

The Woodland Economy of Kent,

1066–1348

By K P WITNEY

Abstract

This article traces the development of the woodland economy of Kent from the later Anglo-Saxon period until the Black Death. It describes how in the woodlands close to the coast, the navigable Rother, or London, the mounting demand for fuel, at home and cross-channel, so enhanced the value of coppice that it came to displace the much less profitable use of the woods for pannage and cattle pasture; while at the same time diverting colonization into the central core of The Weald, where heavy loads were almost undisposable. Although the Black Death caused a serious slump in the wood market the effects are still observable in the distribution of the woodland today.

OF the many studies that have been made of the early land system of Kent relatively few have dealt with the woodlands. They have tended to focus upon The Weald to the neglect of the smaller, but more accessible, northern forests and heaths which had their own place in a design that cannot properly be understood without them. At the time of Domesday Book a great part of the county, perhaps a third, or even more, was tree clad, and while by the thirteenth century the proportion had fallen, it was by far less than might have been expected from the growth in population. By then the value of most of the woodlands had soared and in some places compared to that of the very best arable land. No account of the medieval economy of Kent is complete if it ignores this extensive source of wealth, derived from the poorest of soils. To understand the development, the part played in it by water communications and its own impact on the course of settlement, it is necessary to consider the distribution of the woods, their varying character and the different uses to which they were put. The outcome may seem paradoxical. As in the years following the Conquest the population grew, and land hunger with it, it was the remotest areas of forest – the Wealden fastnesses themselves – that were cleared and cultivated, while those that were

most accessible, nearest to the coast, the towns, and the old established settlements, survived, as mostly they still do today.

I

In the eleventh century by far the largest of the forests was The Weald, which formed the inland core of south-east England. This was mainly an obdurate clay country with oak as the climax vegetation; but there was some good, if ill-drained, land on the flood plain of the Medway and its tributaries and along the fringes of the Rother; and some sandstone on the hills towards the Sussex border, producing a more varied tree cover and occasional patches of open heath.¹ There was also, already, a light scattering of settlements,² mostly on the more open and fertile river terraces. Bounding The Weald to the north, but distinguishable from it in early records, was a belt of woodland – the Chart³ – along the line of what geologists call the Greensand Ridge and stretching

¹ L Dudley Stamp ed. *The Land of Britain: The Report of the Land Utilisation Survey of Britain*, Part 85, Kent, 1943, pp 574, 591; and S W Woolridge and Frederick Goldring, *The Weald*, 1953, pp 133–36, 149.

² Gordon Ward, 'The List of Saxon Churches in the Textus Roffensis', *Archaeologia Cantiana*, XLIV, 1932, pp 35–39; and 'The List of Saxon Churches in the Domesday Monachorum and the White Book of St Augustine's', *Arch Cant*, XLV, 1933, pp 60–89.

³ W de G Birch, *Cartularium Saxonicum*, 3 vols, 1885–93, nos. 191, 343, 370; and K P Witney, *The Jutish Forest*, 1976, pp 8–9.

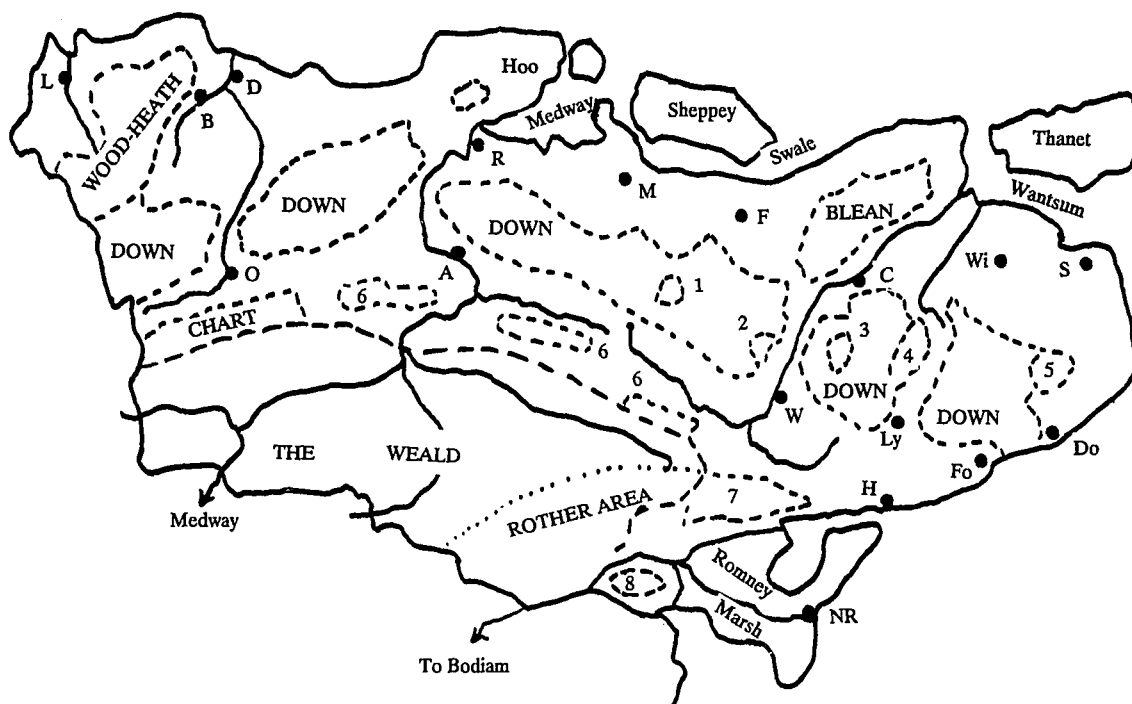


FIGURE I
Woodlands in Kent, c AD 1100

Lesser Forests: 1, Oakenpole; 2, King's Wood; 3, Buckholt; 4, Hardres; 5, Singledge; 6, Chart (ext); 7, Sibersnoth; 8, Isle of Oxney.

Towns and Manors: A, Aylesford; B, Bexley; C, Canterbury; D, Dartford; Do, Dover; F, Faversham; Fo, Folkestone; H, Hythe; L, Lewisham; Ly, Lyminge; M, Milton Regis; NR, New Romney; O, Otford; R, Rochester; S, Sandwich; W, Wye; Wi, Wingham.

The coastline is drawn approximately as in Anglo-Saxon times.

uncleared from the Surrey border well beyond where Sevenoaks now stands, with a number of large fragments further east towards Ashford. The woods here stood on thirsty sand soils which produced as much birch as oak and some beech.⁴ To the north-east a tongue of clay forest – which we shall call *Sibersnoth* from the most important of its early components⁵ – reached out from the main body of The Weald to mask a segment of Romney Marsh.

In north Kent, the Downs, with their thin, flinty clay overlying chalk, were

thickly scattered with woods along their entire length and carried certain larger areas of forest, some of which, like Buckholt (near Petham) and *Haradun* (Hardres) are mentioned in pre-Conquest charters⁶ and others like Oakenfold (or Oakenpole) south of Teynham and King's Wood in Wye (now Challock Forest) in later records. The woods along this ridge, which formed the backbone of Kent, contained some oak but as much beech and hornbeam, together with a variety of trees, yew, whitebeam, maple and alder, of less economic value.⁷ To the north of the

⁴ Stamp, *Land of Britain: Kent*, pp 593, 608.

⁵ F R H Du Boulay, 'Denns, Droving and Danger', *Arch Cant*, LXXVI, 1961, pp 75-87, in particular 87; and J K Wallenberg, *The Place-Names of Kent*, Uppsala, 1934, pp 473-74.

⁶ For example, Birch, *Cart Sax*, nos 141, 247, 248; and J K Wallenberg, *Kentish Place-Names*, Uppsala, 1931, pp 34, 61.

⁷ Stamp, *Land of Britain: Kent*, pp 599-601.

Downs there were two sizeable tracts of poor, but contrasting, soils which had been largely left to woodland: the barren heaths and pebble beds on the threshold of London around Hayes and Chislehurst, and the oak forest of Blean which clad the 'bottomless' clay to the north and west of Canterbury, lying between it and the coast.⁸ The arable areas in Kent were still at the time of Domesday Book confined mostly to the rich lands to either side of the Downs or in the river valleys that breach them; and of these only Sheppey, Thanet and the far north-east were not within easy reach of extensive woodlands of one kind or another.

Custom and tenure in The Weald had diverged from that in north Kent (the *uplands* in local idiom). In the early days of the Kentish Kingdom the woodlands had been divided between those belonging to the king, and used also by his menial tenants, and those owned by the warrior class of the *ceorls*; a division reflected in such surviving place-names as King's Wood or Kingsnorth (*cyninges snade*) on the one hand and Minnis (from *in gemennisse*, i.e. land owned by the folk in common) on the other.⁹ The old royal woods had since mostly devolved on the manorial lords as demesne, and the remainder on their freehold tenants. In the uplands the two forms of tenure were closely intermingled. It seems, however, that the Chart woods fringing The Weald had been mostly in royal ownership, while the main body of The Weald itself had been divided into a number of great commons to be used for the autumn pannaging of swine by the folk of the various provinces of the Kingdom, predecessors of the Domesday Book lathes.¹⁰ From the eighth century on the commons had come to be parcelled out into numerous separate swine pastures, or dens, between the manors that were

developing in north Kent.¹¹ This did not convert them into demesne, and as squatters' settlements came to be established there they were treated as freeholds; but since the prime purpose of the dens was still held to be pannage, the mast-bearing trees, oak and beech, were protected by ancient custom. Of this the manorial lords were supposedly the custodians. They had, however, converted it into a property right which they were seeking to extend to the other standard trees and even to the undergrowth. Around this a whole complex of Wealden custom developed, based on the extraordinary dichotomy that the soil was held to belong to the settlers but the trees growing on it to the lords, who controlled the pannage.¹²

II

Historically, any account of woodland use must begin with pannage. Indeed if the Kent Domesday were to be taken at face value it would seem that in the eleventh century little else mattered. This was not so; but the simplest, if rough and ready, way of sizing the woods belonging to the various manors was through the number of swine they catered for. There was a defined season for pannage, extending from the autumnal equinox, when the acorns were ripe, until Martinmas (11 November) when the bulk of the animals were killed and salted down for winter food.¹³ Custom in Kent decreed that one swine out of every ten pannaged should be surrendered to the manorial lords,¹⁴ and the Kent Domesday enters these dues with meticulous care, from the 500 received (in a good year) by Wrotham manor to the ones and twos received by others.

⁸ *Ibid.* pp 593, 597-98, 602.

⁹ Birch, *Cart Sax*, no 426; and Wallenberg *The Place-Names of Kent*, pp 237, 416, 562.

¹⁰ Witney, *Jutish Forest*, pp 31-64.

¹¹ *Ibid.* pp 78-103.

¹² N Neilson, 'Introduction' to *The Cartulary and Terrier of the Priory of Bilsington, Kent*, Oxford, 1928, pp 1-39; and Du Boulay, 'Dens, Droving and Danger'.

¹³ W Somner, *A Treatise of the Roman Ports and Forts in Kent*, Oxford, 1693, pp 112-13.

¹⁴ *Ibid.*

Pannage was a much more important facility for the husbandmen than for the lords. Sheep were kept for their wool and milk, oxen for traction and cows principally to breed them (any more being extravagant in scarce winter fodder). In all these cases meat was no more than a by-product, whereas pigs were reared solely to be eaten and were the most prolific of animals. A sow could be expected to farrow twice a year with six or seven piglets to the litter.¹⁵ Of these some would be killed young for lack of winter feed, but by choice the males would be kept, castrated, and sent to pannage in the following year before being slaughtered at Martinmas. Most of the animals driven into the woods in autumn were thus *hoggasters*, or yearlings.¹⁶ In the ordinary way a husbandman might have one or two breeding sows, which would be serviced by boars belonging to the lord or perhaps to a wealthy neighbour: more would be kept by those within easy reach of The Weald, with its wealth of pannage, and away from the coast where herrings provided a plentiful and cheap alternative source of protein.

The total pannage dues recorded by Domesday Book for the whole county amounted to just under 7350, but there were a few gaps; for instance Teynham manor, which had Wealden dens near Headcorn,¹⁷ was for some reason omitted from the survey altogether. A truer figure would be around 7500, implying herds ten times that size. But these were only the animals pannaged by the husbandmen: the lords' own beasts did not contribute to the dues and the Kent Domesday gives no tally of them. Their number was almost certainly small. Pig's meat formed a lesser part of the lords' diet than that of the husbandmen, and their requirements for porkers, if not for

sucklings, must largely have been satisfied through the pannage dues. Even in the thirteenth century, when those had usually been commuted for money, the lords seem to have kept relatively few pigs of their own. Thus at Bexley the Archbishop appears normally to have maintained only two sows with some 30 pigs, or piglets;¹⁸ and at Elham the number of sows varied from one to three, with anything between fifteen and thirty-five *porcelli*, or little pigs.¹⁹ There were rather more in some other manors, like Eastry, where in 1269/70 the demesne stock consisted of 2 boars, 6 sows, 22 yearlings and 46 piglets,²⁰ but this seems to have been unusual. By then, too, the lords had largely abandoned the practice of sending their own swine into the woods, preferring to keep them in tiled styes where they were corn fed.²¹ All considered, 10,000 is the most generous estimate that can be made of the number they pannaged in the eleventh century.

The Kent Domesday qualifies its figures of pannage dues by saying that they were for years when the trees were *fructuosae*. The acorn crop might sometimes fail, but it was more dependable than beech mast, which ripens only in warm summers, on average about one year in three.²² Oaks were therefore the prime pannage trees, and the larger the better; which meant that for this purpose The Weald far exceeded in value all the other woods and forests. This is clearly shown by the dues. Manors in Holmesdale, bordering The Weald, received, size for size, twice as much as manors to the north of the Downs; yet all the larger of those, from Lewisham as far to the east as Faversham and Westgate, Canterbury,

¹⁵ Dorothy Oschinsky, ed. Walter of Henley, *The Husbandry*, Oxford, 1971, ch 17.

¹⁶ For *hoggasters*, see Du Boulay, *Medieval Bexley*, Bexley, 1961, pp 53 with n 4.

¹⁷ Witney, *Jutish Forest*, p 251.

¹⁸ Du Boulay, *Medieval Bexley*, p 10.

¹⁹ J E T Rogers, *A History of Agriculture and Prices in England*, 1866, I, pp 46-7.

²⁰ M M O'Grady, 'A Study of Some of the Characteristics of the Holdings and Agriculture of Eastry Manor, East Kent, from c. 1086-1350', unpublished M.Phil. thesis, University of London, 1981, Table 3.10, p 284.

²¹ F R H Du Boulay, *The Lordship of Canterbury*, 1966, p 215.

²² Du Boulay, 'Denns, Droving and Danger'.

owned Wealden dens,²³ despite the presence of much nearer woods. Bexley, on the wooded heaths of the north-west, had nevertheless been given five dens around Hever on its formation in 814, and Bromley five near Edenbridge in 862.²⁴ Milton Regis (by Sittingbourne), by far the largest manor in Kent, nearly twice the size of any other, had numerous dens around Marden,²⁵ but still received less in pannage than the Holmesdale manors of Wrotham and Wye. It seems that in the eleventh century something like three-quarters of all the pannage in the county was derived from The Weald, much of it over distances of twenty miles or more. Transhumance was always a major feature of the Kentish agrarian economy.

Although pannage was taken in a small and desultory way in the northern woods, it was only to the east of Canterbury that distance from The Weald began to tell and nearer woods were used in preference. There were a number of manors here, like Chislet, Wickhambreux, Barham, and Elham, which enjoyed substantial pannage dues but are not known to have had Wealden dens, making use instead of the neighbouring forests of Blean and Hardres, as others like Folkestone did of the more scattered Downland woods.²⁶ In the far north-east, the most open country in Kent and the furthest from The Weald, the dues dwindled almost to nothing: only ten were recorded from Thanet and just over fifty for the whole of the large Lathe of Eastry (closely equivalent to the present Dover district). Yet a remarkable, and apparently contradictory, feature of the manors here, places like Minster in Thanet, Eastry, and Northbourne, was that they owned a scattering of dens in the south-eastern Weald where the Rother flows out of the forest

into Romney Marsh, some like Hensill in Hawkhurst parish being as much as forty miles away, far beyond any reasonable herding range.²⁷ These dens, however, seem to have been served from outlying stock farms on the marsh itself. The earliest example of such an arrangement appears in a charter of 724, by which Minster was granted land near Ham Street on the Marsh, evidently as sheep pasture, with four dens (including, it seems, Tenterden) close by in the forest hinterland.²⁸ The stock farms could conveniently be reached from the north-eastern manors by water, along the coast and up the Rother, and it seems that the animals must have been out-stationed, with the wool and carcasses shipped back, by the same route, together with timber from the dens. There could have been no problem in curing the carcasses since Domesday Book shows that salt panning was a major industry on the marsh.

The records are too sparse to show how common it was for the lords to out-station their swine in this way and 'make a larder' of their carcasses; but we know, for instance, that it was the practice on the Westgate dens (around Sissinghurst);²⁹ and for the north-eastern manors it must have been a necessity if the pannage was to be of value at all. Herds might be replenished overland, but to drive the swine back over distances of thirty to forty miles, only to slaughter them on arrival would have been to lose what had been gained in fattening them. Such arrangements could only have been made for demesne stock, and even so would hardly have been worth making except as part of a larger design: they were not of a kind in which the husbandmen could share and would not, therefore, be reflected in the dues. This is not to say that the tenants in north-east Kent kept no pigs; we know in fact from a survey carried out at Langdon

²³ Witney, *Jutish Forest*, pp 217-56.

²⁴ Birch, *Cart Sax*, nos 346, 506; and Witney, *Jutish Forest*, pp 219-20.

²⁵ Witney, *Jutish Forest*, pp 240-42.

²⁶ 'Inquisitions Post Mortem', Folkestone, in *Arch Cant*, III, 1860, pp 255-64.

²⁷ Witney, *Jutish Forest*, pp 272-75.

²⁸ *Cart Sax*, no 141; and Wallenberg, *Place-Names of Kent*, pp 355-56.

²⁹ Du Boulay, 'Dennis, Droving and Danger'.

in 1273 that they did;³⁰ but these would have been 'grass swine', fattened as best might be about the homesteads, for instance on stubble after the harvest. Grazing on stubble was a poor substitute, to which however even those husbandmen who were better placed would have to resort in years when the acorn crop had failed.

It seems, if these calculations are right, that in a normal year towards the close of the eleventh century the number of swine pannaged in the Kentish Weald would have been around 60,000 allowing for demesne stock, an average of rather less than one for every three acres. Granted that The Weald was not uniformly tree clad, it is clear that in most years it had a superfluity of mast. From the lords' standpoint pannage by itself had become a wasteful undertaking, giving only a poor return. We know that in Athelstan's reign (925-39) a full-grown pig was worth 10d³¹ and that towards the end of the twelfth century this had risen only to 1s,³² which we may take as the prevailing value at the time of Domesday Book; but the bulk of the herds consisted of *hoggasters*, which in later years, when the dues had been converted to money, were valued at only half as much as mature animals.³³ It is unlikely, therefore, that the 7500 or so swine which the lords received in a normal season from all the woodlands in Kent were worth in sum more than £250 and probably less. This amounted only to some 5 per cent of their total income, and that in years when the trees were *fructuosae*. It is true that even when the acorn crop had failed the lords were not entirely deprived of profit, since a due known as *danger* was then imposed on

the Wealden settlers³⁴ for the privilege of not having swine quartered upon their land. This must account for the otherwise inexplicable entry in the Domesday survey of Kennington manor (near Ashford) that it had 'as much woodland' as rendered 'from pannage 40 swine or else 54½d' – a sum well below the value of the beasts, even assuming the great majority to have been *hoggasters*.

It is probable that by the time of Domesday Book pannage in Kent was already well past its peak, and understandably there was a rapid decline thereafter. A simple calculation will show that even when the Wealden dens were in full bearing their value to the lords in pannage (of itself) would have averaged less than ¼d an acre; which may be compared, for instance, to the 1d an acre, with some payments in kind and a few services besides, customarily charged on upland tenants for their arable land³⁵ and even that was not a truly economic rent. Whatever margin of error we allow in our calculations the conclusion is still clear. If the woodlands were to be preserved it would be for other purposes than pannage, or only where the soil was so irremediably poor that nothing better could be done with it. The husbandmen who used the dens might wish otherwise; but throughout The Weald it was the lords, as owners of the trees, that were in control of the situation.

III

Woodland pasture for cattle played a much more important part in the early agrarian economy than might be gathered from the Kent Domesday, which makes only a single direct reference to it – at Nackington on the edge of the forest of Hardres. Although less nutritious than marsh, meadow, and fescue grasslands there was a great deal more of it

³⁰ S Campbell, 'Some Aspects of the Social and Economic History of the Manor of Adisham c 1200 to the Dissolution', unpublished M.Phil. thesis, University of Kent, 1981, pp 199-200.

³¹ 'Iudicia civitatis Londinae' in Dorothy Whitelock (ed), *English Historical Documents*, I, 1968, pp 387-91, in particular p 388.

³² D L Farmer, 'Some Price Fluctuations in Angevin England', *Econ Hist Rev*, 2nd ser, IX, 1956, pp 34-43.

³³ Du Boulay, *Bexley*, 53 with n 4; and 'Denns, Droving and Danger', p 81.

³⁴ Du Boulay, 'Denns, Droving and Danger'; and D Clarke and A Stoye, *Oxford in Kent*, 1975, Appendix C, p 265.

³⁵ J E A Jolliffe, *Pre-Feudal England: The Jutes*, 1933, pp 33-39; and Du Boulay, *Lordship of Canterbury*, pp 164-81.

to spare. It is mentioned in a number of pre-Conquest documents. For instance, we hear in 805 of the *Hridra leah*, or cattle glades, near Petham,³⁶ apparently in Buckholt forest; in 724 Minster was granted a right to pasture in Blean, Buckholt and Oxney ('the ox enclosure');³⁷ and a description of Brabourne manor c 993 speaks of a hollow way going 'up over the down' to a minnis and cowherd's wood.³⁸ Most of the early examples come from north Kent; and Alan Everitt has shown, from the concentration on the Downs of place-names containing references to oxen, and less often cows, or ending in such elements as *steall* (stall) and *stoc* (stock), how much cattle pasture must have featured in the development of this area,³⁹ which had little to tempt the cultivator. Indeed he treats the woodland vaccaries, together with the more open stretches of chalkland used for sheep, as the distinguishing characteristic of the Downland economy up to the Conquest and for some time after – though just how long after is a question we shall need to consider.

The nature of the northern woods made them more suited than The Weald to this purpose. Acorns are harmful to cattle, and even for summer pasture, as this was, oak woods were better avoided. Although there was a scattering of oaks in the northern forests it seems that only in the Blean and in a few small patches elsewhere, for instance in Hardres and, judging from the name Oakenpole,⁴⁰ did they predominate. Elsewhere the mixed tree cover and frequent glades had the beneficial effect of opening out the woods for grazing cattle. Most important of all, these woods were also close to the early settlements and larger manors. As cattle were rarely kept for their meat it was not a matter, as with pigs, of

sending them to be fattened for a season prior to slaughter. It was only in the intervals between ploughing and harvest that the oxen could be spared for any time from the homesteads, and even then there was often carting of one kind or another to be done. They had to be pastured within good reach. So too had the relatively few cows while they were in milk. These were expensive animals to maintain, when milk could be got more economically from the wool-producing ewes. Dairy herds were a rare luxury which only the wealthier lords could afford, and usually better pasture than woodland was provided for them, preferably salt marsh, such as the *cyninges cua lond* (king's cow land) mentioned near Graveney in 814.⁴¹

Propinquity is therefore enough to explain the contribution made by the Downland woods, irrespective of their other advantages. The northern dip-slopes of the Downs reached close to the populous areas of Thameside and along the Swale, and even in the north-east, where they declined into open, gently undulating wolds, the fringe of woodland along Watling Street between Dover and Bridge was within usable reach of such large manors as Wingham, Eastry and Northbourne. On the other side, the vale of Holmesdale was dominated by the Downs along its entire length, and there were few sizeable manors which did not have their own pastures *super montem*;⁴² while those in the river gaps and the Elham valley were hemmed in by woodlands. In Holmesdale use could also be made of the Chart and in north-west Kent of the heaths around Chislehurst and Hayes, though these were lesser resources. The chief drawback of the porous chalk and sand soils was a scarcity of watering places. On the Downs, however, there were a number of shallow ponds, some still remaining and others identifiable by the element *sol* appearing in

³⁶ Cart Sax, no 322.

³⁷ *Ibid*, no 141; and Wallenberg, *Kentish Place-Names*, p 323.

³⁸ 'Liber de Hyda', in Whitelock (ed) *Eng Hist Doc*, I, pp 531–36, in particular p 533.

³⁹ Alan Everitt, *Continuity and Colonisation: the evolution of Kentish Settlement*, Leicester, 1986, pp 141–80, in particular p 142.

⁴⁰ Wallenberg, *Place-Names of Kent*, p 275.

⁴¹ Cart Sax, no 323.

⁴² See for example H E Mühlfeld, *A Survey of the Manor of Wye*, New York, 1933, pp xxi–xxv.

old place-names, of which Sole Street in Crundale is an example. Everitt believes that some 100 of these can be found throughout the area, together with similar names ending in 'pool' or 'mere'.⁴³

It would, however, be a mistake to over-estimate the importance of the northern woods as cattle pasture in comparison to their other uses for fuel and, to a lesser extent, timber and pannage. Nevertheless, taking all into account, most of these woods must still in the eleventh century have been seriously under-utilized. With the great expansion of population that followed, such a wasteful use of land could not possibly be allowed to continue. There was now a pressing demand not only for more arable but for every other resource, to which the woods had to make a fitting contribution if they were to survive. That meant systematic management.⁴⁴ By the thirteenth century coppice with standards had become prevalent throughout most of the northern woods, and their value as cattle pasture then depended on the cycle of cutting. On the one hand coppice improved the grazing by opening up the woods, but on the other cattle are destructive of young shoots and so had to be fenced out of the newer growth. Thus an account of 1263 shows that 150 acres of the Reinden woods above Folkestone, of which thirty acres were cut each year, accommodated only nine cattle,⁴⁵ confined presumably to the plots of fifth-year growth. Where there was a longer, ten- or twelve-year cycle, as at Wye, most of the woods would be open to cattle and the pasture might be worth six or seven times as much, though the fuel value of the woods was seriously reduced.⁴⁶ At Reinden the pasture was said to yield 6s p.a. (8d being charged on each head of cattle) to give an average of just under 1/2d an acre for the wood

as a whole. The corresponding figure at the time of Domesday Book would have been rather less than a mite.⁴⁷ In contrast to this we learn in 1313 (that is fifty years later, after continuing inflation) that pasture in the Melcombe Wood at Wye, consisting of large timber with undergrowth cut on a ten-year rotation, was worth as much as 7 1/2d an acre,⁴⁸ for which the Domesday equivalent would have been around 1 1/2d. We may take these as extremes produced by different systems of coppicing, on short and long cycles.

The determinant was the ease with which heavy wood loads could be disposed of. At Folkestone, from which they could be transported by sea and so at minimum cost, the fuel value of the woods mattered above all else and pasture was merely a trivial bonus; whereas at Wye, at a distance from navigable waters and where loads could only be carted laboriously overland, it was the other way round, the object being to extract the best possible value from the pasture with some fuel for local use as an extra. Indeed to describe the practice here as 'coppicing' is somewhat misleading when what was really being done was to cut back the undergrowth periodically to improve the pasture, the wood itself being in the nature of a catch crop. The treatment was not always as effective as this. There was one wood at Wye where the pasture was worth only 2 1/2d an acre (Domesday equivalent around 1/2d) because the undergrowth was mostly thorn and thistle, and another where the return was only fractionally better because of the density of the trees.⁴⁹ The conditions here can have been little different from those of the woodlands of the eleventh century and the contrast in value is illuminating.

It seems that in most of the northern woods the balance of use lay somewhere

⁴³ Everitt, *Continuity and Colonisation*, p 169.

⁴⁴ For medieval woodland management in general see Oliver Rackham, *Trees and Woodlands in the British Landscape*, paperback edn 1981, pp 66-95.

⁴⁵ 'Inquisitiones Post Mortem', *Arch Cant*, III, 1860, pp 255-64.

⁴⁶ Mühlfeld, *Manor of Wye*, pp xxi-xxv.

⁴⁷ M M Postan, *The Medieval Economy and Society*, Harmondsworth, 1975, pp 253-77.

⁴⁸ Mühlfeld, *Manor of Wye*, pp xxi-xxv.

⁴⁹ *Ibid.*

between that of Folkestone and Wye, depending upon accessibility and the domestic needs of the manors, but that mostly the woods were sufficiently near embarkation points or the principal centres of population – London being an especially powerful magnet – for fuel to have become the prime consideration. We return to this later. The point to be made now is that with the rapid growth of population few of these woods could have survived without coppicing, and then only on land so poor or steep that virtually nothing could be done with it; and that even with coppicing it was their fuel more often than pasture value, together with the reserve of timber in the standard trees, that preserved them. Although these might sometimes be secondary considerations, as at Wye, the additional contribution they made could be crucial.

IV

Timber was always in less demand than fuel; and although its importance grew with time it seems that nowhere, except in the south-eastern Weald, was it ever much more than an incident in the woodland economy. The pre-Conquest charters make only a glancing reference to it. The Kent Domesday does not even do that. It refers only, on ten occasions, to 'small' wood, which was presumably coppice; once to *silva infructuosa*, i.e. wood not bearing mast, which from the context was clearly used for fuel; and twice to alder groves, which supplied wicker and wattling. There must at this time have been more than enough timber to be had locally for the taking except in the open country of the north-east where, problematically, the demand was swelled by ship building. Later, as coppices spread, some system was introduced by allowing the growth of selected standards, mostly of oak, which would be felled on reaching a suitable size for use;⁵⁰ but the records show nothing that

could be described as plantation. Even in the north-east the needs could be best satisfied by cheap water transport from the high woods of The Weald surrounding the Rother.

A variety of trees went into the making of wagons, implements, like ploughs and yokes, and such simple furniture as there was, but these were still relatively minor requirements and easily met. Much the largest demand was for oak used in framing and roofing buildings. Oliver Rackham has shown that for this purpose large numbers of small timbers were taken, usually as whole trunks, most of them no more than six to nine inches in diameter, and that even in the roofs of cathedrals the majority had a diameter of less than fifteen inches. For these young oaks would be chosen. Bigger posts from older trees were used for only a few special purposes, of which Rackham mentions pedestals for the windmills⁵¹ that began to appear at the close of the twelfth century. Surprisingly, it is only when he comes to the Tudor period that he says anything about shipbuilding, although substantial timbers were certainly needed in medieval times, and well before, for the keels of the larger sea-going vessels, constructed on Scandinavian models,⁵² together with quantities of oak for planking and strakes. Boat building was carried out all along the coast but the demand must have been especially great among the shipwrights of the Cinque Ports which, with the two Ancient Towns of Rye and Winchelsea, were at the height of their prosperity in the late thirteenth century.

The spread of coppicing in the northern woods still left a number of ancient trees standing there, singly or in small groups. The Hundred Rolls of 1274 tell, for example, of certain 'great' trees which had been

⁵⁰ Rackham, *Trees and Woodland*, pp 72–4.

⁵¹ *Ibid*, pp 73–7. This first mention of a windmill in Kent occurs temp. Richard I at Monkton: see Frank W Jessup (ed) 'Introduction to Kent Records, XV, Calendar, Kent Feet of Fines, Ashford, 1956, Appendix II, p cxxv.

⁵² Gwyn Jones, *A History of the Vikings*, Oxford, 1973, pp 182–94.

plundered from Blean forest by the royal escheator and were valued at the high sum of 5s 9d⁵³ each. But there cannot then have been many of them, and such heavy loads would have been particularly difficult to transport overland. In Kent it was The Weald that had much of the largest legacy of stout oak timber, and in the hinterland of Romney Marsh, though only there, this was readily transportable by water to serve not only the major ports but the needs of the wealthy manors in the open arable countryside of north-east Kent, which were otherwise most difficult to meet. It was an ideal link, and one apparently long established.

The first mention of this traffic is in a charter purporting to date from 949, but believed to have been constructed some fifty years later, which in describing the lands owned by Reculver opposite and on Thanet speaks also of *ceolulfing tune sud be wealde*, said to be kept for repair of the church (the old Abbey building).⁵⁴ The place is Chilmington in Great Chart parish,⁵⁵ close to where the Wealden forest merged into that of *Sibersnoth* and only six miles from the deep inlet on Romney Marsh which opened out at Hythe – the *Genlida* referred to in 830.⁵⁶ The reference is obviously to timber supplies which must have been carried along this route, since it would have been far too costly to cart them the great distance to Reculver overland. In this case the connection was not commercial but proprietorial, and so it appears to have been for most of the large north-eastern manors. It is probable that the grant of dens to those like Minster, Ickham, Eastry, Northbourne, Wingham and St Martin's, Dover – all of which are known to have had some close to

the Rother⁵⁷ – was designed from the beginning to satisfy their needs for wood as well as for pannage; and by the thirteenth century that had become the chief consideration. By then, too, we are given figures of relative transport costs, of which good examples occur in the accounts of Eastry, with its six dens near Hawkhurst and Benenden.⁵⁸ These show that whereas it cost 7s to move 140 logs from its dens to the water, close as that was (Small Hythe was one of the havens used) a load of 100 tree trunks and 1000 logs could be shipped out to sea and all the way up the coast to Sandwich for as little as 10s, with some addition for wharfage.

The lords were often able to reduce the costs still further by requiring the Wealden settlers, as a condition of tenancy, to fell the trees, fashion them on site, and deliver them ready for use at a convenient embarkation point. The arrangements are seen in their most perfect form in the records of Northbourne manor, which had dens near Tenterden. The occupants of these were required each year to provide 100 timbers, exactly 13 feet in length, with similar precise obligations for the supply of boards and rafters;⁵⁹ while certain of the upland tenants had to hire a ship to fetch them to a point near Deal, off-load them and cart them to the hall, some three miles away.⁶⁰ *Averagia*, or carrying services of one kind or another, were a feature of the obligations imposed on husbandmen in north Kent, but this was a remarkable manifestation of the custom.

V

Of the handful of small woods entered in the Kent Domesday five were said

⁵³ 'Rotuli Hundredorum' sub *Boctune*: see Robert Furley, *A History of the Weald of Kent with an Outline of the Early History of the County*, 2 vols, Ashford, 1871 and 1874, II, p 149.

⁵⁴ Cart Sax, no 880. On date, see Nicolas Brooks, *The Early History of the Church of Canterbury*, Leicester, 1984, pp 232-36.

⁵⁵ Wallenberg, *Kentish Place-Names*, p 284.

⁵⁶ Cart Sax, no 396.

⁵⁷ Witney, *Jutish Forest*, pp 272-75; Du Boulay, 'Denns, Droving and Danger'; and *Domesday Book: Kent*, Philip Morgan (ed), Chichester, 1983, p 4.

⁵⁸ O'Grady, 'Eastry Manor', Table 4.13, p 303.

⁵⁹ W Somner, *A Treatise of Gavelkind, Both Name and Thing*, 2nd edn, 1726, p 22.

⁶⁰ G J Turner and H E Salter (eds), *Register of St Augustine's Abbey, Commonly Called the Black Book*, 2 pts, Oxford, 1915 and 1924, I, p 79.

specifically to be kept for fencing (*ad clausuram*). No doubt what was chiefly meant by this was the supply of wattled hurdles or posts to be interlaced with flexible rods, taken mostly from alders.⁶¹ There was always a great demand for movable, or easily removable, barriers of this kind, not only for sheep folds but also to mark or bar off plots of land when crops were growing. There were at this time few permanent hedgerows, partly because in Kent the custom of *gavelkind*, under which partible inheritance was combined with the right freely to buy, sell or lease land, caused a constantly shifting kaleidoscope of land-holdings, partly because the joint use of ploughs necessitated a general opening up of the arable when the harvest was in. It seems that even the large and usually stable demesne fields were rarely hedged off. A clear indication of this is the introduction in most of the Archbishop's manors of a special ploughing service known as *graserthe*, described in the Wingham custumal of 1285 as having been imposed because the tenants' cattle had been wont to stray on to the demesne during the 'open season' (*tempore aperto*), and could not well be prevented from doing so.⁶²

With so general a need for fencing it may be wondered why the Kent Domesday enters only such a small handful of woods used for the purpose, and why four out of the five of those should have been in the north-east, beyond Canterbury, as were three of the other six *parvae silvae* or *silvae minutae*. Given that the survey is often erratic in the choice of which assets to record and which not, the inference is that fencing was particularly in demand in this area, or that there was something about the character of these woods that picked them out, or both. In this rich arable countryside, fringed with marsh on which large flocks of sheep were kept, the demand for hurdles and

fencing must certainly have been unusually large, while at the same time the scarcity of woodland called for its conservation. It seems likely that these woods were among the earliest of those systematically managed as coppice, for which in the eleventh century there was still little need throughout most of the county, where underwood was abundant.

There was another requirement for fencing which had only just begun to appear at the end of the eleventh century but grew rapidly thereafter. This was to enclose deer parks. It was a Norman development, associated with the introduction of fallow deer.⁶³ Domesday Book mentions only a single park in Kent, created by Odo of Bayeux in the Trenley woods near Wickhambreux; but at some time in the twelfth century the Clares established a huge chase on the eastern side of Tonbridge, still traceable in the North and South Frith woods. The pales of this park, many miles in length, are frequently mentioned in preambulations of the Lowy (or juridical liberty) of Tonbridge carried out in 1259 and 1279.⁶⁴ By then a number of other parks, though none approaching this in size, had been created by the lords in different parts of the county; thus the Hundred Rolls of 1274 mention them at Bexley, Westwell, Aldington and Lyminge⁶⁵ and there were others, for instance at Folkestone.⁶⁶ The effect on the woods themselves was generally deleterious since deer are highly destructive of undergrowth; but the requirements for paling increased the demand for coppice, some of which might be grown in protected plots within the parks themselves, the remainder of which tended to develop into

⁶¹ Rackham, *Trees and Woodland*, p 73.

⁶² Canterbury Cathedral MS, E 24, fo II. See also Du Boulay, *Lordship of Canterbury*, pp 170-71.

⁶³ Rackham, *Trees and Woodland*, pp 142-48.

⁶⁴ John Harris, *The History of Kent*, 1719, pp 320-1; and V W Dumbreck, 'The Lowy of Tonbridge', *Arch Cant*, LXXII, 1959, pp 138-47.

⁶⁵ 'Rotuli Hundredorum' sub hundreds of Ruxley, Calehill, Bircholt (Franchise) and Lonongborough; see also Furley, *Weald of Kent*, II, pp 134, 137, 141, 151.

⁶⁶ 'Inquisitiones Post Mortem', *Arch Cant*, III, 1860, pp 243-4.

open woodland with some value for its timber.⁶⁷

It is significant that the only tree, apart from oak, mentioned as contributing to the value of the park at Folkestone when it was surveyed in 1263 was hawthorn. This had a special use in the construction of dykes, work that was gathering pace during the latter part of the eleventh century as innings multiplied all along the marshland fringes of the county. Tree branches, some three to four inches in diameter were used for the framework around which the banks were built, and hawthorn brushwood for the thick mattress laid to protect them before they were finally compacted.⁶⁸ The hawthorn, which favours open sites, was far from easy to get in the quantities required and the best expedient was to grow it along already established dykes, which the roots then served to consolidate. It remains a feature of Romney Marsh; and ancient thorn trees still line surviving embankments on the Wantsum marshes, such as the Gilling Drove at Chislet. The demand for other wood for the framework, and for groins and sluices, could be considerable; so that in 1253/4 we learn of 50 acres of woodland at Rainham which was worth only a mark (around 1½*d* an acre) because it had been much wasted for the 'making' of a marsh.⁶⁹

VI

In the old settled country of north Kent the primary demand on the woodlands had always been for fuel, the county having little peat. It was required for every form of heating and cooking, for baking, and for making malt for the ale that was drunk in great quantities. We learn from the Lyminge custumal of 1286 that one large, horse-drawn, wagon-load of faggots was needed

to produce a *summa* (8 bushels) of malt; that 48¾ *summas* were required each year for the Archbishop's own use on this manor; together with 72 large, or 144 small, cart-loads of wood for other purposes.⁷⁰ Lyminge was a larger manor than most, though no longer at this time among the very largest, and the supplies catered not only for the Archbishop and his retinue on their periodic visits but for his resident full-time staff and for whatever ale (and loaves) were given to his tenants when working for him, mostly at harvest. Nevertheless this was a considerable toll on the demesne woods. We do not know what were the needs of the tenants themselves, or of the alehouse keepers and village bakers, or the size of the demand in the towns, but the combined requirements must have been considerable.

Also substantial was the fuel used for producing salt, an essential commodity for cheese-making, curing fish and preserving the carcases of animals slaughtered at Martinmas for winter food. Indeed, where fuel is mentioned in the pre-Conquest documents it is almost always for supplying the coastal salt pans. Some idea of the scale of use is given in a charter of 732 which shows that a pan at *Sandtun* near West Hythe needed 120 wagon loads of wood a year to distil the brine.⁷¹ Domesday Book records nearly 140 pans in Kent, but gives no particulars of what they consumed, because they were farmed to salters⁷² who seem to have been left to find the wood themselves. Judging by the rents received by the lords the pans varied greatly in size. Some, like the 47 at Chislet, were certainly very small. All we know is that the lords' total receipts came to some 130*s*; that the largest pans paid around 2*s* 6*d* each; and that if these compared with the one at *Sandtun* in 732 then the total quantity of fuel needed by all would have been around 6250 wagon-loads

⁶⁷ Rackham, *Trees and Woodlands*, pp 142-48.

⁶⁸ Clare T Lukehurst, 'The Chislet Levels: A Transformed Landscape', in K H McIntosh (ed), *Chislet and Westbere: Villages of the Stour Lathe*, Ramsgate, 1979, pp 28-31.

⁶⁹ 'Inquisitiones Post Mortem', *Arch Cant*, III, 1860, pp 243-44.

⁷⁰ Cant Cath MS E 24, fo 66.

⁷¹ Cart Sax, no 148.

⁷² R V Lennard, *Rural England 1086-1135: A Study of Social and Agrarian Conditions*, 1959, p 224.

a year, or the equivalent. This is a minimum, and one moreover that takes no account of an extraordinary assemblage of 100 pans near Rye, which were worth all those in Kent together. If these used wood it must have been brought down the Rother from the Wealden forest to either side of it and the county boundary; but the area around Rye, unlike Romney Marsh in general, appears to have been rich in peat with which the pans here may well have been fuelled.

As salt was a necessity we should expect demand to have kept pace with the growth in population and the annual toll on the Kentish woodlands to have risen to at least 25,000 loads by the close of the thirteenth century. In fact, there was a fourfold increase in output at Chislet, a manor where comparison is possible because, exceptionally, Domesday Book states the payment by the salters not in money but in kind (representing no doubt a fixed proportion, perhaps a tenth, of the product). It amounted then to 50 *summas*, reckoned for this commodity at four bushels each.⁷³ Two hundred years later, when the pans had been reduced in number but enlarged in size, the figure had risen to just over 800 bushels.⁷⁴ The impact made on the woodlands by this industry was felt all the more acutely because it was overwhelmingly concentrated on particular stretches of forest. Although the marshes on Thameside and the Medway estuary would have served for salt production as well as those in east Kent – and appear to have been more used for the purpose in Roman and prehistoric times⁷⁵ – Domesday Book records only two pans there. At that time most of those in Kent itself were on the Wantsum estuary, which was surpassed by Romney Marsh only when

the Rye group is taken into account, and an important contribution was also made by the eastern section of the Swale. These were the best dairying areas in the county and closest to the great fisheries, the Wantsum having the particular advantage that it lay between the major fishing port of Sandwich and the thriving market of Canterbury. But the crucial advantage, enjoyed by all, was that they backed upon extensive forests, the Romney levels on The Weald and *Sibersnoth*, and both the Wantsum and Swale on Blean, the first also making some use of Hardres. Fuel must always have been the major element of cost in salt production.

The early charters dealing with the pans provides some insight into the conditions of the woods before the Conquest. Instead of conveying defined plots of woodland they either make an allowance for fuel, as for *Sandtun*, or else, more commonly, grant rights of entry into large forests like Blean at stipulated times of the year, or for a stipulated number of wagons, or both. Thus a charter of 863 tells us that the ownership by Mersham manor of a pan near Faversham carried with it the right to send two wagons into Blean over a period of four weeks following Pentecost.⁷⁶ The conveyance of Ickham manor in 785/6 was accompanied by lavish rights in both Blean and Hardres,⁷⁷ intended to meet domestic needs as well as to service salt pans (*sealterna steallas*, the vernacular term from which Seasalter takes its name).⁷⁸ In Hardres alone the allotment was 100 wagon loads a year, in addition to which a small cart was allowed to ply there at any time. None of this suggests any systematic husbandry but that forests still within the king's charge were simply culled for undergrowth or blown wood. Although some control was maintained over the use of the woods most accessible to the pans and the main population centres, there was

⁷³ R E Zupko, *A Dictionary of English Weights and Measures*, 1968, p 5.

⁷⁴ *Black Book of St. Augustine's*, I, pp 96–7.

⁷⁵ Alec Detsicas, *The Cantiaci*, Gloucester, 1983, pp 170–1; and A Miles, 'Salt-Panning in Romano-British Kent', in K W de Brisey and K A Evans (eds), *Salt: the Study of an Ancient Industry*, Colchester, 1975, pp 26f.

⁷⁶ *Cart Sax*, no 507.

⁷⁷ *Ibid.* nos 247, 248.

⁷⁸ Wallenberg, *Kentish Place-Names*, p 69.

still – as yet – little suggestion of any real shortage.

We do not know when in Kent coppicing began to be seriously practised, but Domesday Book shows that by then it had been introduced not only in the north-east but at places around Canterbury. Specific mention is made of *silvae minutae* at two places on the outskirts of the city, a small plot of 16 acres at Nackington and a much larger one of 100 at Horton (near Chartham). Nothing is said in these cases about fencing, and the object is much more likely to have been to provide fuel. That seems unquestionably to have been the purpose of the 1000 acres of *silva infructuosa* which we learn was leased to the burgesses for 24s p.a. Where exactly the wood was we do not know, but probably in Blean. The entry is particularly informative because it shows that at this time the value of coppice, in an area where woods were plentiful but also heavily drawn upon, was around 1/4d an acre – much the same return, it seems, as from Wealden pannage or cattle pasture in the northern glades, and (to set the matter in perspective) about a quarter of that from the poorest arable land. The inference is that the demand for fuel was still purely local, and that although in the more populous areas some prudent management was beginning to be needed there was not yet such a shortage as to drive up prices. Other than around Canterbury and in the north-east the only reference to 'small wood' in the Kent Domesday is at Newington by Sittingbourne, and that for fencing. This does not, of course, mean that some coppice may not have existed elsewhere, but, if so, little value seems to have been attached to it.

Over the hundred years or so following Domesday Book the records are too sparse for us to know what had been happening to the woods; but when the darkness lifts in the thirteenth century we find that the situation had been transformed. The value of the woods had risen far beyond that of any other type of land, and the price of salt

had been carried up with it.⁷⁹ By then, as we have seen, coppice had become widespread throughout the accessible woodlands of the north, most of it no doubt consisting of quick growing hazel, though Oliver Rackham has shown that a variety of other woods, including chestnut, might be used, often in a somewhat casual intermixture.⁸⁰ The Wealden woods around the Rother were every bit as valuable as those in the uplands, but here the ownership of the undergrowth, as distinct from the 'great' oaks and beech, which were indubitably the property of the lords, was contestable, and increasingly worth contesting. Thus we hear in 1333 of an action taken by a certain James de Echynhamme, who occupied land near Benenden, against his overlord, the Prior of Christchurch, for forcible entry on to the property to remove the underwood.⁸¹ We do not know the upshot of this case, but other records show that in general the densmen were successful in asserting their claims, leaving the lords to profit from the timber trees and fuel from their profusion of lop and top. In this area the issue was important, but the further away from the Rother the less so it became, because the Medway was not navigable until it left the forest. The value of the wood was rapidly reduced by the cost of carting it over the foul Wealden droves.

The increase in value of the northern woods is well illustrated in a series of *Inquisitiones Post Mortem* carried out in Henry III's reign following the death of powerful tenants-in-chief of the king like Richard Clare and Hamo Crèvequer. Among these surveys was one conducted in 1263 at Eltham.⁸² Here there were 200 acres of woodland in demesne which were worth 57s a year in the sale of undergrowth, or close on 3 1/2d an acre, rather less than the

⁷⁹ For thirteenth-century salt prices in Kent see Rogers, *History of Agriculture and Prices in England*, II, pp 410-12.

⁸⁰ Rackham, *Trees and Woodlands*, p 80.

⁸¹ Furley, *Weald of Kent*, II, pp 331-32.

⁸² 'Inquisitiones Post Mortem', *Arch Cant*, IV, 1861, p 311.

contemporary leasehold value of medium quality arable land but still four times as much as had been got in 1086 from the *silva infructuosa* near Canterbury, allowing for the intervening inflation. This was an excellent return on soils so heathy and poor as to be virtually uncultivable; and it is matched by other surveys of Downland woods on soils which were equally intractable as eg at Nashenden behind Rochester.⁸³ There is little doubt that much of the underwood from Eltham was going to London, as that from the neighbouring manor of Bexley was certainly doing, providing a tenth of its income; and it shows the relative cheapness of water transport that although Bexley was only fifteen miles from London along Watling Street, one of the best roads in England, the supplies were nevertheless shipped through Erith or Dartford.⁸⁴ The influence of the London market extended well down the Thames; so that we hear from the Hundred Rolls of 1274 of the disposal there of 200 *ligna* (probably logs, for burning) from Oakenpole Wood on the Downs behind Teynham.⁸⁵

There were woodlands in east Kent far more profitable than these, including the Reinden woods above Folkestone, which we have already mentioned to illustrate the decline in the use of cattle pasture caused by coppicing on a short cycle.⁸⁶ The obverse of that was the extraordinarily high profit derived from the coppice itself, the annual return from the 150 acres at Reinden being 120s, or 9½d an acre, whereas in this manor the best of the demesne arable was worth only 8d. Moreover the standard oaks interspersed with the coppice here contributed another 20s in pannage and what little was left as cattle pasture 6s, to give a total value of nearly 1s an acre. The manor also had 41

acres of broom and furze which were cut every seventh year and were said then to have been worth 7s an acre. A great part of the profit must have come from sales to the growing municipalities across the Channel. The Wealden woods on the Rother were also open to that lucrative traffic, so that we hear in Edward III's reign of 'very many merchants – as well of our Kingdom of England as of the parts of France, Flanders, Zealand and Eastland, and elsewhere' entering the port of Winchelsea and plying up the Rother as far as Bodiam in search of firewood. Reading, Maytham and Newenden are mentioned as the other havens frequented for this purpose, and we are told that the men of Cranbrook also had a strong interest in the sales, from which they claimed to derive the greater part of their yearly support.⁸⁷

Even away from the Channel coast we find figures comparable to those at Folkestone, as in 1262 at Eastling (although that was a very small wood).⁸⁸ An excellent indicator of the soaring value of these woods is the investment policy of the great lords, who consistently bought up the best plots of land that their freehold tenants might be constrained to part with, sometimes to keep themselves but often to lease out for much higher returns than the previous custom-bound rents.⁸⁹ The development of this policy is well illustrated at Chartham, a Christchurch manor in the Stour valley, which included a share of Blean forest on one side and of Buckholt on the other. Meadow land along the river had always been the most sought after, but at the beginning of the thirteenth century Christchurch was already purchasing as much woodland as arable and by the end of it more; and the wealthier of the freeholders

⁸³ *Ibid.* *Arch Cant*, III, 1860, p 250.

⁸⁴ Du Boulay, *Bexley*, pp 14–5; and *Lordship of Canterbury*, p 217.

⁸⁵ 'Rotuli Hundredorum', sub Teynham Hundred; see also Furley, *Weald of Kent*, II, p 148.

⁸⁶ 'Inquisitiones Post Mortem', *Arch Cant*, III, 1860, pp 255–64.

⁸⁷ Furley, *Weald of Kent*, II, pp 335–36.

⁸⁸ 'Inquisitiones Post Mortem', *Arch Cant*, III, 1860, p 252.

⁸⁹ See for example, R A L Smith, *Canterbury Cathedral Priory: A Study in Monastic Administration*, 1943, p 117.

were also speculating in this highly profitable market.⁹⁰ In this manor entry fines for the purchase of woodland, which in the early part of the thirteenth century were already higher than for arable land, had by the end of the century become as high as for meadow, a remarkable indication of value, enhanced no doubt by proximity to Canterbury.⁹¹ The Archbishop for his part was creating protected reserves in the more extensive of his woods, at Bexley in the north-west, Oakenpole and Petham on the Downs, Whitley in the Chart near Otford, and in *Sibersnoth*.⁹² He seems also to have taken particular care to conserve other of his demesne woods within easy reach of the coast. The largest of those belonging to Wingham, 296 acres at Woolage Green, directly on Watling Street with Dover only six miles away,⁹³ remained virtually intact until after the Second World War and is still plainly marked out by tree belts.

Increases of value of the magnitude described, far exceeding the general rate of inflation since Domesday Book, were not confined to Kent. They were an inevitable consequence of the great expansion of population, coupled with the growth of the towns, which at one and the same time enlarged the demand for fuel, and made inroads into the supply as land hunger led to the clearance and cultivation of more and more marginal land.⁹⁴ In Kent the circumstances were peculiarly propitious. It started with a glut of woodland; in the east the extensive innings and recovery of land from the sea provided a major outlet for settlement on Romney Marsh, while in the west colonization was diverted into the one large area of forest, the Wealden basin of the Medway and its tributaries, where the

trees were of little value; thus relieving the pressure on the profitable outer belt of woods. These, it seems, produced far more fuel than was needed locally; but nowhere were the surpluses more easily disposable, up the Thames, along the coast or across the Channel. In the thirteenth century and up to the Black Death these woods were a source of wealth comparable to the coal-fields of the nineteenth century and the oil-fields today, with the added advantage of being constantly renewable.

VII

Although from the time of the Jutish settlement some encroachment had been made on the northern woods, by feeling out the areas of better soil, relatively little impression had been made on them prior to the Conquest, because there had been little need. Much of the old-cleared land which the Jutes inherited from Roman times was of excellent quality and it seems that for some time not even all of this was fully exploited. If, as it appears, the earliest of the settlements are marked out by the land units known as *sulungs*,⁹⁵ and if the distribution of those is compared to the picture presented by Domesday Book, the chief development shown during the interval had been a steady filling-out of the originally neglected parts of Holmesdale, accompanied by the clearance of the better ragstone soils on the central and eastern sections of the neighbouring Chart.

The open, seaward section of the Downs between Dover and Deal had been well settled from early times, but clearance had spread further inland where in 1086 only a few scraps appear to have remained of the ancient forest of Singledge (around Whitfield) mentioned in eighth-century charters.⁹⁶ Small footholds had been established at other places along the Downs,

⁹⁰ A M Langridge, 'The Tenantry of Chartham from c 1200 to c 1550', unpublished MA thesis, University of Kent, 1982, pp 34, 63-4.

⁹¹ A M Langridge, 'The Population of Chartham from 1086 to 1600', *Arch Cant*, CI, 1984, pp 217-44, especially pp 224-26.

⁹² Du Boulay, *Lordship of Canterbury*, p 217; and 'Dennis, Drowning and Danger'.

⁹³ Cant Cath MS E 24, fo 1.

⁹⁴ Postan, *Medieval Economy and Society*, pp 16-28.

⁹⁵ K P Witney, 'The Period of Mercian Rule in Kent, and a Charter of AD 811', *Arch Cant*, CIV, 1987, pp 87-113.

⁹⁶ *Cant Sax* nos 190, 207.

where almost all the parish churches of today had predecessors entered in the *Domesday Monachorum* or *Textus Roffensis*, although most of these seem to have been diminutive and many, like Paddlesworth above Lyminge, to have originated as no more than woodland chapels.⁹⁷ Here and there, as at Meopham, sizeable manors had developed where the chalk hills declined into the fertile loess soils fringing the Thames; but higher up it is very rarely that we find settlements of any consequence. Domesday Book records ten plough teams at Cudham but much more typical were places like Wichling, Frinsted and Hasting-leigh where the teams varied from one to three. The origin of these trivial manors is obscure, but most probably began as squatters' settlements, either in woods belonging to the folk of the surrounding communities, or sometimes in royal and demesne woods where they were tolerated because more could be extracted from the settlers in rents than the under-utilized woods were at that time worth.

During the twelfth century, as the increase in population began to make itself felt, but before the woods had acquired their later value, this process of attrition appears to have gathered pace. It seems, for instance to have been this period that saw the development of the small satellite settlement of Chartham Hatch at one end of Blean⁹⁸ and the establishment of a few woodland holdings around Strode and Bleangate at the other,⁹⁹ and also the beginnings in the Chart woods, as an off-shoot of Otford, of what was to become the market town of Sevenoaks.¹⁰⁰ These assarts were variously described. At Gillingham they were called *ferthings*,¹⁰¹ but in later manorial records

they were mostly entered as 'new lands'. They so appear at Eltham, where they amounted to some 250 acres¹⁰², and at Kennington, where they included, for example, *Bochangre* (i.e. 'beech hanger'),¹⁰³ evidently on the Down scarp. Small patches of 'new land' occasionally occur even in the north-east, where woods were scarce, as at East Studdal on the margin of what remained of the forest of Singledge.¹⁰⁴ A good indication of encroachment on demesne woods is the presence of *inlands*, i.e. holdings sited on the lords' own property, but remote from the manorial halls around which such holdings generally clustered (as the term implies). The assarts at Strode and Bleangate were of this kind, and in Wingham manor we find 150 acres of *inland* distributed throughout the wooded southern fringe around Womenswold with another 50 acres around Oxenden nearby.¹⁰⁵ Individually these holdings were unusually small but by the close of the twelfth century the woodlands were becoming increasingly frayed. It was at that point that the steep rise in their value began decisively to tip the balance against further clearance.

The lords were well able to protect their demesne woods in the north when the need arose, and it was these woods, rather than those belonging to their freehold tenants (in Lyminge manor Park Wood and West Wood rather than Rhodes Minnis)¹⁰⁶ that stand out clearly today. In The Weald the lords' interests were different, but in the Rother area just as great. Although their concern here was restricted to the mast-bearing trees, with their timber and lop and top, all of those belonged to them, to take or leave standing as they pleased. The problem on the far outposts of the dens was how to protect this property. Over most of The Weald it hardly mattered, since the assets were barely realizable, but around the

⁹⁷ Gordon Ward, 'Saxon Churches in Textus Roffensis' and 'Saxon Churches in Domesday Monachorum'; and Everitt, *Continuity and Colonisation*, pp 156-8.

⁹⁸ Langridge, 'Population of Chartham', p 221.

⁹⁹ *Black Book of St. Augustine's*, I, p 103.

¹⁰⁰ Du Boulay, 'The Assembling of an Estate: Knole in Sevenoaks c 1275 to c 1525', *Arch Cant*, LXXXIX, 1974, pp 1-10.

¹⁰¹ A R H Baker, 'Open Fields and Partible Inheritance on a Kent Manor', *Econ Hist Rev*, 2nd ser, XVII, 1964, pp 1-23.

¹⁰² 'Inquisitiones Post Mortem', *Arch Cant*, IV, 1861, p 311.

¹⁰³ *Black Book of St. Augustine's*, I, p 236.

¹⁰⁴ *Ibid*, I, p 71.

¹⁰⁵ *Cant Cath MS E 24*, fo 9, 10.

¹⁰⁶ *Ibid*, fo 65.

Rother it came to matter a great deal. In earlier times, when there was a superfluity of pannage and the trees had not yet acquired their later value, the lords had been indulgent to settlement because it caused little loss, and what there was could be more than made up by the dues imposed on the squatters; that extraordinary complex of forest customs – *danger*, *lef-yeld*, *gate-penny*, *scot-ale*, *summer-hus* and the rest – which started as compensatory payments for interference with pannage, or relief from it, or were a form of enforced hospitality when the lords or their agents held courts in the forest, known as *parrocks*, to apportion pannage.¹⁰⁷ But once the settlements had gained a hold it was difficult to prevent their expansion; nor, at such a distance, was it possible effectively to restrain illicit felling. As during the thirteenth century the value of the woods mounted, the densmen were intent at every opportunity on rifling them,¹⁰⁸ partly no doubt to clear more land for cultivation but mostly, it seems, to dispose of supplies to shipmen plying along the Rother. In the face of this constant, more or less surreptitious, destruction, the lords were driven to a series of compromises, by which, for instance, the occupiers of certain Eastry dens were allowed one tree for each taken by the Prior of Christchurch, while on the Charing den of *Helesden* (Cranbrook Common) the Archbishop was content with a third of the trees and elsewhere with the oak and beech.¹⁰⁹

Already by the end of the century the difficulties of enforcement were becoming so great that the lords were prepared to sell out their rights in certain of the dens and concentrate on the protection of the remainder, now known as *drof-dens*.¹¹⁰ Thus in 1285 the Abbot of Battle, lord of Wye

manor, made over to the occupants of twelve of his dens in Hawkhurst and Cranbrook parishes all rights to the trees growing on them in return for substantial rents and for converting one other, Angle, into a park.¹¹¹ But even with this reduction, protection was difficult and was becoming more urgent as reserves were constantly eaten into. There were numerous court cases, such as those taken by the Archbishop before the justices of Oyer and Terminer in 1309/10 which showed that more than 600 trees had been illegally felled on eight of his *drof-dens*. Just how extensive the depredations could be is revealed in an associated account of proceedings against the tenants of 120 acres in Rolvenden parish who were said 'by force of arms' to have felled no fewer than 326 oaks and beech to the loss by the archbishop of 119 marks (nearly £40).¹¹² The disputes continued with mounting bitterness until the Black Death, with its immense mortality, knocked the bottom out of the wood market and led to the wholesale abandonment by the lords, for very moderate rents, of rights for which it was no longer worth the struggle to enforce.¹¹³

At the other end of The Weald, around Tonbridge, where difficulty of disposal had made the trees almost worthless, but where some good land was to be found along the river terraces, clearance had begun long before, with little hindrance from the lords, who could expect more from agricultural rents than the meagre returns on pannage. The Kent Domesday shows that already in the twenty years between the Conquest and the taking of the survey there had been considerable colonization here; manors owning dens to either side of Tonbridge and throughout the Wealden basin of the Medway having increased well beyond normal in value. By the thirteenth century

¹⁰⁷ Somner, *Ports and Forts*, pp 112-13; Neilson, *Priory of Bilsington*, pp 2-39; Du Boulay, 'Denns, Droving and Danger'; Witney, *Jutish Forest*, pp 173-78.

¹⁰⁸ Furley, *Weald of Kent*, II, pp 195-205.

¹⁰⁹ Neilson, *Priory of Bilsington*, pp 17-21; and Du Boulay, 'Denns, Droving and Danger'.

¹¹⁰ Neilson, *Priory of Bilsington*, pp 19-20.

¹¹¹ Furley, *Weald of Kent*, II, pp 199-201.

¹¹² *Ibid*, II, pp 203-04.

¹¹³ Du Boulay, 'Denns, Droving and Danger'; Witney, *Jutish Forest*, pp 183-86.

this had become a well-settled countryside, from which the old forest regime and the customs revolving around it had almost vanished. The Archbishop had been the major landowner here, yet of the 50 or so *drof-dens* he was maintaining in The Weald in 1285, none was situated to the west of Horsmonden parish, which itself had only one.¹¹⁴ The greater part of his lands in this area had been assigned as knights' fees, mostly to the Clares of Tonbridge, so effectively passing out of his control; and of those he kept the most important, Penshurst, sited on good workable soil at the junction of the Eden and the Medway, was being converted into arable and meadow.¹¹⁵ But perhaps the most revealing light on the progress of settlement is cast by two perambulations of the Lowy of Tonbridge carried out in 1259 and 1279 and which traversed some thirty miles of countryside, moving at almost every point from one well-established holding to another.¹¹⁶ As the settlements multiplied and pannage dwindled, the clusters of dens belonging to manors of north Kent were beginning to be grouped into manors themselves, if still treated as subordinate, and sometimes with names – Cowden Lewisham, Otford Weald (alias Penshurst Halimote) – betraying their origins.¹¹⁷ The prime example was Tonbridge itself which was no longer treated as a congeries of outpost lands held from northern manors, but had developed into a fully fledged manor in its own right, one of the largest in Kent and a favourite residence of the Clares. Everywhere along the line of the Medway and its tributaries, with their spread of alluvium, other manors were forming, with holdings cutting back into the surrounding woods, unhindered except where the lords had converted those into park or chase,

which increasingly was becoming the use made of land too poor to repay even the labour of clearance.

As, in the western Weald, the dens were gathered into the emergent manors and the links with upland Kent were severed, so did the great annual transhumance of swine die away. But in the east, where the *drof-dens* were too valuable to be released by their parent manors, and the lords' control over the woods had its ultimate justification in pannage, the movement of the herds continued, if merely as a makeweight. It was only when the demand for fuel slumped with the onset of the Black Death in 1348/9, and the wood rights were sold, for what they were worth, to the densmen, who had no wish to see strangers' swine quartered on their lands any longer, that the movement finally petered out, so bringing to an end a whole era of Wealden history which had begun centuries before with the Jutish conquest. And there were other changes afoot in The Weald; in the east the establishment by Edward III of cloth weaving at Cranbrook and neighbouring places¹¹⁸ and in the west the rediscovery of the iron deposits, which were to give a renewed value to the woods, although not until the introduction of large furnaces in Tudor times.¹¹⁹ The whole economy of the forest was changing.

VIII

Whatever the future might hold, the period we have been studying had enduring effects on the development of Kent and its landscape, the framework of which has rightly been described as medieval.¹²⁰ Nowhere is this more marked than in the distribution of the woodlands, fixed virtually in the pattern left by the coming of the Black

¹¹⁴ Witney, *Jutish Forest*, p 170 (map).

¹¹⁵ *Ibid.*, pp 167–69.

¹¹⁶ Harris, *The History of Kent*, pp 319–21: Dumbreck, 'Lowy of Tonbridge'.

¹¹⁷ Witney, *Jutish Forest*, pp 214–16.

¹¹⁸ Furley, *Weald of Kent*, II, pp 321–31.

¹¹⁹ E Straker, *Wealden Iron*, 1931, pp 26–59.

¹²⁰ A M Everitt, 'The Making of the Agrarian Landscape of Kent', *Arch Cant*, XCII, 1976, pp 1–31.

Death. The drastic fall in population devalued the woods, but it also meant that there was no longer any serious shortage of arable land. The woodlands of the north, which throughout the period of acute land hunger had been saved by their great profitability and the diversion of settlement to the western Weald and the newly-inned marshes, continued to be so by the poverty of their soils and mere inanition until, as the population began again to pick up, such innovations as hop-growing gave a renewed value to the coppices on the Downs and elsewhere.¹²¹ The rediscovery and exploitation of the iron fields of the High Weald had little or no effect on the extent of the woodlands there, though it did on their character by speeding the replacement of standard trees by the coppice needed to make charcoal for the furnaces¹²² – the same development that had accompanied the growth of the salt industry centuries before. Throughout Kent, if the distribution shown in the Land Utilisation Survey of 1943¹²³ is compared to our knowledge of that in 1086, and indeed in much earlier times, the only significant difference is the clearance of The Weald along the line of the Medway and its tributaries – and even that had been largely accomplished by the mid-fourteenth century. For the rest, all the ancient forests and woods – Blean, Hardres, Buckholt, the Chart, *Sibersnoth*, King's Wood in Wye, Oakenpole, the Chislehurst heaths and so

on – stand out clearly, together with the scattering of smaller woodlands along the length of the Downs.

It is impossible to study any aspect of the early agrarian economy of Kent without becoming impressed by the close integration of all; a discriminating balance of use, not only between the various types of woodland in their different settings, but between those and the arable, the upland pastures, the marsh innings and *forelands*, the fisheries and salt pans. No mere succession of expedients could have produced such a well-ordered whole. The great variety of soil and terrain in Kent encouraged selectivity, and the long coastline and deeply penetrative estuaries enlarged the scope for it. That such full advantage should have been taken of the opportunities owed much to the initial land system of the Jutes but even more perhaps to the percipience of the church lords who by the time of the Conquest had acquired between them a larger stake in this county than in any other, owning more than half of it with estates scattered throughout every part. This gave the durability of ownership necessary for consistent policies to be followed and the means of applying them with the utmost flexibility across the face of the county. There is no better illustration of this, or of the pressures induced by the great growth of population after the Conquest and the means taken both to cope with and profit from it, than the woodland economy as it had developed during the thirteenth and early fourteenth centuries.

¹²¹ Stamp, *Land of Britain: Kent*, pp 591, 601.

¹²² Straker, *Wealden Iron*, pp 109-40.

¹²³ Stamp, *Land of Britain: Kent*, p 592 (map).