

# Medieval settlement and land use on Holne Moor, Dartmoor: the landscape evidence

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*THE STUDY AREA, located on open moorland, is rich in relict medieval boundaries and traces of industrial activity. A sequence of land boundary types can be established and the history of colonization and land use reconstructed. The sequence stretches from the establishment of a small pre-Conquest hamlet through a period of expansion in the 13th century of commoners from two nearby manors, to later retrenchment and abandonment. Medieval and post-medieval tin-working can be demonstrated, with associated rabbit buries. The changing character of boundaries, lanes and moorgates reveals changing priorities in livestock management. The history of cultivation is briefly discussed. The general approach, which is almost purely an archaeological one, should be capable of application elsewhere, and of further refinement to suit local circumstances.*

## I. INTRODUCTION

The extensive remains of medieval land boundaries, farms and traces of cultivation on Dartmoor are well known.<sup>1</sup> Situated beyond the present-day enclosed land, and easily distinguishable from the more extensive prehistoric settlements and boundaries of the area, they present opportunities for the study of short-lived and relatively uncomplicated medieval intake episodes. Yet too often they are used simply to illustrate or accompany the evidence provided by contemporary documents, or as impressive visual evidence of general historical trends. There is considerable potential for more detailed analytical work of the kind which prehistorians, without the benefit of written sources, have to employ when dealing with more ancient field systems.

This is a study of the medieval archaeology of part of Holne Moor, on the eastern side of Dartmoor, in the county of Devon, in SW. England. One of us (A.F.) has been mainly concerned with the investigation of a large prehistoric field system located here;<sup>2</sup> the other author (N.R.) chose Holne Moor as a study area in an investigation of the relationship between ancient land use practices and present-day soil characteristics. After four years of work (1976–79) it was decided to undertake a detailed analysis of the medieval boundaries, since we both required more precise dating for the medieval episode. The project looked promising. Unlike the great prehistoric field system, much of which was probably laid out in one operation as a

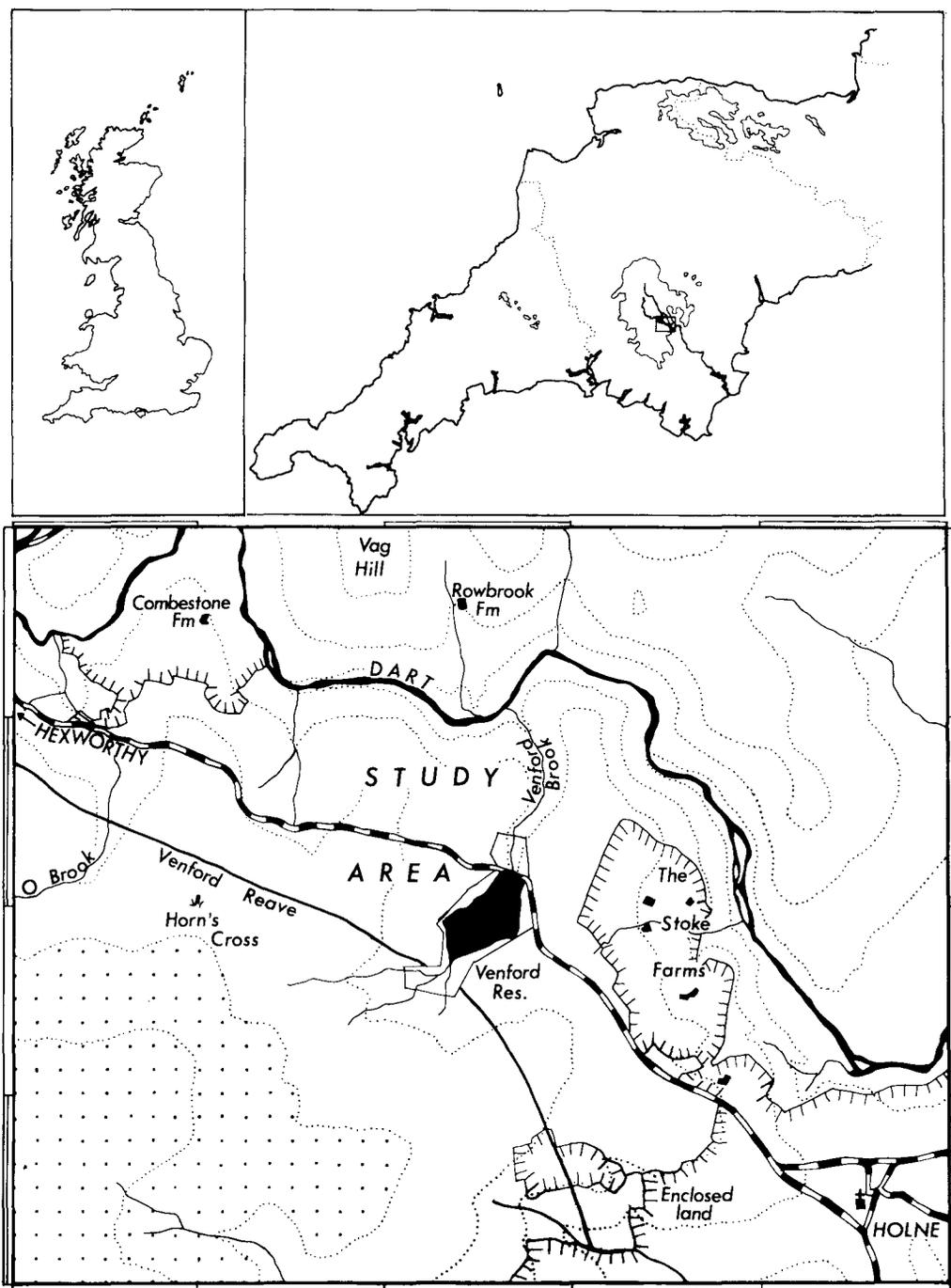


FIG. 1

General map of the study area and its location. Contours every 61 m (200 feet). Land over 396 m (1300 feet) is stippled. The border is marked in kilometres

cohesive field system (in the terminology of Bradley),<sup>3</sup> the medieval fields form a cluster of lobes (agglomerate, in Bradley's terminology) joined together in a recoverable sequence. The study was also undertaken to resolve some of our speculations on the typology of post-prehistoric land boundaries on Dartmoor.

Accurate mapping and detailed description of the boundaries was undertaken in April 1980. The value of a purely archaeological approach was soon apparent. It was indeed possible to discern clear morphological types for the boundaries and a sequence of land enclosure and farming activity, but this proved to be only the beginning of the enquiry. Relationships between boundary-building and tin-mining episodes could be established, and a group of low, dispersed rabbit buries, usually made of earth robbed from medieval hedgebanks, was identified. We were able to observe evidence for livestock husbandry — evidence consisting of boundary arrangements (lanes, droveways, gates, etc.) and of animal movement leading to gulleying and informal hollow-ways. Diachronic change occurred; animal gullies are overlain by boundary-banks, lanes and gateways are blocked, and banks were knocked down to facilitate movement. In places where traces of cultivation were apparent or discovered by archaeological excavation, it proved possible to compare the relative duration of cultivation and the likely date of abandonment of different fields. This was done by an examination of soil profiles or sometimes simply the surface peat or peaty humus, and we regret that, for reasons of space, the detailed publication of these results must be held over for another paper. The results of the soil studies could be compared with the evidence for the maintenance or slighting of different field boundaries; in places whole fields were slighted by tanners.

We believe that our results illustrate the value of purely archaeological methods in this research field.

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The study area lies within the Commons of Devon, some 3 km WNW. of the present-day village of Holne, and is centred roughly on the National Grid intersection SX 680710 (Fig. 1). The broad lower plateau of Holne Moor is sheltered by the high moorland of Holne Ridge to the S. and bounded by the gorge of the R. Dart to the N.; the plateau, 305–365 m (1000–1200 ft.) above sea level, consists of three spurs running roughly N.–S. Today, enclosed land is mainly confined to the borders of the eastern spur, but N. of the Holne–Hexworthy road the sheltered fields of the Stoke farms extend the boundary of cultivation to the margin of the granite, more than a kilometre beyond the modern moorgate above Holne village. The study area is located on the broad central spur and its eastern slopes above Venford Brook, and the lower, slightly more sheltered land N. of the Venford reservoir, which was completed in 1907 (Pl. III).

Most of Holne Moor, including these three spurs, is within the southern part of a very large prehistoric field system, known as the Dartmeet parallel reave system.<sup>4</sup> Reaves are prehistoric walls; in parallel systems the major dividing reaves usually end on a long transverse reave known as a terminal reave. On Holne Moor the terminal is known as the Venford Reave (Fig. 1); it is a long-distance boundary over

7 km long. These boundaries, which are associated with circular, stone-built prehistoric houses, were laid out around 1700–1600 B.C. (BM-1609,  $1320 \pm 55$  bc). Excavation has shown that some of the boundaries began life as banks, probably for hedges, and one is known to have started as a fence, probably of hurdles. The reaves have been marked on all plans of the study area except Fig. 9.

The people of medieval times would have been able to see that the moor had already been intensively occupied, and a good deal of stone clearance already carried out. The early medieval colonists often ignored or destroyed the reaves, while later medieval farmers tended to utilize them for their own boundaries. Possibly changes in vegetation caused by clearance, grazing and peat-cutting made reaves more obvious in later times. Elsewhere the Dartmoor names like 'Yelland' — 'the old land' — show that some early settlers were aware of their heritage.<sup>5</sup>

Holne Moor lies at the eastern end of the shortest natural E.–W. route across Dartmoor. Here the traveller avoids the Dart gorge, to the N., and the exposed moortops to the S. Four stretches of a prehistoric through-route, the Combestone Way, can be discerned among the reaves (Fig. 3 shows the two most easterly stretches). South of the terminal reave is Horn's Cross (Fig. 1), a stone cross restored and re-erected in the late 19th century, and now the most easterly of a line of crosses forming a medieval route across Dartmoor.<sup>6</sup>

## II. THE MORPHOLOGY OF THE BOUNDARIES

The old boundaries in the study area and adjacent parts of Holne Moor can be divided into seven fairly clear-cut types (Fig. 2). Evidence for their chronological position is presented later. Going backwards from the present, the seven types are as follows:

1. *Walls*. There is no example of a *wall* within the study area but they occur not far away. These are thin dry-walls, up to roughly two metres in height; their somewhat precarious appearance is said to deter sheep from attempting to climb them.<sup>7</sup> There is reason to believe that these walls are mainly late 18th century/19th century in date; the model for them may well have been the beautifully-built walls of northern Britain, as described in agricultural text-books of the period. Their present ramshackle appearance reflects the difficulties of building true dry-stone walls with undressed granite, and the absence of a long-established dry-walling tradition on Dartmoor.

2. *Wall-banks*. In this group we include boundaries often of massive size, always more than 1 m broad and 1.5 to 2.5 m high. The amount of stone or earth incorporated varies considerably; some wall-banks have a substantial earth core, while others consist predominantly of (sometimes very large) boulders. Wall-banks are faced with stone on both sides. True coursing is rare, even when small stones are used; instead, mosaic or herringbone patterns are encountered, often neatly juxtaposed between larger boulders. These boundaries are often in use in present-day farmland where they may carry hedges or sporadic trees. Sometimes the facings are complete from top to bottom; elsewhere they occur only in patches. It seems likely that this style of walling was used both for original constructions and for repair of boundaries which may have started life as hedge-banks, corn-ditches, turf banks, etc. Often in a good state of repair, the wall faces tend to carry *Vaccinium myrtillus* (whortleberry or bilberry) and *Cladonia* spp. ('reindeer moss') giving them a very distinctive

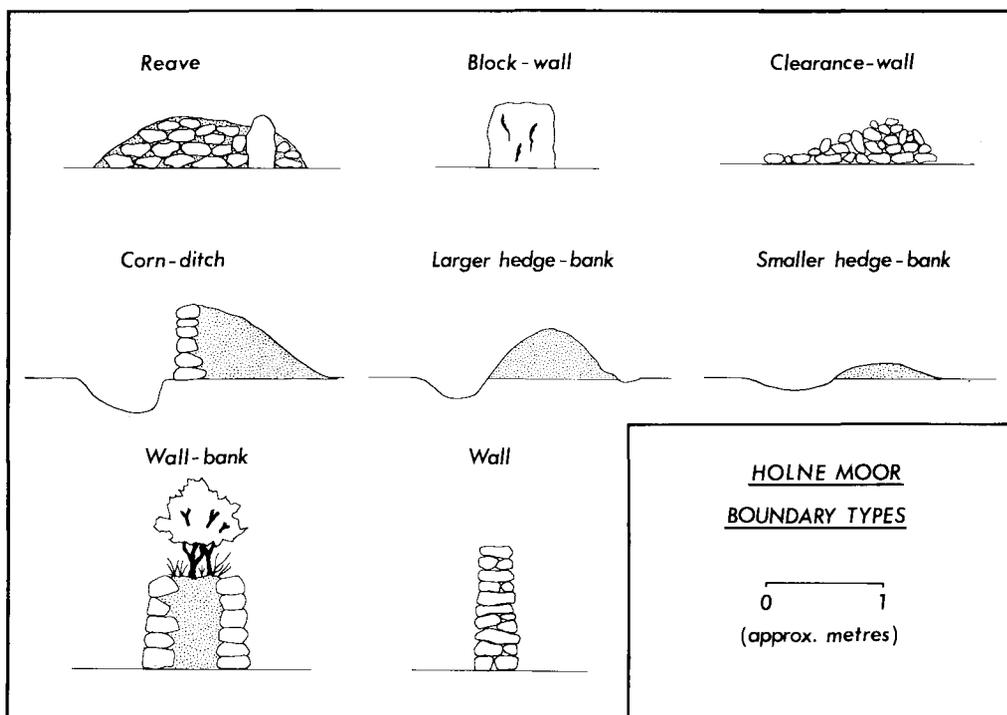


FIG. 2

Schematic cross-sections of boundary types present in or near the study area

appearance. In the study area these wall-banks occur only in the final phase of boundary-building and must be late medieval or post-medieval.

3. *Hedge-banks*. These are earthen banks usually of symmetrical profile with ditches on one or both sides. They are rarely more than a metre in height and sometimes considerably lower. Both low, narrow types and broader, more massive examples can be found, and some hedge-banks have relatively conical profiles. Sometimes the ditch switches from one side to the other; interpretation can be rendered complicated or impossible by animal gulleying which tends to occur naturally beside boundaries. Sometimes the existence of a ditch has only been detected in soil-sampling pits. Occasionally there are hedge-banks with somewhat asymmetrical banks and unusually deep ditches, which might be mistaken for corn-ditches (see 4 below); however, the latter have external wall-faces, which do not occur in hedge-banks as we have defined them. To be stock-proof, hedge-banks would have had to carry hedges or fences; the more massive examples may once have been faced with walls of turf. In the study area, the most conspicuous hedge-banks are late medieval in date, but, as will be seen, our work implies an older tradition of hedges.

4. *Corn-ditches*. These are earthen banks with a markedly asymmetrical profile produced by a ditch and vertical stone wall face on the front, the rear sloping gradually to ground level (see Fig. 2). The banks, constructed of turves and subsoil from the ditch, are two or three metres broad but rarely more than one metre in height, though the ditch increases the effective height of the barrier. In the study area the stone facing, usually coursed, occurs in

patches only. Although the long period without maintenance partially accounts for this, it is possible also that turves were used as facing material over some stretches.

The name 'corn-ditch' is an old one, known to have been in use in the early 16th century,<sup>8</sup> and the present moorland boundaries are still frequently *referred* to as corn-ditches, though they often take the form of hedge-banks or wall-banks. Perhaps because there is, to this day, a legal obligation to maintain a stock-proof moorland boundary, it is sometimes assumed that the unusual form of the 'classic' corn-ditch evolved as a natural response to the norms of animals behaviour and practical considerations. However, traditionally, and in the literature of Dartmoor, the special form of the corn-ditch boundary, with its vertical external face and internal ramp, has been thought to be designed '. . . to conform with the forest law that no land holder within a forest or its purlieu might "forestall the king's deer with either dead hay or quick" (fences or hedges) from regaining the forest'.<sup>9</sup> A similar form of boundary surrounded medieval deer parks,<sup>10</sup> and for much the same reason, though in these cases the ditch lay inside the park; deer could leap in but were then entrapped. At a Forest boundary, the ditch and vertical facing served to keep both deer and livestock out of the corn, while the internal ramp did nothing to prevent a trespassing deer from escaping quickly from the farmland back into the Forest.

There is little doubt that more effective barriers against livestock and deer, such as thick hedges, wall-banks or, where exposure conditions permitted, hedges on top of wall-banks, could be built and the archaeological evidence shows that these were the boundary types normally preferred in the medieval period, both for internal and external farm boundaries. It is therefore difficult to regard the corn-ditch form as merely a functional response to the presence of deer in the adjacent land, for this situation persisted into the post-medieval period; in 1627 Robert Hannaford of Widecombe testified that 'there is a very small sort of deer in the said forest, and not so many as there have been in this deponent's remembrance'.<sup>11</sup> The last deer on Dartmoor is said to have been killed about 1780.<sup>12</sup>

It is easy to envisage deer, in a pre-Forest period, stealing towards a hedged, deeply indented moorland edge in the poor light at dawn or dusk, in search of food and sometimes shelter and being cornered and taken by cunning or exasperated farmers. A first requirement of a Forest administration would have been the prevention of such poaching and the treeless corn-ditch boundary that facilitated deer escape would have filled these needs admirably. In later times corn-ditches were maintained, repaired and modified into wall-banks, but few if any were actually constructed in post-Forest times. We are thus able to use the corn-ditch boundaries as a chronological 'marker' horizon, whose absolute age is considered below.

5. *Block-walls*. These are rare in the study area and on Dartmoor in general. A block-wall is composed of squarish boulders, perhaps typically one metre by one metre by about 40 centimetres or somewhat smaller, arranged in a fairly precise line so that the boulders touch or are separated by distances of 30 or 40 cm. The 'wall' is not normally double-faced, and the nature of any other original components is unclear. At the present day these walls either stand as lines of relatively vegetation-free boulders, or — usually when they are on a slope — they may be shrouded in peat and vegetation. There may be dry-walling in the spaces between the boulders on the downhill side; to what extent this is original is uncertain. These block-walls are probably early medieval; they can be shown to predate corn-ditches in the study area and just to the W., close to the boundary of Combestone Farm, around SX 670722 (where they are seen to post-date reaves).

On some parts of Dartmoor it may be difficult to distinguish block-walls from reaves with absolute certainty, since reaves vary considerably, and may include orthostats and boulders. Stretches of reave exhibiting these characteristics are found within the study area but they are normally short and their role as parts of reaves is clear.

6. *Clearance-walls*. With one ambiguous exception, these (which result from clearing stones from the ground surface) are not evident in the study area but it is important to note their existence within the enclosed land of nearby Combestone Farm (Fig. 1). In the fields to

the N. and NW. of Combestone Tor there are linear piles of boulders, sometimes in roughly straight lines, sometimes in arcs and curvilinear arrangements. Occasionally hedges and walls are set upon them, and it can be shown that they pre-date the corn-ditch in this area. These clearance 'walls' are broad and massive and it is by no means certain that they fulfilled a true enclosure function; if they did, the plots which they enclosed were small. Like the block walls, these clearance-walls are probably early medieval, although it is just possible that one or both of these types are late prehistoric (first millennium B.C.?)

7. *Reaves*. These are low, tumbled walls usually masked by peat and vegetation and symmetrical in profile. Excavation and field inspection show that they were often faced on both sides with dry-walling or orthostats. Occasionally a slight ditch accompanies a reave; more such ditches must be masked by a combination of silting, tumble and peat growth. Excavation has shown that banks may precede the reaves, and it is likely that the ditches relate to these early banks; the reaves themselves are true walls, without admixture of earth.

Reaves were re-used in medieval times. In several places (see Fig. 3) a reave emerges from a point where a medieval boundary makes a sharp turn. Occasionally re-use involves very slight embellishment, additions to height and width being made from ditches now largely peat-filled, but the effect of this thrown-up material on the profile and appearance of the former reave is readily distinguishable in the field.

### III. THE CORN-DITCHES: A CHRONOLOGICAL MARKER HORIZON

The plan of the study area (Fig. 3) shows the prehistoric and medieval boundaries in outline so that they may be followed on the ground; the publication scale has necessitated some simplification.

The dominant feature of the medieval pattern is the corn-ditch. Normally clearly distinguishable from other medieval boundaries, it outlines the outer, western edges of four Lobes: a North Lobe, which encloses a fine set of cultivation-strips, a South Lobe, and two Central Lobes, CL<sub>1</sub> and CL<sub>3</sub>. South Link 1, running across the South Channel, is also a corn-ditch boundary. CL<sub>3</sub>, by the principles of horizontal stratigraphy, must be later than CL<sub>1</sub>, and later than CL<sub>2</sub> which reaches just outside the reservoir fence. The importance of the land within the Lobes is emphasized by the refurbishment of the corn-ditches in late medieval times, after enclosures further W. had been abandoned.

Another clear feature is the Major Extension, a collective name for the North Field (NF), the Outer South Field (OSF), the Inner South Field (ISF), the Lower South Field (LSF) and the Unfinished Field (UF) (see Fig. 3 and Pl. III). It is suggested below that the last three of these fields were not designed as subdivisions of the Major Extension, but initially had a short life of their own.

The Major Extension's outer boundary is not particularly homogeneous; it consists of a hedge-bank which varies in size and character and includes stretches of embellished reave. The Major Extension looks like an ambitious enclosure project, different in scale and character from the Lobes to which it is attached; the NF and OSF were planned as an entity separated into two parts by a driveway c. 15 m wide, which gave access to the OSF and the open moorland.

We have argued above that the corn-ditches should be seen as a response to Forest Law and, if we are correct, this means that the Lobes which they outline and the boundary South Link 1 were in being before Forest Law was abrogated on the

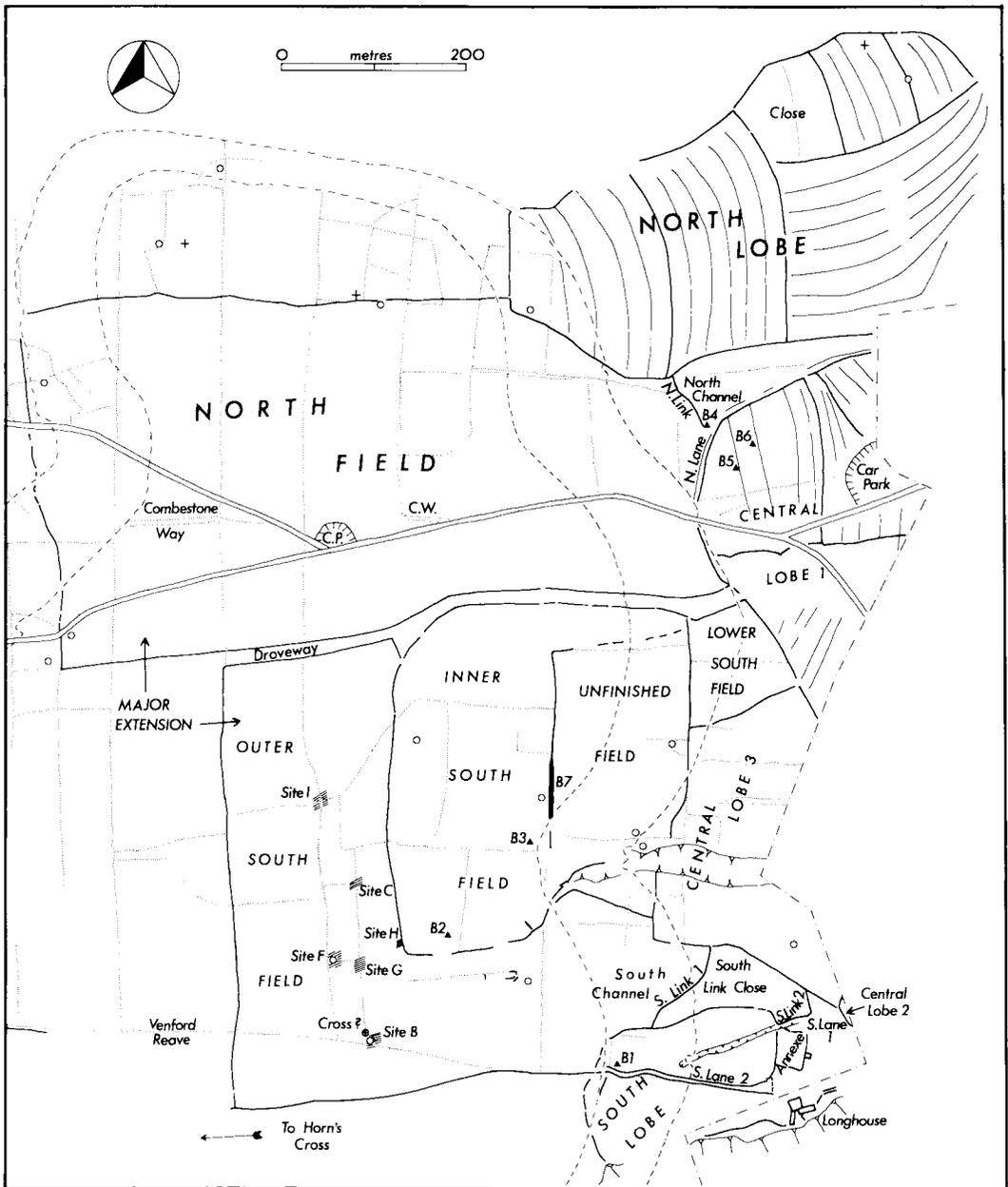


FIG. 3

The study area, showing medieval boundaries (solid lines) and prehistoric reaves (dotted). Open circles—prehistoric houses; crosses—prehistoric ceremonial monuments; hatching—medieval plough-marks; solid triangles—rabbit buries. C.W.—Combestone Way. Figs. 4 and 6–8 show details of subdivisions of the study area

Commons of Devon. The precise date of the effective disafforestation of the purlieus of Dartmoor is uncertain,<sup>13</sup> but it may have followed soon after the Earl of Cornwall's perambulation of his Chase in 1240. In 1204 King John had disafforested all of Devon up to the metes and bounds of Dartmoor and Exmoor but there is no evidence that a perambulation of these bounds was made at that time. Neither has evidence survived for a putative perambulation of 1224.<sup>14</sup> However, in 1239 Henry III granted the Forest of Dartmoor to his brother, the Earl of Cornwall, and the perambulation that established the bounds of this estate has survived. It shows boundaries in most respects identical with those of the present day<sup>15</sup> and thus recognized and probably established the extent and special nature of the land between the Forest (or Chase, as it had become) and the old corn-ditches; this land formed the Commons of Devon.<sup>16</sup> The date of the establishment of Forest Laws is equally uncertain; Dartmoor may have served as a hunting-ground for Wessex kings,<sup>17</sup> but in any case, Norman Forest Law had probably been established throughout Devon by at least the end of the 11th century.

Our study area lies wholly within the Commons of Devon, whose western boundary with the 'Forest' lies, and has lain since 1240, at the O Brook, a tributary of the Dart, about one kilometre W. of the study area (see Fig. 1). It is likely, therefore, that in this area the corn-ditches were built sometime during or before the 12th century and that the hedge-bank boundaries of the Major Extension, which would have been illegal in Forest times, were constructed after the mid 13th century by agreement among the commoners, whose land they lay within. Having noted these uncertainties as to the precise dating, we shall refer hereafter to the disafforestation of the area as if it had occurred in 1239. It should also be noted that, since the *sequence* we are suggesting is based mainly on archaeological reasoning, it should remain valid, even if further historical research discredits the notion of a disafforestation of the Commons in the mid 13th century. It is now possible to describe this sequence, working backwards and forwards in time from our marker horizon.

#### IV. THE EARLY HISTORY OF THE LOBES

It can be argued that the Lobes were laid out in pre-Conquest times by people living locally, in the valley of the Venford Brook. There is one surviving long-house (Fig. 3) in the study area, near the South Lobe, and it will be suggested below that there were once others in the area of the modern reservoir and waterworks. The Lobes were located to take advantage of the shelter and better drainage to be found on the relatively steep western slopes of the valley, and avoided poorly-drained areas further W. and the valley bog between the North Lobe and Central Lobe 1. Each Lobe had a different history.

##### 1. *The North Lobe* (Fig. 4)

The North Lobe encompasses what must have been, from the point of view of topography and shelter, the best site for cultivation in the area, and its complex

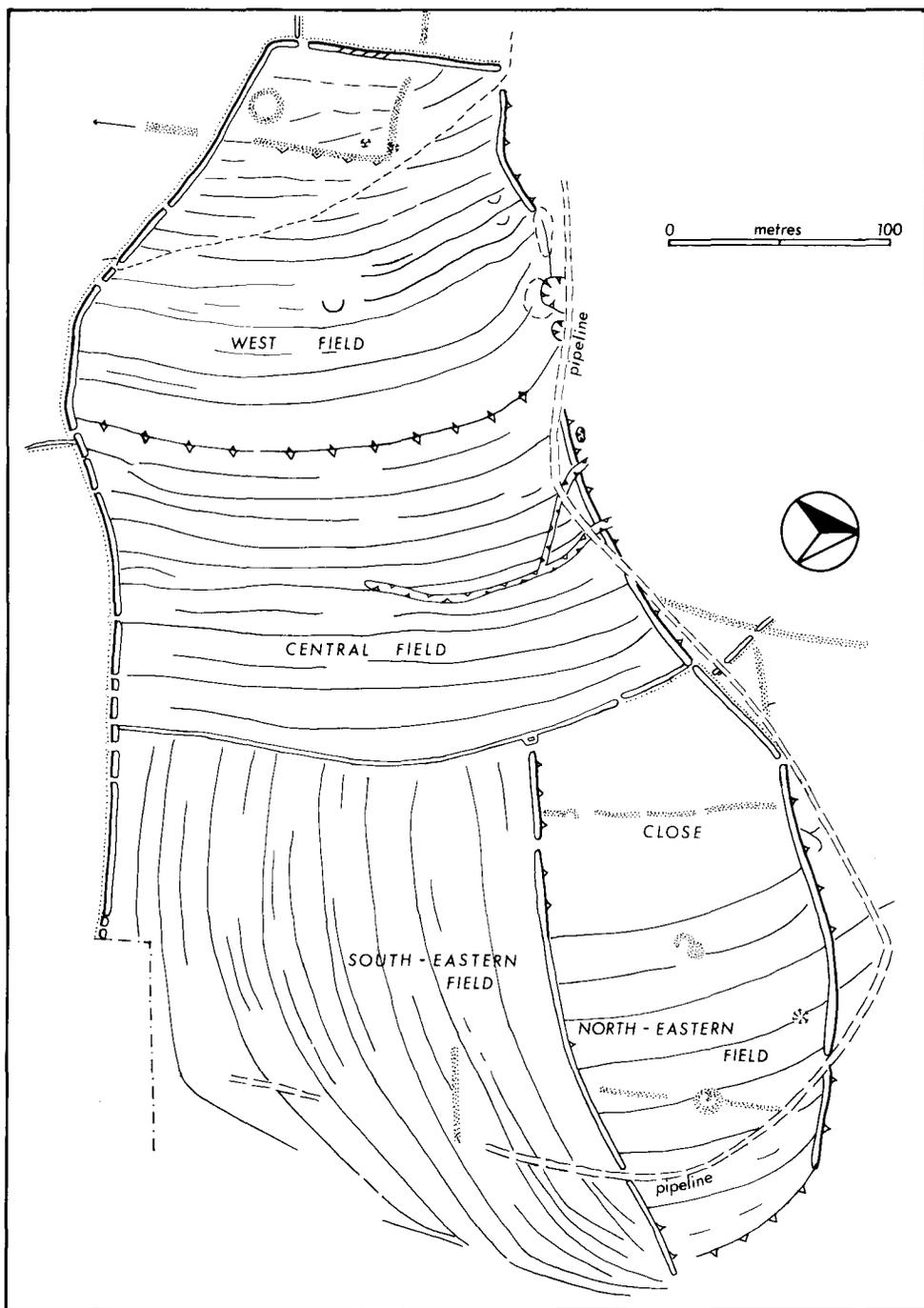


FIG. 4

Detail map of the North Lobe, showing cultivation strips. Reaves and main corn-ditch shown as on Figs. 6-8; for character of other main boundaries, see text

subdivisions indicate the higher value placed upon this land. Arguably one of the earliest areas to be enclosed, it may also have been one of the last to remain cultivated. Intensity and longevity of cultivation can be inferred from the distinctive soil profile in this Lobe. Reaves have been virtually obliterated here.

The corn-ditched western boundary of this Lobe lies just below the top of the steep slope which delimits the main plateau of the central spur of Holne Moor; cultivation on this steep westerly section has produced a fine set of lynchets.<sup>18</sup> Much of the central and eastern part of the Lobe occupies the more gently sloping and flat land of a lower terrace between 275 and 305 m (900-1000 ft.) above sea level, though the plough strips continue eastward down the very steep slopes of Venford Brook valley where substantial lynchets present a remarkable sight. On these slopes the task of the ploughman cannot have been at all easy and we might infer considerable pressure on well-drained and sheltered land resources at some stage in the fields' history to explain the inclusion of these areas.

Defined on the western and southern sides by a corn-ditch, the Lobe, with a total area of just over 30 statute acres (12.24 ha, but Imperial units must be preferred in this context), was subdivided by hedge-banks into four *primary* units or fields.

The South-eastern field of 9½ acres was subdivided into eight strips of 1.0 to 1.4 acres whose edges are defined in the western half by broad, low (0.25 m) symmetrical banks or 'baulks' or, where the land steepens to the E., by the crests of clear lynchets. All but one of these baulks die away in the headland area adjacent to the western boundary of the field. The exception may have divided the field into two units (cropping units?) of around 6 and 3½ acres respectively. In this field the strips approximate to the 'ideal' acre-strip; over much of their 210-250 yards length the typical width is 20-25 yards, though the two most northerly strips are somewhat wider. However, very slight lynchet crests and furrows *within* strips suggest that a smaller unit of land formed the typical *ploughing* division during the final period of the field's cultivation.

The North-eastern field of 6 acres has seven clear strips but the Close, an area of 2½ acres on the western side, is unlyncheted and contains the only well-preserved unaltered reave in the North Lobe. The evidence suggests that this part was reserved for livestock rather than cultivation and this is consistent with the soil evidence. Curiously, no substantial boundary divides the Close from the strips to the E., though the low, broad slightly lyncheted bank of the most westerly strip could have served as a hedgerow base. The strips in this field have a width similar to those on the South-eastern field but are only half the length, giving areas around ½ an acre, but variation in the size of lynchets developed on the edge of these strips (with one exception alternate lynchets are more substantial) could be viewed as evidence that during an earlier phase the land unit was a parcel of about 1 acre with a width of around 44 yards. As in the South-eastern field lyncheted banks which include some clearance stone form the surviving evidence of these divisions.

To the W. of these two fields and separated from them by a substantial hedge-bank lies the Central field, almost flat to the S., but with a gentle valley emerging down its spine in the northern half. Once again low banks and almost imperceptible lynchets reveal strips of roughly one acre, but in this case internal

subdivision of each strip into two equal halves defined by a combination of minute lynchets and furrows illustrates very clearly the approximately  $\frac{1}{2}$ -acre unit ploughed during the last arable use of the field. A somewhat broader than usual bank running through the centre of this field may have a significance similar to the analogous division in the South-eastern field; in this instance the (cropping?) units would be approximately 4 and  $3\frac{1}{4}$  acres.

A very broad low bank separates the Central field from the Western field of about 7 acres, where in the lower half it is still possible to discern the continuance of cultivation divisions similar to those to the E. However, in the very steep upper part of this field, thin terraces separated by tall lynchet faces tumble one over the other to an extent which, together with the heavy growth of bracken, vitiates precise field mapping and analysis. In the south-western corner lie a prehistoric house and nearby a heavily lynched reave; the latter can be seen to continue beyond the corn-ditch bounds in both directions.

A similar prehistoric house, showing signs of rebuilding (in the medieval period?) and lynched reave are found also on the eastern side of the North-eastern field, while more enigmatic remains occur in the centre of this field. Here a prehistoric house and/or cairn may be present but field clearance stones and plough damage make certain identification impossible. Another possible prehistoric house occurs in the South-eastern field. Small clearance cairns occur in all the fields, usually sited on the baulks of strips. A cairn surmounting the lynched reave in the Western field is clearly later than the reave below it and although there is no other chronological evidence it is economical to assume the clearance cairns to be medieval in date rather than earlier. This form of clearance can be seen in other parts of the study area.

A small building is attached to the hedge-bank between the Central and eastern fields at the point where this is met by the boundary which separates the two eastern fields. The latter is unique amongst the internal dividers of the North Lobe in that it incorporates substantial amounts of stonework. This is particularly evident in the stretch which bounds the southern side of the Close where in places asymmetry suggests that the wall 'faces' the area reserved for livestock. Two gateways lead out of the Close, one to the 'waste' above the Dart gorge, the other into the Central field. Differences in boundary type on either side of these gateways suggest that they are original features although some remodelling may have taken place in this zone.

For most of its length, the northern boundary of the North Lobe is unditched. It conforms to Forest Law since its asymmetry provides no obstacle to deer escape, but it relies principally on the sharp fall of land to the N. to prevent deer entering the fields. However, along the northern edge of the North-eastern field it takes the form of an asymmetrical, broad, very stony bank. Here it probably overlies a reave, which may be seen emerging from the medieval boundary at a point to the W., where the latter swerves to cut across a corner of a prehistoric field. At this point it becomes a bank and ditch for the short stretch that reaches to the Central field. This boundary shows that a true corn-ditch was not always maintained, and that the stone content of medieval boundaries can be affected by their location on reave lines or in areas where clearance stone was available.

Preservation of subdivided arable land, unaltered so far as we can tell since its abandonment, is rare. One of the many opportunities offered by this survival is a chance to look at the units of land mensuration indicated on the ground and compare these with evidence from other sources. It is often difficult to discover the actual size of units mentioned in documents, but it is known that the customary acre in parts of Devon was larger than a statute acre.<sup>19</sup> Finberg<sup>20</sup> cites a land sale of 1318 in which a rod of eighteen rather than the normal 16½ feet had served as a measuring stick. In the descriptions given above Imperial standards were preferred to the Metric ones in which all the field measurements were made, but it seems that originally the Lobe was laid out in units that correspond well to the 'Devon acres' used in the case mentioned by Finberg. This is illustrated in Table 1, where data from the South-eastern and Central fields appear. Measurements from the Western field have been excluded due to the difficulty of deciding which lynchets form strip edges rather than internal ploughing divisions. Where a strip varied widely in width this measurement has also been excluded, but all lengths and areas were employed in calculating means. Areas were measured on a 1:1000 scale plan using a planimeter. The half-sized units employed at least in the final cultivation of the North-eastern field, coupled with the problems that topography presented on the eastern side of the field, make analysis less straightforward, but the data presented in Table 2 suggest that in this instance also the Devon acre was the unit employed in the initial layout. However, it should also be noted that a width of about 22 yards is typical of the five western strips, so that their correspondence in area to half a *Devon* acre is produced solely by increased length. If the statute acre had been intended we would expect lengths around 110 yards. Instead we find three exceeding 130 yards, another about

TABLE 1  
SOUTH-EASTERN AND CENTRAL FIELDS

		Field		Devon acre	Statute acre
		South-eastern	Central		
(a)	mean width (yds.)	23.7 (n = 6)	23.0 (n = 5)	24	22
(b)	mean length (yds.)	233.8 (n = 8)	243.0 (n = 6)	240	220
	(a) × (b) (sq. yds.)	5541	5589	5760	4840
	No. of strips	8	6		
Field Acreage	Devon acres	8.00	6.46		
	Statute acres	9.52	7.68		
Mean Acreage and S.D. of strips measured individually	Devon acres	1.02 0.10	1.03 0.18		
	Statute acres	1.22 0.12	1.23 0.21		

S.D. = Standard Deviation

120 yards; only one at 109 yards is close to that expectation. Values given in the tables do not always tally due to rounding and to the differences that arise when measuring individual strips and larger units. Finally the total area of the North Lobe (30.24 statute acres — 25.41 Devon acres) corresponds in size to a typical land holding unit in early Devon;<sup>21</sup> and in this instance we can say that allowing 5½% of the enclosed area to be used for hedges, fieldways and the like, 24 Devon agricultural units were available for cultivation of which only two seem to have been reserved solely for livestock operations.

TABLE 2  
NORTH-EASTERN FIELD

Strips	1	2	3	4	Mean of				Total areas of:		
					1-4	5	6	7	Strips	Close	Field
DEVON acres	0.47	0.45	0.51	0.45	0.47	0.40	0.39	0.33	3.07	2.12	5.18
STATUTE acres	0.56	0.54	0.61	0.54	0.56	0.47	0.47	0.39	3.66	2.52	6.17
Original Subdivisions	1 + 2		3 + 4		5 + 6 + 7			Mean	S.D.		
DEVON acres	0.93		0.96		1.12			1.00	0.10		
STATUTE acres	1.11		1.14		1.34			1.20	0.13		

S.D. = Standard Deviation

## 2. *The Central Lobes and the North Channel* (Fig. 6)

Further S. lies Central Lobe 1, where there is also evidence for subdivided arable land, although truncated to the E. by the Venford reservoir quarry. This Lobe has been disturbed by pronounced animal gulleying in a broad zone fanning out from the eastern end of the Droveaway, and by the works associated with the modern road and its pre-reservoir predecessor, described on the plan (Fig. 6) as the Victorian Road. North of this disturbance-zone the features are reasonably clear. To the W. is an unlynchett area, West field, with soil features suggesting either early brief cropping or rare casual cropping somewhat later. Then, as the land begins to flatten out, comes the subdivided Central field, not separated from the West field by any visible barrier; a situation like the relationship between the Close and North-eastern field in the North Lobe. The strips in the Central field are marked by shallow intermittent grooves associated in places with slight lynchetting. A N.-S. reave has been used in this strip division; to the W. the strips run parallel to the reave, while further E. they follow the more curved line of the ditched hedge-bank which bounds the field. A few of the strip divisions can be seen to continue S. of a long E.-W. reave but conditions across the modern road make it impossible to determine whether they originally extended even further S. In this field also, soil evidence suggests that tillage ceased at an early date.

Still further E. is the Wedge field, named after its shape, where a few grooves, mostly parallel to the western boundary, suggest that it too was once subdivided

arable. Its eastern boundary is parallel neither to the strips nor to the western boundary. This discordant hedge-bank runs from the North Lane to an ovoid mound which may be the heavily damaged remains of a small prehistoric chambered mound. Beyond the hedge-bank lies East field where furrows and heavier, closely-spaced lynchets define exceptionally thin plough 'lands' parallel to the discordant boundary. These unusual features might indicate an addition or alteration to the initial layout of the Lobe, and certainly the soil of this area and the Wedge field, which is identical to that found in the North Lobe, suggests much later cultivation in these eastern parts. South of the modern car park and road, a little field evidence suggests that two, at least, of the Wedge field cultivation strips continued S. beyond the present boundary of the field, another indication that changes have been made.

These alterations may have included construction of the curving hedge-bank which is cut by the Victorian Road and splits this Lobe in half. The definite stagger at the SW. corner of the Wedge field indicates either that it was constructed at the same time as or, more likely, later than the Wedge field. There are other reasons for regarding this divisor of the Lobe as secondary. One is its distinctive character; it is larger and better preserved than other internal boundaries further N. Another is a functional consideration. If the fields to its N. were still in use when the Drove way was constructed, sometime after 1239, it would be necessary to keep animals emerging from the eastern end of the Drove way off these fields, whether they were in transit or being impounded in the southern half of the Lobe. Certainly animals have produced plenty of gulleying in this area. Even though cultivation had probably ceased by this time, Central and West field may have continued in use as enclosed pasture.

Further S. there is some terracing, perhaps prehistoric in origin; any cultivation in medieval times must certainly have been abandoned before the Drove way was built, since the terraces are not provided with a stock-proof barrier at their northern ends. Although the soils in the two halves of CL1 do have different qualities, it is argued<sup>22</sup> that both these soils indicate that, except for the eastern parts, tillage ceased early throughout CL1. Unfortunately changing landform across the Lobe does not allow any more precise statement about the relative ages of cultivation in the northern and southern halves.

South of the modern road, CL1 is corn-ditched; to the N. it is skirted by a deep lane, North Lane. A slight hedge-bank separates this lane from the fields in CL1, and a more substantial hedge-bank, the North Link, runs across from this lane to join the corn-ditch of the North Lobe. The sequence of events here seems to be as follows. First, in the pre-Forest period, CL1 was enclosed and skirted by a lane which was gradually deepened by traffic. Then, in Forest times, the deep lane was deemed the equivalent of a corn-ditch, and indeed it is hard to see how, confronted with an ancient lane skirting a field, farmers could have been expected to make a modification which would produce a 'normal' corn-ditch. The lane was already deeper than most ditches dug for classic corn-ditches, and the foresters would have been satisfied so long as there was no barrier to deer escape. The incomplete and very small hedge-bank on the S. side of this lane could then be seen as a remnant of the pre-Forest boundary of CL1, its hedge demolished when the Forest was established.

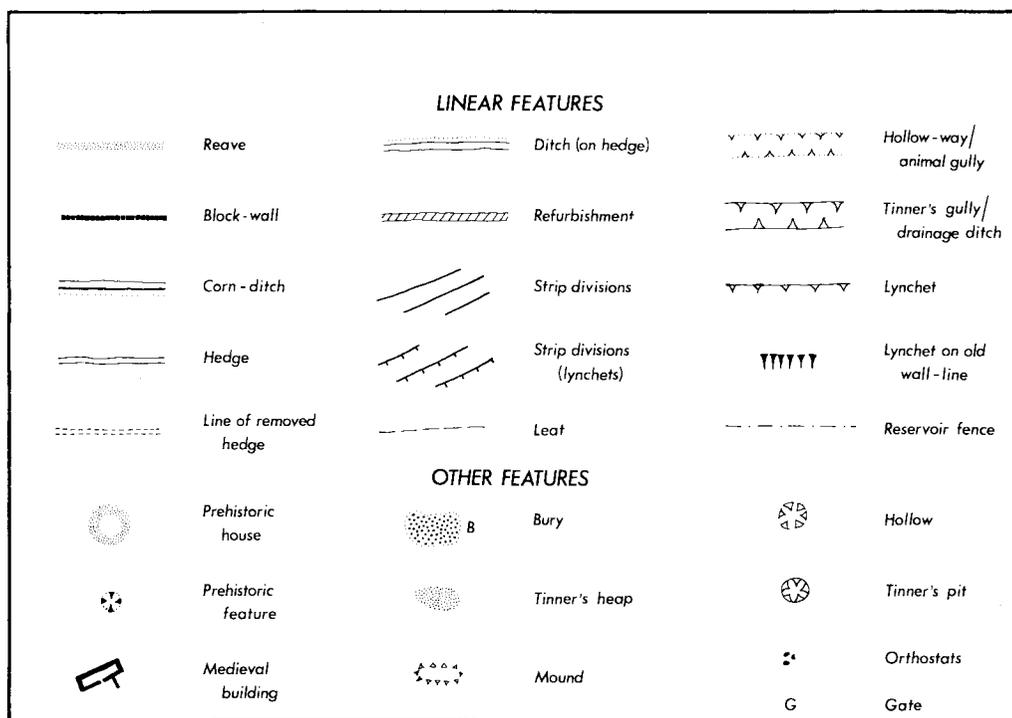


FIG. 5  
Conventions used on Figs. 6-8

Where the lane curves S., however, the hedge-bank on its eastern side is slightly more substantial. Whatever its early history, its present form must be seen as the logically necessary continuation of the line of the North Link hedge-bank, presumably going with a gate in the lane. This arrangement — North Link, gateway, and (possibly refurbished?) hedge-bank running S. — would form a third phase, economically seen as dating from the time when animals in the North Field of the Major Extension had to be kept out of the boggy ground of the North Channel. The very wet conditions here were, at least in part, created by the construction of medieval boundaries; the reave in the North Channel must have been built in drier conditions.

The lane presumably started life informally, as an animal gully skirting the boundary of CL1; almost by itself it implies an early hedge along this line. By levelling, we have determined that it is 65-70 cm deep, both S. of the North Link and some 40 m E. of it, on relatively flat ground; it deepens slightly to 80 cm just S. of the hypothesized gate, as observation of animal movement at gateways might lead one to expect. If the lane was deep enough to be regarded as an acceptable substitute for a corn-ditch in early Forest times, much of its rather impressive depth must have been created in pre-Forest, and hence pre-Conquest, times, although it must have

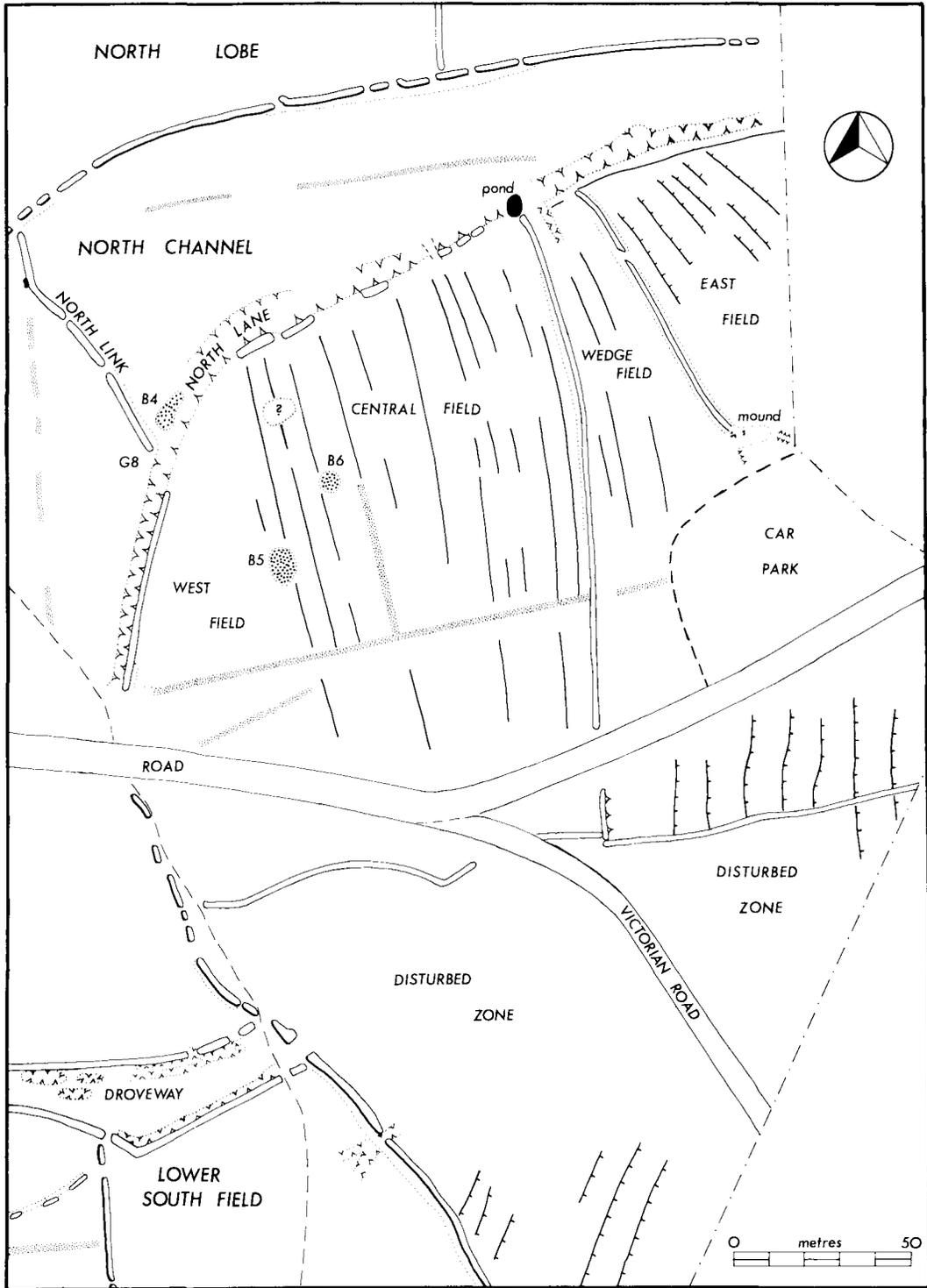


FIG. 6

Detail map of Central Lobe 1 and North Channel. For conventions, see Fig. 5

continued in use after the construction of the North Link. If so, the first enclosure of CL1 must predate the Norman Conquest.

Before the making of the Major Extension, the lane formed a route through boggy ground on to the open moor; after the Major Extension, the failure of the North Link to close it off argues that it still had a function. Yet it is unlikely to have been part of a route across the Venford Brook; the valley is deep at this point, with steep sides, and through routes, like the Drove-way and the modern road, have chosen a flatter crossing-point further south. We postulate that the lane served a lost settlement which we will call 'North Venford' in the area of the present reservoir dam, in a landscape position analogous to those of Combestone and Stoke farms not far away; we discuss the nature of early settlements in the area in Section VII below.

Central Lobe 3, attached to CL1, encloses more steeply-sloping ground and is cut by a wide tinnerns' gulley running roughly E.-W. Evidence for cultivation is limited but definite. There is some lynchetting on the line of reaves (although this may be partly prehistoric). In the area S. of the gulley, reaves have been largely eradicated and there are a few short grooves, running with the contour, too discontinuous to map. Perhaps this arable was never subdivided, so that the creation of true lynchets was avoided; the grooves would then represent fugitive traces of the last cultivation episode. The soil evidence shows that cropping in this Lobe was abandoned earlier than in the North Lobe and the Eastern fields of CL1.

### 3. *The South Lobe and the South Channel* (Fig. 7)

To the S. of CL3 is the South Channel and then the South Lobe. The South Channel has been converted into the South Link Close (SLC) by the construction of the hedge-bank South Link 2 and the corn-ditched South Link 1. Both these boundaries ride over animal gulleys which show that the South Channel was once an open passage between the two Lobes. The South Lobe itself is divided into two unequal parts by a hedged medieval lane, which follows the line of the Venford Reave and emerges on to the moor at the corn-ditch. The southern boundary of the South Lobe has been truncated by tinning at its western end, but further E. runs up to a medieval long-house with associated yard and buildings.<sup>23</sup> To the E. of the Lobe is attached the Annexe, to the E. wall of which is attached a rectangular building.

Evidence for cultivation is limited to the lynchetting visible on the eastern and southern boundaries of this Lobe, and the virtual obliteration of a reave, which runs in an easterly direction from its NW. corner. The peaty soil found in this Lobe suggests that infrequent cropping ceased at a very early date though an episode of later casual cropping cannot be ruled out.

The South Lobe allows us to catch a rare glimpse of a pre-corn-ditch, and probably pre-Conquest, type of boundary — the block wall. It will be appreciated that the recognition of early medieval boundaries is difficult, since most of them will have become encased in, or replaced by, corn-ditches, wall-banks, and so on. The southern and eastern sides of the South Lobe are both bounded by block-walls, as is the Annexe.

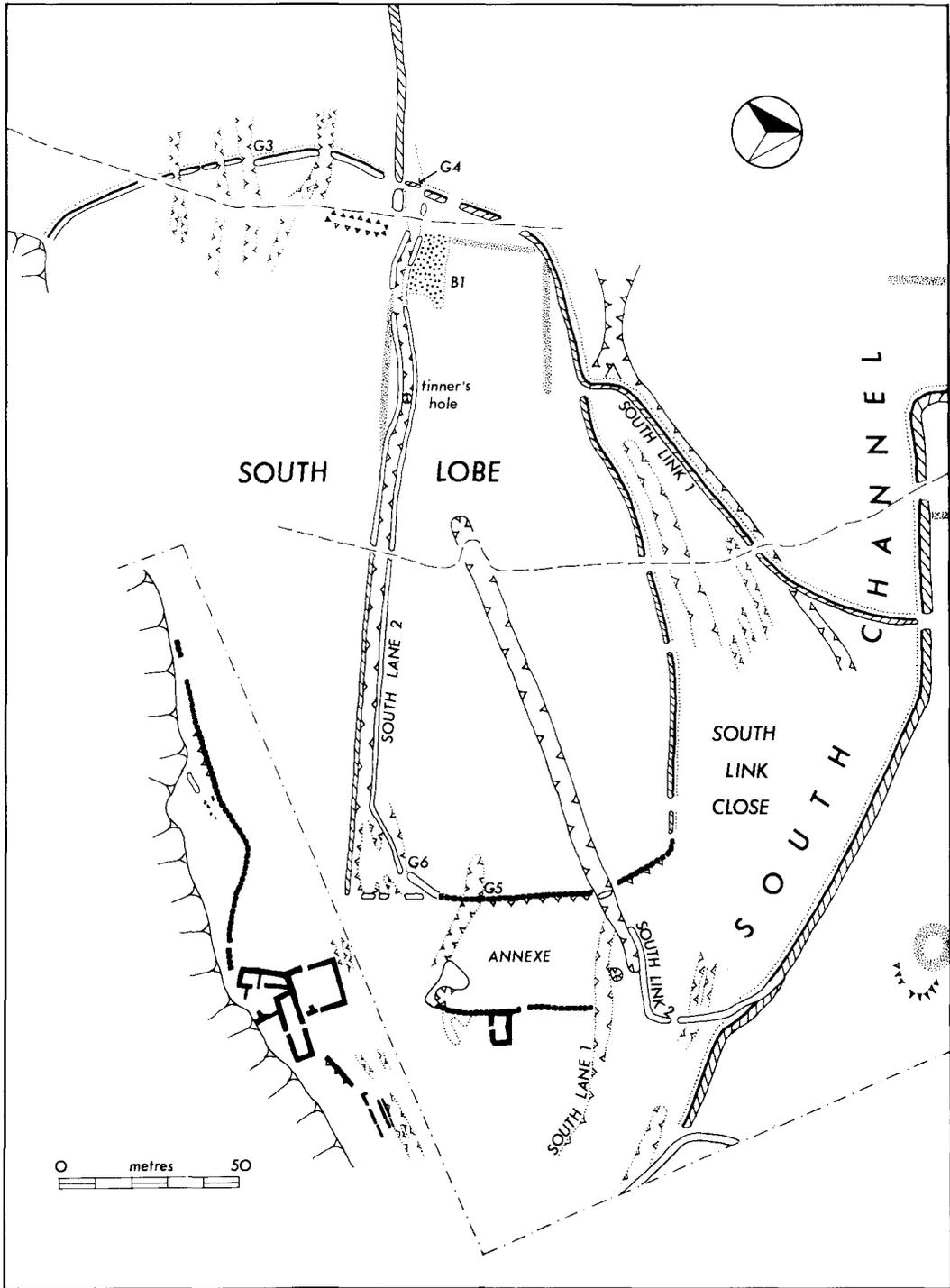


FIG. 7

Detail map of the South Lobe and the South Channel area. For conventions, see Fig. 5

The case for seeing these block-walls as early medieval includes the following arguments:

1. They cannot be reaves, although at first glance they might seem to resemble them. It might be thought that the northern boundary of the South Lobe was originally a prehistoric enclosure attached to the terminal reave, but the remains of a conventionally rectangular reave pattern are seen at the NW. corner, and in any case the southern block-wall is outside the terminal and runs towards a medieval settlement site.
2. They cannot simply be lines of boulders forming the primary core of corn-ditches. The southern block-wall and the wall of the Annexe are boundaries which have nothing to do with corn-ditches, and the independence of block-walls is clearly shown along the eastern side of the South Lobe, where the block-wall had an initial existence as a wall 65 m long heading directly for the terminal reave. Only at a later stage did the lane, S La2, slight it; approaching from the W. with a funnel entrance, it generated traffic which made breaks in the block wall.

The demonstration that the block-walls are early in the South Lobe area may allow us tentatively to recognize traces of block-walls elsewhere. For example, the boundary of CL3, just W. of the reservoir fence, appears to be joined to another Lobe, CL2, which, in the short stretch outside the fence, is of corn-ditch type but incorporates orthostats rather than dry-walling. Inside the fence, the wall turns downhill and is hard to see clearly in the plantation, but it seems to be ditched and includes orthostats and chunky boulders of block-wall type. There are places where blocks are incorporated in corn-ditches. One such place is the western corn-ditch of the North Lobe, including its SW. corner; another is the SW. corner of CL3 where the corn-ditch appears to have a stony core, and a little further N., where the cut made by a leat shows a persistent stony layer at a low level. (It is possible, however, that a reave underlies the corn-ditch here.) A few blocks also line the southern edge of the North Lane bounding CL1.

Support for the presumed chronological position of the block-wall is found NNW. of Combestone Tor, just outside the fields of Combestone Farm, where block-walls are seen to be later than reaves but earlier than corn-ditches.<sup>24</sup>

The idea that there was a pre-corn-ditch phase in the area is supported by the environmental evidence; pollen from a section cut through the North Lobe corn-ditch may indicate local cropping in the area before the construction of that corn-ditch.<sup>25</sup> The section was not a complete one, and leaves open the question of whether there was an early block-wall here concealed in the undug part of the trench, or whether a dead-hedge could have formed the earlier boundary.

Consideration of the function and chronological position of South Lane 2 sheds considerable light on pre-1239 activity in this zone. The hedges fringing this narrow lane show that it was designed to drive animals *past* the fields in the South Lobe, implying that these were in use at the time. It was not simply a service lane for the

longhouse farm; at the E. end of the lane the animal gulleys sweep *past* the longhouse, and there is no link between lane and farmyard. The longhouse faces SE., like the prehistoric houses on Holne Moor and many modern farms in the area, and it would have overlooked a very different landscape from that of today. Extensive tinning has deepened and remodelled the valley to the S. and destroyed all field evidence, but one can guess that most of the closes farmed from the longhouse were in this sheltered valley, and that taking the main route to the moor involved turning right at the front door of the house and proceeding westwards. Behind the house was an enclosed yard.

The lane is clearly an afterthought; animal gulleys from its eastern funnel entrance cut through a block-wall which was the original design here. It looks as if the original gateway into the South Lobe, G5, which is tucked into the intersection between the South Lobe and the Annexe and is associated with a hollow-way, was blocked and the gate moved further S. to G6 (although the blocking could conceivably date from a later phase).

How did traffic reach the open moor before S La2 was constructed? It is possible that there was a route running S. of the longhouse, although this would have taken travellers and drivers through the longhouse's best land and quite close to the farmyard area. An economical view is that the South Channel served as the earlier through route. Here there *is* a narrow hollow-way, S La1, which skirts the N. edge of the Annexe. It is about 15 cm deep and has been sporadically edged with stone. Furthermore, there are deep animal gulleys running up the South Channel, and some of these *precede* the two closing walls, South Link 1 and South Link 2. In fact, the line of South Link 1 is sinuous because it was built along the edge of a long animal gully running up and down the slope, which can be seen emerging on the eastern, downslope, side. South Link 1 utilizes the gully as an external ditch, and only becomes a normal corn-ditch in the short stretch where it turns sharply N. to join CL3.

The building of S La2 implies the closure of the South Channel, and *vice versa*. It is economical to see these events as synchronous, especially as the soil evidence suggests cultivation in South Link Close. Venford Valley farmers — perhaps the longhouse inhabitants, who can hardly have been unconcerned — gained a little extra land, and at the same time a carefully-hedged lane, with funnel entrance, was provided for through travellers. This must have been before 1239, since South Link 1 was corn-ditched.

There is a further implication. The hedge-bank South Link 2 must also date from this period if South Link Close was to form a viable parcel of land. At its southern end it turns abruptly W., becoming a much smaller boundary apparently respecting the northern edge of a tinner's gully, itself replaced by the long, well-defined tinner's gully which slights the South Lobe. If the foregoing arguments are accepted this would indicate small-scale tinning activity in the South Channel before 1239.

In this period, judging from the evidence of the gulleys in the South Channel, there must have been substantial numbers of cattle in the area (sheep by themselves are unlikely to have been responsible for this degree of erosion). In so far as S La2

was designed for animal movement (and the funnel entrance argues that this was the case) its narrow width is appropriate for cattle.

It is natural to identify the moorgate at the western end of S La2 as the one used by travellers heading for the Meavy valley, traversing Dartmoor at its narrowest crossing-place (the time required to walk from moorgate to moorgate is about two and a half hours). Horn's Cross, hitherto believed to be the most easterly of the line of stone crosses marking this route, becomes visible to a pedestrian about 230 m W. of the moorgate in question (although it should be noted that the present cross-shaft is not the original). However, some 250 m W. of the moorgate, perched on a reave, is a little setting of stones (see Fig. 3). This kind of setting does not occur elsewhere on Holne Moor, as far as we know, and no utilitarian explanation has been found for it. It could well be the basal setting for a cross-shaft. If a two-metre ranging-pole is placed at its centre, an observer moving up S La2 sees it suddenly and dramatically on the skyline about 10 m before he arrives at the moorgate. If he advances past the ranging-pole in a westerly direction, the next cross, Horn's Cross, becomes visible almost immediately. A mounted rider would of course see it sooner. We suggest therefore that this stone setting was the site of the most easterly cross on the route across Dartmoor, and that the route must have been established at least as early as was S La2 (i.e. before 1239) and perhaps as early as the time when the South Channel was open, since the putative cross would have been equally visible from the western end of the South Channel. This accords with the accepted minimum age for the route<sup>26</sup> which is based on the earliest known documentary reference to Siward's Cross, in 1240. Presumably our cross, which we christen Two Thorns Cross, was dismantled and relocated during the period of the Major Extension; possibly traffic across the moor was now supposed to use the Droveaway (see below).

Incidentally, despite the former importance of this route, as evidenced by the investment represented by the crosses, its ancient name has not survived. Hemery<sup>27</sup> suggests that the route is 'the true Abbot's Way' but offers no evidence that this is its authentic traditional name. We are indebted to Mr Tom Greeves<sup>28</sup> for drawing our attention to an early 17th-century mention of a tin-work in the Ashburton stannary known as 'Malterne Waie' described as being 'above Wenford', and we are inclined, as he is, to link this name with a route across the moor. Perhaps the ancient name of the route marked by crosses was the Maltern Way?

## V. EVENTS FOLLOWING THE DISAFFORESTATION OF 1239: TWO EXPANSION EPISODES

The purchase of the disafforestation of most of Devon, in 1204, for the considerable sum of 5,000 marks, is thought to have been occasioned by pressures of land hunger. Certainly there was a period of settlement expansion, best known on Dartmoor by the founding of the ancient tenements within the Chase established in 1239.<sup>29</sup> On Holne Moor, whatever the nuances of the legal situation in a place within the purlieu of the Forest, expansion outside the corn-ditches certainly occurred. The first response was the creation of the fields immediately W. of the Central Lobes (Fig. 8; see also Plate III). This probably took place in two stages, an uncompleted

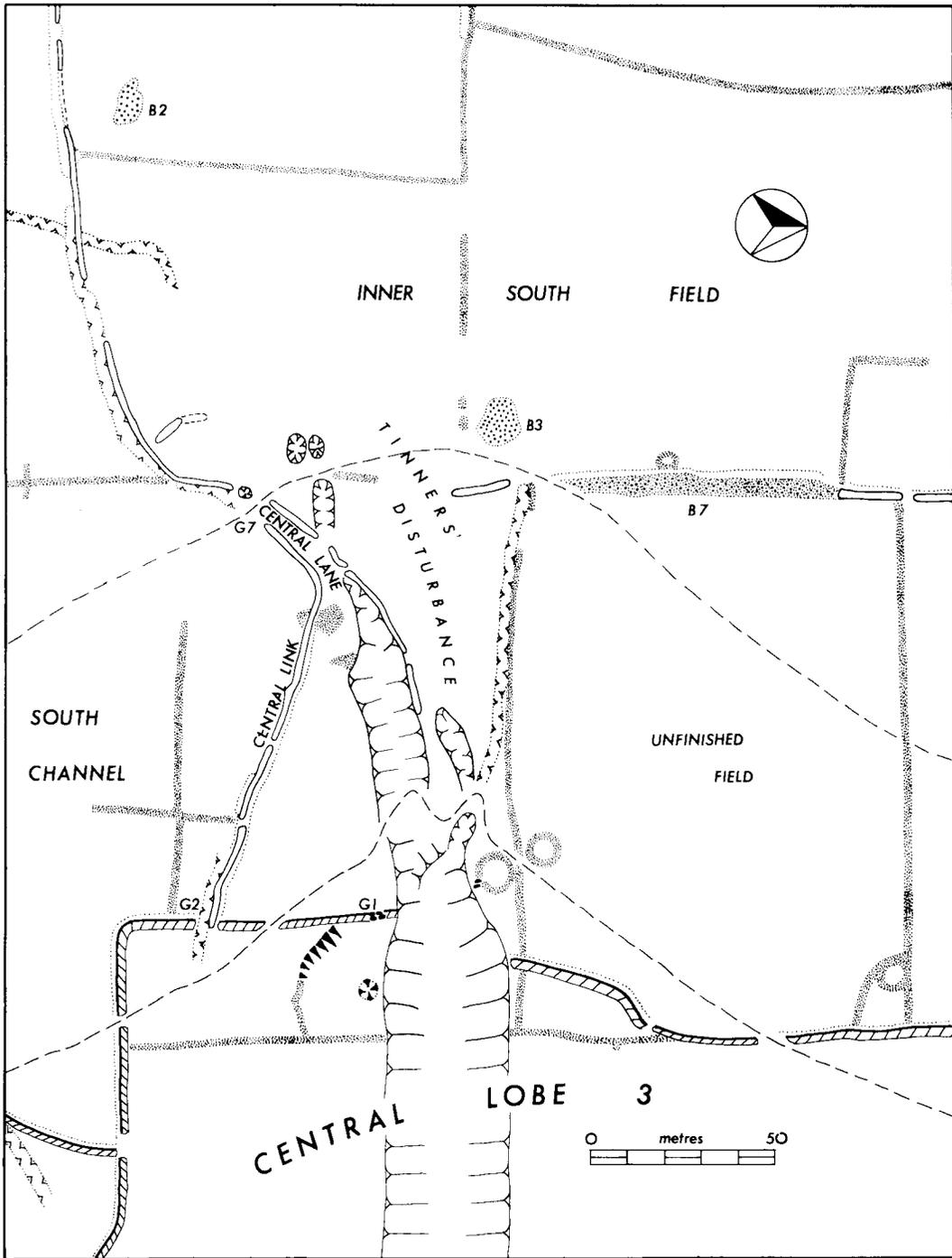


FIG. 8

Detail map of Central Lane area. For conventions, see Fig. 5

project represented by the Unfinished Field and the Lower South Field being succeeded by the complete enclosure of the Inner South Field (a glance at the map, Fig. 3, shows that these fields cannot sensibly be regarded simply as subdivisions of the Outer South Field). The western hedge-bank of the LSF was created by embellishing a stretch of the reave which had been used further S. for the corn-ditch of CL3. The LSF's northern boundary later became the southern hedge of the Drove-way. The UF is represented by a marking-out trench, with sporadic upcast, along its northern edge (the main evidence for the suggestion that it was unfinished) and the embellishment of a reave which forms its western boundary. A southern boundary cannot now be established.

Then came the enclosure of the Inner South Field. With its markedly asymmetric hedge-bank and deep outer ditch, its external boundary looks as though it was built by people accustomed to the corn-ditch tradition, and its postulated date would accord with that suggestion. Its southern boundary curves sharply N., then E. to the point where a moorgate must have been located, at the western end of a short hedged lane, the Central Lane (see Fig. 8). Deep gulleying in the stretch of its ditch leading out from the moorgate shows that there was a period of animal traffic using this lane and gateway.

The sharp deviation just referred to shows that the lane already existed, presumably in the form of a hollow-way deep enough to be respected by the makers of the ISF. Evidence of earlier animal movements toward this area is provided by the cattle gully slighted by the ISF's southern boundary (see Fig. 8). It would be entirely reasonable to postulate the existence of a third early farm, which we may call Middle Venford, located in what is now the area of the reservoir. To reach it there would have been a lane of some kind up what is now the tinner's gully, to a moorgate which would be either G1 (now blocked) or another in the gully area. The inhabitants of this farm would have made the ISF, perhaps in conjunction with neighbours, and would have designed the new moorgate and lane extension. They also seem to have made a triangular enclosure from which animals could be funnelled into the lane and hence on to the moor or into the ISF; the southern boundary of this enclosure is the Central Link, which, seen from the E., swerves as if to avoid a tinner's pile, but rides over the tail of that pile, and curves to form the southern hedge-bank of the Central Lane. This is another piece of evidence for tinning which must be at least as early as the first half of the 13th century.

The total area of the ISF, LSF, and the UF, 11.35 ha, may indicate that, like the North Lobe and like other medieval enclosures on Holne Moor (see below) these landtakes were together intended to enclose a unit of 24 usable Devon acres. This should imply that they were enclosed in accordance with a properly constituted agreement involving the lord of the manor and the commoners acting as a body, although the character of the Unfinished Field might imply that this agreement was preceded by an illegal landtake which was stopped by the commoners.<sup>30</sup> Another reason for failure to complete the UF could have been a dispute with the administrators of the Chase over grazing or other rights on the part of Holne Moor W. of the corn-ditches, a situation which could well have arisen if one supposes that the establishment of the Chase boundary along the O Brook involved a retreat from the

boundaries of the original Forest, which may have extended as far as the corn-ditches. Baring-Gould<sup>31</sup> mentions endeavours by the Duchy 'to extend its right over the commons belonging to contiguous parishes . . . when a drift is carried over such commons the farmers of the parishes rise up and repel the moormen and battles with clubs and horsewhips ensue'. These boundary disputes are still occurring today<sup>32</sup> although without the violence which apparently attended them in the 19th century.

The enclosures in question, then, probably had a short independent life, before the making of the Major Extension, if the gulleying in the ditch of the ISF's southern boundary can be held to show that, for some time at least, the Central Lane led out to a true moorgate.

### *The Major Extension*

The next enclosure phase can be envisaged as a joint project undertaken by the commoners of Holne and Stoke, the Domesday manors of Holle and Estocha. (Incidentally the manorial affiliations of the Venford Valley farms are unknown.) The integral Droveaway may be held to symbolize their co-operation. There are interesting differences between the two parts of the project. The North Field (the 'Stoke' part) covers 23.57 ha, perhaps two units of 24 Devon acres, but its hedge-banks are for the most part of slight construction and even die out altogether in one or two places, almost as if the Stoke tenants were intent on claiming their full land allocation without being able to make full use of it. By contrast the hedge-banks of the OSF (the 'Holne' half of the project) are mainly broad and massive. The OSF totals 12.85 ha, so it looks as if the Holne commoners were only enclosing one 24-acre unit. If the size of the units is not coincidental, the sequence of events can be explained as follows. Initially this part of Holne Moor was a common shared by the tenants of Stoke and Holne manors, the Middle Venford farmers being assigned to Holne Manor. As a result of land hunger in the late 13th or early 14th century, perhaps expressed first by an illicit enclosure attempt represented by the Unfinished Field, the commoners agreed that each manor should enclose two 24-acre units. One unit was taken in immediately by the Middle Venford farmers as commoners of Holne Manor; the rest of the agreement was completed later, in the form of the Major Extension.

It can be seen from the maps that the Extension builders made more use of reaves for external boundaries than did their predecessors, the builders of the Lobes. The soil evidence suggests also that reaves were used as internal divisions during the cultivation of the OSF.

The Droveaway is provided with a funnel entrance into the OSF which was presumably used by the Holne commoners when driving their animals into this enclosure. The breadth of the Droveaway (15 m) suggests that flocks of sheep had now become important enough to have provision made for them. The making of the North Link at this time, apparently for the purpose of keeping animals out of the boggy ground in the North Channel, also seems more relevant in the context of sheep husbandry, and the same could be true for the funnel-shaped enclosure at the end of

the Central Lane, made in the previous phase. There is thus physical evidence of the growing importance of sheep in the 13th century.

There was also some limited cultivation in the OSF. All sites excavated here (Fig. 3) have produced evidence for ploughing by an implement which grooved the surface of the mineral soil beneath the thin peat cover. These marks were probably produced during the initial land-taking. Soil evidence, excavated cultivation-marks, and the absence of surface ridging, whether in the form of 'lazy beds' or 'lands' all point to a very brief cultivation episode; we will argue the case in detail elsewhere. It should be noted that from site F there is some evidence, not fully conclusive, that the OSF was ploughed in strips separated by baulks spaced at 6 m intervals (one rod?) so co-aration may be indicated, as might be expected from the social circumstances of the intake postulated above. A few clearance cairns occur in the OSF and in the UF. They may well date to this brief medieval cultivation episode; *prehistoric* clearance stones presumably went into reaves, and there is evidence from excavations that they were also put against the faces of reaves and into corners at that time.

The date of the Major Extension is likely to be late 13th century or early 14th, although this view to some extent depends on beliefs about population pressure and climatic trends at this time. The Major Extension fields were soon abandoned. There is evidence that the western boundary was broken in places, to allow animals to pass freely to and from the open moor.<sup>33</sup> The commoners had abandoned their attempts at outfield cultivation.

## VI. THE LATER HISTORY OF THE LOBES

The Lobes did not share the same history in the late medieval and post-medieval periods, and they will shortly be discussed in turn. A few general remarks should first be made about the archaeology of this period on Holne Moor.

Parts of the corn-ditches were modified and converted into wall-banks, a process which we will refer to as refurbishment. These wall-banks may have carried hedges; they faced both ways and could have been effective barriers to stock movement from either side. Evidence of refurbishment is sometimes very obvious, but it is rare to find stretches longer than a few metres that have been substantially rebuilt, and nowhere in the study area is there an example of a boundary constructed completely in this style. Unlike examples on the Stoke farms which are built largely with boulders and smaller stone, the wall-banks on Holne Moor are mainly earthen banks, an inheritance from their predecessors.

To some extent the date of refurbishment is a matter of debate. After 1239 it was presumably permissible to plant hedges on former corn-ditches, and the Major Extension shows that unrevetted hedge-banks were the 13th-century norm. Possibly the corn-ditches protecting the most valued arable land, for example that of the North Lobe, were planted with hedges at this time. Refurbishment looks like the patching up of an existing hedge-bank, and it seems most likely that refurbishment, and perhaps the wall-bank proper, evolved to cope with the defects of the unrevetted

hedge-bank, which would be especially noticeable in an area subject to strong winds. Thus we prefer, provisionally, a 14th- or 15th- century date for the refurbishment episode.

A most interesting discovery was that of several very unobtrusive rabbit buries in the study area. These are not at all like the well-known buries of the major Dartmoor warrens.<sup>34</sup> They are very low and broad, and it would be possible to imagine that they consisted solely of rabbits' upcast were it not for incontrovertible evidence of the shovelling away of nearby hedge-banks in order to make them. The buries are marked on the map (Fig. 3) and it can be seen that bury B<sub>1</sub> was made by robbing the northern hedge-bank of S La<sub>2</sub>, and that bury B<sub>2</sub> was constructed by destroying a stretch of the hedge-bank of the ISF. Bury B<sub>3</sub> probably involved the robbing of the southernmost section of the western hedge-bank of the UF and bury B<sub>4</sub> seems to have utilized soil from a hedge-bank of the NLa. Two similar buries slight the cultivation strips of the Central Field in the northern part of CL<sub>1</sub>. The non-peaty, sandy soil of the hedge-banks formed a readily accessible source of material, well-suited to being shovelled away, and would have produced well drained buries causing few excavation problems for their inmates! The latter's appreciation can be judged by the present-day occupation of several of the buries.

There are also two very long buries on Holne Moor. One lies just outside the study area, an 80-metre giant lying in a hollow known as Brockley Bottom, just E. of Horn's Cross; it was built around a (probably medieval) enclosure bank by adding soil taken from long shallow ditches on the southern side of the boundary. The resulting composite construction is up to three metres wide. A similar appearance and history characterize bury B<sub>7</sub>; of similar dimensions, it lies astride the western boundary of the UF, elsewhere seen as an embellished reave whose orthostats are still visible in places. It seems unlikely that the two very different buries which utilized this boundary (B<sub>3</sub> and B<sub>7</sub>) were constructed at the same time.

On Dartmoor, rabbits were the tinnners' traditional emblem<sup>35</sup> and the buries on Holne Moor are found where there are most traces of tinning. Although tinnners' pits are plentiful on Holne Moor, there are only two major continuous gulleys; one slights the South Lobe (there is an exploratory pit in the middle of S La<sub>2</sub>) and is close to bury B<sub>1</sub>, while the second makes a wide gash down the centre of the natural valley running through CL<sub>3</sub>. Buries B<sub>2</sub>, B<sub>3</sub> and, perhaps later, B<sub>7</sub>, accompany this large tinnners' gully. Our survey has not been exhaustive with respect to the ubiquitous tinning pits. Small-scale and exploratory workings dot the landscape and occur in almost all the fields, the only important exceptions being the North Lobe and CL<sub>1</sub>, though the latter is slighted by two rabbit buries.

We do not think it likely that farming was contemporary with either tinning or rabbit husbandry in the study area. In medieval times it was lawful for tinnners to dig anywhere, and there were complaints about their destructive activities.<sup>36</sup> After the 1574 Great Court of Devon Tinnners, strict regulations came into force.<sup>37</sup> However, tinnners had to co-exist with their neighbours, and the intrusion of tinning works into actively farmed land must have been a rare event. On Holne Moor in late medieval times the abandonment of some marginal land and settlements implies a lower demand for arable land and an increased freedom of manoeuvre for tinnners.

The location of rabbit buries close to farmland would have been a provocative act if carried out by tanners, a piece of sheer stupidity if perpetrated by farmers, since it would have cost them or their neighbours dearly in crops and grass. It seems most probable that episodes of tanning with rabbit husbandry normally occurred only in places where farming had ceased. On Holne Moor the broad picture seems to be that land was gradually abandoned in late medieval times, and that more than one late or post-medieval tanning episode is represented. The siting of rabbit buries on land where common rights were still presumably in force and being exercised implies relaxed attitudes among the Holne Commoners, which may indicate that some of them were participating in the tin boom which reached its climax, on Dartmoor in general, in the year 1521.<sup>38</sup>

We may now examine each Lobe in turn.

1. *The North Lobe* (Fig. 4)

The corn-ditch here was not converted into a wall-bank, although in one or two places there is a little stonework on its inner side. A hedge may have been added at the time of the Major Extension. It is clear that strip cultivation was still practised at the time when the fields in the North Lobe went out of arable use. The date of arable abandonment cannot be determined. By analogy with other Dartmoor sites strip cultivation might have been abandoned as early as the 14th century<sup>39</sup> but it could have continued into the 17th century, as at Dunnabridge<sup>40</sup> or into the 18th, as perhaps at Challacombe.<sup>41</sup> The absence of traces of tanning or rabbit husbandry may mean that it was still in use during the main post-medieval tanning episode (16th century?) but this use may have been exclusively pastoral; even today the North Lobe's distinctive vegetation provides valuable keep, particularly in the spring and autumn, and the thorn trees, many of them on the boundaries and probably descendants of the original hedgerow trees, provide some shade and shelter.

2. *The South Lobe and South Channel* (Fig. 7)

After the Major Extension phase, the South Lobe was split into two parts. South of S La2 the land was abandoned to the waste, and several deliberate breaches were made in the old corn-ditch here. Cattle passed through, causing considerable gulleying inside and outside the Lobe. These breaches were probably made at the same time as the blocking of the S La2 moorgate, which is in the refurbishment style and must be part of a maintenance programme which included the refurbishment of the northern wall of the South Lobe and the southern wall of S La2, which was now the moorward boundary of this enclosure. Thus the northern part of the South Lobe was maintained as enclosed grazing land. South Link Close and CL3 were also refurbished, presumably for the same purpose. Then came a long, narrow tanner's gully, slighting the eastern boundary of the South Lobe and driving into the heart of this remodelled field. In the SW. corner of the same field the northern hedge-bank of S La2 was shovelled away to make the bury B1 just to the N. Clearly the field was by

now abandoned, and presumably the longhouse nearby as well. Dating cannot be precise, but a date in the 14th or 15th centuries for the refurbishment and another in the 15th or 16th centuries for the tinning episode would not be unreasonable.<sup>42</sup>

### 3. *Central Lobe 1* (Fig. 6)

Wedge Field and East Field have soil characteristics similar to those of the North Lobe, and their late medieval history may have been much the same — the persistence of cultivation probably until the 14th or 15th centuries followed by use as enclosed pasture.

The Central Field was abandoned early, as far as cultivation was concerned; this is shown by the soil evidence and by the very low degree of lynchetting found here. Indeed the 'grooves' uniquely preserved here at the edges of the strips may even have to do with the original marking-out of the land. Another possibility is that they preserve evidence of early ploughing procedures, not visible elsewhere because of continued cultivation. The outer boundary now consists of a few broken hedge-bank remnants, which, it was argued above, are the remains of the original hedge-bank demolished to conform with Forest Law. It looks as if no attempt was made to replace this barrier, except at the S. end of the North Lane, and abandonment of cultivation during the 11th century is quite probable. Eventually what was left of the hedge-bank was shovelled across the lane to make the near-circular bury B<sub>4</sub>, and two other buries, B<sub>5</sub> and B<sub>6</sub>, were placed on the old cultivation strips, presumably by post-medieval tanners.

The southern half of the Lobe continued to be gulleyed by animals, peat cutters' sledges, and road-menders.

### 4. *Central Lobe 3* (Fig. 8)

This Lobe was refurbished, probably to enclose pasture; the soil evidence suggests that cultivation ended substantially earlier than in the North Lobe. There may have been tinning during this phase, in the head of the gulley just outside CL<sub>3</sub>, where earlier tanners had worked. The two small buries B<sub>2</sub> and B<sub>3</sub> are sited well away from CL<sub>3</sub>, perhaps respecting its continued use. Possibly the gate G<sub>2</sub> was made now, allowing animals passing between the moor and CL<sub>3</sub> to avoid the increasingly disturbed area at the E. end of the Central Lane. The date of the blocking of gate G<sub>1</sub> cannot be ascertained.

Eventually a very large tinner's gulley broke comprehensively through the CL<sub>3</sub> wall-bank. It looks the freshest of the tinner's pits and gulleys, and may represent tinning as late as the early 17th century. According to Greeves<sup>43</sup> the tin-works of Wenford, Malterne Waie, Lower Malternewaie and Hobbeghole, recorded but not certainly worked at this time, could well have been located in the valley of the Venford Brook. It is tempting to date the giant bury B<sub>7</sub> to this phase and to suggest that the tanners were now farming rabbits commercially, no longer building the more casual 'subsistence buries' of earlier times. Across the Dart, on Vag Hill and around Rowbrook, where rabbit-warrens are recorded in the early 17th century,<sup>44</sup> there are similar large buries, some of which are visible from the study area.

## VII. SUMMARY OF THE HOLNE MOOR SEQUENCE

1. *Early medieval* (10th century and perhaps earlier)

This was the time of the Lobes, the sheltered fields of people living in the valley of the Venford Brook; at least three farms, North Venford, Middle Venford and the South Lobe longhouse or its predecessor can be seen as dating to this period. The presence of arable cultivation in strips may even suggest<sup>45</sup> a small early medieval hamlet in the reservoir area. East of the study area, just beside the modern road as it approaches the reservoir dam, there are further arable strips which should also relate to this hamlet. Its original name was presumably an early form of 'Venford'. There seems to be no authentic local tradition of a lost settlement in the Venford Valley, but medieval buildings were presumably destroyed in the extensive stream-works of four or five hundred years ago, long before their sites were flooded by the reservoir. The tin-mill postulated here by Worth<sup>46</sup> on the basis of a mortar-stone now removed to a position near the caretaker's house may of course have been established in a former medieval building. No information about the mill or early settlement traces is forthcoming from early Ordnance Survey maps or from the records of the South West Water Authority.

The boundaries of the Lobes seem to have included hedges (CL1) and block-walls (South Lobe), and it is clear that there was enclosed pasture as well as arable land. The importance of the adjacent moorland at this period is shown by the provision of the North and South Channels and the gulleying and hollow-way formation in them.

2. *Forest period* (11th and 12th centuries)

It is uncertain whether a Forest Law applied on Dartmoor in pre-Conquest times. The Forest period, perhaps lasting only six or seven generations, saw the making of corn-ditches around the Lobes, except in the North Channel where a hollow-way was deemed equivalent. In Central Lobe 1 nearby, the hedge was destroyed and cultivation may have been abandoned, so the strips here could be a rare pre-Conquest survival. Sometime in the 12th century the South Channel was blocked by a corn-ditch, and traffic now reached the moor by a new, hedged lane which bisected the South Lobe. A long-distance route across Dartmoor, perhaps known as the Maltern Way, was established sometime in the Forest period; the traveller, having reached the South Lobe area, followed a line of crosses leading to the Meavy valley. This period saw tinning in at least two places in the study area (South Channel, and just outside CL3).

3. *Medieval* (late 13th century, possibly early 14th century)

The disafforestation of 1239, which must have taken place in a context of land hunger, had two results in our area. First came some small-scale landtakes just west of the Central Lobes, probably carried out by the inhabitants of the reservoir area; first some uncompleted fields, then a completed project, the Inner South Field, with a new moorgate at the western end of the Central Lane. Then came the construction

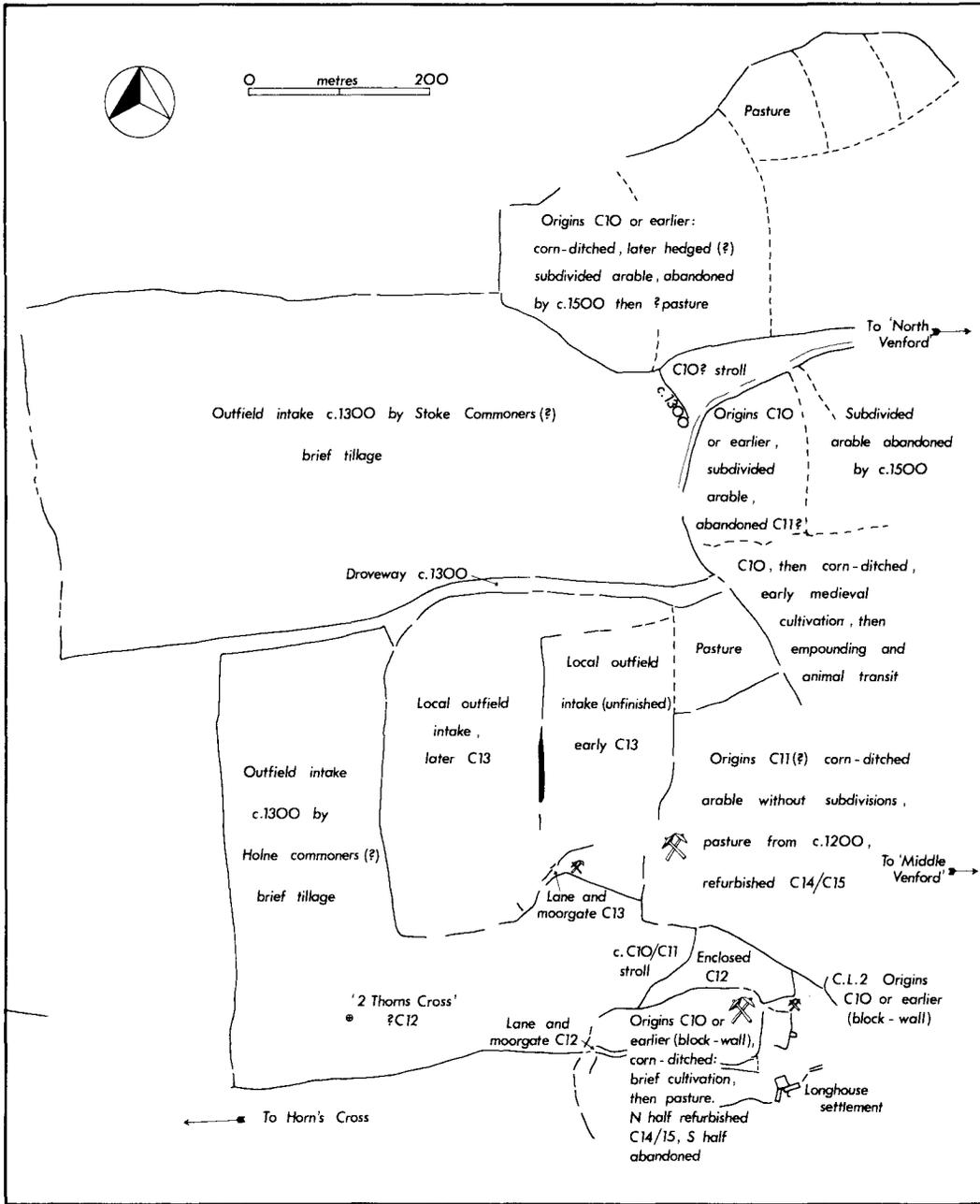


FIG. 9

Interpretative map of the study area. Small pickaxes — medieval tinning; large pickaxes — later tinning

of the Major Extension, which we have seen as a joint project of the commoners of Holne and Stoke. In the Outer South Field a short outfield or casual cropping episode occurred. The breadth of the Drove-way suggests exploitation of the moorland grazing by sizeable flocks and herds; concern for sheep specifically seems attested by funnel-entrances and hedges designed to keep them out of boggy places. If grazing was intensified it may have been at the expense of deer preservation.

4. *Late medieval* (14th and 15th centuries)

The Major Extension was allowed to revert to moorland; clearly the land hunger at Stoke and Holne had subsided. The southern half of the South Lobe was abandoned and its corn-ditch deliberately broken down in several places; the northern half, the South Link Close and CL3 continued in pasture use and their boundaries were refurbished into something more like wall-banks. In the North Lobe cultivation may have continued longer, but the fields were probably in grass by the end of the period.

5. *Early modern* (16th and 17th centuries)

Tinning and rabbit husbandry were the major activities of this period, during which farming must have come to an end. In CL3 and the South Lobe, tanners moved in, cutting deep gulleys and despoiling hedge-banks to build small rabbit buries. Towards the close of this period the giant bury B7 was built, perhaps during a final episode of tinning.

## VIII. CONCLUSIONS

We hope that we have shown that the medieval landscape of Dartmoor can be treated in many respects as if it were prehistoric. We are not suggesting that the study area is necessarily typical of Dartmoor in general; indeed our work gives a limited picture even of Holne Moor, since we have not considered the area E. of the Venford reservoir or S. and SW. of the study area, which are by no means devoid of medieval and post-medieval activity. Nor are we qualified to comment on how far our findings make sense in terms of historically-documented trends.

It has proved possible to arrange the boundary types in a rough sequence, and the central strategy of using corn-ditches as a chronological marker horizon has not been discredited. We were able to identify two types of boundary — the block-walls and clearance walls (though the latter are not strictly boundaries) as candidates for pre-Conquest status. The evidence from the northern edge of CL1, if our interpretation is correct, suggests that the first external boundaries of the Lobes may well have been hedged, although there seems to be no evidence from the study area that sturdy hedge-banks of the type attested for the late medieval period go back to pre-Conquest time. The low hedge-bank on the northern edge of S La2, which must be 12th century or early 13th in date, is a further hint that early hedge-banks may

have been relatively slight affairs. Possibly some of these early hedges were unembanked, and essentially natural. By the 13th and 14th centuries large hedge-banks were popular, though we do not know how far strong winds on Holne Moor would have prevented the growth of adequate hedges.

The hedge seems to have given way gradually, in late medieval times, to the concept of the wall-bank, existing boundaries being refurbished or fully converted according to local circumstances. The bifacial wall-bank, the 'Devon hedge', was the ideal boundary type for Dartmoor, more effective than a conventional hedge where sheep were concerned, and able to fulfil its function even in conditions inimical to the growth of hedgerow trees. The wall-bank rose to prominence during a period of climatic deterioration, well-documented recently for marginal land in Scotland.<sup>47</sup> A similar succession took place on Holne Moor during the prehistoric period; early hedge-banks were supplanted by the reaves, which are essentially thick bifacial walls, although we are ignorant of the original character of reaves above the basal stonework.

It was possible, as we had suspected, to examine the relationship between boundaries and tinning, and to build up a chronology for some of the tin-working which included two cases of early medieval activity. One surprise was our belated recognition of very low rabbit buries made from destroyed hedge-banks. It may be that on other parts of Dartmoor more buries of this type remain to be recorded, and that they represent tinner's 'subsistence warrens' to be contrasted with warrens established on more commercial lines.

Our study has shed little light on the origins of subdivided arable, but we have shown that it is possible to use the strips to study land mensuration, and evidence for the use of the 'Devon acre' was recovered. In some places (e.g. CL3) the absence of strips may be significant in terms of the history of farming practice or land ownership, although the apparent gaps between bundles of plough-furrows observed during excavations, which may also be evidence for subdivided arable cultivation, do not of course show on the surface. 'Narrow rig' which is common on Dartmoor, is not present within the study area, though a little can be found on the exposed land to the E. of the Venford reservoir. We suspect in any case that narrow rig, whether it represents plough or spade ridges or both, is mainly a post-medieval response to poor local drainage conditions, probably exacerbated by the climatic regime of the Little Ice Age.

The moorland fringe of Dartmoor is obviously a good place in which to monitor changing pressures on land, and Holne Moor proved to be suitable for this purpose. If our arguments are accepted, the Major Extension, with its integral Droveaway, its carefully maintained balance between the two manors concerned, and its use of units of about 24 Devon acres, seems to be good evidence that the expansion of the 13th/early 14th century was legally done, by agreement among the commoners of two manors, and accompanied by careful land survey.

A field system is not just a system of blocks and barriers. There have to be channels of communication whose design is relevant to livestock management techniques. Every time new land is taken, there are implications for the positions of gates and lanes; animals have to be driven from place to place, to be kept from

growing crops, to be allowed to reach water or shelter, and so on. Animals, especially cattle, may leave permanent traces in the form of erosion gulleys, and this provides a rough index of their importance at different times in the past. Care should be taken to distinguish the effects of frequent short journeys near the farm (for example, for milking) from longer journeys, for example from upland grazing areas to villages like Holne, and it may be possible to develop a methodology for this. At present we are ignorant of the criteria to be used for identifying marks made by peat-cutters' sledges.

At the beginning of our sequence we see that the colonists of the Venford Valley were careful to leave the North and South Channels between their lobe-like enclosures. These channels are called *strolls*, in the local dialect, and Crossing<sup>48</sup> says that they are intended to facilitate the control of livestock as well as providing them with occasional shelter and access to water. It is interesting to note the antiquity of the stroll on Dartmoor. Later, we see the development of narrow lanes, evolving naturally in the North Channel or being deliberately constructed, as in the case of S La2. These lanes are unsuitable for flocks of sheep, but they are entirely appropriate for dairy cattle, wandering along at milking-time. Sheep, on the other hand, need broad droveways, funnel entrances where they may be controlled more easily (Central Lane, S La2, Droveway) and barriers to keep them from getting stogged, as they say locally, in boggy areas (North Link). Taken as a whole, our evidence suggests the increasing importance of sheep in the 13th and 14th centuries.

Similar studies could be undertaken in other parts of Dartmoor, and, for that matter, in other parts of the moorland and mountain zones which make up some 35 per cent of the British Isles. The importance of the moorland fringe zone as a barometer of pressure on land and as a place where single-phase events can be isolated and studied will now be clear. For this work it is important to choose areas where zones of successive intake, like our Lobes, can be readily detected. A well-dated marker horizon, like our corn-ditches, is also highly desirable. The problems and opportunities presented by an *en bloc* land layout like a parallel reave system are very different.

Our work could be taken further in two directions. First, by careful map-work and field observation one could move into present-day enclosed land, using the same broad principles of analysis but developing an understanding of the more complex superpositions and changes present there. Second, excavation and more detailed soil analysis could be undertaken in certain critical areas, especially in the area of subdivided arable land where it has to be admitted that we are still uncertain about the dating and detailed history of the strips, and the reasons why the field evidence takes its present form. But these fields present an opportunity, not a problem. Having read Dr R. A. Dodgshon's recent lucid account<sup>49</sup> of the problems which beset our understanding of early British agrarian history, we are in little doubt that discussion within the conventional framework has gone as far as it reasonably can, and that it will be archaeological evidence, probably from a place like Holne Moor, which will provide a break-through.

## POSTSCRIPT

Since completing the final draft of this paper we have been able to consult the air photograph reproduced as Plate III. The following points emerge:

1. In some parts of the area, cultivation-traces can be identified with much more confidence than is possible on the ground. The clearest cases occur in the Unfinished Field (UF) and in the northern half of the South Lobe, just in front of the legend 'SLa 2'. They can also be seen to the SW. of the South Lobe, in a zone not dealt with in this paper. Other probable traces occur in the N. half of CL<sub>3</sub>, parts of the ISF (where, unlike the others, they run N.-S., along the slope) and in the South Channel (SC) where they seem to occur both E. and W. of the blocking South Link boundary. Excavations suggest that these lines correspond to marking-out/drainage channels cut by breast-spades and perhaps further emphasized by water erosion and ploughing between them.

2. Differences in the character and coherence of the 'animal gulleys' are more apparent from the air. To the W. and SW. of the South Lobe, and inside its S. half, are multiple criss-cross scorings which were probably cut into peat formed mainly in the post-medieval period, during the 'Little Ice Age'. They contrast markedly with the broader, deeper gulleys mainly in and around the South Channel (SC), which are earlier in terms of our sequence and were probably cut through a much shallower peat into the mineral soil. Further investigation is needed to establish whether cattle are solely responsible for these patterns.

3. The ditch marking the northern boundary of the Unfinished Field (UF) is shown (marked 1 on Pl. III) and it now looks as if we should have had the confidence to include the ditch marked 2 as another, equally unfinished, part of its boundary.

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## NOTES

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- <sup>2</sup> E. Gawne and J. V. Somers Cocks, 'Parallel reaves on Dartmoor', *Trans. Devonshire Assoc.*, 100 (1968), 277-91.
- <sup>3</sup> R. Bradley, 'Prehistoric field systems in Britain and north-west Europe — a review of some recent work', *World Archaeol.*, 3 (1978), 265-77.
- <sup>4</sup> A. Fleming, 'The prehistoric landscape of Dartmoor. Part 1: South Dartmoor', *Proc. Prehistoric Soc.*, 44 (1978), 97-123.
- <sup>5</sup> Somers Cocks, op. cit. in note 1, 78.
- <sup>6</sup> W. Crossing, *The Ancient Stone Crosses of Dartmoor and its Borderland* (Exeter, 1902), 84-107.
- <sup>7</sup> E. Gawne, pers. comm.
- <sup>8</sup> P. Birkett and S. Moore, *A short history of the rights of common upon the Forest of Dartmoor and Commons of Devon* (Plymouth, 1890), xxii.
- <sup>9</sup> M. Havinden and F. Wilkinson, 'Farming', in C. Gill (ed.), op. cit. in note 1, 164.
- <sup>10</sup> G. Hewlett, 'Reconstructing a historical landscape from field and documentary evidence: Otford in Kent', *Agric. Hist. Review*, 21 (1973), 94-110; W. G. Hoskins, *Fieldwork in local history* (London, 1967), 51.
- <sup>11</sup> Birkett and Moore, op. cit. in note 8, 64.
- <sup>12</sup> L. A. Harvey and D. St Leger Gordon, *Dartmoor* (London, 1953), 160.
- <sup>13</sup> R. H. Worth, *Dartmoor* (Newton Abbot, second edition 1967), 329-42; Somers Cocks, op. cit. in note 1, 94-96.
- <sup>14</sup> Worth, *ibid.*, 330-31.
- <sup>15</sup> J. V. Somers Cocks, 'The Forest Boundary', in C. Gill (ed.), *Dartmoor: a new study* (Newton Abbot, 1970), 277-81.
- <sup>16</sup> Harvey and St Leger Gordon, op. cit. in note 12, 159; A. Saunders, 'Lydford Castle, Devon', *Medieval Archaeol.*, 14 (1980), 129.
- <sup>17</sup> Somers Cocks, op. cit. in note 1, 93-94.
- <sup>18</sup> These have been referred to by other workers, e.g. E. Gawne, 'Field patterns in Widecombe parish and the Forest of Dartmoor', *Trans. Devonshire Assoc.*, 102 (1970), 62 and Somers Cocks, op. cit. in note 1, 83.
- <sup>19</sup> J. V. Somers Cocks, 'Dartmoor and Domesday Book', *Devon and Cornwall Notes and Queries*, 30 (1967), 290.
- <sup>20</sup> H. P. R. Finberg, *Tavistock Abbey: a study in the social and economic history of Devon* (Cambridge, 1951), 30.
- <sup>21</sup> H. S. A. Fox, 'A geographical study of the field systems of Devon and Cornwall' Ph.D. thesis, University of Cambridge (1971), 105.
- <sup>22</sup> In a forthcoming paper by the present authors.
- <sup>23</sup> C. D. Linehan, 'Deserted sites and rabbit warrens on Dartmoor', *Medieval Archaeol.*, 10 (1966), table II.
- <sup>24</sup> P. J. Fowler in S. Piggott (ed.) *The Agrarian History of England and Wales* (Cambridge, 1981), pl. IIIa, in which block-walls may be seen; a clearance-wall is also visible emerging from the bottom right-hand corner of this plate.
- <sup>25</sup> D. Maguire, pers. comm.
- <sup>26</sup> E. M. Phillips, 'The ancient stone crosses of Devon: Part I', *Trans. Devonshire Assoc.*, 69 (1937), 297.
- <sup>27</sup> E. Hemery, 'Medieval trackways of Dartmoor', *Great Outdoors*, 3 (1981), 24.
- <sup>28</sup> In litt. 22.3.81.
- <sup>29</sup> Somers Cocks, op. cit. in note 1, 96-98.
- <sup>30</sup> We are indebted to Mrs D. Hills (in litt. 2.11.81.) for information about a somewhat comparable incident in the 1920s, when a house near Ringleshutts Mine, immediately SE. of the study area, the residence of a mole-catcher in 1908, was undergoing repairs after a period of abandonment. The Holne Commoners ordered it to be demolished.
- <sup>31</sup> S. Baring-Gould, *A Book of Devon* (London, 1899), 180.
- <sup>32</sup> Mrs D. Hills (in litt. 4.12.81.) informs us that in quite recent times there have been tensions at commoners' meetings between commoners and Duchy tenants, and 'sharp exchanges when Duchy tenants' stock spends more than a couple of days on the Common'. At present, according to the same informant, the boundary to the SW. of the study area is in dispute.
- <sup>33</sup> An alternative context for this demolition may be sought in the disputes between commoners and Duchy (see above, notes 31 and 32).
- <sup>34</sup> Linehan, op. cit. in note 23; R. G. Haynes, 'Vermin traps and rabbit warrens on Dartmoor', *Post-medieval Archaeol.*, 4 (1970), 147-64.
- <sup>35</sup> Linehan, op. cit. in note 23, 142.
- <sup>36</sup> F. Booker, 'Industry', in C. Gill (ed.), *Dartmoor: a new study* (Newton Abbot, 1970), 115-16.
- <sup>37</sup> T. Greeves, pers. comm.; T. Pearce, *The laws and customs of the stannaries in the Counties of Cornwall and Devon* (London, 1725); R. R. Pennington, *Stannary Law* (Newton Abbot, 1973).
- <sup>38</sup> T. Greeves, 'An outline archaeological and historical survey of tin mining in Devon, England, 1500-1920', in E. Wächtler and G. Engewald (eds.), *ICOHTEC Internationales Symposium zur Geschichte des Bergbaus und Hüttenwesens* (1980), 74.
- <sup>39</sup> Somers Cocks, op. cit. in note 1, 82.
- <sup>40</sup> H. Fox, pers. comm.
- <sup>41</sup> E. Gawne, op. cit. in note 18, 59.
- <sup>42</sup> See above, note 38; and also the output graph in Worth, op. cit. in note 13, fig. 87.
- <sup>43</sup> In litt. 22.3.81.
- <sup>44</sup> Linehan, op. cit. in note 23, 139.
- <sup>45</sup> H. Fox, pers. comm.

<sup>46</sup> Op. cit. in note 13, 293.

<sup>47</sup> M. L. Parry, 'Secular climatic change and marginal agriculture', *Trans. Institute of British Geographers*, 64 (1975), 1-12.

<sup>48</sup> W. Crossing, *Guide to Dartmoor* (Plymouth, 1909), 37.

<sup>49</sup> R. A. Dodgshon, *The origin of British field systems* (London, 1980).

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