartmel also owned some land in Low Furness and Cartmel.

Before the Reformation large amounts of beeswax were used for candles burnt at mass and other liturgical services. Beeswax was thought to represent the virginity of Mary, mother of Christ, the wick symbolizing the soul of Jesus, and the flame the divinity absorbing and dominating both (Crane, 1980). Honey was important as the only sweetener, and it was needed for making mead. Beekeeping was carried on in many Cistercian monasteries, under the charge of a monk called an *apiarius* (Lekai, 1953).

It is considered that few ordinary domestic buildings have survived in this area from earlier than about 1660 (Marshall, 1990). And few, if any, of the surviving beekeeping structures in Cumbria had been built at the time of the dissolution of the monasteries. However, it seems highly likely that the bee shelters and bee boles in Furness are relics of a strong beekeeping tradition during the active period of Furness Abbey, 1127–1531. (Bee boles still remain in pre-Reformation walls at Buckfast Abbey Farm in Devon; at Pluscarden Abbey in Scotland, and at a former grange of Fountains Abbey in Yorkshire; the walls probably date from the 12th, 13th and early 15th centuries, respectively.)

Some bee boles in Cumbria are at farms known to have been associated with monasteries; see Section 4g.

Some further evidence can be found in the Isle of Man. In 1135, Olaf I gave permission for Furness Abbey to build a subsidiary abbey, Rushen, at Ballasalla in the south-east of the island. Although always a small establishment, Rushen became influential in its early years, controlling much farmland, and it was the last of the British abbeys to hold out against Henry VIII – until 1540. Of eleven sets of bee boles in the Isle of Man, seven are in the south-east not very far from Rushen Abbey, and two at Malew date from 1506 and earlier. The fiercest gales blow from the south-west, so the island has been called 'the child of the south-west wind' (Stenning, 1958). Most unusually, three sets of bee boles face north-east, as if protection from the gales was more important than facing the sun. Apart from the gales, the climate is equable, with cool summer weather and average winter temperatures approaching those of Falmouth.



#### 4(c) *Direction faced*

Roman authors recommended that hives should face south. For instance, according to Columella in *De re rustica*: 'A position must be chosen for the bees facing the sun at midday in winter' (9.5.1). The bees' dwelling-places, although they are protected by buildings, ought to be so arranged as to face the south-east, in order that the bees may enjoy the sun when they go out in the morning and may be more wide-awake; for cold begets sloth.' (9.7.45). In Britain and elsewhere, this advice has been followed ever since. For example, Thomas Tusser (1557) said that 'hives should be set south, good and warme'. John Evelyn in 1655 (Smith, 1966) advised that hives 'must be placed against the South sun, a little declining from the East, otherwise the Bees will fly out too early and be subject to the mischief of cold Dews.'

In Britain and Ireland about two-thirds of the sets of bee boles face south or south-east, and the same is also true in Cumbria (see Appendix B). The skeps would face the sun, and also be sheltered from 'the northerly winds that rip down many Lakeland dales in winter' (Tyson, 1982), and the cold helm wind in the north-east. (Only in eastern parts of Britain exposed to east winds, e.g. Fife, Tayside, Kent, has an easterly aspect been avoided for bee boles.) Three-quarters of the bee shelters in Cumbria also face south or south-east.

It seems surprising that in Cumbria, where winds and driving rain often come from the west or south-west, as many as 17% of sets of bee boles and 10% of bee shelters face south-west.

#### 4(d) *Type of Property*

In Britain and Ireland as a whole, bee boles have been found at a very wide range of properties: 'cottages, larger houses and farms, a few inns, and country estates, including some castles' (Crane, 1983). Few reports on Cumbrian bee shelters and bee boles comment on the type of property, but we know that many on the Register belong to houses where yeomen once lived: farms and modest cottages (Tyson, 1990). In Cumbria, unlike some other counties, very few houses of the gentry have beekeeping structures. There are some of these structures in towns – Kendal, Keswick and Dalton-in-Furness – or villages, but no aggregations in towns such as those found in St Andrews in Fife, and in Canterbury and Sandwich in Kent.

Bouch and Jones (1961) refer to five wills made between 1568 and 1596 that include a line item for 'poultry and bees'. The value was £1. 3s. od. in Sir William Strickland's will, 6s. 8d. and 1s. 10d. in those of two yeoman, and 2s. 6d. and 1s. od. in those of two cottagers. So people in all these classes kept bees at that time. In a study of the domestic economy of Lakeland yeomen from 1660 to 1749, Marshall (1973) found that 'both Tudor and Stuart inventories contain frequent references to beehives. But, like pigs, they are not always mentioned with regularity, and it may be that the prizors of a deceased villager's or dalesman's possessions ignored the skeps in the garden in many instances.'

#### 4(e) *Situation within the property*

In early times it was necessary to place hives where they were protected from roaming animals and possible thieves. Figures in Appendix B show that most Cumbrian bee

shelters were against the inside of a wall surrounding a garden; most bee boles were similarly situated on the inside of a garden wall, or in a house wall overlooking the garden (as in Plate 6). An orchard wall was used rather more commonly than in the rest of Britain.

Skeps would usually be put on a bench or stand, but bee boles or a shelter would give additional protection both from the weather and from grazing animals and poultry. An advantage of having bees near the house was that any mishap could be noticed, and swarms could more easily be watched for.

Several early English writers on beekeeping recommended such a setting for beehives; for example Charles Butler wrote in 1609:

For your bee-garden first choose some plot nigh your home, that the Bees may be in sight & hearing, because of swarming, fighting, or other sodaine happe, wherein they may need your present helpe. Your garden of herbes & flowers is fit for the purpose. See that it be safe, and surely fenced, not onlie from cattaile . . . but also from the violence of the windes, that when the Bees come laden and weary home, they may settle quietlie.

William Lawson, in *A new orchard and garden* (1618), said: 'for cleanly and innocent Bees, of all other things, love and become, and thrive in an Orchard'. He went on to make one of the very few early references to bee boles: 'Some . . . use to make seats for them [bees] in the stone wall of their orchard, or garden, which is good.' This book was published with *The country housewife's garden*, a title suggesting that it was the job of the farmer's wife to tend the bees, and most of her work would be in or near the house.

#### 4(f) *Date of construction*

The oldest bee shelter surviving in Britain is an unusual decorative one in Gloucestershire, built before 1500. The oldest left in Cumbria may be the one at Goody Bridge House, Grasmere [646], which dates from 'the seventeenth century or earlier'. One of the Troutbeck shelters [673] was built before 1650, and one near Langdale [195] is said to date from 1670.

The oldest surviving bee boles in Britain, at Buckfast Abbey in Devon [208], were probably built in the twelfth century. The oldest remaining in Cumbria may well be a pair at Bampton [187], dated provisionally to the fifteenth century.

In Cumbria few bee boles and no shelters survive from before the seventeenth century. Some were built in the seventeenth, most in the eighteenth, fewer in the nineteenth (see Appendix B), and none in the twentieth century – by which time modern wooden frame hives had become common. In England as a whole, the greatest number of recorded bee boles date from the seventeenth to eighteenth centuries, and in Scotland and in Wales, from the eighteenth to nineteenth (Walker, 1988a; Walker and Linnard, 1990). All these statements refer to structures that survived long enough to enter the IBRA Register. It has already been noted that Furness has few ordinary domestic buildings from before 1660.

#### 4(g) *Other points of interest*

Sykeside, Grasmere [513] was the home of John Fisher, a yeoman, his wife Agnes and sister Molly. They would have kept skeps in the south-facing bee boles and shelter in

their garden (Plate 4). Next to Sykeside is Dove Cottage where the Wordsworths lived from 1799 to 1808, and we know that they had at least one hive in their garden (William's 'domestic slip of mountain'). Dorothy wrote in her journal for 1802 (Moorman, 1971):

27 *January* A beautiful mild morning – the sun shone, the lake was still, and all the shores reflected in it. . . . The Bees were humming about the hive. William raked a few stones off the garden . . . John Fisher helped with the bees.

27 *April* He [William] sate in the orchard – I made bread . . . [Later] I found that he and John Fisher had cleaned out the well. John had sodded about the Bee-stand.

The 'Bee-stand' refers to the place where the hive(s) stood. George Kirkby of the Wordsworth Trust (which now owns both Sykeside and Dove Cottage) believes that the hives stood quite near the cottage, on a raised sunny patch next to a small pool.

Not far away, Nab Cottage, Rydal, has a bee shelter [155] that had been built in 1702. In the early nineteenth century Nab Farm (as it was then) was the home of Margaret Simpson who married De Quincey, and later still of Hartley, son of Samuel Coleridge, lived here.

Two bee shelters at Rusland [632a, b], one of which is shown in Plate 3, were known as 'bee butts'. They were built by Thomas Graveston about 1870, and one of his eleven children recalled – as an old lady – that skeps were put in them for winter, packed round with straw, old coats, sacks, etc., and closed in with wooden doors. Metal fixtures remaining on one shelter were probably for hanging the door. This is the only known report of winter packing in England, although there is good evidence for this practice in Scotland (Walker, 1988a).

There are seven bee boles at a rather isolated site near Stainmore [658], each with a central hole through its rounded lintel. An iron bar was fixed vertically through the hole to prevent theft of the skep. Horizontal bars may have been fitted across some bee boles in Calderdale, West Yorkshire (Walker, 1987). Although no bars survive in England, some are still in place on Scottish bee boles (Walker, 1988a).

The likelihood that monasteries encouraged beekeeping has been mentioned in Section 4b. Bee boles are found at four properties that we know were once associated with religious establishments, although the walls probably post-date the dissolution of the monasteries:

610, once part of Abbey Farm, St Bees, believed to have been used by Benedictine monks; eight bee boles

674, Great Hartbarrow Farm, Winster, where monks from Cartmel Priory were trained; five bee boles in a walled enclosure known as the 'monastery garden', and six more in other walls

1049, Elliscales Farm, Dalton-in-Furness, where monks used to dig iron ore; six bee boles

841, Bridge Field Farm, Spark Bridge, said to have been associated with Furness Abbey; five bee boles and a bee shelter.

Many other bee boles and shelters in Furness are at houses close to granges and other properties of Furness Abbey, for instance: Bouth [150, 1051], where there was a grange; High Stott Park [1050] where the abbey had property; Bowkerstead Farm [533] at Satterthwaite where the abbey had a cornmill and also a court.

#### 4(h) *The high proportion of bee shelters in Cumbria*

We have not found any contemporary writings that help us to understand why more shelters are found here, and also in Wales, than elsewhere in Britain (see Appendix B). One or more of the following factors may have been involved.

1. Most shelters in Cumbria were quite deep from front to back (18 to 48 inches, average 28 inches), whereas the depth of bee boles – normally limited by the thickness of the wall – was 17 to 25 inches, average 19 inches. In this wet part of the country a deep shelter would protect skeps from rain more effectively because they could be set well back from the front.
2. If a beekeeper with garden walls already built (without or with bee boles) wanted to provide protection for his skeps – or for extra skeps – he could build a shelter against an existing wall, or even free-standing. At least six properties in Cumbria have a shelter as well as bee boles, but it is not possible to say whether the shelters were built later.
3. Where local stones were rather large and uneven in shape, it might have been much easier to build a shelter of the type found than a wall incorporating recesses.

#### 5. *Evidence of use of the bee shelters and bee boles*

The earliest printed book containing an illustration of an English bee shelter is *The country housewife's garden* by William Lawson (1618). He described a shelter as:

A Frame standing on posts with one floor (if you would have it hold more Hives, two floores) boarded. . . . In this frame may your Bees be dry and warm, . . .

John Keys (1796), however, disapproved of hives being placed close together in a shelter, or even on a stand:

It is very *wrong* to place *hives* on benches, which is always the source of mistakes, quarrels, and often slaughter, by their interference with one another. A still worse contrivance is that of little *cots*, or sheds, with shelves therein, one above another; affording a greater harbour for their enemies, very inconvenient for the management, . . .

A painting on wood of eleven bee boles with skeps in them, dating from about 1700, was found above a fireplace at Charity Farm, Lovington, Somerset, where the bee boles themselves can still be seen in the garden [131]. No such direct evidence has been found in Cumbria, but there is good evidence of the use of thirty-two of the structures for sheltering skeps of bees.

#### *Local knowledge*

Local people sometimes remember a bee shelter or bee boles holding skeps of bees; or this information might have been passed down from an earlier generation. Old photographs show skeps in a few of the structures.

In the list below, entries marked \* are bee shelters, and the rest are bee boles. An entry in brackets gives evidence of bees being kept at the site, but not necessarily in the structure there.

- 40 Keswick: local people knew the fourteen bee boles were used for bees
- 71 Seathwaite: bee boles may have been used until 1920s, and skep bases have been found; see below
- 73 Lorton: colony records written in pencil inside one door, e.g. 'June 24 1866, swarm left': owner in 1953 knew skeps were kept in this shelter
- 76\* Borrowdale: known to be in use in 1890s. (House kitchen has hooks where honey bags were hung to drip.)
- 100 Thirlspot: (bees kept here until c. 1900)
- 107\* Little Langdale: still in use in 1930
- 138 Hayton: photo, published 1930, showed skep in bole
- 157 Kirkby Moor: wall was specially built (1850s) for bee boles
- 190 Skelwith Fold: local inhabitant knew bole was for bees
- 211\* Woodland: bees kept in shelter until c. 1920
- 217a Grizebeck: owner in 1954 remembered her father having skeps in most of the twenty-two bee boles
- 530\* Keswick: bees kept in this shelter until at least 1897, possibly 1906 (see Section 7, 'telling the bees')
- 588 Brandlingill: (owner in 1972 knew that a previous owner had kept bees)
- 632a\*, b\*, also 532, Rusland: shelters known to be built by Thomas Graveston, c. 1870, and used for bees; skeps were 'packed' in winter (see Section 4g)
- 833\* Clubs: picture, published in 1930, showed three skeps in shelter
- 1045\* Edenhall: William Dodd (a beekeeper who died in 1989 at the age of 82) remembered this 'bee house' [shelter] that held eight or nine skeps (Dodd, 1986)
- 1048 Plumpton: in 1981, a man remembered the bee boles at Mounseybank and his grandfather keeping bees in skeps
- 1050 High Stott Park: present owner remembers a man keeping bees in the bee bole.

### *Names used*

Further evidence of use is provided by the names used locally for the structures. The terms recorded include 'bee stacks' for bee boles near Grizebeck [217a, see list above], 'bee shells' for round-backed recesses at Finsthwaite [622], and 'bee holes' for sets at Blawith [623], Woodland [626a] and Great Urswick [643]. 'Bee butts' was the name used for two shelters at Rusland [632, see list above] and 'bee houses' for those at High Nibthwaite [608], Grasmere [646] and Edenhall [1045, see above].

Two structures at Crosthwaite [918] were also known as 'bee houses', and the winter storage building at Appleby Castle [79] was traditionally called 'Lady Anne's bee house'. These are described in Section 6.

### *Skep bases*

A skep, whether on a stand in the open or in a bee bole or shelter, was usually placed on a

square base made of wood, or a round base of wood or stone. A round base might have a small projection (like a tongue) to provide an alighting area for the bees in front of the flight entrance of the skep. Remnant (1637) advised:

The best seat or stoole for them is a round board, or stone fit to the Hive, onely left an hand breadth wider than the hive before, for a place for the Bees to alight upon; and set it a little leaning forward, for that the raine may runne off, if any be driven or fall upon it: . . . '.

Wooden bases are perishable, and none has been found in Cumbria, but several shaped stone ones survive, all with an alighting projection. Those found at bee bole sites provide supporting evidence that the recesses were used for bees. In 1953 three shaped sandstone skep bases were found at Albyfield Farm, Cumrew [136], and a slate base was reported in Seathwaite, Duddon Valley [71]; a thick, shaped stone in a bee bole at Heskett-Newmarket [771] was probably also a skep base. Each of the seven bee boles in a cottage garden at Borrenthwaite Hall [658] contained a skep base shaped to a point at the front. Three skep bases were found at Combe Cottage, Borrowdale [76], where there is a shelter. Two skep bases were also dug up in the garden at Yewbarrow Hall, Longsleddale.

## 6. Some other protective structures for housing skeps

In addition to bee shelters and bee boles, the IBRA Register includes records of alcoves, bee houses and winter storage for bees (see Crane, 1983).

*Alcove* is the name we use for a recess much larger than a bee bole, usually tall, with one or more dividing shelves, which accommodated several skeps. Such an alcove seems to have been made an ornamental feature in a garden; see Plate 7. Five sites in Cumbria have one or more alcoves, which are not quite as tall or elegant as some farther south. There are fifteen sites in the rest of Britain, but none in Ireland.

An alcove at Urswick [129], set into a limestone wall and with a brick arch, would have held four skeps. Ashlack Hall, Grizebeck [216], which dates from the fourteenth century, has an alcove with a triangular top, which probably held up to five skeps. Four alcoves at Pennington [130] held a total of sixteen skeps. Three arched alcoves in the centre of Kendal [670] were once in a cottage garden (Plate 7), and both cottage and garden wall were shown on a 1787 map (Satchell, 1987). Not far away, in Rosemary Lane, there are four arched alcoves [672] almost identical in construction but slightly taller. It is surprising to find these quite imposing structures in the Fellside area of the town, which consisted of workshops, yards, gardens and houses occupied by poorer people. (There is a bee shelter [671] in a garden just above Rosemary Lane, so bees were kept in this area.)

We have recently been shown another arched recess in Kendal, very tall (about 8 feet) and 6 feet wide; the wall has been partly reconstructed, and no evidence of shelves can be seen. We think that this recess, which is much larger than the alcoves mentioned above, was probably made for some other purpose.

A *bee house* is a free-standing structure in which skeps were placed along one or more of the inside walls, usually on a shelf. The beekeeper could move about inside the house



PLATE 7. Three alcoves in a garden, yard 43, Highgate, Kendal [670], photographed before the site became Booth's car park. Photo Mr Morton, 1963 (The Margaret Duff Collection).

to attend to the skeps. Usually the wall was solid, and openings were provided through which the bees flew out. Altogether thirty-two bee houses are known to have survived in Britain and Ireland, and two of them are in Cumbria, together with one built about 1960 for modern hives [842].

At Crosthwaite (Westmorland) [918] there are two open-fronted stone buildings, referred to as 'bee houses', which may date from the seventeenth century. Each is 5 feet high, nearly 11 feet wide and  $6\frac{1}{2}$  feet deep, with a ridged roof; they face south and east on two adjacent sides of a levelled square in the corner of a sloping orchard. There is no evidence that they were fitted with shelves, but skeps may have been placed just inside the open front, on a bench or other structure.

Skeps of bees were sometimes put for winter in a building or other place specially designed for winter storage of bees, in the dark and at an equable temperature. In total, twenty-seven such structures are known in Britain and Ireland, two of them in Cumbria. One is a square two-storey building at Appleby Castle [79], according to tradition built by Lady Anne Clifford between 1650 and 1676. It is known as 'Lady Anne's bee house', and some details are given by Crane (1983). The other is a dairy building at Hill House, Maulds Meaburn [666], with thirteen recesses in two internal walls that are of a suitable size for skeps.

## 7. Bees in the life of the family and the community

The record forms and other sources provide a few glimpses of the part that bees, and their wax and honey, played in the life of Cumbrian people.

### *'Telling the bees'*

Some traditional customs have continued longer in Cumbria than in many counties. One is 'telling the bees' of their owner's death (see Plate 8), a ritual that was followed in various parts of Europe, and probably started in the seventeenth century (see Crane, 1980). It seems to have originated because bees were regarded as part of the family, and so should be told of their owner's death and requested to remain and work for their new owner; it was thought that if the bees were not told, they would die, or go away.

Dodd (1986) recalled that at Greenways, Edenhall [1045], when Henry Wilson the tenant died:

his widow draped the hives with crepe, told the bees their master was dead and bid them to the funeral. After the funeral she took each hive a portion of the funeral repast. After my grandmother died in 1911 my aunt went and told the bees their mistress was dead and they were to go to a new home.

Rowling (1976) describes a similar 'telling', around 1916 at a farm in Underbarrow near Kendal. And when Thomas Allison died on 11 January 1897 at Low Nest Farm, near Keswick [530], someone had to 'lift' – and replace – the hives and tell the bees of their master's death (Alston, 1987).

### *Skeps*

Making skeps of coiled straw was a specialized craft, although some beekeepers would have made their own. An old beekeeper near Penrith recalled that until 1880 his grandparents kept their bees in skeps made from rye straw. 'In the winter months grandfather would take about four or five cwt straw to Joseph Turner, straw hive maker at Catterlen' (Dodd, 1985). Farther north, a death notice announced 'Thomas Modlin died aged 77, beehive manufacturer and bee merchant of Talkin Tarn' (*Carlisle Journal*, 11 December 1813).

In 1776, empty skeps were bought by the Brownes of Troutbeck, near Windermere, for 2s., and in 1786 for 1s. 6d. (Browne papers, 8/5). We do not know the numbers of skeps, but the price was probably a few pence each. The use of skeps continued long after modern movable-frame hives were introduced to England in 1862. In 1906, when the Cumberland Beekeepers' Association was already five years old (and in receipt of a special grant of £50 from the County Council, Dodd, 1974), nearly a quarter of the colonies in Cumberland and Westmorland were still kept in skeps (Alston, 1987).

### *Prices*

The following has been gleaned from contemporary local sources. In the eighteenth century swarms were sold in Troutbeck for only 1d. each (Browne papers, 8/1, 8/4). Prices of honey and beeswax below (per pound) are calculated from the costs of various larger amounts. The 1571 entries are calculated from an inventory of Robert Pattinson, a Carlisle merchant who died in that year. He had three gallons of honey in stock (6s.) and





PLATE 8. A widow 'telling the bees' of her husband's death, having tapped the side of the hive with the key. Black crepe is already in position on the hackle protecting the skep. Photographer unknown (reproduced by permission of Brighton Reference Library).

nine hives of bees in the garden (20s.). The entries marked \* are for England as a whole, and all other entries for 1719 to 1858 are for Westmorland (Browne = Browne papers; Birkett = accounts of Robert Birkett).

	<i>Honey</i>	<i>Beeswax</i>	<i>Skep with bees</i>	<i>Skep with 4lb. honey</i>	<i>Source</i>
1571	1. 7d.		2/3 = 27d.		Jones, 1990
1719	3. 4d. *				Crane, 1990
	7d.				Satchell, 1987
1776		1s. 6d. = 18d.			Browne 8/5
1787				10d.	see below
1788	8d.				Browne 8/5
1858	1s. 3d. = 15d.				Birkett 20/1
	2s. 1d. = 25d.				Birkett 20/1
1895	8. 5d. *				Crane, 1990

Beeswax has always fetched a higher price than honey, in the 1890s between two and four times.

The 1787 entry is from the Order Books of the Westmorland Quarter Sessions, Kendal (Christmas), which records that 'John Robinson of Kirkby Lonsdale, shoemaker, on 5 October 1787, stole "one Straw Bee Hive and four pounds of Honey therein contained of the value of Tenpence" . . . Found guilty.' The skep was probably empty of bees, after harvesting; it might have been worth 1d. and the honey 2½d. a pound. It seems a low valuation.

### *Beeswax candles*

The important use of beeswax candles for religious services before the Reformation has already been mentioned. Personal piety was sometimes demonstrated by making an endowment for altar lights. One such endowment in a sixteenth century will was administered by the Keepers of the Lamp of the Blessed Mary in St Lawrence, Appleby. Another was in honour of the Blessed Mary in Dalston, near Carlisle. Wax lights might also be burnt as a memorial to an eminent person after death. For instance, Carlisle Priory spent £7 7s. 8d. in maintaining a wax light before the sacrament in memory of Gilbert Welton, Bishop of Carlisle (Bouch and Jones, 1961).

### *Bee forage*

Bees would have collected nectar and pollen from flowering fruit trees, herbs and other plants in gardens and orchards. The inclusion of apples and apple trees in six inventories made in the period 1681–1732 (Marshall, 1973) suggests that there were apple orchards in the Furness area, and some old damson orchards can still be found here. The bees would also forage on wild flowers in the area and certain flowering crops. Plants visited by bees in the past, mentioned in the IBRA Register records for Cumbria, and by Dodd (1986), include the following – willow, cherry and other wild trees

flowered in spring, and lime and sycamore later. Charlock was a useful source of nectar in some areas, as were clovers which were undersown in oat crops. Later in the summer, blackberries were especially abundant in Furness in coppices two years after the trees had been cut (Shackley, 1990). Rosebay willowherb also grew in clearings, and in many parts there was ling heather and also bilberry.

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### Appendix A: Sites in Cumbria: Additions to the 1981 List

A detailed list of sites known in 1981 was published in *The archaeology of beekeeping* (Crane, 1983). The following have since been added to the IBRA Register; the entries marked \* were received too late for inclusion in the analysis.

#### Bee boles

IBRA	Address	No. bee boles, aspect, material
532b	Light Hall, Rusland	1 (for 2 skeps), east, stone
605b	Nettleslack Farm, nr Ulverston	1 (for 2 skeps), south, stone
605c	Nettleslack Farm, nr Ulverston	3, south, stone
674c	Great Hartbarrow Farm, Winster	2, east (now demolished)
856	Thacky, Melkinthorpe	2, south, stone (ruinous)
982	Mirehouse, Under Skiddaw, Keswick	4, south-west?, stone (recently restored)
994	52 Main Street, St Bees	3, south, stone (filled in)
1040	Hazelmound, Thwaites, Broughton-in-Furness	3, south, stone + brick piers
1044	Hodge Hill, Tilberthwaite	5, south, slate
1046	Woodside Farmhouse, Dean, Workington	3, north, stone
1048	Mounseybank, Plumpton, nr Penrith	(now demolished) number unknown
1049	Elliscales Farm, Dalton-in-Furness	6, south, stone (piers repaired with brick)

1050	High Stott Park, Finsthwaite	1, south, stone
1051	Commercial Inn, Bouth	3, brick + slate (now demolished)
1052	(was) Water Yeat Farm, Blawith	3, south, stone + brick piers; also 2 slate skep bases
1055*	Knott End Farm, Hallthwaites	3 (+ 1 possible)
1056*	Yew Tree Cottage, Bouth	2, stone

### Bee shelters

883	High Scaur, Grasmere	size not known; subject to preservation order
929	Barrow Wife, Cartmel Fell	for 5 or 10 skeps
931	Tow Lane House, Newbiggin-on-Lune	for 4 or 8 skeps
1041	Newlands Farm, Borrowdale	shelter reported, but site not located
1045	Greenways, Woodhead, Edenhall, nr Penrith	for 8–9 skeps (Dodd, 1986)
1053*	Water Yeat Guest House, Water Yeat, Blawith	for 8 or more skeps
1054*	Mill House, Water Yeat, Blawith	for 3 skeps; probably another shelter nearby

### Bee houses

842	Croft House, Little Clifton Workington	modern bee house
918	Crosthwaite House, Crosthwaite, nr Kendal	2 bee houses

Structures at the following sites were incorrectly listed in 1981 as bee boles; their corrected designation is given on the right.

107	Low Colwith Farm, Little Langdale	bee shelter
130	Church Style, Pennington	4 alcoves
194	High Bield, Little Langdale	bee shelter with 2 compartments (address also corrected)
211	Ring House, Woodland, Broughton-in-Furness	bee shelter
216	Ashlack Hall, Grizebeck, Kirkby-in-Furness	alcove
672	11 Rosemary Lane, Fellside, Kendal	4 alcoves
690	Askham (probably near Penrith, but site not located)	possible shelter
798	Grange Cottage, Grange-in-Borrowdale	not a bee bole

## Appendix B: Data for the bee shelters and bee boles

### Numbers of different beekeeping structures

	<i>bee shelters</i>	<i>sets of bee boles</i>	<i>other structures</i>	<i>shelters as % of all structures</i>
Britain (except Cumbria)	47	750	72	6%
Cumbria	37	105	10	24%
Yorkshire	6	102	6	5%
Northumberland	0	19	1	0%
Wales	15	58	6	19%
Devon	2	101	6	2%
Scotland	10	187	10	5%

Data below for bee shelters and bee boles in Cumbria are from analyses of the characteristics of 34 shelters and 103 sets of bee boles (in so far as information is available, e.g. only 23 of the 34 shelters can be dated). The analyses inevitably exclude a few sites for which only the address is known. Most of the data quoted for Britain and Ireland, and for England, are from the analysis we made in 1981 (Crane, 1983). Data for Scotland and Wales are from Walker (1988a) and Walker and Linnard (1990).

### Number of skeps accommodated per property

	<i>in shelter(s)</i>	<i>in bee boles*</i>	<i>no. bee boles per property</i>
Cumbria	5.4	4.5	4.0
Wales	6.0	6.0	5.6
England			5.2
Scotland			3.3

\* 2 and 3 skeps could be put into some bee boles.

### Direction faced

Number facing in each direction, as a percentage of the total for which the direction is known. B + I is the total for Britain and Ireland.

	S	SE	SW	E	W	N+NW +NE
<i>Bee shelters</i>						
Cumbria (32)	50%	25%	9%	13%	3%	—
B + I (43)	53%	23%	14%	9%	—	—
<i>Sets of bee boles</i>						
Cumbria (84)	43%	21%	17%	14%	1%	4%
Wales (55)	46%	20%	9%	6%	7%	11%
B + I (627)	49%	16%	9%	12%	7%	7%

### Situation within a property

Number in each situation, as a percentage of the total for which the situation is known.

	<i>garden</i>	<i>orchard</i>	<i>other enclosure</i>	<i>out- building</i>	<i>house wall</i>	<i>other</i>
<i>Bee shelters</i>						
Cumbria (27)	85%	7%	4%	—	4%	—
B + I (41)	59%	12%	7%	—	15%	7%
<i>Sets of bee boles</i>						
Cumbria (84)	62.5%	9.5%	8%	8%	7%	4%
B + I (600)	68%	5%	5%	5%	9%	8%

### Date of construction

Numbers of bee shelters and sets of bee boles.

<i>Century:</i>	<i>pre-15th</i>	<i>15th</i>	<i>16th</i>	<i>17th</i>	<i>18th</i>	<i>19th</i>
<i>Bee shelters</i>						
Cumbria (23)	—	—	—	4	12	7
B + I (29)	—	1?	—	4	14	10
<i>Sets of bee boles</i>						
Cumbria (49)	—	1?	1	13	18	16
B + I (369)	5	9	38	66	65	57

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