

CHARTRIDGE AND PEDNOR HEDGEROWS: A LANDSCAPE STUDY

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PART II: IMPLICATIONS FOR LANDSCAPE HISTORY

The second part of Mr Casselden's study explores in detail what can be learned about the landscape history of a small area of the central Chilterns, from the vegetation of its hedges (surveyed in Part I). Certain limitations of the 'Hooper formula' for dating hedges are discussed, and some correctives proposed. Among these are complete shrub profiles for entire hedges, noting the presence or absence of particular shrubs, and the herbaceous layer at the hedge-bottom. It is shown that it is possible to follow the course of the tide of clearance outwards from the nucleus of Chesham, to trace the outlines of former common fields, early assarts and their sub-divisions, and to suggest the date by which enclosure of the common fields was virtually complete.

The Earliest Hedges

In attempting to date hedges it is valuable to have some of known date as a point of reference, but for the period before 1500 source material is rarely detailed enough to allow this. However, for the Chilterns area we have one early bench-mark in the Black Hedge near Princes Risborough, mentioned as an estate boundary in a charter of 903 and therefore over a thousand years old. The more species-rich parts of this boundary bank have an average of 12.2 species of shrub or tree per 30 yard section, which according to the formula for dating devised by Dr Max Hooper (Pollard, Hooper and Moore 1974, 79) would place its origin in the eighth century. The estimated accuracy of this formula is however only ± 200 years, so no more firm conclusion can be reached than that the known date of the boundary and the apparent age of the hedge roughly correspond.

This hedge has had special attention and the figure of 12.2 species per section is therefore likely to be the true value. In my own survey work, for reasons outlined in Part I of this paper, the average figure for the number of shrubs in any particular hedge by 30 yard sections can be

regarded as below the true value, although subsequent checking of hedge sections has shown that my initial survey was not seriously inaccurate.

Even allowing for a slightly less rigorous methodology there are some hedges in and near the survey area that will bear comparison with the Black Hedge. For example, the first nine sections of the boundary bank of Captain's Wood at its southern end overlooking the Asheridge Road have an average shrub count of 12.1 species per section. This bank would have been topped in all probability by a paling fence at first and the process of shrub acquisition would then have followed a similar process to that of an ordinary boundary bank.

The position of Captain's Wood on the brow of the valley at the boundary between communities, its sinuous shape, large bank and long list of plant species all point to it being a primary wood, in continuous existence since the earliest settlement. Its boundary bank is therefore likely to date from the valley clearance, being in effect the tidal edge of that clearance. On present knowledge that clearance

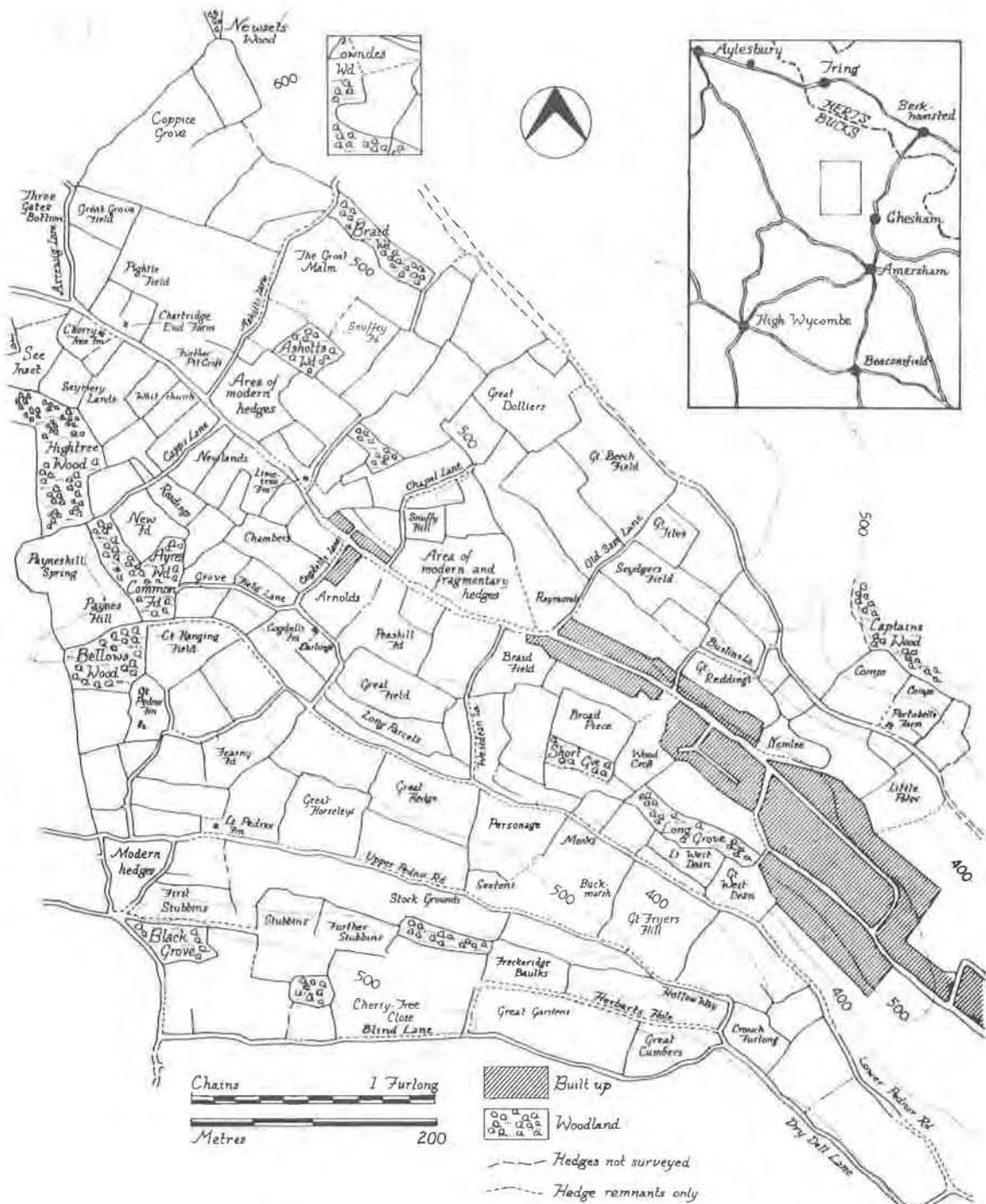


Fig. 1. The survey area with field names.

was part of the Saxon expansion westward from the central nucleus of Chesham at a date well before 1000. The botanical evidence supports this. No doubt there was earlier farming in the valley, although no Roman villa site has yet been found upstream of the Latimer site, but the collapse of the Chiltern economy almost certainly led to much farmland reverting to scrub and ultimately woodland in the succeeding centuries. That the Saxons found a certain amount of land being cultivated by Britons is suggested by the field name Great Cumbers, which seems to contain Welsh *cymry*, but it is unlikely that the Saxon colonisers found any very extensive cultivated area when they penetrated the Chess valley and the boundary banks of such woods as Captain's Wood are unlikely to pre-date the Saxons.

The continuation of the west edge of Captain's Wood northwards is by a series of bays which may represent successive stages of clearance along the valley side. Not all these bays have high shrub counts, the figure ranging from 7.9 to 11.4 per section, but there are problems of assessment because in some places the boundary bank now lies within the wood, while elsewhere it has suffered from grazing pressure and the shrub line is very thin. Long Grove has a very similar aspect, being on the boundary between the fields of Chesham and those of Chartridge. The edge of this wood is also indented with bays and the average shrub count of about 11 species per section is comparable with Captain's Wood.

All these wood boundary banks have a range of species which make them comparable with the Black Hedge. Their location and shape together with the internal flora of the wood where it still exists, accord well with a Saxon date. The shrub content of hedges and boundary banks should however be compared with the total range of shrubs and trees occurring in a particular locality. Hedges and wood edges form a unique habitat, since within them the natural succession from grass through scrub to woodland is halted in its middle phase and although that 'scrub' gets increasingly rich in species, no final demise of non-woodland plants takes place. In the post-

clearance landscape these new habitats offered the earliest opportunities for many plants to establish themselves in a man-made countryside. The history of these early hedges is still reflected in their shrub composition.

There are a few hedges with a comparable shrub range to the primary wood edges. Two of these adjoin Captain's Wood, running down the valley side from the wood edge at points where embayments begin or end. The unusual feature of these hedges is that they change character abruptly half way down the valley side, to be continued by a hedge with a much simpler structure and lower shrub count. One of them changes at this point (SP 949034) from a single to a double hedge, becoming a lane, now abandoned. These hedges have shrub counts of 12 and 10 in their older sections, and similar hedges adjoining Long Grove and a former wood edge in Herberts Hole have an average of 11.7 and 11.5 species per section. These older sections also terminate before the valley bottom to be completed by later hedges. Other hedges adjoining these woods and dateable to the sixteenth and seventeenth centuries do not show anything like their richness of species. It seems therefore that they are pre-enclosure and their origins are bound up with the successive stages of clearance which are marked in the wood embayments. It is the more modern extensions of these hedges which date from the enclosure of common fields.

The remaining hedges with a range of species to mark them out as among the earliest features of the farmed landscape are the boundaries of lanes. A long stretch of the southern hedge of Blind Lane, leading to Hundridge, has an average shrub count of nearly 10, with 13 species recorded for some sections. This stretch of the lane must have had a separate origin for it has no bluebells in the herb layer, unlike the rest of the lane's hedges to east and west. In addition those sections of the lane immediately adjacent have continuous hornbeam, a tree closely associated with wood boundary banks in the conquest period. Several sections of Blind Lane have shrub counts of more than 8 species per section, but the hedges were not

homogeneous in origin. Much of the lane seems to have run through or alongside woodland in the medieval period, but this species-rich section without bluebell at the base seems to be the earliest example of a hedge running across arable land. Its shrub count would make it early Norman at the latest and it may have been an estate boundary which continued to east and west along the borders of woodland. Fig. 2 shows the species density of hedges in the survey area.

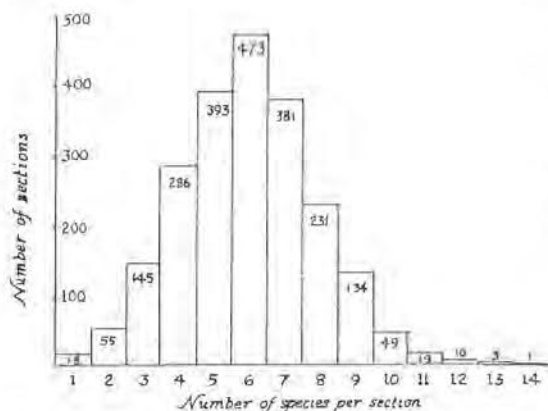


Fig. 2. Frequency distribution of hedges of different species richness in the survey area as a whole.

It has been seen in the analysis of individual species in hedges in and near the survey area that the distribution of many plants is largely limited to a few of the earliest hedges in the landscape (see Part I in Vol 28). One centre of such plant clusters is the southern hedge of Hollow Way on the Pednor road (SP 944022). This is the only hedge in the survey area to have wild privet in any quantity, other than through planting, and has several plants such as buckthorn, whitebeam and wayfaring tree, the distribution of which is very limited. It has an average of 8.6 species per section which would be slightly higher if some sections of the hedge were not so thin. The hedge lacks a planting species; the amount of hawthorn (5 sections out of 11) is far too low to provide this and there is no other candidate. There is no bluebell in the hedge base, suggesting a non-woodland origin. The discontinuity with adjoining road hedges to the east and west is very marked. The hedge on the Chesham side has only a little

above 5 species per section, while towards Pednor there is a former wood edge—a continuous planting of hornbeam with bluebell at the base and an average of 6.5 species per section.

The Hollow Way hedge seems to have grown up as scrub on the bank of the lane leading to the settlement at Pednor. The lack of any woodland element in its make-up suggests that the lane ran through arable land when the bank was formed, as far as a point at the top of the hill where it reached a wooded area. It is one of the earliest features of the landscape. (The northern bank of the Hollow Way has however been remodelled, probably in the nineteenth century, and its plant population has a much more recent structure.) A remarkably similar hedge is to be found on the Asheridge road where it climbs the hill. This hedge is in much better condition and has over 9 species per section and a similar range of shrubs, including one section with privet. The presence of hornbeam in this case raises the question of a possible woodland origin although other factors such as the absence of bluebell both in this hedge and others in the valley argue against it. This hedge also shares the same discontinuity in shrub content with the road hedges above and below. Tiles Wood used to lie alongside the road on the crown of the hill, but has not left a distinctive wood edge. The corresponding northern hedge of the road where it climbs the hill is more difficult to assess but is rich in species.

These early hedges are all associated with the earliest fixed features of a cleared landscape—the lanes joining communities and the boundary between field and forest. There must be a strong presumption that they are of Saxon origin. There are no groups of field hedges, other than those linked to embayment of primary wood edges, that have the kind of shrub range that would indicate such an early date. An occasional hedge such as the southern hedge of Great Beech Field at Chartridge (SP 938042) has a shrub count (9.4) which would suggest a very early date, but they are isolated examples, forming no pattern of enclosure, and in this case perhaps the edge of a

wood assarted at a later date. The indications are therefore that there were few fields here enclosed with hedges in the late Saxon/early Norman period.

The Common Fields

The development of the common-field in England has defied comprehensive description. Even the date of its origin is the subject of debate. In the Chilterns, the existence of common-field systems was only firmly established by the work of David Roden (Roden 1966). It had long been believed, on the authority of H. L. Gray, that no such system had ever been practised in the hills (Gray 1915), and as late as the 1950s Beresford had judged the open-field system to have been insignificant in the Chilterns on the basis of a study of glebe terriers (Beresford 1956).

Chiltern common-field systems differed from those of the Midlands in having a large number of quite small fields as opposed to the classic three or occasionally two fields of the Midland vales. Thus Little Hampden had 9 fields and The Lee 7, numbers by no means unusual for Chiltern villages (Roden 1966).

The management of crop rotation in so many fields may have been a complex problem in itself, but there were further anomalies in the common-field systems of the Chilterns as E. C. Vollans discovered when making an analysis of the Missenden Charters (Vollans 1959). She found relatively few references to furlongs, even though the charters cover a period from the twelfth to the fourteenth centuries when the system was at its most developed. The implication is that many areas of arable in the Chilterns were too small to require division into ploughing units.

Elsewhere in the Charters there are references to selions, the basic unit of landholding in the common fields, but the overall pattern of landholding remains elusive. Compared to the descriptions of selions being in a particular furlong in a particular field, which are usual in the average three-field village, these descriptions seem fragmentary or incomplete.

There are many references to crofts, normally meaning small enclosed fields, but here concealing a variety of circumstances. Vollans points out that many crofts were sub-divided into various holdings. Rights of grazing on such land must have varied greatly and their exercise would have required much co-operation. Nor were assarts or fresh clearances of woodland always taken into single ownership. Some were sub-divided, others were piecemeal clearances of woodland holdings attached to the arable holdings of the common fields, while larger clearances sometimes resulted in a mixture of woodland, pasture and arable such as Frithsgrove, where the word grove was retained and the area of assart gradually became sub-divided by inheritance (cf. Roden 1969).

When enclosure did take place it was often accomplished with a dyke and fence: a twelfth century Kingshill charter provided for stakes and brushwood to be taken from a nearby wood for the purpose (Jenkins 1938, 122). The practice of planting live hedges seems not to have been established until later.

Enclosure swept away the common-field system of the Chilterns before detailed estate maps became at all common. By the seventeenth century only remnants of the Chiltern common fields remained, chiefly consolidated in unenclosed holdings.

It is not surprising that Gray dismissed the idea of common-field agriculture in the Chilterns. The visual evidence has almost disappeared, destroyed by four centuries of ploughing. However ridge-and-furrow, banks and ditches persist as faint marks in the fields even after hundreds of years of disuse, and there are certainly fields in and around the survey area in which long narrow divisions of land can be seen. In some cases these may be the traces of drainage schemes but there are examples of the divisions running across rather than down the slope. The best example of this is in the fields called Comps, in the Asheridge valley. There are similar traces in the field Little Poles nearby, once part of the common field Pullfield. In Fearnly Fields in

the Pednor valley (SP 927031) two blocks of what are possibly strips run in different directions.

The most difficult undulations to see are those on the higher clay tops. There appear to be a number of these on land which was probably part of the common field called Peashill in Chartridge but there is no vantage point from which to see them.

If the common-field divisions have no more than a shadowy presence in the present landscape, some cultivation terraces in the old common fields are highly visible. Perhaps the best of these are to be seen in White Hawridge Bottom between Bellingdon village and Chesham Vale. A terrier of 1478 (BL, Cottonian, Galba E iii, 131) which describes all the lands in Chesham belonging to Leicester Abbey mentions 17 pieces of land lying in White Hawridge, establishing its status as one of Bellingdon's common fields. The subdivision of White Hawridge into numerous little elongated holdings survived right down to the Tithe Map of 1843 and beyond. Most of these little fields have disappeared since the war as hedges have been removed, but some of the terracing of the land on the steeper slopes remains.

The date of these terraces is unknown but it seems unlikely that they are later than 1300. The inconvenience and labour involved in cultivating a steep slope would have been considerable however it was done, and only undertaken if land was at a premium. Population was in decline after 1300 and the Black Death in 1349 so altered the balance between land and labour that land pressure did not re-emerge until the sixteenth century. By then enclosure for stock-rearing was the principal movement changing the countryside. The Orwins' work on sixteenth-century Laxton showed that in a less pressurised agricultural economy the practice was to leave the steeper slopes as pasture for tethered animals. Bringing such slopes into cultivation argues a considerable pressure on land.

There still remained much untilled land at

Chesham in the eleventh century. The Domesday return reported land for 31 ploughs, one plough-land being waste, and even if one allows the theoretical acreage for each plough-land of 120, this still accounts for less than half the parish. The pace of expansion was probably quite rapid in the eleventh and twelfth centuries. In the Missenden Cartulary are charters of the late twelfth century referring to assarts in Pednor, clearances that had already been made (Jenkins 1940, 18). It appears therefore that by this date outlying areas of a very large parish had been brought into cultivation. Land pressure may have built up earlier on the best farming land of the parish but it is questionable whether White Hawridge is in this category. The date of the terraces may therefore be later rather than earlier, perhaps in the late twelfth or thirteenth centuries rather than the Saxon period.

One factor which precludes their being much earlier is their shrub content and herb layer. All the terraced banks that are still situated in fields display, in their lack of shrubs associated with woodland, for example holly and cherry, and their paucity of bluebell, characteristics consistent with open field origins.

The five field banks in White Hawridge range in height from 7 to 12 feet and have shrub counts of between 8.5 and 9.8 species per section. The amount of hawthorn in these 'hedges' is on the low side as one would expect considering their origin in scrub. A second group of such banks in West Dean, one of the Chartridge common fields, has 'hedges' that are much less uniform in their composition with between 5 and 9.4 species per section. Some of these 'hedges' are however in very poor condition having suffered a lot of grazing pressure. One interesting point about these terraced West Dean holdings is that the elongated ones below Short Grove have a faint reversed S-shape which was typical of the individual lands of the common fields.

The restriction of a number of shrubs and trees to features of the common fields, confirms their pre-enclosure date. So does their species count. Hedges with eight to nine

species per section should have an approximate date of origin, according to Dr Hooper's formula, in the eleventh or twelfth century. Of course, hedges that originate in scrub on field banks may not behave in the same way as planted hedges in terms of shrub acquisition. Nevertheless, the fact that these banks are the centres of distribution clusters of the less common shrubs such as buckthorn, clematis and spindle, together with their shrub counts, supports a date in the early post-Conquest period.

Common Field and Assart—Plant Indicators

Documentary sources such as land terriers, maps and field names provide the best evidence for areas of common field, but much supplementary information can be gleaned from the botanical evidence and particularly the mapping of certain plants in hedgerows. The colonising ability of different species varies enormously. Cow parsley, for example quickly establishes itself in the most recent hedges—it is common at the foot of some post-1945 hedges along the lower Pednor Road. Bluebell, on the other hand, has an extremely limited colonising ability, often failing to move out of its original site after hundreds of years. This differential ability to colonise provides a good guide to the origins of hedgerows particularly when all the hedgerows in one area are mapped for selected plants.

The plants I have mapped in the survey area for this purpose are bluebell (Fig. 3) and dog's mercury (Fig. 4). The mapping was carried out on the 30-yard-section scheme. Whereas bluebell is, so to speak, a very leaden-footed plant, dog's mercury is a steady if unspectacular coloniser, creeping yard by yard along a hedge from its original source. Pollard, Hooper and Moore (1979) suggest a maximum rate of spread for dog's mercury of 1 yard in 3 years, and study of the plant in hedges of known date in the vicinity of Monks Wood, Huntingdonshire, showed an actual rate of spread of as little as a yard every nine years. However in one of the post-1945 hedges referred to above dog's mercury has crept just over 20 yards in less than 40 years so one cannot be dogmatic. The general habit of dog's mercury is however clear.

It is a woodland plant which by rhizomes and seed gradually colonises hedgerows over a long period, and so tends to mark out the older hedges of the former arable areas.

Bluebell and dog's mercury are not always found together in woodland. They often occupy different areas within a wood, and some small woods have one without the other, which may explain why some hedgerows have bluebell but not dog's mercury, the woodland having been the source of the hedge's herb layer. At the other end of this spectrum some hedges have neither plant, indicating that they were originally laid out on open farming land either at too great a distance from sources of woodland herbs to acquire them or in some cases too recently to have done so. In the survey area and the Chilterns generally most hedges date from the seventeenth century or earlier and are never far from a wood or former wood, so that where hedges were planted in the course of enclosure of common fields both a woodland source and sufficient time have been available for some colonisation by dog's mercury. The distinction between hedges with and without dog's mercury is therefore principally one of age rather than origin, always bearing in mind whether a likely source was available at either end of the hedge.

The distinction between hedges with bluebell and those without bluebell is more fundamental. Hedges with bluebell in any quantity may be assumed to have had bluebell from their inception because of the very poor colonising ability of the plant. They must therefore either have been former wood edges or the hedge banks must have been constructed immediately after the clearance or assarting of the land, for bluebell does not survive long in open fields in the eastern half of England. Bluebells in hedges are heavily concentrated in parts of the survey area which are known to have been assarted at a relatively late date or where substantial areas of woodland are known to have existed until the late medieval period. This is a fairly good theoretical base on which to judge the origins of hedges with bluebell, but one word of warning must be sounded. There are one or two hedges in the survey area which



Fig. 3. Distribution of Bluebell in the survey area.

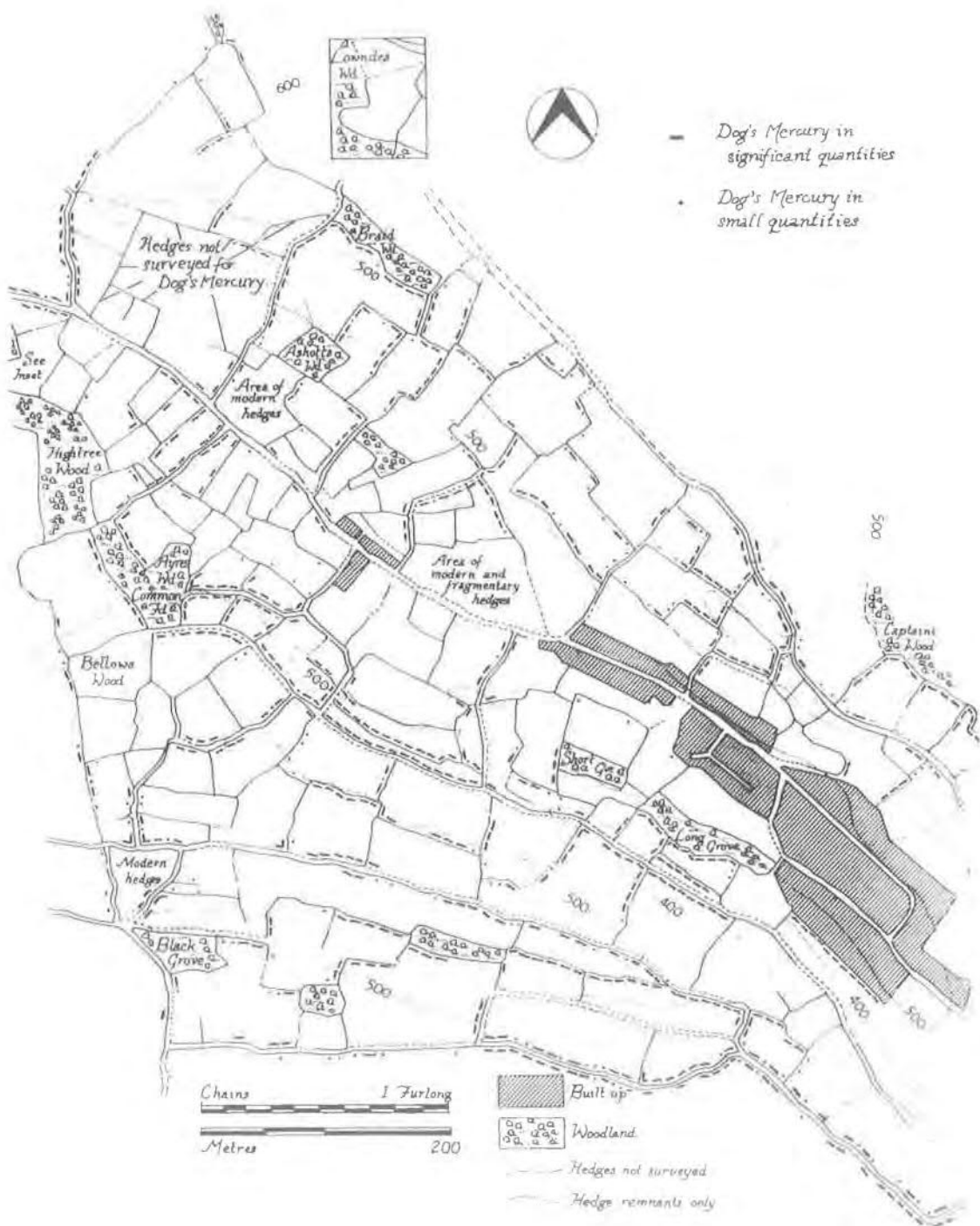


Fig. 4. Distribution of Dog's Mercury in the survey area.

appear to have been planted to sub-divide enclosed fields (see pp. 144, 152) and yet have considerable amounts of bluebell in them. It may be that on occasions bluebell was introduced into a hedge with the planting material, if that material was taken from woodland with substantial bluebell colonies.

The distribution maps of these two woodland plants show which parts of the survey area were cleared at an early date and were for some time in open-field arable, and which areas were assarted at a later date and have hedges which are clearly influenced by woodland origins.

The Pednor Valley

One of the principal features of the Pednor Valley hedgerows is the almost entire absence of bluebell from Bury Farm to the eastern hedge of Great Hanging Hill (SP 925034) just to the NW of Great Pednor Farm. The only valley hedge with any amount of bluebell is the eastern hedge of Parsonage (SP 937027) and even here it is only sporadic. Most of this valley was occupied by the common fields of Chesham and Chartridge during the Middle Ages. Towards the eastern end of the valley lay Churchfield to which there are several references in the 1478 Leicester Abbey terrier. In the 1629 Wedon Hill Manor rent roll (Eland 1941) we read of a piece of land in West Dean 'abutting upon a style called Churchfield style'. West Dean was one of the Chartridge common fields and lay in a long and narrow strip of land on the northern side of the valley under Long and Short Groves.

There is a reference to a further common field in the valley in the Wedon Hill rent roll. This was Elmonfield, which adjoined West Dean on the opposite slope of the valley facing the western end of Long Grove. It must have been quite small in 1629 since much other land on the same side of the valley was enclosed. Fryanhill is described as a close and Monks-croft was presumably so. Elmonfield, which was a Hundridge field, may have extended to the top Pednor road, rather as the fields today encompass all the lands between the roads in a single sweep.

Dry Dell Lane has strong colonies of dog's mercury for most of its length and indeed this plant is found all along the road to Pednor. Bluebell however is only found along the edge of Spring Wood and at the junction of Blind Lane, until the former wood edge is reached above Hollow Way, from which point bluebell is almost continuous in the road hedges to Little Pednor Farm and beyond. Dry Dell Lane lies on a terrace between Churchfield to the north and The Worthys to the south, the latter being a common field which encompassed all the land down to the Missenden Road, formerly Westmead Lane. Beyond Dry Dell Cottage the lane's hedges have no obvious planting species, with hazel being the dominant shrub. The lane may only have acquired hedges through the growth of scrub on the banks. But hazel is not a fast coloniser of young hedges and its frequency here is somewhat surprising.

The road in the Pednor Valley is really no more than an up-graded field track. As far as the Chesham Town boundary it runs, for much of its length, along the top of a field bank. Some parts of the hedge on the southern side are again just managed scrub. There is no dog's mercury on this bank until Great Friar's Hill, opposite the eastern end of Long Grove. This is probably because this plant is still spreading eastwards along the valley bottom and has yet to reach these hedges. Their comparative youth, reflected in an average of less than five species per section, is also a contributory factor.

There is no bluebell in the cross-valley hedges of Herberts Hole. They probably represent sub-divisions of assarts at a later date than the original clearance. At the eastern end of the valley are fields with the names Freckeridge Baulks and Great Gardens, the former indicating common field origins. Overlooking the valley to the north are a succession of former wood edges, mostly with strong bluebell, a pattern repeated on the south side of the valley but more interruptedly since some of the hedge or wood banks have been removed. Here lies the section of Blind Lane where the hedges appear to have open field origins and contrast with the bluebell and hornbeam hedges to east and west (see p. 135). It seems probable that at

one time the common field land at the eastern end of Herberts Hole was contiguous at this point with the common field Ridgesfeilde (1629) which lay to the south of the lane. The lane divided the two fields.

The absence of bluebell in the hedges of the Pednor valley extends to the side valley followed by Westdean Lane, formerly Greenerd Lane. The lane marks the division between two Chartridge common fields, Broad Field and Peashill Field, and bluebell is only found in the hedges at the very top of it.

There is therefore a marked agreement between areas of former common field and the absence of bluebell in hedgerows in the Pednor Valley and its side valleys. The implication is that as Saxon clearance spread westwards through the valley it left the ridges for some time swathed in woodland, the edges of which are clearly marked even to this day by bluebell in the boundary banks of that woodland even though the woods themselves have now almost completely disappeared. At the end of the valley lay an area of woodland which straddled the parish boundary, from which the field Great Hanging Hill must have been assarted and of which only Bellows Wood remains. The bluebell in the valley-bottom hedges from this point marks the arable/woodland boundary as it must have existed for some considerable time. On the northern side of the Pednor Valley the edges of Long and Short Grove marked the original line of clearance up the valley side, while to the West of Westdean Lane bluebell in hedges round Cogdells Farm probably marks the extent of the arable up the hillside, although the exact borders of the original woodland are now unsure.

The Asheridge valley

This has been built on for a considerable distance out from the town centre. However, when the fields begin one can see the same pattern of dog's mercury and bluebell repeated. Bluebell is absent from the valley hedges but appears along the former Long Lane overlooking the valley on the southern side. On the northern side is Captain's Wood marking the line of clearance on that side. The valley splits

into two arms near Hazeldene Farm and on the southern arm the valley bottom is clear of bluebell as far as Old Sax Lane, a similar distance to the limit of the open field in Herberts Hole. The first fields encountered on leaving the built-up area (travelling west along the Asheridge valley) were part of the Chartridge common field Pullfield, to which there are references both in the 1478 Leicester Abbey terrier and the 1629 Wedon Hill Manor rent roll.

North Chartridge

Beyond Old Sax Lane up the Asheridge valley the distribution of bluebell is far more complex. There are valley bottom hedges with continuous bluebell, valley lanes with bluebell, former wood banks in the valley bottom with bluebell and frequent juxtaposition of field hedges with neither. In the eastern part of this valley lay Beechfield, which from the descriptions of land in the Wedon Hill rent roll—'land lying in Beechfield', 'a close in Beechfield'—must have been a common field although by 1629, with enclosures becoming numerous, its function as such may have ended. It seems to have extended from somewhere near Buslins Lane (formerly Burrets Lane) westwards beyond Old Sax Lane to a hedge line at SP 938043. At the western end there were fields with the name Beechfield on the 1843 Tithe Map but the presence of bluebell hedges in this area illustrates the point that the clearance which brought about this common-field area was piecemeal. The disappearance of a number of the Tithe Map hedges in this area makes a clearer assessment very difficult, but the parcels of woodland that once existed here and the wood-bank hedges suggest that much of the clearance may have been in the nature of assarts, brought about by the combined efforts of the villagers, and with many gaps.

Further up the valley was another common field, Nuffield. The reference to this in the rent roll of 1629 is explicit. Thomas Heires held '2 peeces of Arable land lying in the Common called Nouff-field'. There are seven other closes referred to in the rent roll with the name Nuffield (various spellings); on the 1843 Tithe Map (BRO AR 130/81/No. 90; PR 44/27/13) we

find three of these, and a strip of land surviving from the common field, all called Snuffey. Two of these are near the Chartridge Chapel on either side of the lane but the others are at some distance, just to the NE of Ashotts Wood. Presumably Nuffield must have encompassed most of the land between these fields, but this includes a number of fields with bluebell hedges. One is drawn towards the conclusion that as with Beechfield, this common field must have included areas of woodland. Ashotts Wood (Haukeshead Grove 1629), which appears to be an old secondary wood, looks very like a furlong on the open fields, having the reversed S-shape on its N-S axis and sides of approximately a furlong length.

Between Ashotts Lane (Hawksheadlane 1629) and Arrewig Lane (Anlowewitch Lane 1629) there is no indication in the Wedon Hill rent roll of a common field. Interestingly the eastern hedge of Arrewig Lane has virtually no bluebell while in the western hedge it is almost continuous. This could be an indication of early arable extending as far as the lane.

South Chartridge

One of the features of hedges to the south of Chartridge village is that very few of them contain dog's mercury. Dog's mercury appears in almost all the hedges in the open-field areas of the Pednor valley from Great Friar's Hill westwards but here it is mainly limited to Capps Lane, Grovefield Lane and part of Chartridge Lane itself. Of the other hedges, rather more than half have bluebell and the rest have neither bluebell nor dog's mercury. This is a somewhat different pattern from the bluebell hedges of the Pednor ridge which generally have dog's mercury as well. West of Cogdells Lane (formerly Appswood Lane 1629) lay the common field Grovefield (Leicester Abbey terrier). The references to land lying in Grovefield in the 1629 rent roll mostly relate to holdings on either side of Grovefield Lane and the land SW of Ayres Wood. However, one entry in the rent roll refers to a piece of land in Grovefield 'abutting . . . upon the land called St Marie Land.' St Marie Land is described elsewhere in the rental as abutting upon Gorewood (Hightree Wood) and on the Tithe Map we

find Great Seymery Lands and Little Seymery Lands adjoining woodland to the south of the present-day Cherry Tree Farm. This reference is the only indication that Grovefield was much larger than the area near Ayres Wood where the field names Common Field and Grovefield seem to place it.

Grovefield implies a grove or wood within or beside the field and this was certainly Ayres Wood or, as it was called, Greenewaye Grove. Land to the immediate west and north of the wood has the names New Field and Readings. The latter was a close in 1629, while the New Fields were probably a more recent clearance. Both indicate a much larger Greenewaye Grove and the boundaries of these fields, which have a lot of bluebell, as does the wood, confirm this. The question is whether all the other hedges of the Grovefield area indicate assarts. In the case of Newlands this seems quite likely, but the area to the west of Capps Lane includes two hedges which were probably planted after 1629 to sub-divide larger fields, yet contain a lot of bluebell. Older hedges in the vicinity have failed to acquire bluebell even with an available source. In the post-1629 hedges bluebell may have been introduced among the roots of the planting species.

This may also apply to one or two hedges in the northern part of the former common field Peashill which lay between Westdean Lane and Cogdells Lane (1629 rent roll). This area may however have had small woods adjoining Chartridge Lane near the junction with Westdean Lane and near Cogdells Farm. None of the hedges on the lower side of Peashill Field have bluebell in them.

Broad Field lay to the east of Westdean Lane. In the 1629 rent roll there is a reference to 'a peece of land in the said Brodefield lying under Peasehulfield hedge'. It is not clear where this piece of land was — Broad Field may have included a small area of land just to the west of Westdean Lane. Its centre however lay above Short Grove where on the Tithe Map we find a large field called Broad Piece. Other fields called Braid Field exhibit the same name. Most of this area of land is without bluebell in the hedges, but the northern hedge of Broad

Piece does have bluebell so it no doubt marked a woodland edge at one time. The fields further east, Wood Croft, Crab-tree Piece and Sheer-croft were probably assarts from outside the open-field area.

Conclusion

The pattern which emerges for the development of the farming landscape west of Chesham is fairly clear. The Saxon clearance was mainly along the valleys and parts of the side valleys, in which all traces of a wooded landscape disappeared. It was here that the oldest common fields were established. The tide of clearance left its mark along the upper slopes of the valleys, this line being marked today not only by the boundary banks of some primary woods but by former wood boundaries picked out by the presence of bluebell, and trees and shrubs strongly associated with wood edges. The boundaries of wood and arable are thus still clearly marked in the vegetation of the hedgerows. (See distribution maps for bluebell and dog's mercury, Figs. 3 and 4.)

The development of daughter communities on the wooded ridges with their heavier soils led gradually to the piecemeal clearance of the ridges. Here too cleared land was farmed in common, but these common fields were interspersed with woodland, creating a much more diverse pattern in the hedgerows, with bluebell in the assarted wood edges, and dog's mercury or an absence of either of these plants in the enclosed-field hedges of the common land. These common fields, while of later development, were of earlier enclosure. The absence of their names from the 1478 Leicester Abbey terriers probably reflects their late development for most of the gifts of land to religious houses were made in the earlier years of their establishment in the twelfth and thirteenth centuries.

The complicated structure of the fields surrounding Chartridge village both in terms of shape and size and the vegetation of their hedges may be explained by the slow exploitation of the available land by a small but expanding village after the main tide of clearance at Chesham was over.

Crofts and Assarts

As has been seen from the late twelfth-century Missenden Abbey charter for Kingshill (see p. 137), the earliest field boundaries consisted of a bank surmounted by a paling and brushwood fence, with an external dyke. This particular charter referred to the enclosure of a virgate and a half, nominally about 45 acres, an area which one would expect to be subdivided. Religious houses were particularly active in enclosure at this date, its main purpose being the restriction of rights of pasture and the consequent increase in the value of the land. These crofts were not necessarily in single tenancy, but one that was is referred to in a Missenden Abbey charter of about 1300 relating to Chesham (Jenkins 1940, 19). It was called Pusenheg and was rented by a goatherd, Robert Gretheved, for 21d a year, a rent which had been given by Laurence de Charderugg to the Abbey at Missenden for the use of the sacristan's office. The description of the croft implied that it was fenced and it can be identified as the field Personage in the Pednor valley (SP 936228) from the 1843 Tithe Map. Adjoining Personage to the south is a small field, Sextons Croft, now incorporated into the large field to the east, itself an amalgamation of Buckmarsh and Monks. After the dissolution of the Abbey, lands called Pednor and Sextons were granted to John, Lord Russell in 1541: some part of the land was still regarded as the particular property of the sacristan or sexton.

The field adjoining Personage to the west has the name Great Hedge (1843), formerly Great-heads (1629), which preserves the name of the goatherd whose rent was the subject of the grant. A bluebell hedge separates Personage and Sextons Croft making it probable that the two fields were never consolidated and that Sextons Croft was a separate assart. There is a certain amount of bluebell in the eastern hedge of Personage but in none of the other valley-side hedges enclosing this field, nor in the neighbouring Great Hedge. These hedges have average shrub counts per section of 5.6, 6.6 and 7.2 compared to the average in the survey area

of about 6.5, which suggests that the fields had been assarted not long before the grant.

There is a series of fields at the western end of Herberts Hole with the name Stubbins, derived from the stubbs or stumps of trees left in the ground after clearance. This name is associated with later clearances of land. There are also three fields in the same area on the northern side of Herberts Hole which on the Tithe Map were called Stock Ground. This again implies cleared ground, stock meaning stump. Only two hedges remain dividing the Stubbins fields one from another and one of these is a modern planting on the line of an older hedge. The remaining hedge and that at the eastern of the Stubbins fields have no bluebell and a shrub count and shrub species that are consistent with enclosure at a late date, say the late fifteenth or sixteenth century. Probably no permanent sub-division of this assart was made until the main period of enclosure in the Chilterns.

The distribution of bluebell in Pednor indicates that the entire ridge and much of the western half of Herberts Hole was cleared piecemeal at a relatively late date with many wood boundary hedges being left on the edge of assarts. Further enclosure took place within the boundaries of each assart at a later date. This can be seen most clearly in the block of land called the Reddings which straddles the western boundary of Great Chesham parish by Little Hundridge Lane. Reddings means literally riddings, that is clearance, and the boundary hedge of this assart has a distinctly woodland character, with planted hornbeam. The average number of shrubs per section is only 5.7 in the stretches of the hedge which I have surveyed, which is not very high, although it must be remembered that on the clay and well away from areas of richer flora, there are fewer available species for colonisation. Most of the internal hedges of the Reddings are fairly recent, probably of the eighteenth or nineteenth century as their low shrub count suggests—about 3.75 on average. There are one or two older hedges with shrub counts of about 6 species per section but these have a somewhat different character to the boundary hedges of

the clearance, being much closer to the average enclosure hedge of the survey area. If there was internal sub-division of the Reddings, it must therefore have been non-permanent, that is fencing, for a considerable time. This was probably the case with most assarts.

The conclusion is that only the outer boundaries of assarts and clearances will have hedges that pre-date the general period of enclosure. These crofts in many cases will have hedges within them that are typical in their plant structure of the enclosure hedges of the common fields.

The Period of Enclosure

Michael Reed (Reed 1979, 175) concluded that the tide of enclosure was running strongly in the Chilterns from the mid fifteenth century, then slackened in the middle decades of the same century. The Leicester Abbey terrier of 1478 should show some early signs of this development but in fact there are very few references to closes. One of these refers to the holdings of John Birch lying in the three fields of Grovefield, Pullfield and West Dean and goes on to add, 'and all other closes and lands of his there pertaining and belonging'. Most of the references to land in the terrier concern 'peesces' of land, a term which implies a holding in the common field. The implication is that holdings referred to as pieces in the 1629 rent roll were not yet enclosed or not entirely so, though consolidation may have taken place. It implies that in the parish of Great Chesham in 1478 only a relatively small amount of the common-field as yet lay in closes.

There are however quite a lot of references to crofts in the 1478 terrier at Latimer, Whelpley Hill and Ashley Green, areas which from their distance from Chesham and their situation (in the last two cases) well away from the main valleys, one would expect to have been subject to piecemeal clearance, with many of the subsequent crofts not subject to rights of common.

The next evidence for enclosure in the Chilterns comes from the 1517 commission of enquiry, known as the Domesday of Inclosures (Reed 1978, 152; Leadham 1897, ii. 584). It

found that only 280 acres of land in Chesham had been enclosed since 1488 and only for arable. Even allowing for the fact that some enclosure may not have come to the attention of the commission this is a quite small acreage representing only about 2½% of the parish. As a proportion of the common-field arable however it would represent a much higher percentage, perhaps 10% or more. Enclosure of the common fields was thus well under way by 1517 and was no doubt paralleled by the sub-division of many crofts, so that Leland's observation a couple of decades later that the Chilterns were full of enclosures was no more than the truth (VCH II, 62).

Whereas the 1478 Leicester Abbey terrier gives a rather general impression of the farmland of the parish, the Wedon Hill rent roll of 1629 gives a nearly complete description of the land surrounding Chartridge village. Over 60 closes in Chartridge are referred to, most of them identifiable with fields on the 1843 Tithe Map. There is no doubt that enclosure had continued apace since the 1517 enquiry commission. A few of these closes were in dual ownership. Thomas Birch the elder, for example, held 'the lower parte of a close called the Brede'.

There was still land in the common-fields unenclosed—'Ezechell Norwood' held '2 peeces of land lying in the comon called Pullfield, the one of them under a woodside there called Hineng, the other at the end of a close there called Compp'. By 1674 however these were 'now enclosed with other land and lying upon Belingdon hill, the one of them abutting upon a close caled the Comp, and the other upon a wood caled Litle Hyneing' (Eland 1944, 221). This indicates that enclosure often took place only when a suitable amalgamation of holdings made it feasible.

Many of the 'peeces' of land mentioned in the rent roll were in West Dean but these appear to have been consolidated holdings for the most part, for there were not many more fields in West Dean at the time of the Tithe Map than 'peeces' of land mentioned in the 1629 rental. In fact the presence of field banks made very

little hedge planting necessary to achieve enclosure. Consolidation of holdings does however seem to have been the rule and the rent roll shows this in progress in Peashill Field where Josias Weedon held no fewer than 10 pieces of land in the Common Field in 1629. He had in fact engrossed most if not all the remaining common-field holdings in Peashill, so enclosure required little further hedge planting. A new stretch of hedge was needed on the north side of Great Field (SP 932033) but the holdings were otherwise encompassed by Great Field itself and Long Parcels, and the field bank which separates them was probably already there.

It is clear therefore that enclosure of the common fields, while still in its infancy locally in 1478, was substantially complete in 1629 at Chartridge, with most of the still unenclosed land poised for enclosure in consolidated holdings. Pullfield, Beechfield, Nouffield and Brodefield all had closes in them and Grovefield was apparently reduced to a small part of its former size. Peashill Field only had one or two closes on its northern side, but the rest of the field is in the hands of one man. Only West Dean was unenclosed and in multiple ownership. A single close had been made under Short Grove but for the rest it was in many hands, several labourers having their only land holding here.

Many hedges must have been planted between 1478 and 1629 to achieve so much enclosure, according well with Michael Reed's dating of enclosure in the Chilterns from 1450 onwards. The ripples of this great tide do not finally die away until the end of the seventeenth century. The botanical evidence supports this chronology.

Enclosure Hedges

The average number of species per section in the hedges of the survey area worked out at 5.94 including some climbers, but excluding briar. If adjustments are made to bring this into line with the exact requirements of Dr Hooper's hedge dating method, an average of 6.5 species per section is produced. If we apply the age formula to this average figure, it produces a

mean age for hedges in the survey area of 628 years and a mean planting date (based on 1981) of 1353. From the documentary evidence we can see that this is at least a century too early. I have pointed out earlier the discrepancy produced by including the planting species (assuming there to have been one), so if one discards one species to adjust for this, a mean date is arrived at for hedge planting of about 1450. This would be more acceptable, but even so, bearing in mind the evidence of the Leicester Abbey terrier it is still too early. Discarding briar as well as the planting species gives a planting date of 1520-5. On the evidence available, this is a far more satisfactory date.

A graph of hedge sections by number of species excluding briar, for the whole survey area, shows that the median number of species is six (see Fig. 2). One would expect therefore that a hedge planted at the full flood of Chilterns enclosure would have an average of six species per section, again excluding briar. Many factors will of course distort the distribution of shrubs in individual hedges, such as the lack of a planting species, the planting of more than one species, close proximity to older hedges or the presence of elm. To recognise such distortions when they occur a clearer idea is needed of what the average six-species hedge should contain. Some guidance is given by a graph showing the break-down of shrubs in six-species sections (Fig. 5). This indicates a high probability that such a hedge will contain hazel, hawthorn, blackthorn, elder and maple in most if not all of its sections, with holly and ash as the most likely additional shrubs in the hedge. It is worth noting that the next most prominent shrubs or trees in six-species sections are oak and hornbeam, both of which have often been planted in hedges rather than arrived there by the natural process of colonisation.

Few hedges, of course, will give an exact match of the statistical average, but a field example helps to illustrate what an average hedge may look like. This hedge from the Grovefield area of Chartridge had 4, 8, 5 and 6 species in successive sections, an average of 5.75. Its constituent shrubs are here set out to

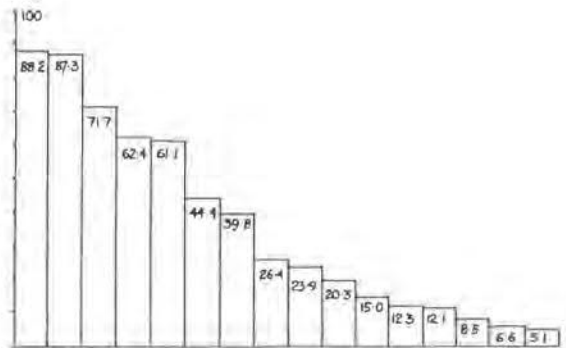


Fig. 5. Species found in six-species sections of hedge. (Hz - hazel; H - hawthorn; B - beech; El - elder M - field maple; Ho - holly; A - ash; O - oak; Hb - hornbeam; D - dogwood; E - elm; Ch - cherry; Sp - spindle; Cl - clematis; Ap - apple; Hy - honeysuckle)

show in how many sections each occurs. (Note that this and similar tables are to be read in columns, not in lines. It is not the case that each line represents a hedge section, but that each column shows the frequency of a species.)

H Hz B M
 H Hz B M El
 H Hz B M El Ho
 H Hz B M El Ho Ch Sp

(H hawthorn; Hz hazel; B blackthorn; M maple; El elder; Ho holly; Ch cherry; Sp spindle)

Hawthorn, hazel, blackthorn and maple all occur in four sections, elder in three, holly in two and cherry and spindle in one each. Briar was also present in all four sections and might be included in such a profile if desired. Set out in this way it is easy to compare the shrub contents of different hedges, which in a local survey is the best way of assessing the likely origins of hedges.

A second example, from West Dean, had 5 sections with 6, 6, 6, 5 and 7 species per section, an average of 6.0. It can be set out like this:

Hz B M
 Hz B M El Sp
 Hz B M El Sp H
 Hz B M El Sp H E
 Hz B M El Sp H E D Hb

(D dogwood; Hb hornbeam; E elm)

While hazel, blackthorn, maple and elder are well represented in this hedge, hawthorn is

probably too infrequent to have been the planting species. Spindle is well represented, but this merely reflects the location of the hedge in West Dean, the centre of a strong cluster in spindle's distribution. The hedge has good dog's mercury, which is only to be expected since it adjoins Long Grove, but no bluebell. This hedge may well post-date 1629 since very few of the West Dean holdings seem to have been enclosed at this date and the hedge appears to sub-divide an enclosure, the fields on either side being named Great West Dean and Little West Dean. This hedge therefore, while having a structure reasonably close to that of the average 6-species hedge illustrates one or two variations from that norm derived from its position and perhaps its origins. If one merely relied on an arithmetical calculation to determine its age, a date in the early sixteenth century would be obtained. If one allows for the influence of the wood edge and nearby field banks, one would be inclined to bring forward the date of the hedge even without any additional information. It points up the importance of caution in assessing the age of hedges, particularly when there is no data available for other hedges in the locality.

The two hedges referred to above give some idea of the standard by which other hedges may be judged. Other hedges may have additional planted species or a much greater variety of shrubs and therefore a longer 'tail' when set out in the way illustrated. On the other hand they may be weak in one of the principal shrubs of the average hedge. Here are two examples of such variations:

(a)
 H Hz Ho Hb O
 H Hz Ho Hb O B
 H Hz Ho Hb O B M El A E Ap
 (O oak; A ash; Ap apple)

(b)
 H Hz B D
 H Hz B D El M Ho A Sp
 H Hz B D El M Ho A Sp O Hb E

Hedge (a) had 9, 7 and 6 species in its three sections, an average of 7.33 per section. However, the oak and hornbeam are almost

certainly planted species, possibly in addition to hawthorn. Even holly could be a planted shrub for it appears in nearly every section of every hedge in the immediate vicinity in Pednor. This hedge is therefore less old than it might at first appear, being no more perhaps than a hedge of median age with extra planted species.

Hedge (b) near Chartridge had 9, 9 and 7 species in its three sections, an average of 8.33 per section. There is no evidence of any extra planted species in this hedge and indeed even hawthorn might be acquired. Its average number of species per section is therefore a fairly true reflection of its age. Although now just a field hedge it may at one time have been a lane hedge and, like many lane hedges in the survey area, have had a fairly early origin.

It is only by using such breakdowns of the hedge material and making comparisons with the expected contents of the standard enclosure hedge in the survey area that one can make a worthwhile assessment of the age and origins of any hedge. Additional material, such as the nature of the herb layer can be valuable and the context of the locality and the structure of other hedges in the vicinity is of especial importance.

The Survey Area in Detail

The Asheridge Valley

Many of the remaining hedges in the valley lying within the Chesham Town boundary date from the enclosure of Pullfield. This area lies outside the survey area but was farmed by Chartridge people (1629). The road hedges near Portobello Farm are particularly good examples of enclosure hedges, with between 5 and 5.4 species per section (excluding briar, as elsewhere in this description), and very uniform. Some we know to have been planted by 1629 since Comps was a close by then. The eastern hedge of Comps has about five species per section but is rather more variable than the road hedges, while the sub-dividing hedge has 4.25 species per section in what remains of it, so is probably post-1629.

On the southern side of the valley there is an enclosure hedge on the NW side of Little Poles,

some post-enclosure hedges further west and the large north-facing bank of Nemlee. This very large bank is not easy to assess but its characteristics are closest to those of a field bank, once part of the open fields, on which scrub has grown up.

Chesham Boundary to Old Sax Lane

The hedges in this area have a slightly higher species count, generally between 5.4 and 6.4, indicating a slightly earlier enclosure date than Pullfield. The northern boundary bank of Great Reddings and the northern hedge of Seydgers Field just to the west are the only ones with significant amounts of bluebell. These seem to be assarts post-dating the development of the common fields. The other hedges have varying amounts of dog's mercury but the northern hedge of Great Gravel Field has neither bluebell nor dog's mercury for 90% of its length and a good deal of planted hornbeam. Although its shrub range and shrub count of 6 species per section appear fairly normal, this hedge does not give the impression of being of a piece with adjoining hedgerows.

Old Sax Lane has an average of 7.2 species per section in its hedges with a lot of oak, cherry and holly and strong bluebell at the base, although no dog's mercury until the lane descends into the valley bottom. The lane clearly ran through woodland in the medieval period, but its continuation up the other side of the valley is a single hedge with no woodland features but over eight species per section. This hedge has been cited earlier as an example of wide species range without any trace of double planting.

Old Sax Lane to Ashotts Lane

This area incorporates a considerable part of Beechfield and Nuffield and as has been seen above is a complex area of enclosures of the common fields and assarted woodland. The remaining hedges running west from Old Sax Lane have a great deal of bluebell in them. That in the valley bottom lay within Beechfield. A series of fields with bluebell hedges lying NW of Raymonds form part of one of this area's assarts. This was one of the holdings of Josias Weedon in 1629.

Chapel Lane (as it is now called) ran through part of the open field area of Nuffield and although it has strong dog's mercury has scarcely any bluebell. Where this lane runs beside a banked hedge, the average number of species per section is 7.5, quite a high figure. The lane then continues along the western edge of the holding, and this steep bank is a former wood edge with strong bluebell.

To the west of Chapel Lane lay the farm of Micah Woodhouse in 1629. This consisted of a collection of small closes which encompassed all the land from Snuffy Hill to Ashotts Wood. The holding is marked out by the amount of holly in its hedges. It occurs in nearly every section of every hedge, in contrast to the hedges to the north towards Braid Wood where it is nearly absent. Two small fields on the eastern side of this holding have hedges with a lot of bluebell and may indicate a small wood cleared at a quite late date. Neither bluebell nor dog's mercury are prominent in the other hedges. Many of these are very straight which together with the uniformity of what one suspects to be planted holly suggests that they were rather recent enclosures in 1629, since the more recent the hedge the straighter its line.

The lane that runs through this holding, connecting Chartridge to Asheridge, has hedges that are older and for the most part have a good deal of bluebell. This lane turns several right-angles obviously skirting round furlongs in a common field. The land to the west of the lane is another part of the old Nuffield. The remaining hedges of this lane are not homogeneous. It probably skirted woods to the east. The average shrub count is fairly high at about 7.3 and the presence of dogwood in the lane marks it out from surrounding enclosure hedges as it does many other lanes in the survey area.

Ashotts Lane to the Parish Boundary

Ashotts Lane itself is similar to other lanes crossing the valley, with a fairly high shrub count of about 8 species per section in its hedges, and sections, particularly at the southern end, that have a lot of bluebell. Like several other lanes in the survey area, it has lost

some of its hedges and a short section of new hedge in the valley plugs the gap left when Bottom Spring was removed in the last century.

The area to the west of Ashotts Lane has lost many of its hedges since the drawing of the Tithe Map and most of those that remain are in a very poor state. The 1629 rent roll again provides the evidence that the land was in closes at that date: Pittcroft, Hawkshead-croft and Phillips Pitt; and we read of a series of closes and crofts adjoining each other. Here again holly appears in every section of the remaining hedges. An average 5.5 species per section in these hedgerows argues a planting date no more than a generation or two before 1629.

Some older hedges to the north towards Wood Farm have seven to eight species per section and more of the character of lane hedges than field hedges in part.

The hedges of Arrewig Lane are particularly interesting. As the lane is the parish boundary one might expect its hedges to be particularly rich in species. In fact they only average 6 species per section on the eastern side and 6.4 on the western side according to Dr Hooper's method (including briar but excluding climbers). If one excludes briar as well the average is as little as 5.25 on the eastern side. These hedges do however contain dogwood, which in so many cases picks out the oldest features of the landscape.

The Arrewig Lane hedges provide an object lesson in the long-term survival of the biological origins of hedges. The eastern hedge has hornbeam in every section except the last two at its northern end, so we can assume that it was originally planted with hornbeam. However, despite the hundreds of years which have intervened the western hedge has only acquired hornbeam in four out of sixteen sections, while conversely the western hedge has ash in thirteen out of sixteen sections while the east has it in only two. Both hedges have strong colonies of dog's mercury along their entire length, but only the western hedge has fairly continuous bluebell. It is remarkable that hedges facing

each other across a narrow lane have preserved their separate identities over so many centuries and it underlines the contribution that the study of the distribution of plants has to make in landscape history.

The relatively modest shrub count of the lane's hedges may have something to do with the long survival of woodland along the parish boundary. Much of the western boundary of Great Chesham parish either lay alongside or through woodland until the mid-nineteenth century. North of Three Gates Bottom there is a section of the boundary hedge with an average of about 8 species per 30 yards with a good range of shrubs. However, beyond this a wood straddled the boundary as is shown in the earliest Ordnance Survey map for the area, surveyed between 1813 and 1820. Here there is a hornbeam hedge but with a diminished range of shrubs, while further on towards Newsets Wood the boundary hedge is little more than a scrub hedge dominated by blackthorn. Thus the boundary hedges are disappointing if one expects to find magnificent old hedges, but full of odd quirks that perhaps reflect a rather chequered history.

Capps Lane to the Parish Boundary

As we have seen, this area contained part of the former common field, Grovefield. The small fields close to Cherry-Tree Farm are yet another example of enclosures with planted holly in the hedges. Several hedges have disappeared since 1843, but the most obvious feature of those remaining is the amount of bluebell in them. Three hedges in particular not only have a lot of bluebell but share very similar ranges of shrubs. These are the eastern hedge of Nobbs Crook, the western hedge of Capps Meadow/Little Field and the dividing hedge of Great and Little Seymery Fields. They all have hawthorn, hazel, blackthorn, oak and ash strongly represented with some maple and an average number of species per section of 6.0, 6.6 and 7.6. The presence of bluebell in the Seymery Fields hedge is odd, for one would expect this to be a later division of an assart and not the edge of one. Another dividing hedge however provides some valuable information on this point. In 1630 the Earl and Countess of

Devonshire made a gift of land in Chartridge for the maintenance of seven poor people of the parish (VCH III 1st edn.), 265). This included one close called Whitchurch. At the time of the Tithe Award this was still owned by the Devonshire Charity but was divided in two. The dividing hedge must therefore be post-1630 and its shrub count, being slightly lower than others in the vicinity, supports this. But this hedge has quite a lot of bluebell at the base and the implication is that this was introduced with the planting material. Certainly it would be very surprising if it were the result of colonisation, for the southern hedge of Whitchurch has none despite being adjoined by three bluebell hedges. Hightree Wood was close by to provide sapling shrubs.

As with so many other lanes in the survey area, Capps Lane has hedges with higher shrub counts than the surrounding field hedges. The eastern side of the lane has an average of 8.2 species per section for much of its length. There is a decline in the number of species at the southern end of the lane as it approaches the wood and bluebell grows particularly strongly in these hedges. Clearly the wood extended further north.

Cogdells Lane to Capps Lane.

This area divides neatly into five blocks of land. To the north of Ayres Wood lay fields with bluebell hedges (New Field and Readings) which probably formed part of a largish wood of which Ayres Wood is the surviving remnant. North of these fields lies Newlands, which seems to be a separate clearance, its subdividing hedges being later and having no bluebell. Between Newlands and Cogdells Lane lay a series of fields with the name Chambers and this too may have been a separate clearance with the subdivisions made at a later date (one at least after 1629). To the east and south of Ayres Wood lay fields still in common in 1629 and between the valley bottom and the parish boundary an area called Painseshill which was partly enclosed by the same date.

Running through Grovefield was Grovefield Lane, whose western half has a good deal of bluebell in the hedge banks. There is also some

bluebell in one or two of the terraced banks within the common fields. This suggests that these banks were made at the time of an expansion of the common fields into former woodland, with the bluebell finding enough shade on the banks in emerging scrub to survive. Such an expansion probably included Painseshill, where in 1629 Thomas Birch held 'an acre in Painseshill'. The northern edge of the former Painseshill Spring was stepped in such a way as to suggest 'strips' and the spring itself was probably an area returned to woodland after the Black Death. This wood was another casualty of the nineteenth century.

The parish boundary itself seems to be a former wood edge or even an internal wood bank. It has a good deal of hornbeam, presumably a wood boundary planting, and an unusual mixture of trees, including whitebeam and silver birch which are usually found at opposite ends of the soil spectrum. It is also the only hedgerow in the survey area with rowan in a high proportion of its sections. However, the most curious feature of this boundary hedge between Bellows Wood and Hightree Wood is the complete absence of either bluebell or dog's mercury north of the former Painseshill Spring.

Westdean Lane to Cogdells Lane

This area included the common field Peashill, the exact extent of which is not clear. Bluebells in hedges near Holt Lane (adjoining Cogdells Farm) and in the NE corner of this block of land bordering Chartridge Lane suggest two small areas of woodland on the edge of the common field. The field banks towards the southern side of Peashill have about 6.5 and 9 species per section; their origin is certainly pre-enclosure.

Greeneyard Lane in 1629 led from Chartridge to West Dean. It is now a tarmacadamed road (Westdean Lane) running through green fields, but in the middle ages it would have been a green track running for the most part between tilled lands. The lane seems to have descended at first through a small wood, because the four sections or so of the northern end of the lane's hedges have strong bluebell colonies and a fairly wide range of shrubs. The western bank

has planted hornbeam for some distance and since there is also sporadic bluebell in this stretch the lane may at one time have bordered woodland here too. The eastern bank has a similar pattern of bluebell but has hornbeam only as a colonising shrub. South of the bend in the lane, the eastern hedge soon peters out, while the western hedge continues, but without hornbeam. The western hedge has scarcely any hawthorn, while the eastern hedge has planted hawthorn for most of its length. Here again is an example of hedges facing each other across a lane retaining their original but different characteristics over a period of centuries. Unlike other lanes in the survey area the hedges of Westdean Lane have rather low shrub counts. The average per section for the eastern hedge is only about 4.8 and for the western hedge 4.3.

Long Grove to Westdean Lane

This part of the survey area contained two common fields: Broad Field, which lay on the ridge above Short Grove, and West Dean which lay on the valley side below that wood, and the wood to the east, Long Grove. West Dean has been discussed earlier, being an area of open field which was cleared and farmed at an early date. Broad Field involved the clearance of woodland on the heavier clay soils and its subsequent enclosure seems to have come slightly earlier than the average date. In 1629 there were several closes in the common-field area of former days, including Uplands and perhaps a close called the Brede. The field above Long Grove called Sheer Croft was perhaps never part of the common field and enclosed directly from the wood. The average number of shrub species per section in the hedges of the Broad Field area is relatively high at about 6.5. They have little dog's mercury, and bluebell is largely confined to the northern hedge of Broad Piece, adjoining Short Grove and the eastern hedge of Wood Croft. The fields to the north of Broad Piece, including Burnhams Field and Sellocks were almost certainly enclosed by the mid-sixteenth century since they are referred to as closes and crofts in the will of Stephen Rowberde in 1558, one of the most informative of Chartridge wills (BRO, DA/We/9/58).

Pednor

The area bounded by the upper and lower Pednor roads has fields much larger than those of Chartridge. At the eastern end of the valley, which formed part of the Chesham fields, most of the internal hedges have disappeared, but those that remain have an average of only 3.6 species per section including briar, indicating a late date for enclosure. Indeed some seem still to retain the original planting material, to judge by the spacing of individual shrubs along the hedge line. As has been seen earlier, the road hedges of the east Pednor Valley probably grew up from scrub on field banks.

The bank on the northern side of Crouch Furlong a little further west has over six species per section and a good deal of dog's mercury and is obviously much earlier in date. Further still to the west the hedges of Great Fryers Hill have shrub counts in the region of 4 to 4.5, well below the average for the survey area. The road hedge of Great Fryers Hill does not have enough hawthorn for it to be the planting species and its frequency in both field hedges is also rather low. The western hedge of the field has a fair amount of dog's mercury, but this more reflects its position adjoining other hedges with the plant than any earlier origin than the eastern hedge.

The northern hedge of Monks/Buckmore, immediately to the west of Great Fryers Hill, has an average of just over 4 species per section with a good deal of hazel, and hawthorn again too infrequent to be the planting species. Hazel is the dominant shrub in several of the hedges bordering the lower Pednor Road. This is particularly noticeable in a long stretch of hedgerow from Westdean Lane to the footpath at SP 926035. This has an average of 5.4 species per section along the bottom of Long Parcels. Interestingly the 'hedge' on the opposite side of the road averages 5.6 species, but is either a failed attempt to establish a hawthorn hedge at a fairly recent date or simply scrub that has grown up along the line of an iron fence. Its number of species is boosted by buckthorn and spindle in all its sections which it has acquired from the field bank just to the north and parallel to it. The opposite road hedge, which

lies between it and the field bank, has not been colonised to anything like this degree despite its much greater age. However, the structure of plants in this scrub hedge does not resemble any of the models of hedges from open field enclosures or assarts, so there is little chance of mistaking this for a genuinely old hedgerow. There are twentieth-century planted hawthorn hedges along the road just to the west for comparison. These have just 2.7 species per section and are predominantly hawthorn with the occasional elder or briar shrub.

The remaining field hedges between the road and Bellows Wood have approximately 6 and 4.7 species per section, the SE hedge of Great Hanging Hill marking an assart from a large area of woodland of which only Bellows Wood remains. The hedges of Great Horseleys adjoining the top Pednor Road at SP 929028 have 5.6 and 7.1 species per section and are characteristic of assarts, with hornbeam, cherry and oak quite prominent and some bluebell at the base.

Herberts Hole

The remaining hedges of the eastern part of the valley are enclosure hedges in former open fields, while in the western end of the valley there are many former wood edges and assarts, some with later sub-dividing hedges which are not distinguishable from enclosure hedges of the open fields.

Many field hedges in the vicinity of Barn Cottages have disappeared since the Tithe Award. Those that remain are among the most disparate in the whole survey area. Just to the west of Barn Cottages is a field hedge with about 5 species per section, mainly hawthorn, blackthorn, hazel and elder, with a lot of bluebell at the base but no dog's mercury. This should not be earlier or indeed very much later than the sixteenth century, either planted following a clearance of woodland or, bearing in mind examples from Chartridge, a subdivision of a larger field which had bluebell introduced with the planting material. Just to the north, the northern hedge of Lower Cherry-Tree Close bounds an older assart; it has no blackthorn, a lot of cherry, oak and hornbeam and both bluebell and dog's mercury at the base,

with an average number of species per section of 7.6. Another hedge adjoining Barn Wood to the west has only elm for much of its length, but again both bluebell and dog's mercury. Adjoining this hedge is a 'typical' hawthorn, blackthorn, hazel and maple hedge with no bluebell and scarcely any dog's mercury, while in the valley is a modern hedge on the line of an older one which has an average of three species per section and neither bluebell or dog's mercury. These hedges reflect the variety of origin which is very much the pattern in Hundridge and West Pednor.

The hedges of Blind Lane, as noted already, do not all have the same structure. On the southern side of the lane at its eastern end is a hedge with a good deal of hornbeam, probably a former wood edge, with about six species per section. The northern hedge at this end of the lane is somewhat richer in species (16 compared to 11) with an average of 7 per section. In the next section of the lane to the west of the Chesham Town boundary it is the southern section of the lane which is the richer, at about 9 per section compared to 7.5. The lack of bluebell in this part of the lane suggests that it ran through arable from the first. Hornbeam is re-encountered when bluebell appears again, and the average number of species continues to be quite high, about 7.5, as far as the lane leading to Great Hundridge Manor. Beyond this point the average number of species per section drops to about 6.5, but in reality the drop in the 'quality' of the hedges is greater, for there is evidence of double and even treble planting involving hawthorn, hornbeam, oak and perhaps holly. The hedges at this end of the lane seem not to predate the general period of enclosure in the survey area.

Some Conclusions

If one considers the survey area as a whole one is impressed by the uniformity of its hedges. The majority have between 4 and 8 species per section (Fig. 6) and this pattern is also found in the hedges of north and south Chartridge. In Pednor the species range shifts slightly with 3 to 7-species sections being dominant, and the distribution graph peaks in 5-species sections rather than the 6 species of

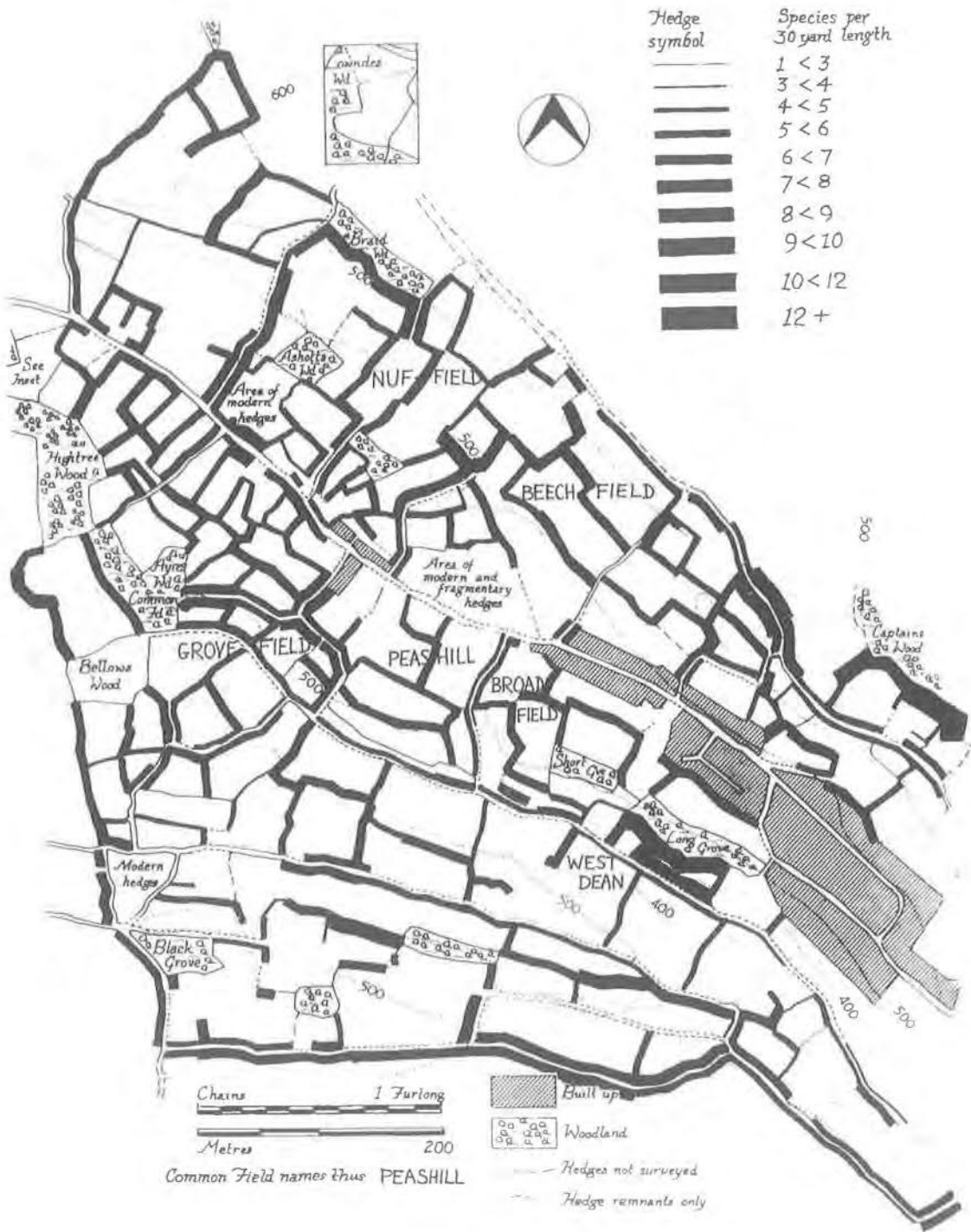


Fig. 6. Density of species in hedges of the survey area.

Chartridge hedges and the general survey area. This probably reflects the slightly later date of some enclosures in the eastern end of the Pednor valley. In Herberts Hole the number of species per section peaks at 7 with many more hedges in the 4 to 9-species range. This partly reflects the inclusion of the Blind Lane hedges and the amount of double or treble planting. It may also reflect the variety of origin which typifies hedges in this locality.

These however are only slight variations; both the documentary and field survey evidence indicate that the great majority of these hedges were planted or came into existence between the late fifteenth and the early seventeenth century. No doubt there are a few enclosure hedges of an earlier date but there is no part of the survey area where groups of hedges are obviously older than elsewhere. Most of the oldest hedges in the survey area fall into one of the three categories: (a) wood boundary banks, including the edges of some former assarts; (b) lane hedges, which in some cases were also boundaries between common fields; (c) field banks, lying within areas of former open-field arable. None of these are, properly speaking, enclosure hedges, though they are now woven into the intricate pattern of an enclosed landscape.

Enclosure of common-fields in the survey area seems in nearly all cases to have taken place after the consolidation of holdings. This was not always the case in the Chesham area. There are examples at Asheridge and Bellingdon of unconsolidated holdings surviving to the Tithe Award of 1843, parcels of an acre, half an acre or less with such names as In common field, Long Common Piece, Rood Piece, Common Piece, Flax Field Common and Common Field Slipe.

We have seen how Josias Weedon in 1629 had secured all or nearly all the remaining unenclosed land in Peashill Field. However, many of the tenant farmers still held pieces of land isolated from their main holding, representing a residual holding in the common fields. Thus Josias Weedon held another tenement with adjoining land on Chartridge Street (as it was then called) attached to which tenancy was

'one peece in Westdeane'.

The internal division of Chiltern common fields is still not properly understood. Vollans found few references in the Missenden Charters to furlongs, and field names which include the word furlong are uncommon locally. There are none in the Tithe Award Schedule for Chesham, a very large parish, although the Charles Lowndes Estate Map of 1747 (BRO Ma/44/1) includes a field called Crouch Furlong opposite the bottom of Blind Lane. Nevertheless there must have been some division of the common fields into units of ploughing and one would expect the boundaries of these to have formed the line of many enclosure hedges in an area where consolidation of holdings usually preceded enclosure. The dimensions and shape of Ashotts Wood have already been remarked on in this respect and one can find many fields in the Chartridge area with sides exactly 220 yards (a furlong) in length, e.g. Whitchurch, Great Seymery Lands, Pightle Field, Further Pit Croft, to name just a few. In practice furlongs in the common fields were of many shapes and indeed sizes, but there are enough lengths either of whole or part furlongs (distance not land unit) in Chartridge to suggest that field boundaries are less haphazard than they at first appear.

Post-1629

By 1629 the tide of enclosure had swept through the Chilterns leaving little more than a few eddies in its wake. The remaining pockets of unenclosed land required only the minimum amount of hedge planting to complete their transfer to the wholly private use of individual farmers. Some further sub-division of enclosures occurred in the seventeenth and early eighteenth centuries and the eastern part of the Pednor valley may have remained partly unenclosed until the latter date.

The Charles Lowndes Estate Map of 1747 is of particular interest because it was surveyed at the height of the enclosed landscape. The meticulous drawing of the hedgerows and trees on this map reflects the pride of the landowner of the period in what, to judge by those hedgerows that remain, may have been some fairly

recent enclosures. Small hedged enclosures for stock were recommended by the agricultural improvers of the time and the patchwork of fields in the valley bottom seems to be an example of what the eighteenth-century agriculturalists enthusiastically encouraged.

The Nineteenth Century

The Tithe Map, surveyed about a century after Charles Lowndes's Estate Map, shows seven examples on the Lowndes Estate of two fields having been made into one. These changes were small compared to the spate of hedge destruction which took place in the same fields between 1843 and 1873-7, when the surveying was carried out for the 6-inch Ordnance Survey Map. By the latter date five more hedges have disappeared in the valley while to the south and south-west of Spring Wood a dozen hedges have vanished leaving an enormous field stretching from Blind Lane to Spring Wood. This pattern was repeated in several other parts of the parish. The area between Ashotts Lane and the parish boundary in Chartridge was particularly severely affected. Not only hedgerows but several small woods were swept away here in the middle decades of the century. Subsequently three new hedges were planted to make fields that were more manageable in size.

In all over 16,000 yards of hedgerow disappeared from the survey area between 1843 and 1873-7, representing 21.6% of all the internal field hedges (that is excluding road and lane hedges). Over a quarter of the field hedges of Pednor and Hundridge within the survey area disappeared. The loss of woodland was even more drastic. Twelve woods were grubbed out, with parts of others, for a total loss of over 63 acres representing 41% of the woodland in the survey area.

The cause of these convulsions can be found in the high grain prices and generally buoyant climate in agriculture in the middle of the nineteenth century. High prices not only offer incentives for farmers but attract investment in land from outside agriculture. The new landowners have no ties with the past and little to restrain them from reshaping their investment

for the maximum profit. It is not need but greed that powers the forces of change in the countryside.

By the 1870s the boom in land prices, agricultural commodities and rents was over and farming was in the grip of a recession which was to continue almost uninterrupted until 1939. The contrast between the middle years of the nineteenth century (1843-1873/7) and the later decades in terms of change in the countryside within the survey area could scarcely be greater. Between 1877 and 1897 only 1025 yards of hedgerow were lost compared to the 16,000 of the previous thirty years and this was offset by the planting of 605 yards of new hedgerow, so that the aggregate loss was only 420 yards. No more woods were grubbed out and about 3½ acres of new beech wood were planted just south of Hightree Wood.

Very little woodland had been lost in Chartridge between 1629 and 1843. Greenway Grove (Ayres Wood) probably shrank somewhat during this period and the exact extent of Hightree Wood over these two centuries is uncertain, but any drastic loss of woodland in the post-medieval period must have occurred before 1629 in this part of the parish.

Modern Times

In the western half of Great Chesham parish, some 93 acres of the 382 acres of woodland which existed in 1843 have been lost since then, representing 24.4% of the total. However, 145 acres of new woodland have been planted, bringing the present acreage to 434, an overall increase of 13.6%. This new secondary woodland represents 33.4% of all the woodland in the west of Great Chesham parish and if one includes those areas of White's Wood planted just prior to 1843, the percentage of recent secondary woodland rises to about 40%. Not all of this new woodland is broadleaved and one old wood, Black Grove has been largely replanted with conifers. The overall effect of all this grubbing out and replanting has been to concentrate much of the woodland in a few large blocks. Much of this replanting of woodland took place between 1880 and 1920. After 1920 a period of almost complete neglect of

woodland management ensued, broken only by the demands for timber of the 1939–45 war. This period of neglect is only now coming to an end, but we pay for more management by the replacement of much beechwood by conifers.

After the mid-nineteenth-century slaughter of hedgerows few hedges were lost in the survey area until the second World War. The need for increased food production and the incentive of higher prices led to a further loss of hedgerows at this time, although not on the scale of the previous century. Some at least of these hedges were in a poor state of repair and some hedgebanks were infested with rabbits in the pre-myxomatosis years, which gave an added incentive to remove the hedges. A handful of new hedges were planted, notably those which enclose fields adjoining the lower Pednor Road at its western end.

Since the 1950s the most important factor operating to change the landscape has again been high farm prices. Agriculture has become capital rather than labour intensive and is increasingly influenced by short-term accounts-based advice on maximising returns on that capital. It has become a favoured area of investment for pension funds and companies wishing to diversify their interests.

The survey area has escaped much of the current hedge destruction, partly because the terrain is less suitable to the prairie-type cultivation which EC grain subsidies encouraged and partly because several critical areas are still in the hands of dairy or stock farmers. The recent recognition of the need to tackle farm surpluses may yet save our hedges. But they face another danger.

Hedgerows to earlier farmers were more than just stock barriers. They were fuel for the fires and bakehouses and brewhouses, wood for building, and carts and tool handles. They provided winter fodder for animals and seasonal fruits and herbs for the kitchen and the medicine chest. Hedgerows today have lost almost all their functions, and the advent of barbed wire has made their maintenance much less of a necessity than it was. The hedgerows

are consequently in a state of decay, many reduced to remnants through neglect, ill-use and over-grazing in the recent past. Many have remained untrimmed for as much as sixty years, as can be ascertained from counting tree rings when they finally fall to the chain saw. The acquisition by farmers of mechanical hedge-trimming equipment (the universal flail and chain saw) has been a mixed blessing. Overgrown hedges are vulnerable to grazing pressure at their base leaving them thin and gappy, and regular trimming can help to prevent this by encouraging new growth at the base. But many farmers, having acquired the equipment, seem determined to put it to the maximum use, not allowing two years uninterrupted growth in any hedge and cutting increasingly early in the year, slicing off the harvest of berries in mid-flush.

Farmers are not alone in displaying insensitivity to the countryside. The most sure sentence of death for any hedge is for it to become the back-garden boundary of a housing estate whether council or private, exclusive or down-market. It suffers death by a thousand slights. It is suffocated by rubbish, burnt by fires and hacked at unmercifully at all times of the year. Its lack of uniformity is a constant source of irritation to the owner and he finally replaces its tattered remnants with something soothingly regular, such as lap-board fencing, *Cupressocyparis leylandii*, *Thuja plicata* or corrugated iron, depending on his pocket and the fashion of the neighbourhood. The field hedge can never achieve the kemptness considered desirable in the suburban garden.

Conclusion

In the long term the best of our remaining countryside, whether herb-rich meadows, wet lands, woods or hedges, will only be saved by an extension of planning controls to the countryside. Nobody would now accept that developers should have a free hand to demolish whatever they choose in our towns and cities or to build factories where they like. Everybody has to live in the environment which we create. Everybody's life is a little diminished when the countryside is mutilated. The farming

landscape was not made by the people who are now destroying it and many generations will have to live with an impoverished legacy. The best of what remains can be preserved and enriched if there is the will to do it. The hedged landscape of the Chilterns is a unique inheritance from a world we have lost, scarcely

enough appreciated by any of us now that it is in danger.*

*The first hedge to be lost in the survey area since this work was begun was grubbed out over 14 and 15 February 1985 in Herbert's Hole. It was the hedge between Great Cumbers and Crab-Tree Field and had a total of fourteen different species of trees and shrubs.

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