

CHARTRIDGE AND PEDNOR HEDGEROWS: A LANDSCAPE STUDY

PETER CASSELDEN

PART I: THE HEDGES SURVEYED

The Survey

This survey concentrates on an area around Chartridge village. It encompasses most of the land farmed by Chartridge people in past centuries, but at the same time has clearly defined boundaries in the present landscape. Map 1 shows its limits.

Within this area I have surveyed nearly all the field, lane and road hedges along their entire length. A few hedges have been missed either because of inaccessibility or my overlooking them in such a large task, but the survey is at least 95% complete and accounts for 2235 complete 30-yard sections.

The survey had two objects. The first was simply to make a botanical record, while it was still possible, of the shrub content of the hedges. The second was to use this information to learn something of the landscape history of the area, using Dr Max Hooper's method of dating hedges. Part I of this paper covers the first of these objects, Part II the second.

Dating hedges by their shrub content is not a straightforward matter. For example, if the planting species in a hedge, which is usually hawthorn, is included in the count, then by the Hooper formula—99 times the number of species in the section minus 16 (Pollard, Hooper and Moore 1974, 79)—even a newly planted hedge will be 83 years old. This anomaly is illustrated by an example I came across in a trial run. A hedge enclosing two sides of Portobello House and an adjoining paddock in the Asheridge valley, although on

the Tithe Map, was not on the first edition of the 6-inch Ordnance Survey Map surveyed in the years 1873–7. It proved to be a hedge planted since that date on the same line as the Tithe Map hedge, which had been removed. This hedge had an average number of species per 30-yard section of three, the species in nearly every section being hawthorn, elder and briar. The estimated date of planting using Dr Hooper's formula referred to above would be 1700, some two hundred years out. The uniformity of hawthorn in the hedge and the documentary evidence as to its date established it clearly as a 'modern' hedge planted in the last hundred years.

It seemed therefore that Dr Hooper's method would prove unsatisfactory and this was confirmed by later surveys of other 'modern' hedges which could be dated by reference to maps. The obvious solution was to drop the planting species which meant reducing the number of counted species by one each time. This would at least reduce the disparity between the actual and estimated ages of the hedge. In practice, however, following on the evidence from the Portobello hedge among others, two species could be dropped, and since briar seemed so ubiquitous in hedges of all ages and kinds, after a period I stopped recording it. This I later regretted, not so much because it diverged from Dr Hooper's method as that the failure to record any plant reduces the scope of the survey. Indeed it might be argued that the greater the number of plants of all kinds growing in hedgerows that are recorded the more accurate the dating should be. The neat

formula (approximate) of one species per hundred years would be lost or submerged but perhaps anyway it bulks too large in everyone's minds. The exclusion of climbing shrubs and the inclusion of briar but omission of bramble are rather arbitrary decisions.

I decided from the start of the survey proper to include the wild clematis and honeysuckle among the shrubs counted and later, when I encountered it, hop as well. All these climbers are relatively infrequent, yet clematis on occasion forms such a major part of a hedge-row that it seemed absurd to ignore it. Black bryony and woody nightshade are both common but relatively insubstantial in the hedge and I did not record them systematically. Bramble I ignored, while briar, as I have said, I stopped recording but later on resumed. In some of the earliest survey work near Ayres Wood in Chartridge I recorded briar in 55 out of 63 complete 30-yard sections, an average of 87.3%, indicating how common it can be.

A few problems arise in identifying different species of the same genus. In ordinary conditions dog rose and field rose can be easily separated but early in the year in a hedge severely cut back by the flail it is more difficult. Similarly it is not always easy to distinguish between blackthorn, which can be quite variable in hedges, and some domestic varieties of *Prunus* or their hybrids. I decided in these cases to lump them together, since my aim was to cover a large area rather than to look at a few hedges in great detail. I did record very obvious domestic *Prunus* in my original notes as I did the woodland hawthorn (*Crataegus laevigata*) where it was very close to type, but these notes have not played any part in the statistical results on which the tables and graphs are based. Most of the elm in hedges was already dead but as the catastrophe was so recent I recorded it anyway, making no attempt to distinguish which was the common suckering elm and which the Wych elm. Elm has an adverse effect on the shrub population of hedges containing it, and more useful results can sometimes be obtained by omitting from the calculation hedge sections containing this tree. I have indicated where this has been done.

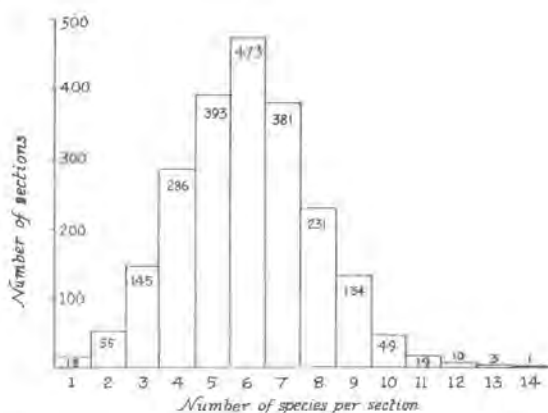
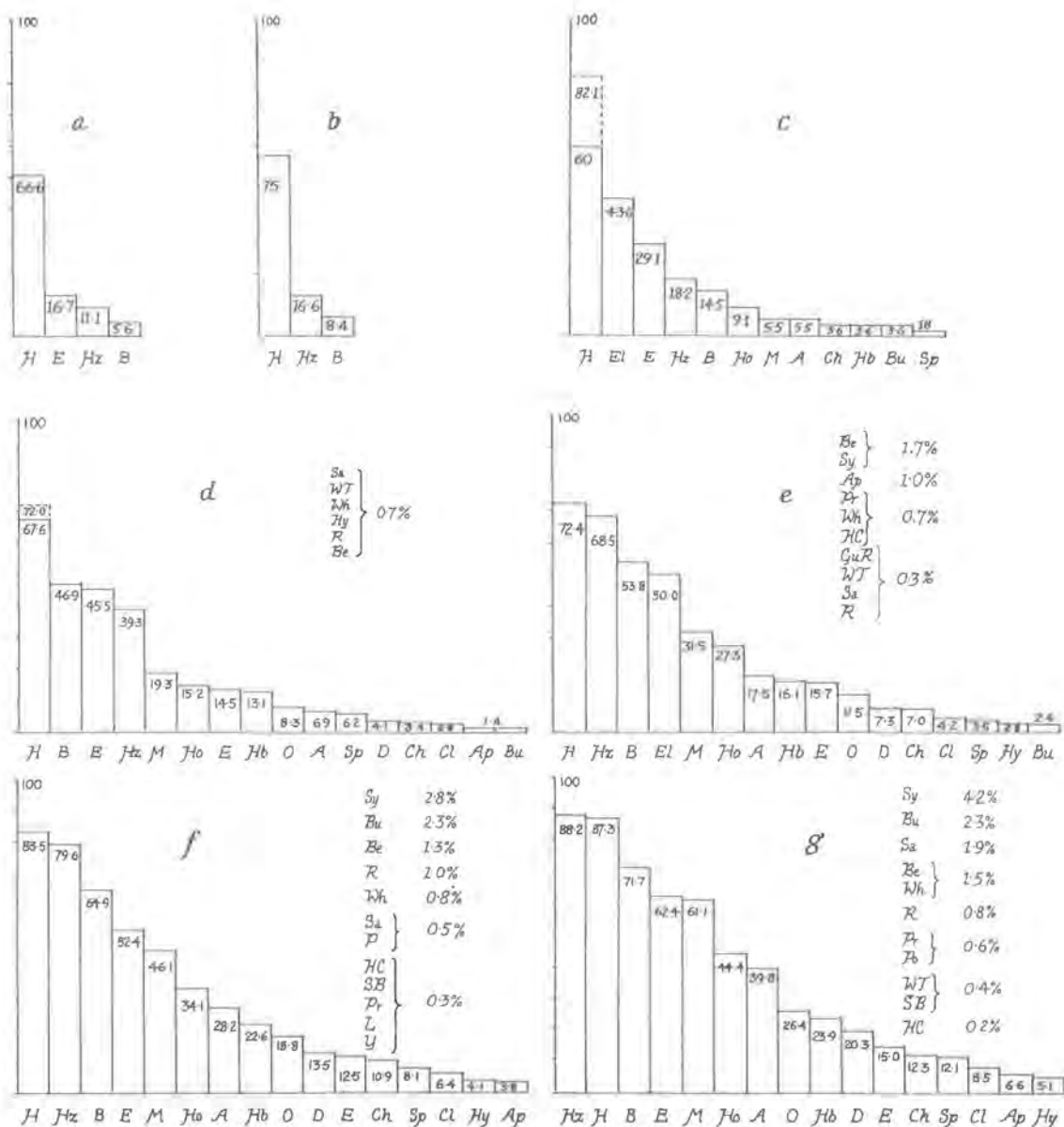


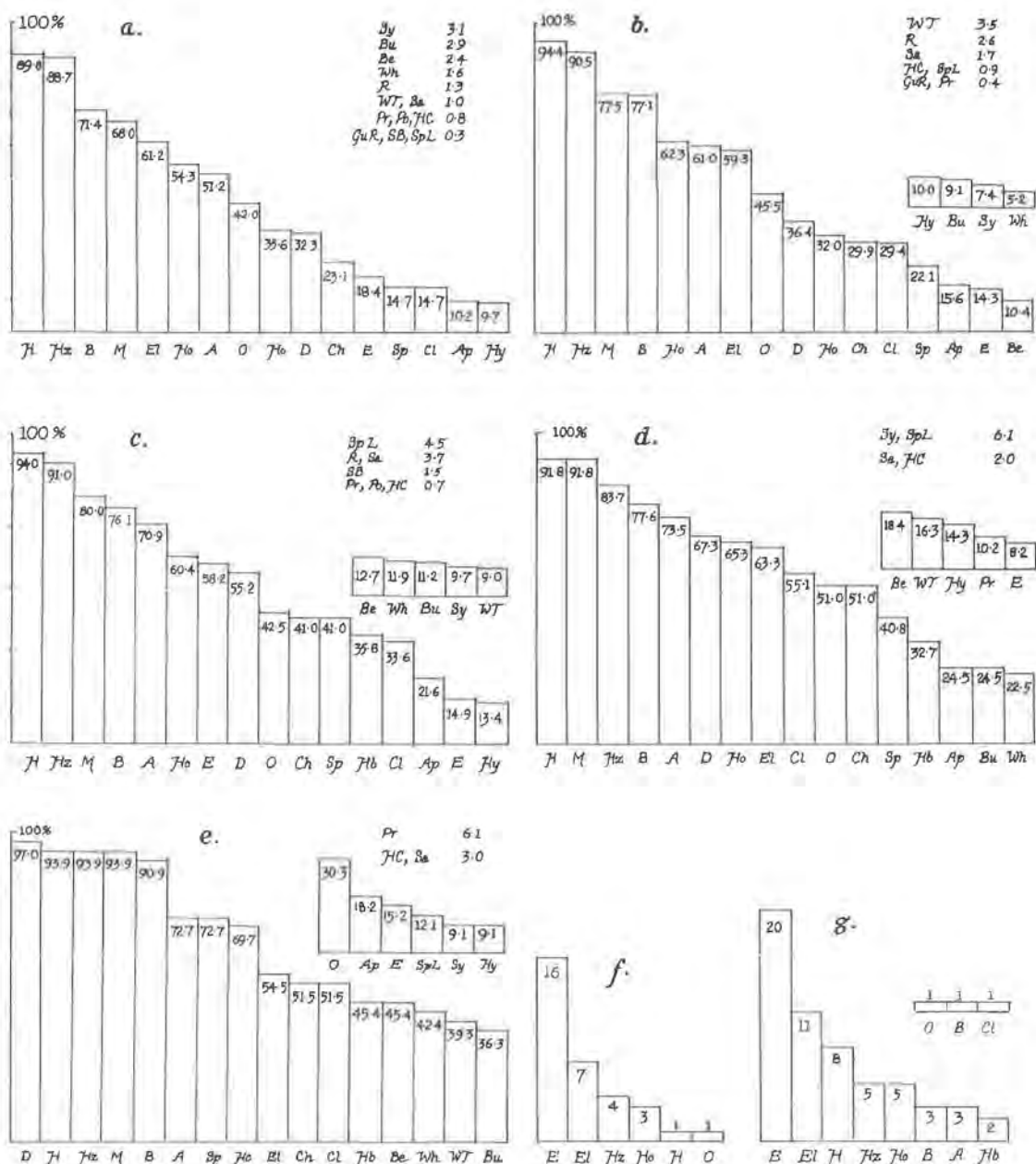
Fig. 1. Frequency distribution of hedges of different species richness in the survey area as a whole.

The modification of Dr Hooper's method, described above, should yield if anything an underestimate of the age of hedges, but in fact I think this is unlikely to be the case in the Chilterns. The average number of species per section in the whole survey area (2235 sections) worked out at 5.94. This excludes briar but includes the climbers already mentioned and does not allow a deduction of one for the planting species, which is only an optional modification of the method. An adjustment can easily be made to this average to bring it into line with the original Hooper formula. An analysis of 301 sections within the survey area in which briar was noted if present showed that it occurred in 71.1% of these sections. In another sample of 281 sections outside the survey area briar occurred in 73% of the sections. If the average number of species per section, 5.94, is weighted to take account of the omission of briar and the inclusion of the climbers an additional 0.5 needs to be added, producing a figure of 6.44 species per section. Taking 1981 as the survey date this produces a mean age for hedges in the survey area of about 1360. Michael Reed (Reed 1979, 157-8) suggests that the tide of enclosure was flowing strongly in the county in the fifteenth and sixteenth centuries. The omission of a notional



A - ash; Ap - apple; B - blackthorn; Be - beech; Bu - buckthorn; Ch - cherry; Cl - clematis; D - dogwood; E - elm; El - elder; GuR - Guelder rose; H - hawthorn; Hb - hornbeam; HC - horse chestnut; Ho - holly; Hy - honeysuckle; Hx - hazel; M - field maple; O - oak; Po - poplar; Pr - wild privet; R - rowan; Sa - sallow; SB - silver birch; Sp - spindle; SpL - spurge laurel; Sy - sycamore; Wh - whitebeam; WT - wayfaring tree

Fig. 2. Species occurring in hedge sections of different species richness. (a) Single-species sections. (b) Single-species sections, omitting those with Elm. (c) Two-species sections. (d) Three-species sections. (e) Four-species sections. (f) Five-species sections. (g) Six-species sections.



A - ash; Ap - apple; B - blackthorn; Be - beech; Bu - buckthorn; Ch - cherry; Cl - clematis; D - dogwood; E - elm; El - elder; GuR - Guelder rose; H - hawthorn; Hb - hornbeam; HC - horse chestnut; Ho - holly; Hy - honeysuckle; Hz - hazel; M - field maple; O - oak; Po - poplar; Pr - wild privet; R - rowan; Sa - willow; SB - silver birch; Sp - spindle; SpL - spurge laurel; Sy - sycamore; Wh - whitebeam; WT - wayfaring tree.

Fig. 3. Species occurring in hedges of different species richness. (a) Seven-species sections. (b) Eight-species sections. (c) Nine-species sections. (d) Ten-species sections. (e) Eleven- to fourteen species sections. (f) The effect of Elm on two-species sections. (g) The effect of Elm on three-species sections.

planting species would give a mean date of 1460 which seems more satisfactory but even so is a little early. The omission of briar as well would give an average date of c.1530 which on the historical evidence available is more acceptable.

Trees and Shrubs

Table 1 gives a list of all trees and shrubs found in hedges in the survey area arranged according to the number of sections in which each species is found. This table does not give

a comparison of the relative commonness of the plants listed. A species can only be recorded once for each section even though it may constitute almost the whole substance of the hedge over 30 yards. The table therefore records the frequency with which a particular species is met and not the absolute numbers of plants in relation to each other. In general the table tends to exaggerate the commonness of the less recorded shrubs, while hawthorn is probably much more numerous than any other species.

Hawthorn

Hawthorn has been the most common planting material for hedgerows. Its distribution in hedge sections by number of species, which in practice is also a distribution of hedges by age, is shown in Fig. 4. There is little difference in the frequency of hawthorn whatever the age of the hedge. Its frequency in 1 to 4 species sections and the lack of any very noticeable upward curve in the graph suggest its dominant role in planted hedges of more recent centuries.

Table 1. Trees and shrubs found in the survey area, according to the number of species in which each occurs.

	<i>No. of sections</i>	<i>% of total (2235)</i>
Hawthorn	1864	83.4
Hazel	1768	79.1
Blackthorn	1451	64.9
Elder	1239	55.4
Field Maple	1221	54.6
Holly	951	42.6
Ash	866	38.7
Oak	607	27.2
Hornbeam	567	25.4
Dogwood	527	23.6
Cherry	393	17.6
Elm	336	15.0
Spindle	315	14.1
Wild Clematis	292	13.1
Apple	174	7.8
Honeysuckle	137	6.1
Buckthorn	102	4.6
Beech	101	4.5
Sycamore	88	3.9
Whitebeam	74	3.3
Wayfaring Tree	49	2.2
Rowan	31	1.4
Sallow	29	1.3
Wild Privet	20	0.9
Spurge Laurel	19	0.8
Hop	15	0.7
Horse Chestnut	13	0.6
Poplar	12	0.5
Silver Birch	9	0.4
Guelder Rose	3	0.1

Lime, Pine, Yew, Red May: 1 section each.

Average number of species per 30-yard section for the survey area was 5.94.

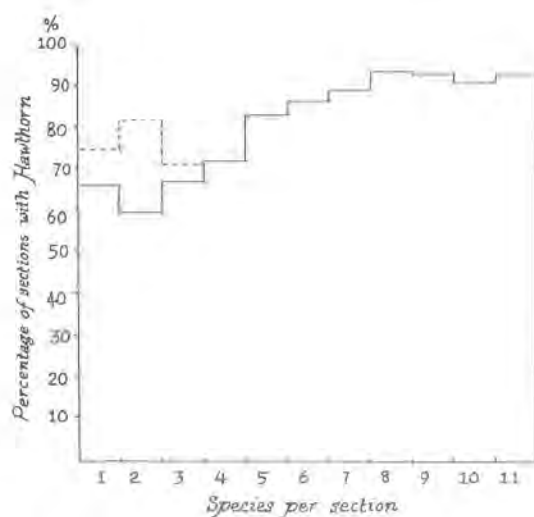


Fig. 4. Distribution of Hawthorn in hedge sections, by their number of species.

Since hawthorn is usually present in over 75% of sections in hedges of all ages, where it is less frequent it is probably not the planting species. There are some quite long stretches of

hedge on both sides of the upper Pednor road in the vicinity of Spring Wood which have very little hawthorn in them. Even in long established hedges with quite high species counts, hawthorn may be infrequent. The south-east hedge of Blind Lane as far as the Chesham Town Council boundary has hawthorn in less than half its 30-yard sections despite having an average of 6.3 species per section. Hornbeam was the probable planted species on this hedge line and hawthorn is only present as a coloniser. In the southern hedge of the Hollow Way section of the upper Pednor road nearby, hawthorn is again represented in less than half the sections. This hedge has more than 8.5 species per section with a probable origin as scrub on the banked roadside, later managed as a hedge. It probably predates enclosure in the area and thus illustrates how much hawthorn owes its dominant position in hedges to planting.

The true woodland hawthorn (*Crataegus laevigata*) is found only occasionally in hedges in the survey area and is not confined to the margins of present woodland. A. D. Bradshaw (Bradshaw 1979) suggested that the presence of *Crataegus laevigata* indicated an early hedge close to a woodland source. In the Chilterns most hedges are 'early' by comparison with most other areas of southern England because enclosure was completed at an earlier date. In addition, few hedges were far from a woodland source. However, the presence of woodland hawthorn should not be dismissed as an indicator. One Chartridge hedgerow in the fields called Chambers has this plant together with bluebell at the base of the hedge and although it is probably no older than many other hedges in the vicinity it may have originated on a cleared woodland site of the Tudor period. Of course, there are many intermediate hybrids between *Crataegus laevigata* and *Crataegus monogyna* but the classification of plants by the depths of the leaf lobes could only be carried out as a separate study and not in a general hedge survey.

Hazel

The abundance of hazel is a particular characteristic of Chiltern hedges. In the whole

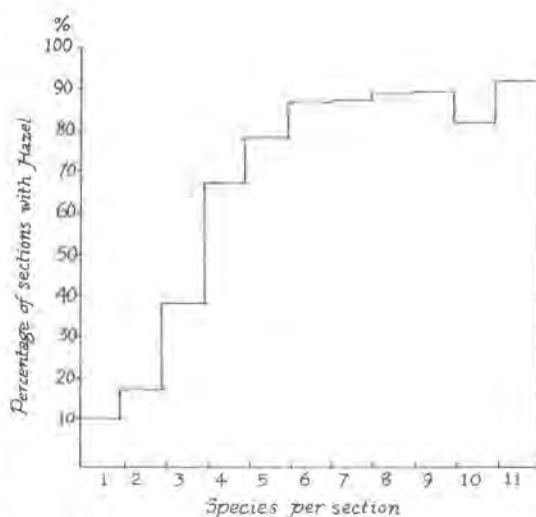


Fig. 5. Distribution of Hazel in hedge sections, by their number of species.

of the survey area it ranked second in frequency to hawthorn, while in some parts, for example between the upper Pednor road and Blind Lane, it was the most frequent shrub. In an area to the east of Old Sax Lane it is not only the most frequent shrub but was found in 90.1% of all the hedge sections. In the Midlands and East Anglia hazel is closely associated with wood-relic hedges, that is, hedges which once formed the boundary of a wood (Pollard *et al.* 1974, chap. 7). Obviously this is not the case in the survey area and in this respect the Chilterns have more in common with Kent and Sussex. Indeed hazel seems to be just as common in the survey area in older hedgerows which have no woodland characteristics as it is in hedges with these features. On the boundary banks which form the south or west edges of Captains Wood and Long Grove, both of which can be classified as primary woodland of some antiquity, hazel is even under-represented in relation to its average frequency. It is found in only 50–60% of the 30-yard sections of these wood edges compared to the average frequency of 79.1% for all hedge sections in the survey area and an expected frequency of 90% in hedges with 9–11 species per section, the average for these wood edges (see Fig. 5).

The general conclusion of Pollard, Hooper and Moore that hazel in hedges is closely associated with areas which remained quite heavily wooded, if not to the present day at least until the late medieval period, is more acceptable and accords fairly well with the history of the Chilterns.

Fig. 5 shows that hazel is fairly uncommon in 1 and 2 species hedges, but rapidly grows in frequency in 3 and 4 species hedges to reach a plateau in hedges with 6 species and above. There are some hedge sections that are entirely hazel. They make up about 11% of all single species sections and occur at the ends of hedges to complete the enclosure. These may have grown from hazel wands or hazel hurdles forming a temporary stop-gap. Hazel does not readily colonise young hawthorn hedges but its curve of distribution in older hedges suggests that once introduced it spreads rapidly. It does not have to grow to great size before producing fruit and so can take advantage of relatively short periods when a hedge receives no trimming. Fig. 1c-e shows that while hazel usually enters a hawthorn hedge after elder and blackthorn, it overtakes both these shrubs in frequency once a hedge has 4-5 species, emphasising its colonising ability.

Blackthorn

Blackthorn is one of the earliest colonisers of hawthorn hedges, as is shown by Fig. 1d. It is a constituent of 46.9% of 3 species hedge sections (52%, if those containing elm are ignored) and the curve of its spread into older hedges is very like that of hazel, flattening out in the 6-10 species sections (Fig. 6). Its overall frequency is 64.9% of all hedge sections in the survey area. Blackthorn is a suckering shrub and will grow out from hedges into the adjoining fields in pasture that is undergrazed. As a result it can form barriers of scrub in front of the true hedge sometimes making survey work difficult. Its suckering habit undoubtedly assists in the colonisation of hedges, particularly where the hedge has originated in the first place as scrub. The field and road hedges enclosing Great Fryers Hill all have a great deal of blackthorn in them and may have originated in this way, while along the top Pednor road

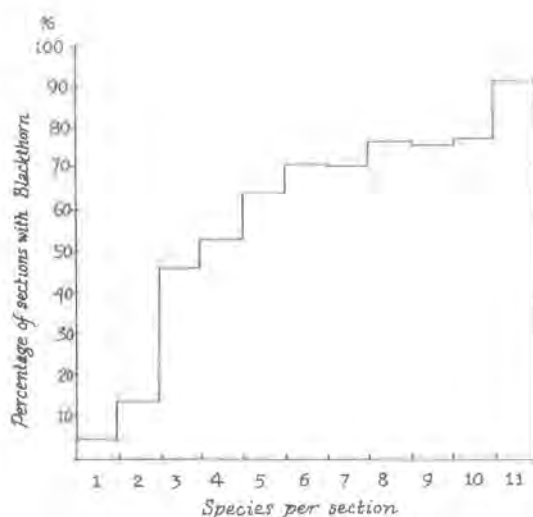


Fig. 6. Distribution of Blackthorn in hedge sections, by their number of species.

there are several examples of blackthorn scrub having grown out from the original lane hedge on to the modern verge in large 'hedges'.

Like hazel, blackthorn is under-represented on the edges of old woodland, such as Long Grove, Captain's Wood and Braid Wood where under 50% of sections have blackthorn despite a high number of species per section. These edges tend to be thin in places and have suffered quite a lot of grazing pressure and this may explain why blackthorn is sparse, since under shade its tendency is to sucker outwards into the field where grazing prevents growth. Its distribution within the survey area is fairly even, being weakest between the top Pednor road and Blind Lane. This was an area of assart in the medieval period and the woodland origin of some hedges may have disfavoured blackthorn.

Elder

Elder is the fourth most frequent shrub in the survey area, found in 55.4% of hedge sections, but unlike any other shrub, except those which have been extensively planted, it is almost as common in young hedges as older ones (Fig. 7). A good example of its early intrusion is found in one of the most recently planted hedges in the survey area. The hedge which now encloses

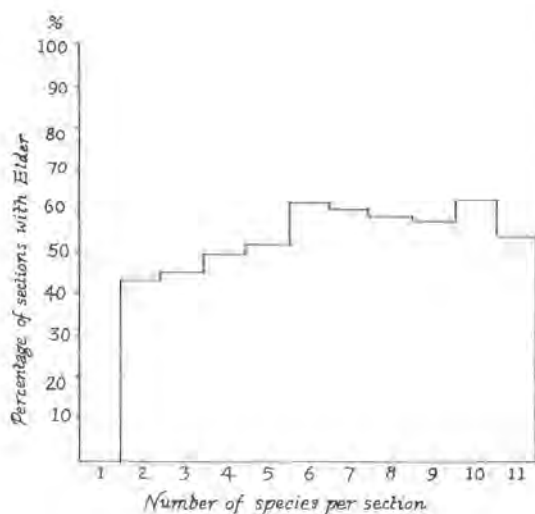


Fig. 7. Distribution of Elder in hedge sections, by their number of species.

Fearnly Field from the Pednor road at SP 927032 approx. was planted after 1945 and already has elder in seven out of nine sections. In another hedge planted in the late nineteenth century across Great Grove Field and Slates Bottom near Three Gates Bottom, elder occurs in all the 17 complete 30-yard sections. Its success at invading new hedges is partly due to its rapid growth to fruiting maturity, but as a plant it also thrives on disturbed ground and so new hedgerows provide excellent colonising opportunities. It is a rather short-lived shrub and so tends to be less vigorous in older hedges and as Fig. 7 shows makes little further progress into these hedges. From being the second most frequent shrub in 2 species sections (after hawthorn) it declines to ninth most frequent shrub of hedges with 11 species per section and over. It does however find new opportunities in older hedgebanks when they become disturbed by badger setts and rabbit warrens, sometimes becoming the dominant shrub. It is also prominent in hedge sections that are dominated by elm whether living or dead. Like blackthorn it is under-represented in the Herberts Hole valley compared to the survey area as a whole, probably because of the age distribution and origin of this area's hedges.

Field Maple

Field maple is the fifth most frequent shrub in the hedges of the survey area and the most common of those plants which need to grow to tree size to reproduce themselves. Like hazel, it was found to be closely associated with wood-relic hedges in the Midlands by Pollard, Hooper and Moore but in the Chilterns it is one of the most characteristic plants of the hedgerows, and its distribution goes far beyond hedges with woodland origins. Its average frequency for the whole survey area—54.6% of all hedge sections—hides a very steady rate of colonisation which takes it from a level of 22% of all 3 species hedge sections to 80% occurrence in 9 species sections. In 10 species sections and over it is as common as hawthorn and the curve of its distribution ascends until it becomes almost the commonest species in the oldest hedges (Fig. 8).

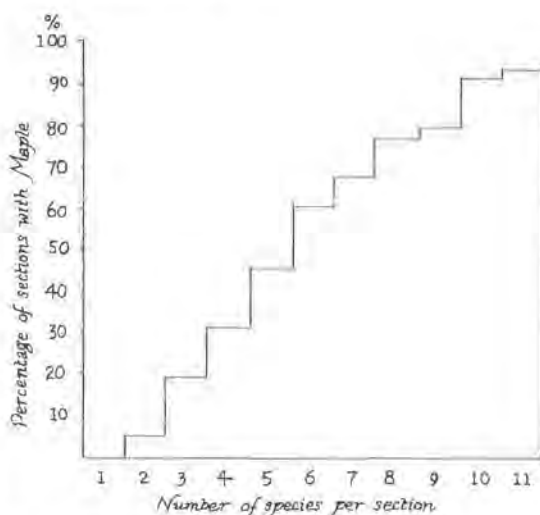


Fig. 8. Distribution of Field Maple in hedge sections, by their number of species.

The success of maple in Chiltern hedges does not seem to be due to any special favour shown to it by farmers. Its colonising ability is probably due to the fact that it bears a wind-borne fruit on a relatively small tree, so that it is able to spread new seedlings to some distance whenever a hedge is neglected. It is especially abundant on large banks where the 'hedges' have perhaps been cut back at less frequent

intervals. There are good examples in the Pednor valley. It is very strongly represented in all the woodland edges of the area, these being perhaps its ideal habitat. Among the trees of Chiltern hedgerows it is by far the most successful coloniser and once in a hedge seems unaffected by any sort of management.

Holly, Ash and Oak

Holly, ash and oak are all in the second rank of trees and shrubs in the survey area, in terms of frequency. They each have a different method of seed dispersal, relying on birds, the wind and small mammals or crows respectively. However, they share the advantage of being the trees most often spared by farmers when cutting back hedges, even today when hedges are no longer managed to produce timber. Oak is indeed more common in the survey area as a tree in hedges than cut back as a shrub; presumably where it has not been planted it has at least been nurtured by the farmer.

Oak, of course, was the principal timber for house-building in the Chilterns until bricks superseded timber. Exceptional trees were also at one time in demand for ships' timbers and in 1608 more than half these specialised timbers came from fields rather than woods (Rackham 1976, 170). The importance of hedgerow trees increased as the destruction of the English forests in the medieval period was followed by the clearance of many smaller woods in the sixteenth century. Apart from its practical uses the oak was at one time worshipped, a regard which survived for many centuries in a respect for the tree which went beyond its utility.

Holly was also held to have magical properties, flourishing as it did in the winter when other trees were lifeless. As a symbol of everlasting life it came to play a part in Christian symbolism, and its popularity, which causes it often to be spared the flail, seems to be mostly based on this. It has in the past had a practical use as fodder for cattle in hard weather.

Ash owed its importance to its wide range of practical uses. It was the principal wood for tool handles of all kinds and for the shafts of

carts and waggons, and it made the best firewood. It is still much used today, even in competition with plastics, for tool handles. Ash in hedgerows was usually stooled or occasionally pollarded, because the timber required was mainly of small size. The influence of this practice is still to be seen in local hedgerows, even though discontinued for many years, in the number of ash trees with clusters of large trunks growing from the stool. In many cases they have not been cut for fifty years or more.

The usefulness of these trees must be borne in mind when considering their distribution in hedges; there has been an incentive to encourage their growth or plant them.

Holly (Map 2)

The graph of holly's distribution in hedges of different ages shows a steady but not dramatic colonisation (Fig. 9). Holly is a woodland plant, being one of the few shrubs in the understorey of beechwoods, coping with both heavy shade and poor soils. It is slow-growing and takes time to establish itself but once it has, is fairly resistant to browsing. It does have bird-sown seeds which help its distribution.

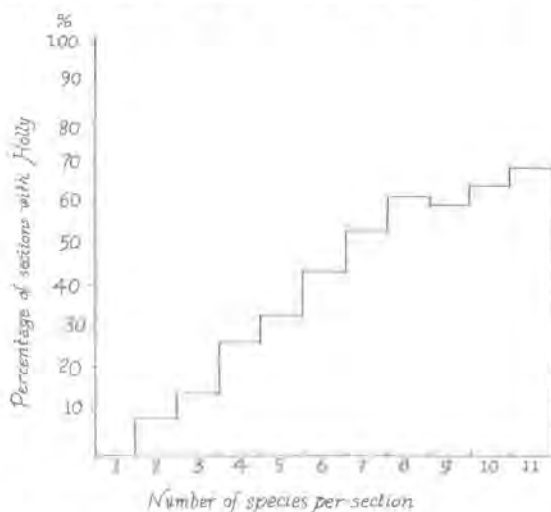
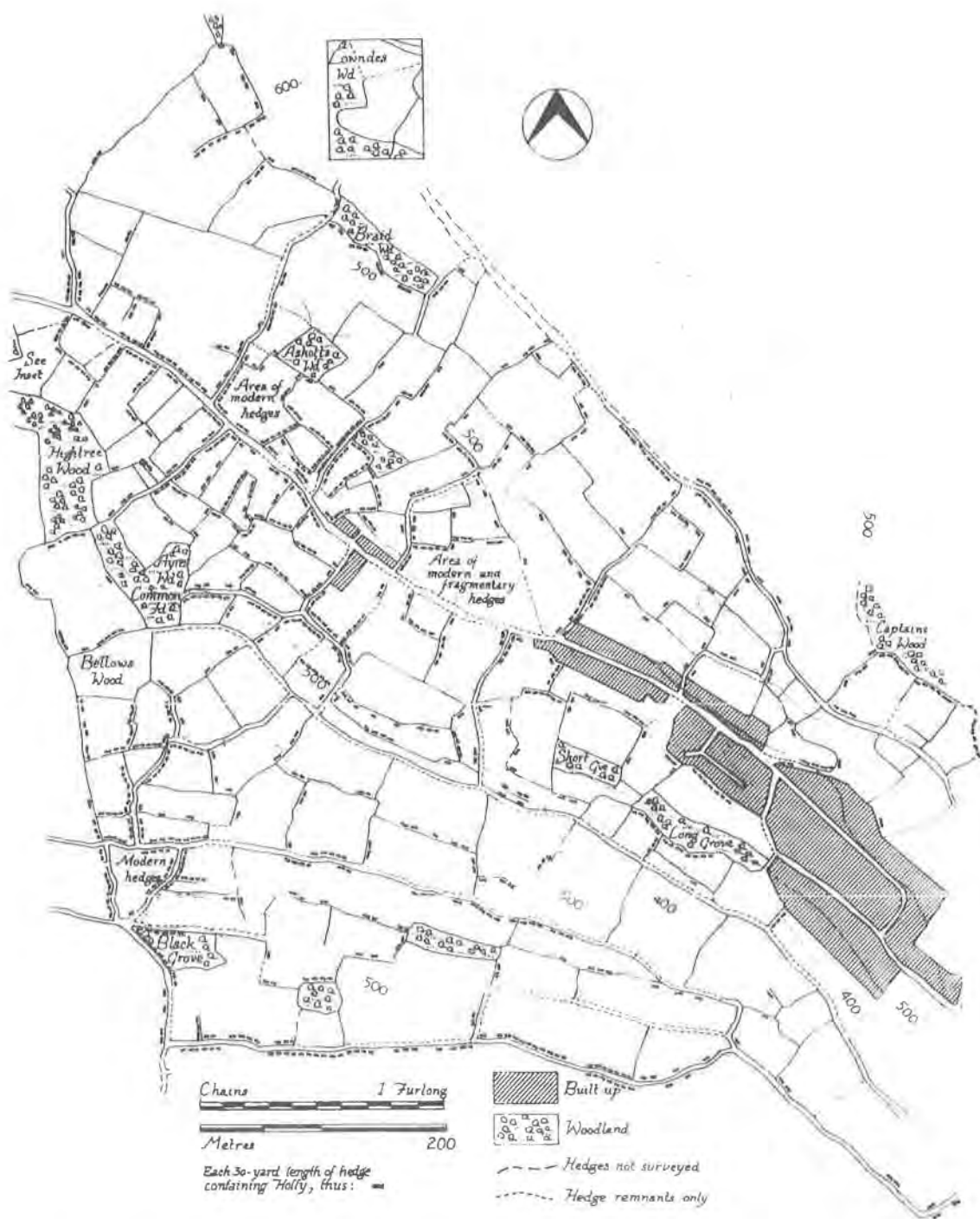


Fig. 9. Distribution of Holly in hedge sections, by their number of species.

The curve of its distribution in hedges of different ages is distinctly convex, whereas the graphs of the pure colonisers, such as



Map 2. The distribution of Holly in the survey area.

dogwood, spindle and clematis, are concave. Holly is obviously a species which owes its distribution to both planting and colonisation, so that the convexity of the curve in hedges of median age represents its promotion there, filling out what would otherwise be the normal concave line.

Holly appears in nearly all the 30-yard sections of the boundary banks of the two primary woods in or near the survey area. It is less frequent on the edges of secondary woods.

Although present in quantity in old wood edges and frequent in hedges in the Grovefield area of Chartridge and in parts of west Pednor which may have been cleared of forest or assarted only in the later medieval period, holly does not show on its distribution map any clear correlation with such areas. Its main concentration is in the immediate vicinity of Chartridge village. One would hardly expect to find the main areas of assart so close to the village and many of these holly hedges are of no great age, having if anything rather less than the average species count.

It is improbable that these hedges could have acquired so much holly by colonisation. It occurs in every section of several hedges just to the east of Cogdells Lane, for example, whereas in the large bank at the bottom of the former Peashill Field, which has around 10 species per section, holly is only an occasional shrub. Even more significant, while the northern hedge of the former Cherry-Tree Close has holly in every section, its continuation as the northern hedge of Great Field has no holly at all, yet is several hundred years old. The other shrubs in these two hedges are almost identical and it is only the absence of holly in one which really distinguishes them. Other examples of adjoining hedges, one with holly and one without, can be seen on a map of holly's distribution.

It looks as though holly was planted in hedgerows during the Tudor period and there are a number of distinct sets of holly hedges in the survey area, particularly around farms: Chartridge End Farm, Cherry-Tree Farm and Lime-tree Farm, and bounding the Newlands

fields and some of the Chambers fields. None of these hedges have the shrub count to suggest that they are particularly ancient.

Many of the fields enclosed by these holly hedges were fairly small and their proximity to the farms is a good indication that they were used for pasturing stock. The main attraction of enclosure for the Tudor farmer was that it released him from the stint imposed on animals pastured on common land and so enabled him to increase his stock as well as keeping them apart from any diseased animals in the village. Holly planted in these hedges provided extra shelter for animals when it was well grown as well as being a source of fodder in bitter weather. It only seems to have been planted in conjunction with other species, in most cases hawthorn, providing a balance between a quick-growing plant and a slower-growing but denser evergreen bush.

Ash

A map of the distribution of ash over the survey area shows it to have a more even scatter than holly. It is the seventh most frequent shrub or tree in hedges in the survey area. The graph of its distribution in hedge sections shows that it is a slightly more vigorous coloniser than holly, occurring in more than 70% of sections

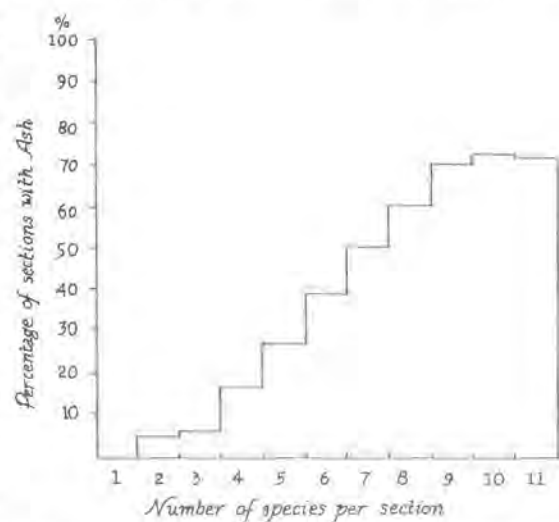


Fig. 10. Distribution of Ash in hedge sections, by their number of species.

with nine species or more (Fig. 10). Ash also becomes slightly more frequent in older hedges relative to other shrubs, while holly suffers a slight decline. Nevertheless it cannot rival maple in its colonising ability (another tree with a winged fruit). Ash needs to grow into quite a large tree before it produces seed and its value for ash poles in past centuries probably prevented many trees from ever achieving this.

Ash is weakly represented in old wood edges. This raises the question of whether ash was very common in the 'natural' woodland before clearance. It does not seem to be any more frequent on the edges of old secondary woodland, where they can be adequately assessed, so it is very much a hedgerow tree in the survey area. It is strongly represented in lane hedges. These tend to be older than internal field hedges, but they may at times have had less management, so facilitating the growth of mature ash trees.

Oak

Oak is the eighth most frequent tree or shrub in hedges in the survey area, occurring in 27.2% of sections. This represents a considerable drop in frequency compared with ash. It is often found in hedges only as a tree and where such trees occur with any regularity in a hedge it is probable that they have been planted. The graph of its distribution in sections of different age shows a curve between the 3 and 7 species sections which is quite compatible with a normal colonisation curve, but in the older sections it makes no further advance and indeed drops dramatically in sections of 11 species and over, reflecting a poor representation in some of the oldest hedges in the local landscape (Fig. 11). Oak is poorly if at all represented in some of the old open field areas, much better in the old areas of assart. Where oak is present it is often found in every section of a hedge. Thus in hedges between Capps Lane and the parish boundary there are five with oak in every section. This implies planting.

Where oak has been planted in any quantity in the last two centuries, the planting is easily recognisable because it nearly always occurs as a line of trees, more or less regular. Its status as

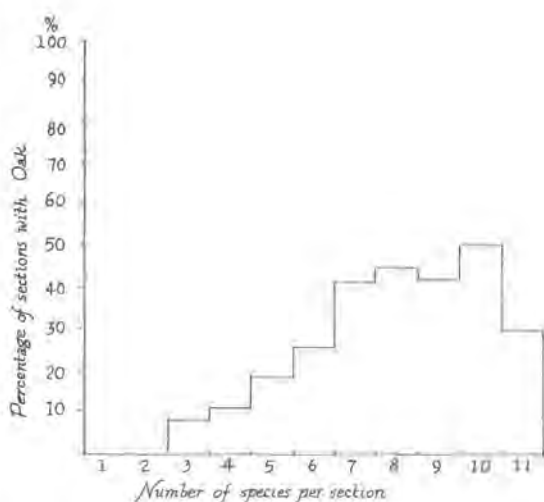


Fig. 11. Distribution of Oak in hedge sections, by their number of species.

a planted tree is confirmed by its average frequency in hedges of different ages. Oak reaches its highest level of distribution in 10 species hedge sections: 51% (Fig. 11). In 6 to 7 species sections its frequency is only in the range 26–42% so that when a hedge with this kind of species range has oak in every section one is entitled to suspect that some of it has originated from planting. Oak is absent from what are possibly the oldest sections of Blind Lane's hedges, but it is found in nearly every section of the southern hedge at the western end, although these are less species-rich. In the hedge on the southern side of Hollow Way, where the top Pednor road climbs the hill, oak is not found at all in a hedge which has probably grown out of scrub and predates enclosure. This emphasises the fact that oak does not have the ability to colonise the farming landscape far from its original source. Moreover oak is infrequent on the boundary banks of the local primary woods. It occurs on only five sections out of forty-four of the south-west edge of Captain's Wood, although sometimes it is found a little more often just within the wood. This kind of frequency is repeated at Long Grove and Braid Wood.

All the evidence shows oak has little power to colonise hedges without the agency of man.

However, it differs from other planted species in that it does not make up the substance of the hedge but is planted along it at intervals. Where a complete hedgerow has been planted with oak the planting is obvious, but if two or three trees have been planted they would not be detectable as a planting. Oak will colonise within a small distance of the original planting and this no doubt explains the convex curve in its distribution graph in 3 to 7 species sections. Why has planting not distorted this curve? I think the answer is that oak has continued to be planted in hedges from the Tudor enclosures up to the present century. A limited period of oak planting would have distorted the curve, but moderate planting over several centuries would increase the frequency of oak without altering the curve.

Hornbeam (Map 3)

The graph of hornbeam's distribution is convex and gives an initial indication that part at least is due to planting (Fig. 12). In addition, its distribution map shows that much of its occurrence is in consecutive sections along the length of whole hedges or lanes. In that part of the survey area north of Chartridge Lane, in which hornbeam is least frequent, 54.5% of the hedge sections containing hornbeam are in hedges which have it along their entire length. There is little doubt therefore that most hornbeam in hedges within the survey area originates from planting.

Over the whole survey area hornbeam occurs in 25.4% of hedge sections but the disparity between different parts of the area is far greater than that of any other of the commoner trees and shrubs. In north Chartridge it is present in 18.4% of hedge sections while in the Herberts Hole area it is found in 53.4%. In the latter it is the fifth commonest tree or shrub. In these areas hornbeam is particularly common in laneside hedges in association with holly.

Hornbeam is associated with the whole western boundary of Great Chesham parish from the Missenden road in the south to Newsets Wood in the north and even beyond. Much of Little Hundridge Lane is lined with it. For part of its course the lane winds away from

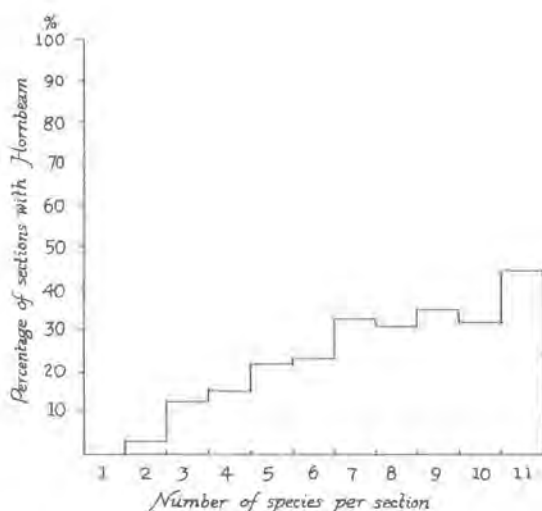
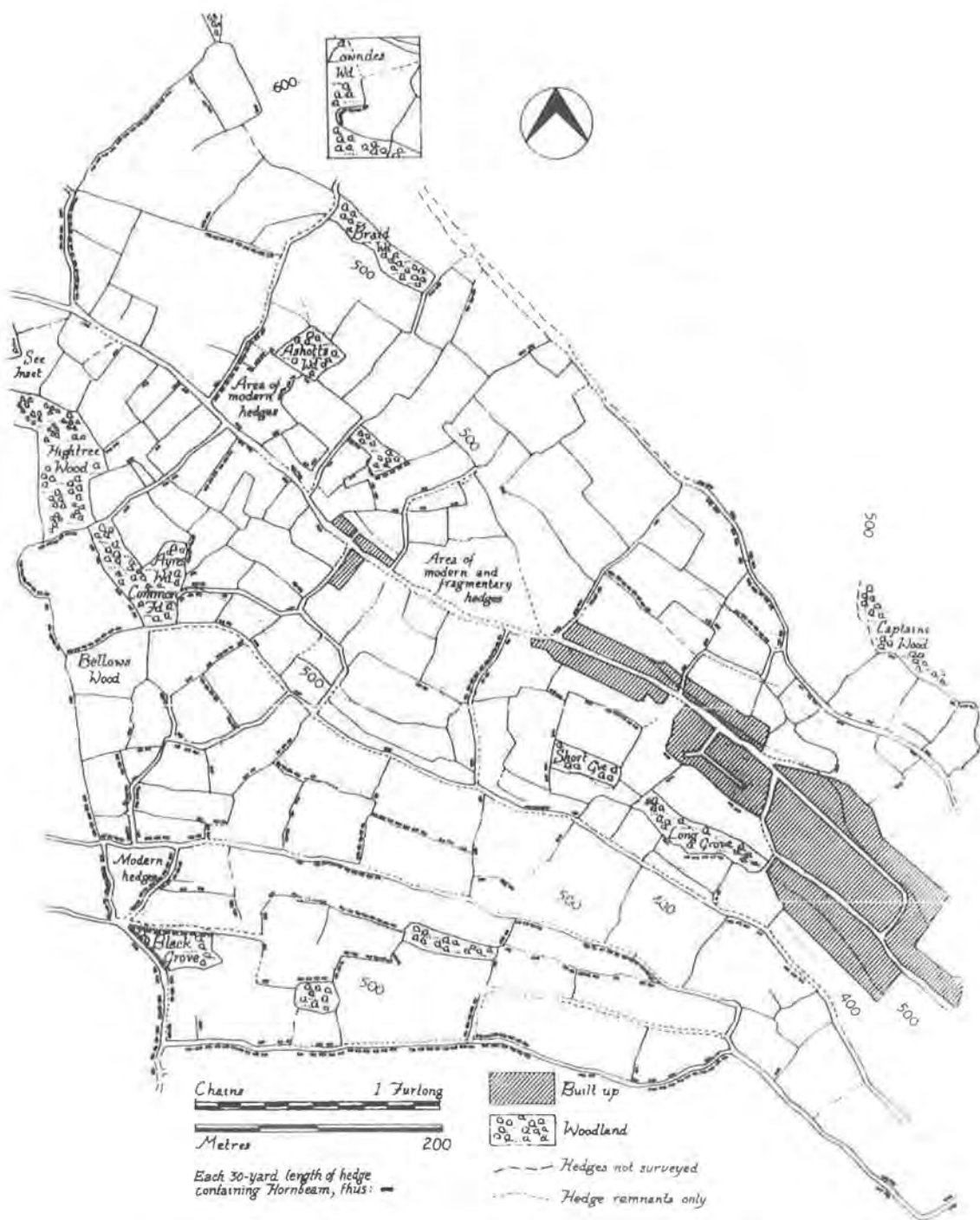


Fig. 12. Distribution of Hornbeam in hedge sections, by their number of species.

the boundary itself, which is no more than a line on a map across the former assart of The Reddings. Beyond Herberts Hole Cottage hornbeam is found in 13 of the next 15 complete sections, that is, to a point beyond the Pednor-Ballinger lane. It reappears in the boundary hedge beyond Bellows Wood, occurring in 11 out of the next 13 sections. The parish boundary then runs through Hightree Wood and then by wood edges including a nineteenth-century hornbeam hedge before it crosses fields to the junction of Chartridge Lane and Arrewig Lane. On the east side of Arrewig Lane hornbeam is almost continuous to within 80 yards or so of the point where the road turns in the valley bottom. About two thirds of the boundary hedge between Three Gates Bottom and Newsets Wood has hornbeam and it continues to reappear between Newsets Wood and Oak Lane and in Oak Lane itself.

Much of this hornbeam along the parish boundary is probably associated with wood boundary banks since most of the boundary was wooded in past centuries and hornbeam has always been a popular, indeed almost traditional tree for planting wood edges. It is an occasional plant of primary wood edges which probably date back to Saxon clearance, and also in old field banks. However, its use as a



Map 3. The distribution of Hornbeam in the survey area.

planted tree for the boundary banks of woods seems to date from the medieval period. Thus Redding Wick, Bellows Wood, Black Grove, Barn Wood, Hightree Wood, Lowndes Wood, Darvill's Wood and Newsets Wood, all have planted hornbeam and all seem to have been reshaped or some into existence during or after the period of assarting which opened up the western boundary of the parish. Not all these wood boundary banks necessarily date from this period. Further encroachment on these woods at later dates would have entailed the planting of new wood edges and many of the present banks of these woods are very small. There are however three hedge banks in Pednor, once the edges of woods, which are much larger and have a lot of hornbeam. These may date from a period of assart in Pednor which we know from the Missenden Charters to have been of recent date in the late twelfth century (Jenkins 1955, Nos. 295, 316).

Although hornbeam is not very frequent on the valley-side edges of primary woods, the boundary banks of which are probably Saxon, it is usually to be found on the back edges of these woods where the final boundary between wood and field has only been arrived at after much encroachment. Again these banks are relatively small. Many of these hornbeam hedges round woods have in the past been laid although most have not had any management now for many years. Hornbeam's extremely hard and durable timber was used in the past for such items as the cogs of mill-wheels and for threshing floors and so had a specialist role in the farming economy.

To summarise, hornbeam in the survey area is concentrated in areas of former assart, where it has in most cases been planted. It is a very common tree on the boundary banks of medieval and later woodland and it is always worth considering whether a present day field hedge with hornbeam in every section was perhaps the edge of a wood in the Middle Ages.

Dogwood (Map 4)

Dogwood is the tenth most frequent tree or shrub in the survey area, being found in 23.6% of all hedge sections. This frequency is very

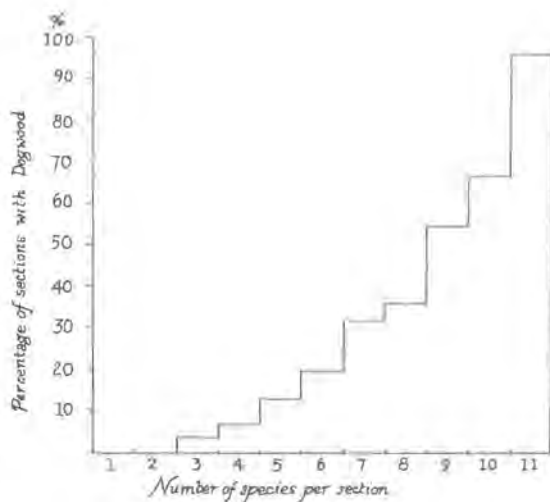


Fig. 13. Distribution of Dogwood in hedge sections, by their number of species.

similar to that of hornbeam, but whereas that tree owes much of its distribution to planting, dogwood is purely a coloniser of hedges. The graph of its distribution in hedge sections demonstrates the markedly different curve this produces compared with a planted species (Figs. 13 and 12). Although it is often one of the chief components of scrub on the scarp face of Chilterns it has not been a rapid coloniser of hedgerows in the survey area, its progress being slow though inexorable. However it becomes so prominent in the oldest and most species-rich hedges that it is actually the most frequent shrub in sections of 11 species and over.

Dogwood favours chalk soils to some extent and in the Chilterns soil type and soil acidity can vary considerably over quite short distances. The ridges are capped with clay and tend to acidity while chalk outcrops only a short distance down the valley sides. If dogwood's distribution were determined by soil, this should show up in its distribution map: it would favour the valley sides and avoid the ridges. In fact, dogwood is found across the whole range of soils from clay to chalk, so soil type can be ruled out as the critical factor of its distribution. It is heavily concentrated along the oldest features of the farming landscape: the edges of the primary woods such as Long

Grove, Captain's Wood and Braid Wood, old field banks of the common fields in Westdean and Peashill, and old lanes such as Arrewig Lane, Ashotts Lane, Chapel Lane, Grovefield Lane and Blind Lane. It picks out most of the pre-enclosure skeleton of the medieval parish and indeed away from these features dogwood is really not very common.

Where dogwood appears occasionally in a few field hedges in the East Pednor valley the source is obviously the southern edge of Long Grove and its continuation eastwards in the large bank at the top of Outsides. Once confined to a few features of a more open landscape, dogwood has made little progress into later enclosure hedges. The slowness of its advance is surprising when one considers that it has a berried seed and one can only assume that the agency of birds in distributing seed is variable from one species to another.

Cherry

Cherry is one of the most characteristic trees of Chiltern woods and is also fairly frequent in hedgerows. In the high canopy of beechwoods the cherry blossom can only be properly seen from higher ground as patches of white here and there. The wild cherry or gean (*Prunus avium*) is a prolific bearer of fruit when mature and the cherries at their best have as sweet a flavour as cultivated varieties, although they are very variable from tree to tree and can be quite bitter. They are much eaten by foxes when they fall to the ground in the summer, the stones often appearing in their droppings at that time of year.

Foxes are probably one of the agents by which seed is dispersed into new sites, but in established sites suckering is almost certainly more important as a means of regeneration. Rackham considers suckering to be more important than seed and there are many examples in local hedgerows where erosion of the hedge bank has revealed large trees fused together at the roots. Cherry trees are shallow rooted with typically a rather heavy crown and in hedges are therefore vulnerable to wind, many trees being blown down at the height of their maturity. However, cherry is a fast

growing tree and has a relatively short lifespan even in the more protected environment of a wood. It will attain the same size as beech in as little as half the time, large-trunked cherry trees often being only about 100 years old when equivalent beech are from 160 to 200 years old.

The graph of its distribution in hedge sections (Fig. 14) shows a normal colonising curve, indicating that cherry has been little if at all planted. It also suggests that suckering does not necessarily produce a different curve of distribution in hedges on an age-related basis. Although cherry may sucker fairly vigorously in favourable circumstances, it does not seem to affect other species in the hedgerow in the way that elm does.

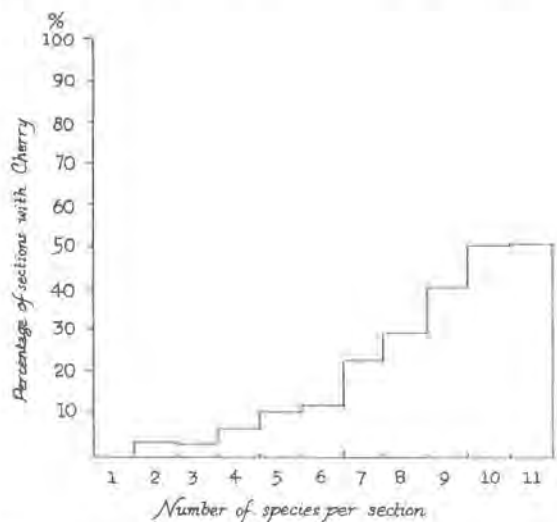


Fig. 14. Distribution of Cherry in hedge sections, by their number of species.

Cherry occurs in 17.6% of all hedge sections within the survey area, and is fairly evenly distributed with the exception of the hedges between Westdean Lane and Cogdells Lane where it occurs in only about 4% of sections. It is common in the hedges of a number of old lanes, along some sections of the parish boundary and on the edges of a number of former woods in Pednor. It is also common on the boundary banks of primary woodland in and near the survey area. It is less common than dogwood in old field banks and therefore its

distribution is rather more linked with former woodland than purely pre-enclosure features of the landscape.

Elm

Elm is the twelfth most common tree or shrub in the survey area, occurring in 15% of all hedge sections, but its distribution within the area is extremely uneven. It is heavily concentrated in just a few areas. In some parts elm is quite uncommon—between Ashotts Lane and the parish boundary it occurs in only 8% of hedge sections, while between Capps Lane and the boundary it occurs in only 2.6%.

Most of the elm in the survey area hedges is the suckering elm (*Ulmus procera*) and much of it is dead or dying although one occasionally finds stretches of quite healthy brushwood. Its future is uncertain. The clustering of elm in the survey area reflects its method of regeneration and colonisation by suckers, but unlike blackthorn or cherry it has the ability to supplant other species in the hedgerows which it invades (cf. Rackham 1976, 168). In a hedge adjacent to Barn Wood some 80 yards are formed by a rampart of elms and a single oak tree. One gets the impression that everything else has been shouldered out of the hedge. The one 30-yard section that is relatively unaffected by elm has 8 species and the hedge itself is part

of a field system which must date back to the sixteenth century at least.

Elm therefore has the ability to reverse the process of species acquisition on which hedge dating is based and there are many examples in hedgerows within the survey area of elm having taken over a section of the hedge. Two 30-yard sections in the middle of a hedge near Old Sax Lane have only elm and elder, and elm, elder and ash. The other sections have an average of 7 species. This characteristic of elm is illustrated by the graph of its distribution (Fig. 15). Elm is proportionately more common in one and 2 species hedge sections than in more species-rich sections. There is no increase whatsoever in the proportion of 3 to 11 species hedge sections which have elm. The normal curve of the graph has been effectively neutralised.

There is therefore ample justification for excluding elm sections when considering the usual make-up of hedges with very low species counts.

Elm is nowhere common on wood edges. It does occur here and there within woods but its future in this habitat is especially bleak because in the poor light-conditions of the woodland floor there is little prospect of brushwood or sucker regeneration.

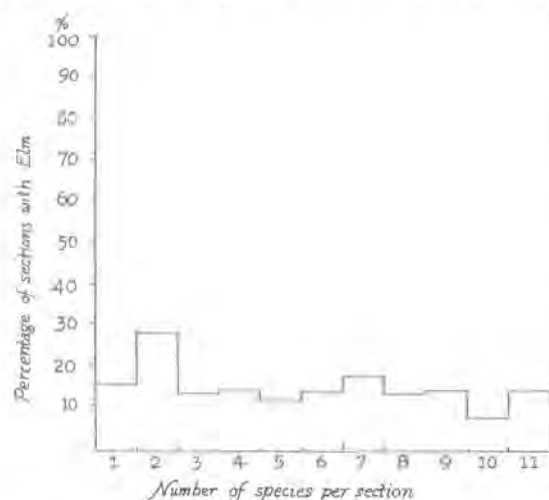


Fig. 15. Distribution of Elm in hedge sections, by their number of species.

Spindle (Map 5) and Clematis (Map 6)

Spindle and wild clematis are the thirteenth and fourteenth most frequent trees or shrubs in hedge sections in the survey area, occurring in 14.1% and 13.1% of hedge sections. Both are regarded as typical plants of chalk soils but their distribution maps for the survey area indicate that spindle is more tolerant of the rather acid clay-with-flints that caps the ridges than clematis. About a third of the hedges in the survey area lie on the more acid clay soils. The frequency of spindle and clematis in these hedges is 5.2% and 1.2% respectively, and in the case of clematis six out of the nine sections which contain the plant on clay soils are all in one hedge. Clematis is therefore the more sensitive of the two to acid soils.

The distribution of these plants within the



Map 5. The distribution of Spindle in the survey area.



Map 6. The distribution of Clematis in the survey area.

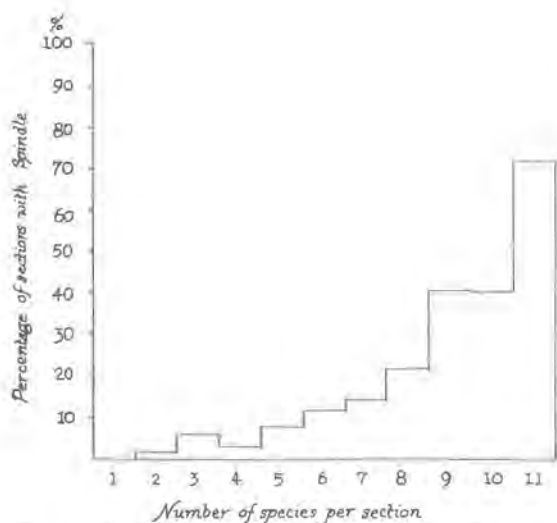


Fig. 16. Distribution of Spindle in hedge sections, by their number of species.

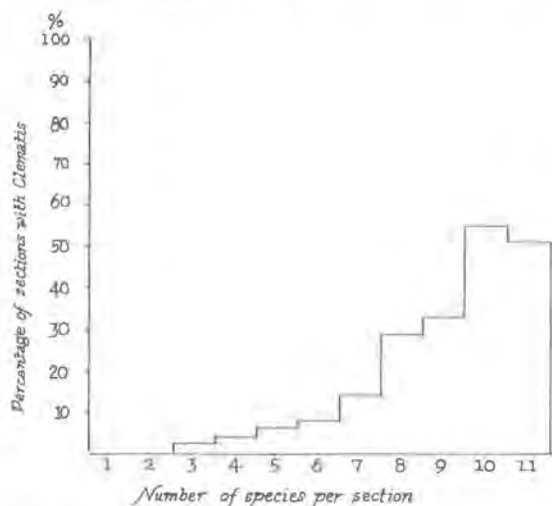


Fig. 17. Distribution of Clematis in hedge sections, by their number of species.

survey area is however very restricted even within the area of chalk soils, particularly in the case of clematis. There are some locations however where they are strongly clustered, nowhere more so than in the field banks and nearby hedgerows of the former common field area of Westdean. A comparable area of field banks in White Hawridge Bottom has similar clusters. Clematis is also well represented in

Blind Lane where the lane is on the chalk, in the Hollow Way sections of the top Pednor road and in Asheridge Road. Away from these locations it is thinly scattered. Spindle has a slightly wider distribution. It is generally much more frequent along primary wood edges than clematis, while its tolerance of a wider range of soils explains the appearance of occasional plants in hedgerows on the ridges of West Pednor and Hundridge.

Like dogwood the distribution of both these plants is confined for the most part to the neighbourhood of some of the oldest features of the farming landscape. They do not pick out that landscape as well as dogwood because they are more restricted by soil type and colonise newer hedges in their original localities with more success. Nevertheless where they cluster they help to identify pre-enclosure features of the landscape.

The distribution graphs for spindle and clematis (Figs. 16 and 17) show curves of colonisation which are standard for shrubs that have not been planted. The low frequency of clematis in sections with 11 species and over is explained by its comparative infrequency on wood edges in the survey area which make up a significant part of this group of sections.

Clematis can grow to considerable heights on the framework of other trees in the hedgerow and the stems can become as thick as small tree trunks. Large banks on chalk obviously provide an ideal habitat for this climber since they are often unmanaged, but there is little evidence that it is adversely affected by more rigorous hedge trimming. In some hedges clematis seems almost to smother other plants, but I suspect that this only happens where other plants in the hedge (such as elm) are affected by disease and unable to compete. Clematis then simply sprawls over them forming a barrier only a few feet high and this seems a perfectly suitable mode of growth since it flowers and fruits well in such circumstances. One concludes therefore that management has little effect on clematis in hedgerows and the same is probably true of spindle, which needs only a year's respite from

the flail to produce seed in its astonishingly coloured fruits.

Apple

Apple occurs in only 7.8% of hedge sections in the survey area, a frequency only a little more than half that of spindle and clematis. It is therefore little more than occasional in hedgerows. Its distribution in hedge sections by number of species shows a gentle increase in older hedges on a quite normal rising curve (Fig. 18). Apple includes a variety of trees from pure crabs to trees of domestic origin and man has presumably been one of the main agents of dispersal. Its distribution is random within the survey area, the only cluster being in the Pednor valley west of Westdean Lane. The centre of this cluster seems to be the very large bank at the bottom of Peashill Field. Apple does not seem to be affected in any way by soil type in its distribution.

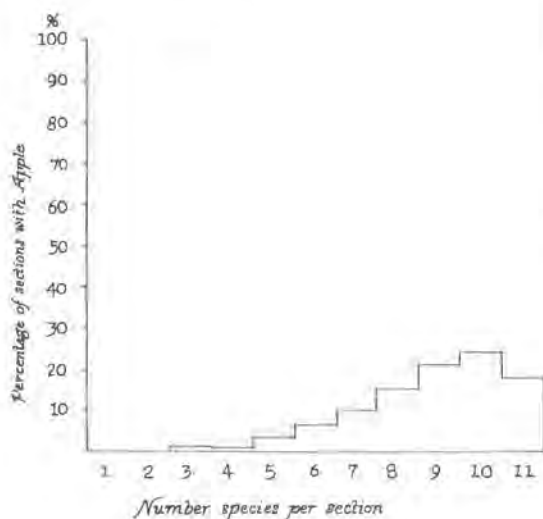


Fig. 18. Distribution of Apple in hedge sections, by their number of species.

Honeysuckle

Honeysuckle, which occurs in 6.1% of all hedge sections within the survey area, is more common on the clay than the chalk. It is found in 9.4% of hedge sections on the former and 4.4% of sections on the latter. Its locations tend to be associated with fairly late medieval

clearance of woodland. The principal cluster of honeysuckle is in road and lane hedges just to the west of Little Pednor Farm. Others occur in Pednor, near Ayres Wood, in and near Ashotts Lane and in Arrewig Lane. Its apparent preference for clay soils could be explained by its association with areas of late clearance of woodland which were usually away from the chalky and more fertile valleys.

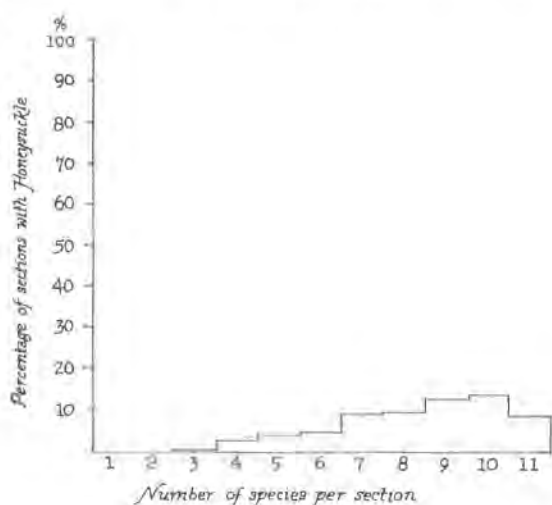
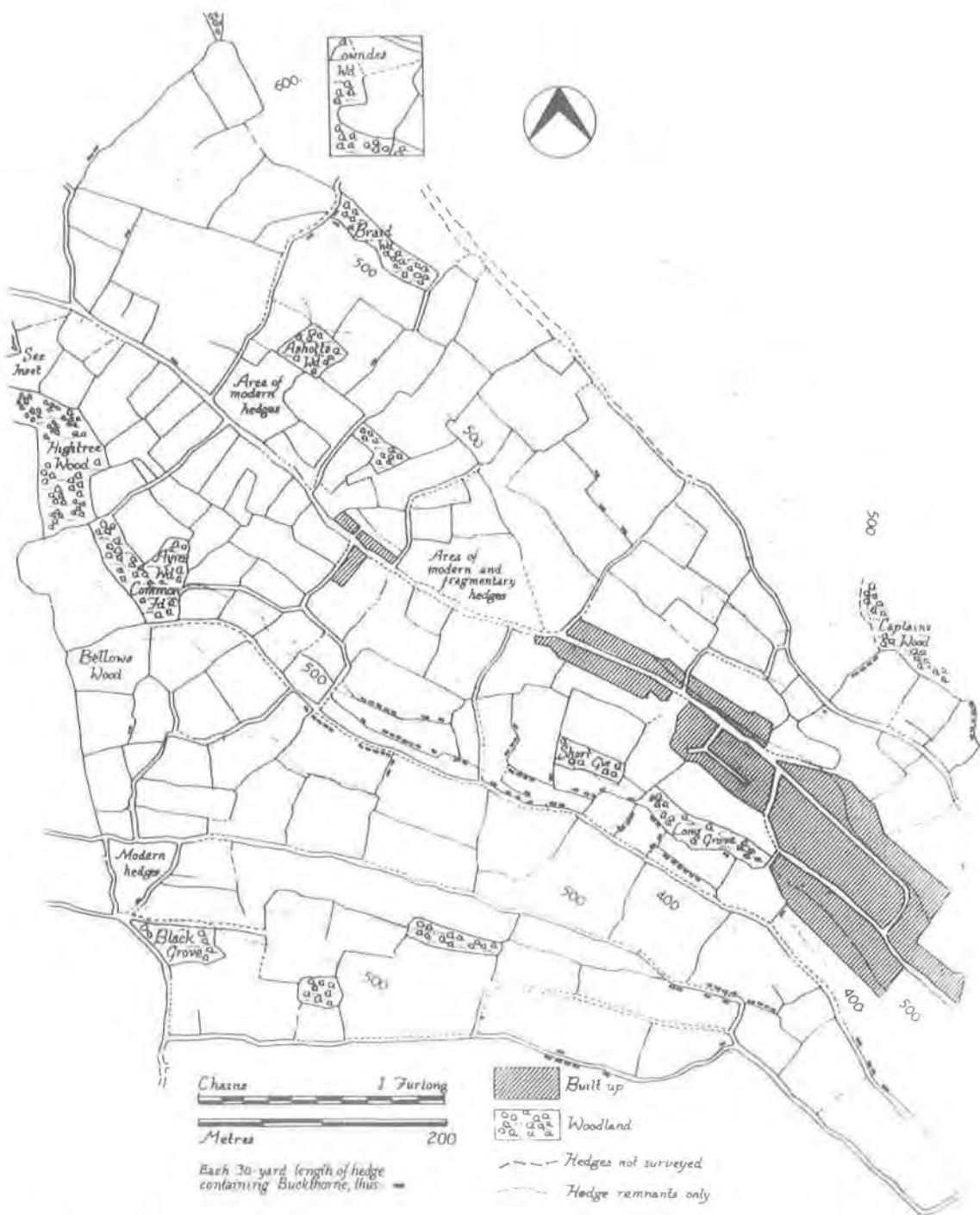


Fig. 19. Distribution of Honeysuckle in hedge sections, by their number of species.

The graph of its distribution in hedge sections shows an indifferent colonising ability (Fig. 19) which is confirmed by its failure to become abundant even in hedges which it has entered.

Buckthorn

The berries of the purging buckthorn (*Rhamnus catharticus*) were as their name implies once used as a rather fearsome purgative. Buckthorn is almost entirely restricted to hedges on chalk soils within the survey area. Only two hedge sections on the clay were found to have it, representing about 2% of its entire distribution. However, like spindle and clematis it is highly localised. 62% of the sections in which it is recorded are found in the Westdean area of the Pednor valley from Long Grove to the P.F. at SP 929032. Other small clusters occur in Hollow Way on the top



Map 7. The distribution of Buckthorn in the survey area.

Pednor road and in the central section of Blind Lane. Other than this there are only isolated instances of the plant in the survey area.

The distribution of buckthorn, centred as it is on field banks in former common fields, is far more restricted than is necessary simply through its soil requirements (Map 7). Again it points to the importance of some of the pre-enclosure features of the medieval landscape as early habitats and subsequent sources for plants in our countryside. It also underlines how difficult some plants find colonising later hedgerows in an intensively managed landscape.

Buckthorn is a plant of scrub, not woodland, and its distribution graph in hedge sections of different ages shows the kind of curve associated with such plants (Fig. 20). Buckthorn's poor record in colonising hedges in the 4 to 7 species range reflects how much it has remained confined to its earliest locations.

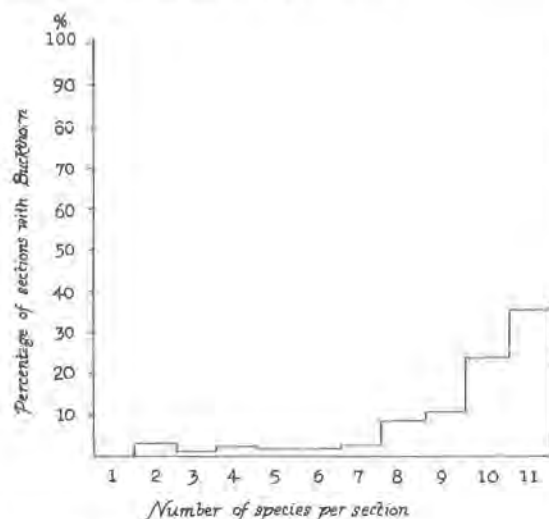


Fig. 20. Distribution of Buckthorn in hedge sections, by their number of species.

Beech

Beech is so dominant in many Chiltern woods that it may come as a surprise that it is only the eighteenth most frequent species in the survey area's hedges, occurring in only 4.5% of hedge sections. Even this is an overestimate of

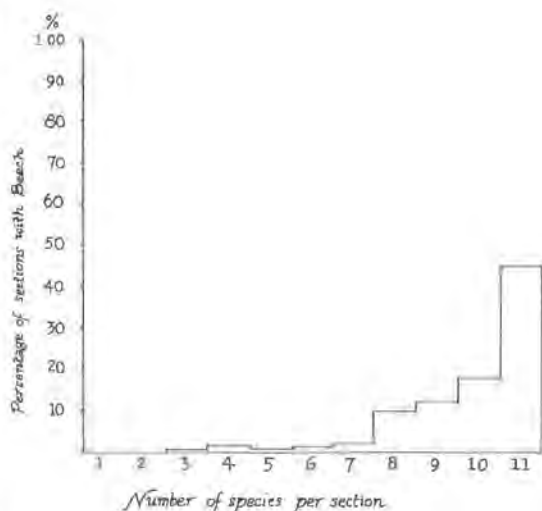


Fig. 21. Distribution of Beech in hedge sections, by their number of species.

the frequency of beech in hedgerows, for 60% of its distribution is accounted for by the boundary banks of a few woods. If one discounts these then beech is only half as common as sycamore, a non-native tree, in local hedges. The graph of its distribution in hedge sections appears to show a strong colonising ability in older hedges, but this is illusory, merely reflecting its prominence on old primary wood edges (Fig. 21).

There is little doubt that the dominance of beech in many local woods has been achieved by planting. No better evidence for this could be found than in a comparison between Ayres Wood the adjoining woodland to the south-west. Ayres Wood has naturally regenerated, has a low canopy and is predominantly silver birch and cherry with very little beech. The woodland to the south-west is a little less than a hundred years old. It is nearly all beech, has a high canopy and was certainly planted. The extreme divergence between its ubiquity in woods and its infrequency in hedgerows is therefore partly artificial. Like other trees which have their fruit in the form of a nut the colonisation of the hedges, requiring as it does the agency of animals to disperse the seed, it not very easy. While beech has become a popular plant of garden hedges it seems never

to have been planted in field hedges. In the survey area isolated examples occur more often in hedges which may have been former wood margins. Its ability to colonise in hedges must be extremely limited since the competition among rodents for the mast of individual trees in hedgerows must lead to little of it surviving to germinate. The regeneration of such trees as beech depends on the massive production of mast in the small area of woodland, with the surplus providing the seedling trees of the future.

Sycamore

Sycamore is an introduced tree in the British Isles and so has been in the past dependant on planting for its establishment in the countryside. In towns it is so well established as to be one of the major colonisers of urban wasteland, especially railway embankments. It is a very vigorous coloniser of woodland and has successfully taken over sections of woodland in the Chilterns where an opportunity has arisen. In hedges it finds fewer opportunities because of their management, and occurs in only 3.9% of hedge sections in the survey area. Much of its distribution is clustered near Ashotts Lane, Little Pednor Farm and in some field hedges in Westdean. Most of these clusters probably originated from specimen trees and as a result

sycamore has been confined to hedgerows in the immediate vicinity of its introduction, having little age-related distribution. In its distribution graph in hedges by their number of species there is little evidence of any colonising curve (Fig. 22).

Sycamore, with its abundant production of seed, could establish itself as a common tree of wood and hedgerow in the Chilterns in the coming centuries.

Whitebeam and Wayfaring Tree (Map 8)

Both whitebeam and wayfaring tree (*Viburnum lantana*) are primarily plants of chalk soils. Neither is common within the survey area, occurring in only 3.3% and 2.2% of hedge sections respectively. I could find no instance at all of wayfaring tree occurring off the chalk, but whitebeam does grow occasionally on the clay tops although it is at least 3.5 times more common in hedges on the chalk as on the clay. The distribution of each plant in hedge sections by number of species shows an almost identical pattern (Figs. 23 and 24), which is not surprising since much of their distribution is in the same hedgerows (Map 8). Whitebeam is principally located along the edge of Long Grove, in Hollow Way, Blind Lane and some of the former wood edges in the

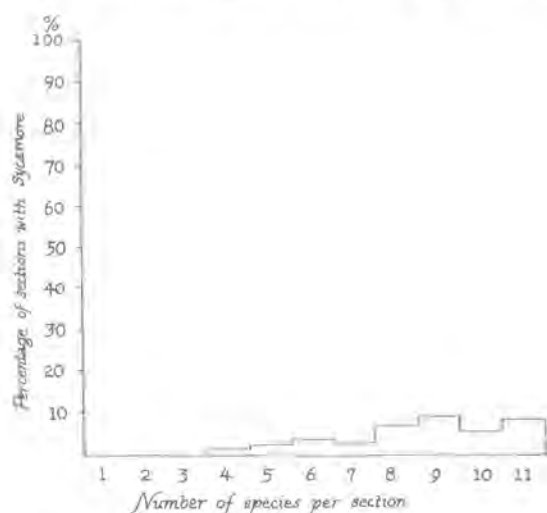


Fig. 22. Distribution of Sycamore in hedge sections, by their number of species.

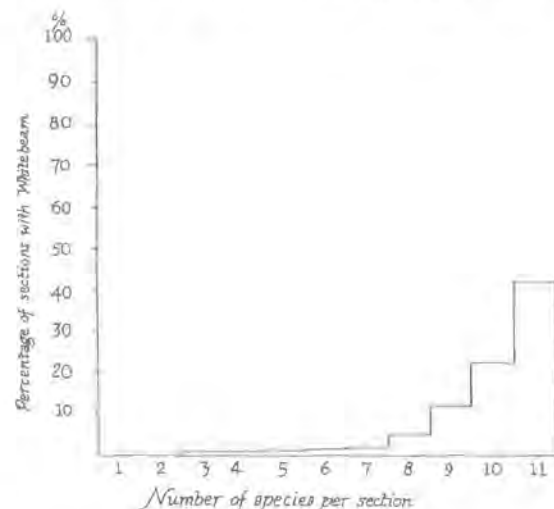
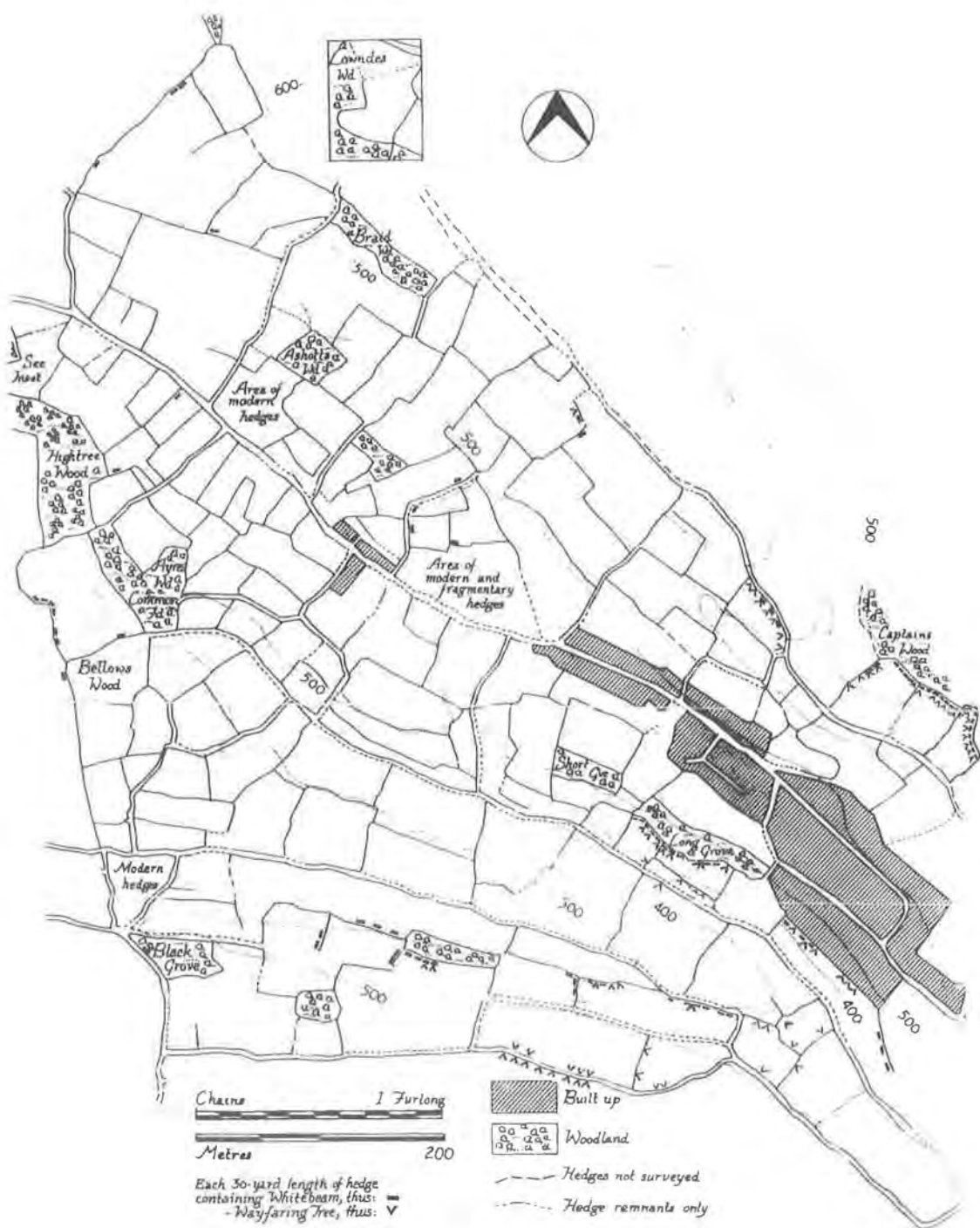


Fig. 23. Distribution of Whitebeam in hedge sections, by their number of species.



Map 8. The distribution of Whitebeam and Wayfaring Tree in the survey area.

Herberts Hole valley. It is also found on the western boundary of Great Chesham parish to the north of Bellows Wood and, infrequently, north of Three Gates Bottom. Wayfaring tree has no distribution in west Chartridge or west Pednor and is rather more common than whitebeam in field banks, for example the bank parallel to and below Long Grove.

Whitebeam is one of the commonest, if not the commonest tree on the edge of valley-brow primary woods in and near the survey area. It is found in nearly every section of the boundary banks of Long Grove and Captain's Wood although it is absent from the edge of Braid Wood. It appears in every section of the edge of Beech Wood to the south of Chesham and in 16 out of 22 sections of Mantle's Wood near Hyde Heath. Wayfaring tree also appears on the edge of all these woods and is absent from Braid Wood showing how often these plants are associated. Again nearly all their distribution is in some of the oldest banks and hedges of our local landscape although that distribution is if anything even more restricted than buckthorn.

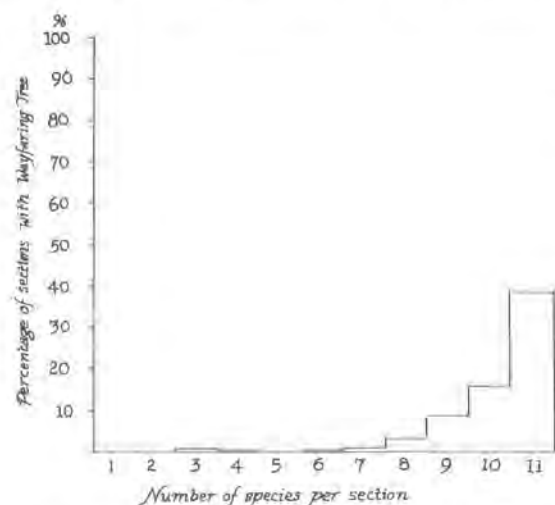


Fig. 24. Distribution of Wayfaring Tree in hedge sections, by their number of species.

Minor Trees and Shrubs

There remain a number of occasional trees and shrubs of hedgerows in the survey area. *Wild privet* (0.9%) is a common plant of scrub

on the Chiltern scarp face but is very scarce in the survey area. Indeed it is probably more common locally in garden hedges since in the period between the wars it—or something very close to it—was used for domestic hedging in preference to *Ligustrum ovalifolium*. Its principal location as a wild plant is in the hedge of Hollow Way where the top Pednor road climbs the hill. Here it occurs in seven 30-yard sections, but in the rest of the survey area is found in only eleven more, some of these clearly from nearby planted hedges. The infrequency of privet can only be ascribed to some aspect of the historical development of a cleared landscape since there are any amount of suitable habitats on chalk within the survey area for this shrub. It does serve to remind how much plant populations can vary within a few miles.

Goat Sallow occurs here and there in hedges, being four times as common on clay as on chalk. The hedges in which it is found are fairly scattered but most of them are in west Chartridge. In all it is present in 1.4% of hedge sections in the survey area.

Rowan (*Sorbus aucuparia*) has about the same frequency (1.4%) but is mostly found on or near the western boundary of the parish between Black Grove and Hightree Wood and particularly on the parish boundary just north of Bellows Wood. It too prefers the clay soils, being twice as common in hedges away from chalk.

Silver Birch (0.4%) is not uncommon in woods locally, particularly where natural regeneration has taken place. The only location of any note in a hedge in the survey area is again in the boundary hedge to the north of Bellows Wood.

Spurge Laurel occurs on a few wood edges, notably Braid Wood, and isolated examples were found in two hedgerows. Its most prolific site locally is however just outside the survey area in The Plantation, a twentieth-century wood, although the colony may have originated in the field bank on the south-west side. In hedgerows and wood-edge banks it was found

in 0.85% of sections, although one can often find small colonies within older woodland in the area.

Hop was found in 15 hedge sections (0.7%) mostly in Dry Dell Lane near Spring Wood, where they may have been a relic of cultivation.

Guelder Rose (*Viburnum opulus*) was found in only three hedge sections but is often found on the edges of primary woods in similar topographical sites to that of Captain's Wood where it is present. It also occurs in a few field bank hedges in White Hawridge Bottom.

In addition to the above there are a number of garden escapes and planted trees and shrubs occurring here and there but of little significance. White poplar occurs both as a tree and suckering in the hedgerows in Dry Dell Lane. There are a few other planted poplars of different species in shelter belts, as well as occasional horse chestnuts, lime and yew. Cotoneaster, snowberry, cherry laurel, *Lonicera nitida*, Forsythia, *Ligustrum ovalifolium* and lilac make occasional appearances in the survey area's hedges but never far from the gardens from which they originated.

Box is found locally in woodland (Devil's Den and The Plantation) where it was presumably planted, but not in the survey area except in the large garden hedge of Pednor House. Yew is found in the same woods but since these are mature trees and The Plantation is recent secondary woodland, planting is presumed.

Afterword

None of the trees and shrubs whose distri-

bution I have outlined above is rare. Those that are restricted to chalk and limestone areas such as Spurge Laurel, Whitebeam, Wayfaring Tree and Buckthorn may be unfamiliar to people living in other areas, but they are all common enough. 'Common' is however one of the most misused words in natural history. We tend to divide plants into those we can see without much trouble, perhaps in our own locality, and those we must go to a special place or site to see. We lump together any number of plants as common with little or no awareness of the differences in their frequency and habitat.

Nor do many people understand the historical dimension in plant distribution. The handbooks say 'on chalk', 'in woods', 'by rivers and streams', 'on acid soils' rather as if the landscape was virgin territory and not a man-made environment which has been farmed for at least the last thousand years, and in some cases the last three thousand years or more. The plants which grow in our hedgerows and woods and fields have taken advantage of a man-made landscape over a specific period of historical time. Modern farming practice has increasingly marginalised this living history in the field edges and remaining woods, but the plant communities that remain are unique. They cannot be recreated, only destroyed, and their destruction also entails the loss of historical evidence as to the origins of the farming landscape. The woods and hedges, their trees, shrubs and herbs, are the thumbprint of past endeavours.

Part 2 of this paper, forthcoming, will review what the hedges of Chartridge and Pednor can tell us about the landscape history of the area.

BIBLIOGRAPHY

- Bradshaw, A. D. 1979. *Hedges and Local History: the Significance of Hawthorn* (National Council for Social Service).
- Jenkins, J. G. 1955. *The Cartulary of Missenden Abbey* ii (Bucks. Record Society).
- Pollard, E., Hooper, M. D., and Moore, N. W. 1974. *Hedges* (Collins, The New Naturalist Series, No. 58).
- Rackham, O. 1976. *Trees and Woodland in the British Landscape* (Dent).
- Reed, M. 1979. *The Making of the Buckinghamshire Landscape* (Hodder and Stoughton).