

Ridge and Furrow in Berkshire and Oxfordshire

By J. E. G. SUTTON

I

FAR from forming a natural geographical region, Berkshire and Oxfordshire (FIG. 36) provide an interesting section across the Jurassic, Cretaceous and Eocene systems. Their most salient feature is the north or north-west facing chalk escarpment of the Berkshire Downs and Chilterns. This escarpment is the dividing line between two regions which present in general terms a number of noteworthy and doubtless interconnected contrasts. To the south, both on the chalk and beyond, there is more wood, heath and down, and less good arable; nucleated village settlements are fewer and smaller, many parishes consisting of a scatter of 'Ends', 'Greens' and 'Rows'; whilst other settlement names, when compared with those to the north, end much less often in '-ton' or '-ington', but correspondingly more frequently in '-ley' and '-field'. (This pattern tends to re-emerge in the more forested areas of the northern region—Wychwood and the Oxford Heights.) Moreover, north of the chalk these two counties lie, to use Alice's phrase, 'all ridges and furrows': except on the Cotswold oolitic limestone one rarely need go far to find them. But the ridge and furrow country ends at the foot of the chalk escarpment: to the south it is virtually never seen. Mead has shown that this pattern continues into Buckinghamshire.¹

A survey of Berkshire and Oxfordshire using air-photographs (the Ordnance Survey 6 inches to one mile verticals) gives a more detailed picture of this contrast (FIG. 37). From each photograph have been taken four readings, each $2\frac{1}{2}$ kilometres square. There are examples of ridge and furrow which these photographs are not large or clear enough to show; hence it has been decided not to fill in from ground survey those areas for which no photograph is available. Nevertheless the survey appears to give an accurate general picture of the distribution of prominent ridge and furrow. Some necessary modifications are discussed below.

Though it cannot be stated dogmatically that all the ridges here recorded

¹ W. R. Mead, 'Ridge and Furrow in Buckinghamshire', *Geog. J.*, CCX (1954), 34-42. For the best general accounts of ridge and furrow see C. S. and C. S. Orwin, *The Open Fields* (2nd. ed 1954); M. W. Beresford and J. K. S. St. Joseph, *Medieval England: An Aerial Survey* (1958), ch. III.



FIG. 36

Map of Berkshire and Oxfordshire, including places mentioned in the text.
(Outline based on the Ordnance Survey. Crown copyright reserved)

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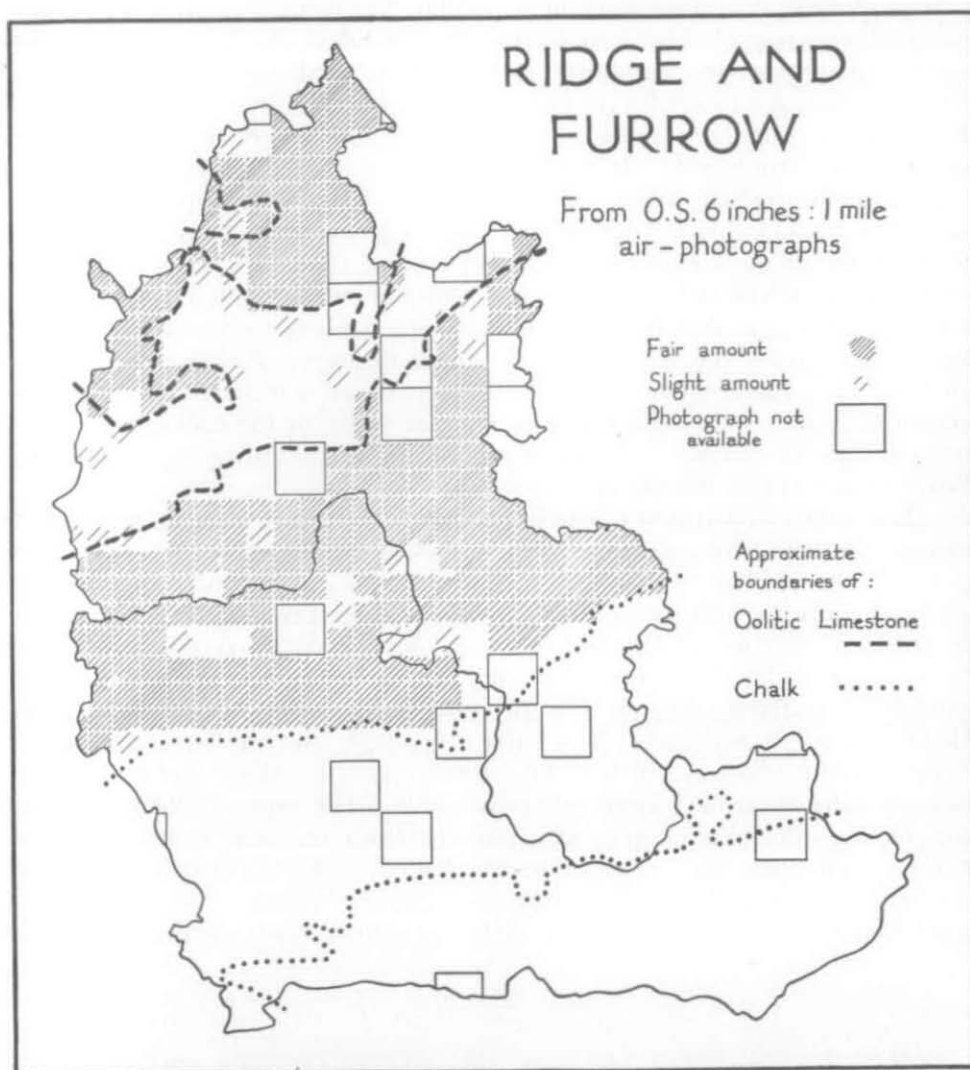


FIG. 37

Map showing the distribution of ridge and furrow in Berkshire and Oxfordshire, and its relationship to the outcrops of oolitic limestone and chalk. (N.B.—This is *not* a map of the distribution of open fields.) (Outline based on the Ordnance Survey. Crown copyright reserved)

represent formerly ploughed open-field selions,² it now seems certain that the vast proportion do. Beresford, in particular, has demonstrated a number of cases where areas of ridge and furrow correspond to the furlongs shown on open-field maps;³ and similarly at Wroxton in north Oxfordshire surviving ridge and furrow agrees with the directions of furlongs shown on a map of 1768.⁴ Furthermore, ridges are commonly found underlying hedges and other features of the modern landscape. It is, of course, possible that some ridge and furrow was gathered up after enclosures, but this has been most inadequately demonstrated, at least for this part of England. Kerridge's arguments from documents for the extent of post-enclosure ridge and furrow would look much stronger if he could locate and describe some specific examples on the ground: some of the references to ridges that he quotes have clearly nothing to do with ridge and furrow as seen on the landscape.⁵ It might be expected, however, that on enclosed land that remained arable the ploughman sometimes found it convenient to maintain the old ridges or parts of ridges in the enclosure. Some striking cases of this were illustrated by the Buckinghamshire reporter to the Board of Agriculture during the Napoleonic Wars.⁶

It is not suggested that absence of ridge and furrow in a particular district means that open-field agriculture using a furlong and selion pattern was never practised there. On the contrary, inclosure awards, maps, and topographical and agricultural writings provide plenty of evidence of such open-field farming continuing as late as the 18th and 19th centuries in those parts of Berkshire and Oxfordshire which have no ridge and furrow.⁷ Nevertheless, in areas of extensive woodland, such as the Wychwood district, parts of the Oxford Heights in north Berkshire, the Chiltern dip-slope, and the forest and waste covering much of south-east Berkshire, the proportion of land under any form of cultivation must have been relatively small. The same would have been true of large downland tracts, again on the Chilterns and on the Berkshire Downs. The Berkshire reporter to the Board of Agriculture included the central and western Downs under the heading of 'Wastes'. But they made good sheep-walks, and he noticed with disapproval that certain parts were

² Selions are not necessarily coterminous with strips or holdings, which might consist of several selions or 'lands'. On terminology see the useful note by H. M. Clark, 'Selion Size and Soil type', *Agric. H.R.* viii (1960), 91.

³ M. W. Beresford, 'Ridge and Furrow and the Open Fields', *Econ. H.R.* (1948), 34-45; *The Lost Villages of England* (1954), ch. II; Beresford and St. Joseph, *Medieval England*.

⁴ J. L. G. Mowat, *Sixteen Old Maps of Properties in Oxfordshire*... (1888).

⁵ E. Kerridge, 'Ridge and Furrow and Agrarian History', *Econ. H.R.* (1951), 14-36. See also J. C. Jackson, 'The Ridge and Furrow Controversy', *Amateur Historian* (Autumn, 1961), 23-9.

⁶ St. J. Priest, *General View of the Agriculture of Buckinghamshire* (1813), 131-4.

⁷ e.g. see William Mavor, *General View of the Agriculture of Berkshire* (1809); W. E. Tate, 'A Handlist of English Enclosure Acts and Awards relating to Land in Berkshire', *Berks. Arch. J.*, XLVII (1943), 56-90; *V.C.H. Oxon.*, vii, viii.

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being broken up for cropping for short periods.⁸ In the mid-19th century Thomas Hughes in the opening pages of *Tom Brown's Schooldays* aired his enthusiasm for the Berkshire Downs, adding a lament against the 'improvers' and 'Lincolnshire farmers'. 'The long fresh slopes are sheep-walks no more, but grown famous turnips and barley.' Recent years have seen a second wave of this improvement or encroachment on the grassland. But the earlier bare aspect of the Downs must not be exaggerated. Whereas the actual escarpment and the ridge of the Downs were divided as pasture among the numerous villages situated in the Vale of the White Horse, there have also existed several village settlements on the Downs' dip-slope. One of these is East Ilsley, where a large area of downland was being cultivated in strips as late as 1860.⁹

Another reason for the absence of ridges in many places, is, hardly surprisingly, ploughing since enclosure; but complete obliteration of all traces, even over a comparatively small area once ridge and furrow, is exceeding difficult.

A much more important factor deciding the presence or absence of ridge and furrow in Berkshire and Oxfordshire is ploughing technique, governed by the nature of the soil and subsoil. Open-field selions could be ploughed unridged, as where they survive at Portland in Dorset and Braunton in Devon.¹⁰ Mavor, reporting on Berkshire during the Napoleonic Wars, observed: 'In the deeper soils of the Vale (of the White Horse), the ridges are generally thrown pretty high as a substitute for draining; . . . In the drier soils the land is made as level as possible.'¹¹ On this question of ridging for drainage, ground observation shows that the ridges were rarely, if ever, laid out to produce an overall drainage system for a whole field or township, and Mavor complained that water often had no outlet, but stagnated in the furrows and destroyed vegetation.¹² Yet an immediate objective was achieved: the ridge would be relieved of excessive moisture, even though the furrow might be waterlogged and left uncultivated.¹³ Underground pipe-drains are the modern answer.

The view that ridge and furrow was gathered up in many open fields to assist drainage is confirmed by comparing FIG. 37 with an outline of the geology. To the north of the chalk escarpment, ridges are not found on the free-draining oolitic limestone, but occur on almost every other soil, both heavy and medium-drained. FIG. 37 does not, admittedly, show an exact correlation between the limestone belt and the absence of ridge and furrow, but this is because

⁸ Mavor, *General View*, 26, 239, 324.

⁹ Berks. R.O. Map D/EL P5.

¹⁰ C. D. Drew, 'Open Arable Fields at Portland and elsewhere', *Antiquity*, xxii (1948), 79-81; H. P. R. Finberg, 'The Open Field in Devonshire', *Antiquity*, xxiii (1949), 180-7; Beresford and St. Joseph, *Medieval England*, 43-5.

¹¹ Mavor, *General View*, 159-60.

¹² *Ibid.* 351.

¹³ i.e. 'green furrows': see below with discussion of balks.

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the air-photographic survey is of insufficient detail for the extreme irregularity of the geological outcrops. Moreover, around Wychwood, as well as on parts of the Oxford Heights, forest cover contributes to the sparseness of ridge and furrow.

From the chalk escarpment southwards the absence of ridges in open and cultivable areas is generally explicable by the free-draining soils, both on the chalk itself, and farther south on sands of Eocene date and superficial gravels. But the Eocene country also includes claylands, where, by analogy with the country north of the chalk escarpment, one would expect to find ridge and furrow, and where the negative evidence of the air-photographs cannot be entirely explained by the extent of woodland and recent ploughing. But ground-searching has demonstrated the limitations of these small-scale air-photographs, and has revealed a number of examples of ridge and furrow on the clays east and south of Reading, notably at Waltham St. Lawrence and at Stratfield Saye, just across the Hampshire border. These ridges are narrow, varying between 4 and 8 yards, and never very high. Within the furlongs the widths are normally very regular, and the alignments straight: in only one furlong—in Shottesbrooke Park in Waltham St. Lawrence—have lands of the distinctive reverse-S shape been definitely observed.¹⁴ At Stratfield Saye the ridges underlie hedges and a metalled road, and elsewhere on these clays where they run up against a hedge without a headland or at a sharp angle, it is reasonable to assume that the ridges are earlier than the hedge and have been ploughed out on the other side. Nevertheless, the possibility remains that some of these ridges are later than enclosures. It would be interesting to know whether the Eocene claylands of other counties have ridges similar to these in south Berkshire and north Hampshire: there could be a regional type. Some of them would fall within Bowen's arbitrarily defined class of 'narrow rig'.¹⁵ It is easy to see why they do not appear on the small-scale air-photographs (though some examples proved just discernible on a second check). Compared with the high-backs on the claylands north of the chalk, they present little problem to farmers wishing to obliterate them, which would suggest that they were once much more extensive.

The flat-ploughing of open-field selions in areas of free-draining soils requires some discussion. The ploughman avoided the ridge, but maintained the furrow or groove between the selions, which even on well-drained soils facilitates the removal of surface water—a principle observed by modern mechanized ploughing. To prevent an unwanted ridge when using the

¹⁴ See below.

¹⁵ H. C. Bowen, *Ancient Fields* (1961), 47.

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common fixed mould-board plough,¹⁶ techniques such as ploughing slightly shallower towards the edge of the selion, careful harrowing, or even the occasional ploughing outwards were probably employed. The light crumbly soils of the chalk and limestone country have anyway less tendency to ridge up than clay and loamy soils.

The furrow could, of course, have been avoided by using a turn-wrest plough with a one-way flat-ploughing action,¹⁷ but, despite the superficial attractions of such a theory, there is no evidence that turn-wrest ploughs were ever adopted in Berkshire or Oxfordshire. Marshall considered them confined to Kent and parts of Surrey and Sussex,¹⁸ while the ploughs described by the Berkshire and Oxfordshire reporters all have fixed mould-boards.¹⁹ Mavor suggested, nevertheless, that the Kentish turn-wrest plough might be introduced with advantage in many parts of Berkshire with 'strong, cohesive soils'.²⁰

Flat-ploughed selions once abandoned or enclosed stand little chance of surviving archaeologically. However, downland broad-rig, consisting of long and low parallel strips which seems to belong to some form of open-field agriculture, is fairly extensive in some upland chalk regions.²¹ It is visible on parts of the Berkshire Downs, notably on the Wiltshire border at Ashdown. In several localities where it is suggested by Major Allen's air-photographs taken in the 1930's²² recent ploughing has made ground checks impossible. Bowen includes downland broad-rig under the heading 'ridge and furrow', but this classification can be misleading, for it is not ridge and furrow in the normally accepted sense, and clearly the ploughman never tried to ridge these lands up. The broad-rig on Fyfield Down in Wiltshire is plain enough on the air-photographs of Allen²³ and St. Joseph;²⁴ but how many visitors there, in summer at least, have failed to detect it overlying the more famous Celtic Fields?

Strip-cultivation on the Berkshire Downs, the Chilterns and the Oxfordshire Cotswolds is further attested on air-photographs by crop- and soil-marks of furrows on land now arable. The furrow lines are normally straight, but in many cases do not correspond with the existing enclosures, though these in many cases are very new. Often a criss-cross pattern of furrows is produced by later

¹⁶ For fixed mould-board ploughing see Orwin, *Open Fields*, 32-3; M. Nightingale, 'Ploughing and Field Shape', *Antiquity*, xxvii (1953), 20-1.

¹⁷ See Nightingale, 'Ploughing', 22 ff.

¹⁸ William Marshall, *The Rural Economy of the Southern Counties* (1798), *passim*. In the Weald of Kent, he remarked, '... the lands, in general, are gathered up into beds or ridges' with a turn-wrest plough! : I. 350.

¹⁹ Mavor, *General View*, 119-23; Arthur Young, *View of the Agriculture of Oxfordshire* (1809), 76.

²⁰ *General View*, 156 n.

²¹ Bowen, *Ancient Fields*, 48-50. See also O. G. S. Crawford and A. Keiller, *Wessex from the Air* (1928), pl. xix-xxii.

²² In the Ashmolean Museum, Oxford.

²³ J. and C. Hawkes, *Prehistoric Britain* (1947), pl. xi.

²⁴ Bowen, *Ancient Fields*, pl. v.

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ploughing at right-angles. No doubt some of these marks are modern, but others may well represent open-field ploughing—a view reinforced by the excavators of the Iron Age farmstead at Little Woodbury in south Wiltshire, where parallel grooves in the chalk correlated not only with dark lines on the air-photograph, but also with divisions shown on an estate map of about 1600.²⁵

Flat-ploughed lands also survive in the form of strip-lynchets, of which the Berkshire Downs possess several examples. It would be arbitrary to assume that all strip-lynchets represent one-time open-field selions, yet those at Calstone in Wiltshire show a striking correlation with the strips of an early 18th-century map.²⁶ They are by no means peculiar to chalk land, and their 'treads' (to use Bowen's terminology) are not always flat. In several places on the red lias hills of north Oxfordshire, notably at Shenington and on both sides of the Warwickshire border on Deddington Hill at Warmington, there are fine examples of strip-lynchets with ridged 'treads'—'lynchettled rig', as Bowen proposes to call them. These are clearly open-field selions arranged in furlongs, though the lie of the land rarely allows their curves to be of the normal reverse-S type. On Deddington Hill, as the steepness of the ground diminishes so does the size of the 'risers' between the lands until they become ordinary ridges; and ridges laid across the contour abut onto strip-lynchets laid along it.

Two other features, describable as ridge and furrow, deserve mention here. Firstly, within the Iron Age hill-fort on the chalk outlier of Sinodun Hill is a block of ridges some 60 yards long and 2½ yards wide, which have intrigued various observers.²⁷ They are older than the 'Clump' of beeches standing on them, but their purpose is obscure, though presumably agricultural. On account of their isolated position, their small size, and their descending a step towards one end they can hardly be equated with open-field ridges. Some virtually identical ridges, again in a later beechwood, have been observed in Oldfield's Copse (Ash Copse) in Stratton Audley parish on the cornbrash in north-east Oxfordshire.

Secondly, there are the artificially floated water-meadows,²⁸ whose short, marked ridges arranged on grid-iron plans beside rivers are easily distinguishable from open-field ridge and furrow. They need a porous soil, and are commonest in the chalk counties. Mavor noticed this feature in various places in Berk-

²⁵ G. Bersu, 'Excavations at Little Woodbury, Wiltshire', *Proceedings of the Prehistoric Society*, n.s. vi (1940), 31, 33-4, pls. I, II.

²⁶ Crawford and Keiller, *Wessex*, pl. xxviii, xxix. On consideration and dating of strip-lynchets, see Bowen, *Ancient Fields*, 40-6; P. D. Wood, 'Strip Lynchets Reconsidered', *Geog. Jnl.*, cxxvii (1961), 449-59.

²⁷ Notably O. G. S. Crawford, *Archaeology in the Field* (1953), 199.

²⁸ See L. Dudley Stamp, *The Land of Britain: Its Use and Misuse* (1948), 78-82; E. Kerridge, 'The Floating of the Wiltshire Watermeadows', *Wilts. Arch. Magazine*, LV (1953), 105-18.

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shire,²⁹ where water-meadow ridges are still visible in the Kennet, Lambourn and Pang valleys. In Oxfordshire there are some fine examples constructed in the 1840's by the Evenlode at Hanborough,³⁰ but no others are known. Nor were there any at the beginning of the 19th century, if we may believe Young.³¹

II

The following general observations on the form and lay-out of ridge and furrow in the Oxford region, that is those parts of the two counties lying north of the chalk escarpment, are based on fieldwork and study of air-photographs, and in particular on a survey of the township of Water Eaton, immediately north of Oxford (FIG. 38).

In the Oxford region, as elsewhere, ridges vary considerably in size, not only from parish to parish, but also from furlong to furlong and even within the furlongs. Though above 350 yards is unusual, lengths of 500 yards occur, and similarly short furlongs of less than 100 yards. Widths varying between 4 and 24 yards have been observed, but are normally between 7 and 13 yards. Though, as already mentioned, there is more regularity in south Berkshire, in the Oxford region and the south Midlands generally the side of ridges does not appear to be controlled by locality, gradient or soil-type.³² If anything, there is a tendency on heavy low-lying land for ridges to be higher and wider. On the Oxford clay at Water Eaton and across the Cherwell at Islip and Hampton Poyle there are many furlongs of highly banked ridges 15 yards and more wide. It is at Water Eaton that the enormous size of 24 yards occurs. But by contrast ridges only 7 yards wide are found in two of the furlongs at Water Eaton, and one includes an individual of only 4 yards. Not uncommonly two adjacent ridges occur each only half the width of their neighbours—clearly a case of a ridge being slit down. This could be the result of a division of a tenement or merely for agricultural convenience—a question unanswerable archaeologically. There are also ridges at Water Eaton that do not extend the full length of the furlong, but end in a point half-way across, as if squeezed out by their neighbours.

²⁹ *General View*, 368-71.

³⁰ See my note in *Top. Oxon.* Autumn 1962 / Spring 1963.

³¹ Young, *Agric. Oxon.*, 268. A map of Chesterton drawn in the 1760's (Oxon. R.O.J., iv/1) shows the name Flood Gates assigned to three pieces (or lots?) of meadow measuring in all about four acres. The small size of the adjoining stream, the situation of the Oxford clay, as well as the lack of any present indications on the ground, make it unlikely that these were floated meadows of the ridged type. But the name may not be rare, and meadows called 'Flotgates' and 'Damunede' are recorded in mid-13th-century manorial surveys in Huntingdonshire: *Ramsey Cartulary*, 1 (Rolls Series 79a, 1884), 332. They could be mowed once a year. Presumably some less sophisticated type of watering is to be understood. Furthermore, the name 'watermeadow' *per se* may apply to any damp or riverside meadow with no connotation of artificial floating.

³² H. M. Clark similarly found no correlation between the width of selions and soil-type: *Agric. H.R.* (1960).

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With such variations in both measurements it hardly needs stating that there is no standard size for a selion, despite the widespread appellation 'half-acre'. But, as rough estimations, 'half-acre' selions were commonly found convenient for assessing rents and services. A survey of the holdings of Corpus Christi College in Marston in 1605 shows that almost all the lands, selions and ridges (all three terms were used) were reckoned at half an acre,³³ but measurement showed how variable and mostly over-estimated these 'half-acres' were—hardly surprising when it is recalled that Jonathan and his armour-bearer slew about 20 Philistines 'within as it were an half acre of land which a yoke of oxen might plow'.³⁴

Reverse-S shaped lands appear to be commoner than straight ones.³⁵ Sometimes, especially on the most highly banked ridges, the curves are very accentuated with hooked ends showing clearly how the plough-team moved onto the headland. It is difficult to believe that ridges were laid out so sinuously; it is more probable that they have attained their shape after ploughing over a long period. The continual encroachment of land upon land presupposed by such an argument would be easier to understand where all the lands in a furlong were held in demesne or by a single tenant.

Whether there were balks between the selions or the holdings in this region cannot be answered categorically. Beecham has suggested that where balks existed they should show between preserved ridges;³⁶ but grass-covered ridge and furrow has lost the sharper profile of the arable selions they once were, and, save for very prominent cases like the famous 'green furrows' at Crimsote on the lias clay in south Warwickshire,³⁷ the presence or absence of a balk can only be proved by excavation. The furrow marks, mentioned above, found in the chalk at Little Woodbury in Wiltshire, though about a metre wide, were single grooves, showing that there had been no unploughed balks there; and recently at Standlake stripping of topsoil preliminary to gravel quarrying revealed the lines of furrows without balks cut into the gravel. What quality of crop grew in the bottom of such furrows is, of course, another matter.

Nevertheless, it is hardly conceivable that on heavy clay, like that at Water Eaton, the furrows were worked to the bottom. Moreover, Mavor commented that in the Vale of the White Horse 'few unsightly balks are left, nor is more land wasted than can be helped under this form of aration'.³⁸

³³ G. N. Clark, *Open Fields and Inclosure at Marston, near Oxford* (O.R.S., 1924), 9-10.

³⁴ I. Samuel, xiv. 14.

³⁵ S. R. Eyre, 'The Curving Plough-strip and its Historical Implications', *Agric. H.R.*, III (1955), 80-94.

³⁶ H. A. Beecham, 'A Review of Balks as Strip Boundaries in the Open Fields', *Agric. H.R.*, IV (1956), 22-44.

³⁷ Orwin, *Open Fields*, pl. xib.

³⁸ *General View*, 159-60.

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These 'green furrows', left uncultivated between each ridge for reasons of drainage (or lack of it), were presumably less spectacular than those of Crimscote, but they were distinct from mere division balks. The latter existed in certain parts of England (and still exist in the open fields of Braunton and Portland³⁹) between holdings, but not necessarily between individual selions. Insistence on division balks was probably commoner where selions were ploughed flat without the wide furrows, which in many areas would have been sufficient boundary marks in themselves. Beecham commented on the normal silence of Arthur Young and his contemporaries on this subject,⁴⁰ but in the open fields of the Baldon district Young did notice the absence of 'division baulks, which in so many counties are sources of weeds and depredation'.⁴¹ It would be unwise to infer from this that outside the Baldon district, either within or without Oxfordshire, division balks were normal in open fields which survived until Young's day: his *View* (or *General View* when reprinted in 1813) of the *Agriculture of Oxfordshire* is in many parts merely a collection of odd observations and anecdotes.

The variable size, shape and normally apparently haphazard lay-out of furlongs of ridge and furrow are well enough known, but that these are commonly the result of older furlongs being partially, and doubtless also wholly, overlain by later ones has not received sufficient emphasis. A glance at a field-map or air-photograph will often show how furlongs cut away corners of others, or how one-time reverse-S lands remain as half-S's, while their other halves are covered up by newer lands laid out in the opposite direction. A case of overlying on a field-map of Lower Heyford⁴² was illustrated by Eyre,⁴³ and his contention that straight lands are generally later than curved ones is corroborated by other observations in the Oxford Region. Later furlongs tend, moreover, to contain shorter lands. A simple way of effecting this, not uncommon at Water Eaton, was by dividing a furlong across the ridges, thus making a furlong of reverse-S's into two of half-S's. No headland was constructed along the new division, which is witnessed by a bump on each ridge, showing the build-up where the ploughs turned. These bumps probably represent 'half-balks', such as the Orwins recorded at Laxton in Nottinghamshire.⁴⁴ It is clear then that open-field patterns were susceptible to considerable and continual alteration as well as enlargement, and it must not be assumed *a priori* that selions remained unchanged from the time of their first ploughing until enclosure.

³⁹ See above.

⁴⁰ *Agric. H.R.* (1956), 23.

⁴¹ *Agric. Oxon.*, 239.

⁴² Mowat, *Sixteen Old Maps*.

⁴³ *Agric. H.R.* (1955), FIG. V, p. 92.

⁴⁴ *Open Fields*, 99.

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Nevertheless levelling of ridges, either for relaying out or for other purposes, was not to be lightly attempted. Kerridge quotes cases of slitting, cleaving and throwing down as regular practices,⁴⁵ but this was presumably a relative process to keep lands in trim: it can hardly mean flattening of high backs. As became apparent after enclosure, there were dangers involved in levelling, unless done very gradually.⁴⁶ A farmer at Wendlebury, so Young observed, had some high ridges in his enclosure, but was 'very cautious of ploughing them down as they contain only a cold clay', while Sir Christopher Willoughby had ploughed some down to make an ornamental lawn, but after 30 years the land had not recovered. Willoughby's moral from this was that 'old high ridges should on no account whatever be ploughed down'. They were best laid to grass unploughed, for 'the staple is the artificial child of cultivation; and if it is buried, and the subsoil brought up by levelling, it is injured for an age'.⁴⁷ Whether for technical or more purely economic reasons, so much ridge and furrow remains under grass to this day.

III

After drawing heavily on Water Eaton in the last section, an attempt at correlating the ridge and furrow survey with documentary evidence is called for, in the hope of reconstructing something of the former township and its open fields and their enclosure. In summary, the results are rather disappointing: neither the enclosure nor the depopulation of Water Eaton can be precisely described or dated, but both processes appear to have spanned several centuries.

Water Eaton lies low by the Cherwell on the Oxford clay.⁴⁸ Until recently it was reckoned a township of some 1,500 acres in Kidlington parish. It included Frieze, lying west of the Banbury road (or Portway), and a small detached area between the road and the river on the line of the present Oxford by-pass. (Both these areas are omitted from the survey shown on FIG. 38 as they have suffered from recent developments.) The southern part of Water Eaton probably includes a considerable portion (three hides in Domesday) of the original Cutteslowe, which Oseney Abbey apparently united with its manor of Water Eaton in medieval times. The extra-parochial area that continued to be known as Cutteslowe probably represents the remaining two hides that were held by the Priory of St. Frideswide.⁴⁹

⁴⁵ *Econ. H.R.* (1951), 16-17.

⁴⁶ Eyre, *Agric. H.R.* (1955), 89.

⁴⁷ *Agric. Oxon.*, 103.

⁴⁸ Some piecemeal and partly inaccurate information on the manorial history of Water Eaton can be found in Mrs. B. Stapleton, *Three Oxfordshire Parishes* (O.H.S. xxiv, 1893), 102-14. See also some short notes by H. E. Salter in *The Cartulary of Oseney Abbey*, iv (O.H.S. xcvi), 97-8.

⁴⁹ In 1928 part of Cutteslowe, the detached part of Water Eaton and a few acres of Frieze were incorporated within the City of Oxford. The remaining parts of Water Eaton and Cutteslowe were then combined with other areas to the north-west and south-west to form the new civil parish of Gosford and Water Eaton.

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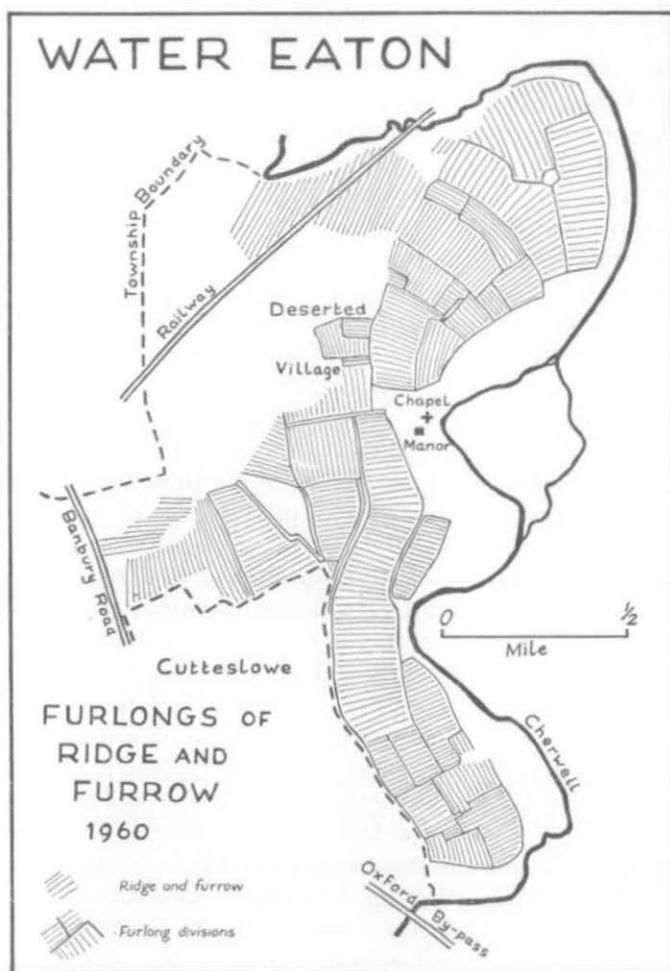


FIG. 38

Map of Water Eaton showing furlongs of ridge and furrow as preserved in 1960.
 (N.B.—Within the furlongs only the length and direction of the ridges are shown:
 no attempt has been made to represent the individual ridges or 'reverse-S' shapes.)
 (Parish boundary based on Ordnance Survey. Crown copyright reserved)

Most of Water Eaton lies under ridge and furrow, and appears to have been under permanent grass since enclosure. Nevertheless, tractor ploughing is encroaching here and there, opening up the tops and throwing outwards, so that in several enclosures the ridges are already low and will doubtless be obliterated in time. Only in some western and north-western parts of the

township was such levelling complete by 1960. The extent of the destruction is uncertain, especially as the unridged area includes the deserted village site. This shows best on air-photographs, but is also partly ploughed. The other areas not lying ridge and furrow seem never to have been cultivated either before or since enclosure. They consist of riverside meadows of varying breadth, a few ponds, and an irregular triangular plot bounded by big headlands half a mile east of the road. Perhaps this represents one of the commons or greens mentioned in a survey of 1659.⁵⁰

That Water Eaton once contained a vigorous agricultural community is indicated by Domesday that recorded 26 *villani* and 7 *bordarii* with 9 plough-teams.⁵¹ There were also three and a half hides of demesne (*inland*) that doubtless increased its value to Oseney Abbey, which acquired Water Eaton in the 1130's. An account roll for the year 1279-80 shows that the Water Eaton manor was then enjoying some intensive demesne farming, both arable and pastoral, directly supervised by the Abbey through a canon-warden.⁵² The figure of 63 oxen, suggesting a considerable ploughing capacity, is reflected in the large grain liveryies to the Abbey, while over 600 sheep were accounted for. Of all of Oseney's manors whose accounts survive in this roll, Water Eaton was then the most prosperous, apparently being exploited as a home-farm and perhaps also for the Oxford market. Some of the demesne was being worked by *famuli* (hired labourers or servants of the manor, as opposed to tenants), and it can probably be assumed that there was also a body of customary tenants, though the account is not explicit on this, except to mention the commutation of 16s. worth of labour-services. Nevertheless, it is clear that the emphasis on the manor was not on tenants' farming. There is nothing to show that any of the demesne arable was enclosed at this period. Indeed, for Water Eaton and Cutteslowe in the 13th and 14th centuries there are several references to open-field acres, headlands and butts as well as to pieces of common meadow held by the Abbey and by the Priory of St. Frideswide.⁵³ Some of these appear to have been blocks, not individual selions. Other recorded holdings are half a hide with the Rastel family in the 12th and 13th centuries, and the 'miller's acres', consisting of two acres of arable (perhaps, from their description, two adjacent ridges) bounded by lands of the Abbot on either side, with an acre of lot-meadow, exchanged by a franklin in about 1300.⁵⁴ Customary tenants and their lands are very rarely mentioned, but the reason cannot be depopula-

⁵⁰ See below.

⁵¹ *V.C.H. Oxon.*, I, 413.

⁵² *Oseney Cartulary*, ed. H. E. Salter, VI (O.H.S. xci), 196-8.

⁵³ e.g. *The Cartulary of the Monastery of St. Frideswide*, ed. S. R. Wigram, I (O.H.S. xxviii), 77; II (O.H.S. xxxi), 212; *Oseney Cart.*, IV, 102: dealing with a dispute between the two houses.

⁵⁴ *Oseney Cart.*, IV, 99-101.

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tion at this period : 14th-century tax-lists show reasonable numbers at Water Eaton, and as many as 128 paying poll-tax in 1377.⁵⁵

There are no more unmutated accounts until the years 1509-10 and 1520-21.⁵⁶ These included no details of grain and stock with the cash returns, but show that a large part of the demesne was then leased at farm. Oseney was clearly finding Water Eaton more profitable for livestock than arable. Two derelict cottages had been converted into a pinfold, and Cutteslowe pasture was reserved for the monastery's cattle. But there were still customary tenants paying rents amounting to some £24, and 16 tenants were party to an agreement with the Abbey and Convent in 1511.⁵⁷ Besides a number of common rights and small pieces of arable and meadow, the tenants conceded to the Abbey the Southfield, which thereafter remained pasture. The tenants received lands and common rights elsewhere, particularly in Cutteslowe, but the Abbot had the right to pasture 300 sheep in specified fields or parts of fields, when not sown, and the tenants might be required to wash and shear as many as 400 of his sheep. This agreement probably explains the record of the Commission on enclosures of 1517 that the Abbot of Oseney had shortly before enclosed with hedges and ditches and converted to pasture 107 acres of arable at Water Eaton.⁵⁸ It may also explain why the farm of the manor and demesne lands, only £16 in 1509-10, was £35 in 1520-21.

Since the Dissolution the manor has passed through the hands of a number of families, and the demesne land has been mostly, and later entirely, leased. The accent has been on enclosed pasture and meadow, as illustrated in a survey of 1659 when some of the riverside meadow was rated at 45s. an acre.⁵⁹ In the following decade Anthony à Wood put Water Eaton first in his list of places of 'good pasture' near Oxford,⁶⁰ while to Arthur Young in 1809 Water Eaton was 'rich cow ground' and contained 'the best grassland in the county; it is under dairies'. One farmer had sheep as well, but there was 'some arable'.⁶¹ However, the surveys of 1659 and 1670 record 20 to 30 tenants of the manor, mostly resident, holding some 300 acres. Some 80 of these acres were arable, in which only 6 or 8 of the tenants partook. The rest was common pasture and

⁵⁵ I am indebted to Mrs. M. Lobel for showing me transcripts of tax figures compiled for the Victoria County History.

⁵⁶ *Oseney Cart.*, vi. 230, 259-60.

⁵⁷ Sawyer pps. in private hands. I am indebted to Mrs. M. Long who has worked through these papers and allowed me to consult her notes.

⁵⁸ *The Domesday of Inclosures*, ed. I. S. Leadam, 1 (1897), 376-7.

⁵⁹ Sawyer pps. The term 'water meadow' is used, but there is no reason to think that they were artificially floated: see above.

⁶⁰ Wood, *City of Oxford*, ed. A. Clark, 1 (O.H.S. xv), 53.

⁶¹ *Agric. Oxon.*, 12, 207, 309.

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meadow.⁶² These surveys suggest that the oft-quoted statement, reputedly made in a judicial interrogation by one of the intending hunger rioters in Oxfordshire in 1596, that Mr. Frere had destroyed the whole town of Water Eaton,⁶³ may not have been strictly accurate. Frere was not specifically accused of expulsion by the malcontents, and no tenant of Water Eaton, resident or expelled, appears to have been among them. Nor was the complaint of enclosing the commons held against Frere, as against other gentlemen in the district.⁶⁴ But Frere had built a pretentious manor-house and Water Eaton Chapel a short distance from the village site, and it is quite possible that this was accompanied by some destruction, perhaps of decadent homesteads. On the other hand, it could be that the desertion of the village was completed in Frere's time, and that the 17th-century tenants occupied homesteads dispersed about the township.

This account of Water Eaton is necessarily very sketchy. But two interesting conclusions might be hazarded—that most of the ridge and furrow there has been abandoned since the 16th century, if not earlier, and that when arable farming was most intensive, probably in the late 13th century, the bulk of the land was in demesne. It seems likely that Oseney Abbey's demesne arable included large blocks in the fields, which would presumably have allowed considerable independence of common-field customs. In which case enclosure, when desired, should have been relatively easy to effect.

But the documentary evidence is insufficient for definite conclusions. It is not even certain how many open fields Water Eaton possessed at any one time, and only in an exceptional township could field boundaries be deduced from the ridge and furrow pattern, without the help of a field-map or detailed survey, neither of which has turned up among the Water Eaton papers. There are recorded, however, a number of names of fields, parts of fields or furlongs—in the medieval period, Breche, Benacre and Stotfurlong;⁶⁵ in the 16th and 17th centuries, Northfield, Southfield, Great Southfield, Cutteslowe Field, Jordanhill, Twisloe and again the Breach.⁶⁶ Some of these can be roughly located, but none precisely demarcated. Others are entirely lost, or may be alternative names. Several of the names of meadows and other non-arable are similarly unidentifiable.

In fact the archaeological approach to open-field farming has clear limitations. The manorial and village economy, the tenurial basis, field customs, rotations and the crops grown have all to be sought from documents and can

⁶² Sawyer pps.

⁶³ *Cal. State Papers Domestic*, 1595-7, p. 343.

⁶⁴ *Ibid.* pp. 316 ff., 342 ff.

⁶⁵ *Oseney Cart.*, iv. 99-101.

⁶⁶ Sawyer pps.

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hardly be read on or under the ground. Land lying ridge and furrow has at some time been arable, yet the old ridges will not tell us how much land was subject to an open-field rotation at any particular time. But agriculture, like archaeology, is an earthy pursuit, and study of the remains of open fields can, if intelligently combined with that of documents, help in creating a more feasible picture of former agricultural life and work. We cannot hope to understand records of by-gone husbandry practices without testing the terminology against the soil.