

In the time of mast: Investigating the medieval swine pannage of south-east England

by Andrew Margetts

Abstract

The turning out of swine in woodland and the feeding of the animals on mast is an established part of modern livestock husbandry (for example, *Jamón ibérico* of Spain and Portugal or the ‘pannage pork’ of the New Forest). Despite this, perhaps the most famous historic records of woodland pig pasture are derived from the documentary evidence of the medieval Weald of south-east England. Though this is undoubtedly the case, the practice has received few interdisciplinary studies that feature excavated archaeological evidence. What follows is an extended review of the medieval practice of pannage, both in the Weald and beyond.

I

Medieval south-east England was predominantly a pastoral area. Though it possessed prime arable country that at one time or another was amongst the richest in the kingdom, in terms of land use, it was mainly given over to pasture, especially wood-pasture. For much of the middle ages, this environment epitomized the largest natural and cultural area of the region, the Weald.¹ The medieval practice of swine pannage has dominated our understanding of the region’s medieval pastoralism. The strong connection between the medieval Weald and pig husbandry is in part reflective of scholars’ historic reliance on information provided by Domesday (AD 1086). Within William the Conqueror’s great survey of holdings and their value, a given woodland is measured in the number of pigs it could support in pasture (see below).

This article explores the nature of medieval pannage and the part it played in a system of transhumance. It investigates the distribution of the practice within the south east and highlights current strands of evidence for the keeping of swine. It evaluates the importance of pannage and sheds new light on the archaeology of medieval pig husbandry, both in the landscape (e.g., place-names and droveways) and excavated archaeological remains (bone assemblages and buildings). The work begins with an introduction to the study area before embarking on the more detailed evidence of the region’s swine economy.

¹ D. Hooke, ‘Wealdbæra and Swina Mæst’, in S. Turner and B. Silvester (eds), *Life in medieval landscapes* (2012), pp. 15–41.

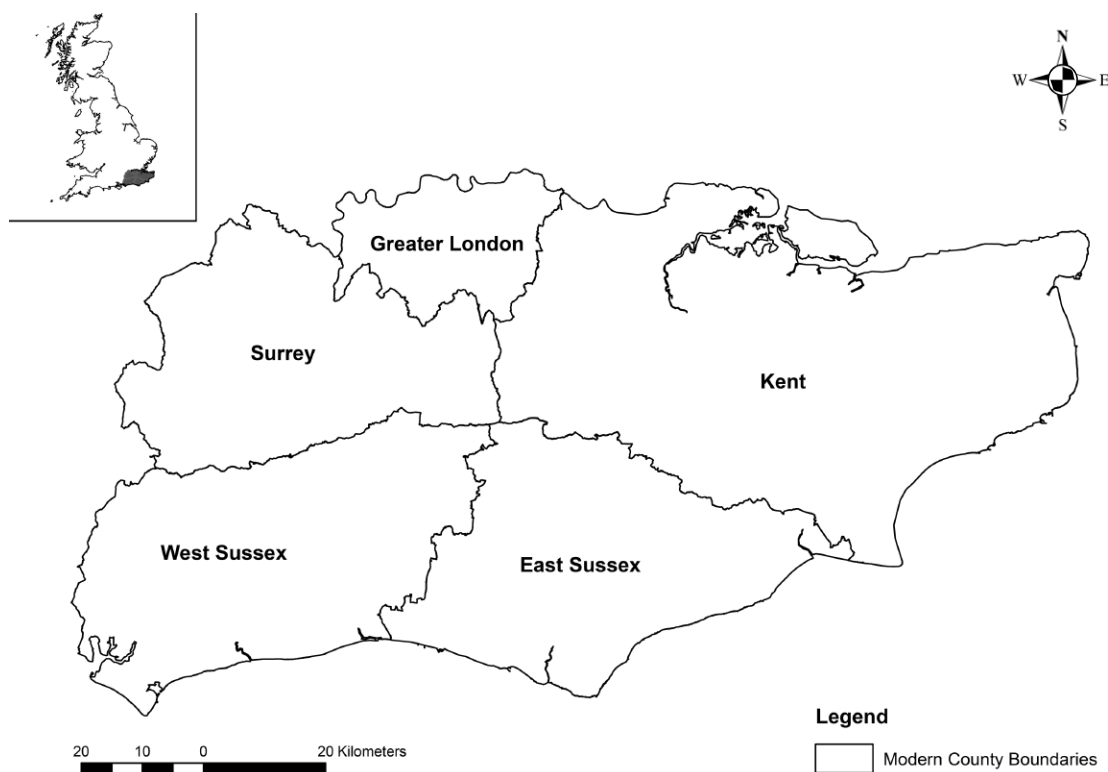


FIGURE 1. The study area (drawn by the author)

II

South-east England as it is defined here comprises the modern counties of Kent, Surrey and East and West Sussex, as well as part of Greater London (Figure 1). It is formed of a number of ‘character areas’ or *pays* which transcend modern administrative boundaries and have provided a framework for the study of the area’s historic landscape (Figure 2). It is a region of varied underlying geologies and topography, which has given rise to a number differing landscape types. Over the centuries, the region’s communities have adapted these contrasting environments in different ways, this often with a view to effective exploitation through the most suitable methods of agriculture for the given soil, hydrology and topography, its *terroir*.

The area known as the Weald comprises over 60 per cent of the south east’s entire landmass. It is named from the Old English for woodland and is considered to be the region’s poorest arable area. It is traditionally divided between the elevated, predominantly sandstone, High Weald and the largely clay Low Weald. From the early medieval period and possibly before, this area comprised a pastoral and woodland resource in which a system of transhumance prevailed. Early communities utilized a network of droveways and based their agricultural exploitation of this marginal area on parent settlements situated within areas of greater arable potential. These areas of so-called ‘primary settlement’ existed at the scarp foot of the North

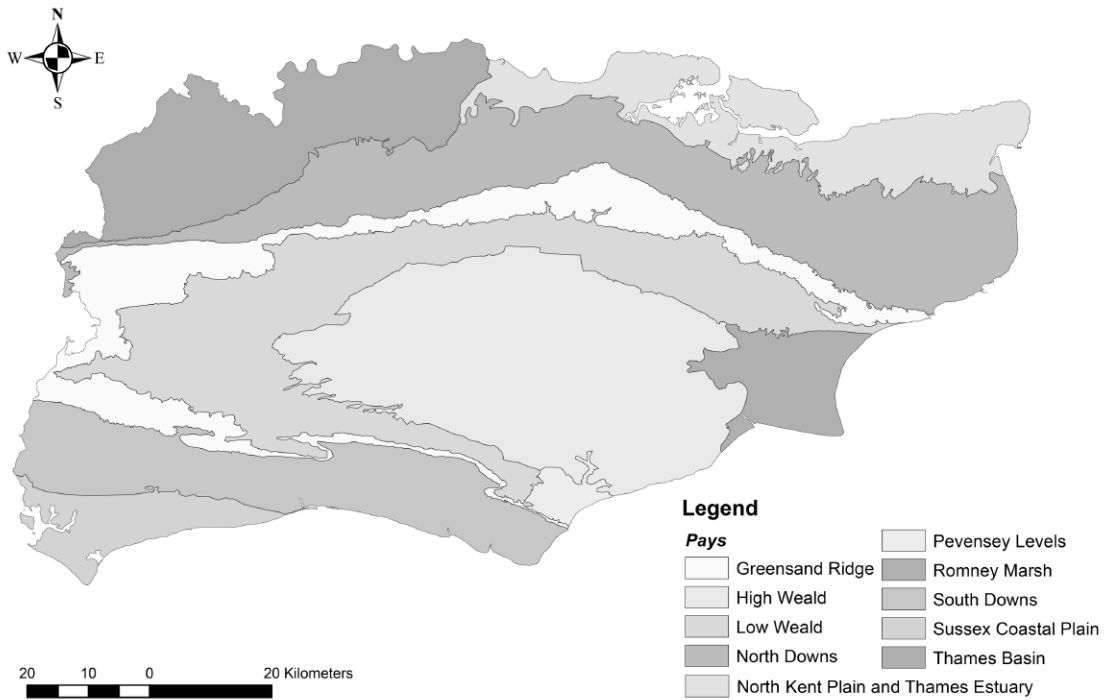


FIGURE 2. The *pays* of the south east (drawn by the author)

and South Downs (the Sussex Spring-Line and Holmesdale) as well as on the Sussex Coastal Plain and parts of the North Kent Plain and Thames Estuary.

Traces of the region's pastoral economy can be seen in modern day road networks, field boundaries and enclosures of the Wealden landscape, and through careful examination of the evidence, an evolution of rural society and settlement patterns from seasonal occupation to permanent farming communities and/or villages may be seen.² It is thought that during the early medieval period portions of the Weald first existed as common pasture for the relevant kingdom as a whole (e.g., the Kingdom of Kent or Sussex). Later there was appropriation of pasture, firstly by so-called 'folk-groups' and later by Anglo-Saxon multiple estates. During the tenth and eleventh centuries use of certain areas had become institutionalized into closed seasonal pastures known as *denns*. These *denns* are often simplistically interpreted as swine pastures, however, it is probable that other species of livestock were also sent to graze in the Wealden woods.³

² K. P. Witney, *The Jutish forest: a study of the Weald of Kent from 450 A.D. to 1380 A.D.* (1976); A. Everitt, *Continuity and colonization: the evolution of Kentish settlement* (1986); P. Brandon and B. Short, *The South East from AD 1000* (1990).

³ D. Hooke, 'Pre Conquest woodland: its distribution

and usage', *AgHR* 37 (1989), pp. 113–29; Hooke, *Weald-bāra and Swina Māst*; A. Margetts, 'The wandering herd: the medieval cattle economy of the South-East, c.450–1450' (unpubl. PhD thesis, University of Exeter, 2020).

III

Despite the presence of cattle and other animals, the most historically apparent use of the south east's wood-pasture, both on the manors and in the *denns* was for the pannage of swine. Pannage meant both the pasturing itself and the dues paid by tenants and others for the right to send their pigs to graze.⁴ It involved the autumnal feeding of swine, mainly on acorns or beech mast (the fruit of beech, oak, chestnut, and other forest trees) in order to fatten them for slaughter. Modern science has confirmed the value medieval husbandmen placed on the mast diet, both for the flavour and for the quality of the resultant pork.⁵ From a land management perspective, foraging swine have also shown benefits in terms of their impact on the biology of the forest floor.⁶ Although grazing of pigs may be beneficial for open wood-pasture environments, when grazed in large numbers they cause colluviation and they inhibit reafforestation, ultimately causing the disappearance of woodland.⁷

The cost of keeping swine is neatly demonstrated by the thirteenth century *Seneschaucie*.⁸ Within this document it is made clear that manors without wood or marsh or waste, where pigs could be kept away from the community's corn land, would be severely restricted in terms of the number of pigs they could keep. Only those that could be fed on the stubbles after harvest and sold before winter were recommended for retention. Indeed:

For whoever will keep swine for a year from the cost of the grange alone, and count the cost and the allowance for the swine and swineherd, together with the damage they do yearly to the corn, he shall lose twice as much as he shall gain, and this will soon be seen by whoever keeps account.⁹

Despite its continuity throughout the period of high farming and into the fifteenth century, the roots of the pannage system lay in the early medieval period or before. Anglo-Saxon charters contain the earliest documentary evidence for the practice in England where the word commonly used for swine pastures was recorded as *denbæra*, although occasionally they are

⁴ F. R. H. Du Boulay 'Denns, Droving and Danger', *Archaeologia Cantiana* 76 (1961), pp. 75–87.

⁵ M. Bonneau and B. Lebret, 'Production systems and influence on eating quality of pork', *Meat Science* 84 (2010), pp. 293–300; S. Ventanas, J. Ruiz, C. Garcia and J. Ventanas, 'Preference and juiciness of Iberian dry-cured loin as affected by intramuscular fat content, crossbreeding and rearing system', *Meat Science* 77 (2007), pp. 324–30.

⁶ A. L. Wealleans, 'Such as pigs eat: the rise and fall of the pannage pig in the UK', *J. Science of Food and Agriculture* 93 (2013), pp. 2076–83.

⁷ A. Gebhardt, 'Soil micromorphological data from traditional and experimental agriculture', in A. Barham and R. I. Macphail (eds), *Archaeological sediments and soils: analysis, interpretation and management* (1995), pp. 25–39; R. A. Sweitzer and D. H. Van Vuren, 'Rooting and foraging effects of wild pigs on tree regeneration

and acorn survival in California's oak woodland ecosystems', in R. B. Standiford, D. McCreary, and K. L. Purcel (eds), *Proceedings of the fifth symposium on oak woodlands: oaks in California's changing landscape* (2002), pp. 219–31; M. Gardiner, 'The changing character of transhumance in early and later medieval England', in E. Costello and E. Svensson (eds), *Historical archaeologies of transhumance across Europe* (2018), pp. 109–20; C. Zatyko, 'Seasonality, territories, and routes: pannage as a multicomponent practice in medieval and early modern Hungary', in P. Dixon and Cl. Theune (eds), *Seasonal Settlement in the medieval and early modern countryside*. *Ruralia* XIII (2021), pp. 361–70.

⁸ D. Oschinsky (ed.) *Walter of Henley and other treatises on estate management and accounting* (1971), pp. 261–95.

⁹ *Ibid.*, pp. 113–4.

referred to as *wealdbæra* or, more specifically, as *pascua porcorum*, ‘pasture for pigs’.¹⁰ In the earliest charters the rights refer to the south east’s folk-groups, as is exemplified by Æthelberht of Kent’s grant to the abbess Mildred during the summer of 724. The grant mentions ‘*pascua porcorum*, *Brentingesleag on Limenwearawalde*’ (‘the wood of the men of the Limen region’) and in *Weoweraweald*, ‘the wood of the men of Wye’.¹¹

It is probable that during the earliest phases of seasonal pig pasture, those lowest down the social scale were engaged within the yearly movement to the commons. Slaves comprised a significant body of agricultural labour during this time and the eleventh/twelfth century *Rectitudines* indicates that a swineherd may either be an unfree *æhteswane* or a free, tribute-paying *gafolswane*. Within the Sussex Weald the association of slaves with woodland pastures may be preserved in the place-name Wallhurst (*weala-hyrst*) ‘wood of the Briton’s or serfs’,¹² although the compound of *dryhten* ‘a lord’ and *geselle* in Drigsell (Sussex) implies that those higher up the social scale were also engaged to some degree in transhumance practice (Drigsell; ‘lord’s hut, buildings or the like’).¹³

South-eastern custom is generally assumed to indicate that one swine out of every ten pannaged should be surrendered to the manorial lord, but Darby’s analysis of Domesday woodlands indicates that determining the ratios of pigs rendered is by no means clear cut.¹⁴ Only a single Domesday entry for Leominster, in Herefordshire gives an explicit reference to the ratio of render to total for mast swine (*de pasnagio*).¹⁵ In the south-eastern counties no equivalent ratios exist, a situation that is symptomatic of the variable and in many ways limited nature of Domesday.¹⁶ Unlike the eastern counties covered by the so-called ‘Little Domesday’ (Essex, Norfolk and Suffolk), numbers of livestock were not recorded in the south east¹⁷ limiting our ability to reconstruct the eleventh century pastoral economy. That being said, it must be remembered that the ‘Little Domesday’ itself is not without problems. The nine cows and two donkeys recorded for the whole of Suffolk for instance plainly being unrealistic.¹⁸ In terms of swine renders in the south east, however, the documents are explicit for pigs fed on grass (*de herbagio*). For instance, at Pagham in Sussex every villein had to render one out of seven pigs¹⁹ whilst at Malden and Battersea in Surrey the numbers were one in seven and one in ten respectively.²⁰

Because of the relationship between swine renders and woodland, the size or amount of woodland on a holding came to be recorded in terms of the number of swine paid as an annual

¹⁰ Hooke, ‘Pre Conquest woodland’; Hooke, ‘*Wealdbæra* and *Swina Mæst*’.

¹¹ P. Sawyer, *Anglo-Saxon charters: An annotated list and bibliography* (1968), Charter 1180.

¹² A. Mawer and F. M. Stenton (eds), *The place-names of Sussex*, Part 1 (English Place-Name Society [hereafter EPNS] 6, 1929), p. 211.

¹³ A. Mawer and F. M. Stenton (eds), *The place-names of Sussex*, Part 2 (EPNS 7, 1930), p. 458; A. Margetts, ‘To browse and mast and meadow glades: New evidence of shieling practice from the Weald of South-East England’, *Ruralia XIII: the Jean-Marie Pesez Conferences on Medieval Rural Archaeology* (2021).

¹⁴ H. C. Darby, ‘Domesday woodland’, *ECHR* 3 (1951),

pp. 21–43.

¹⁵ Ibid.

¹⁶ J. H. Round, *Feudal England* (1895); R. Welldon Finn, *The making and limitations of the Yorkshire Domesday* (1972); H. C. Darby, *The Domesday geography of eastern England* (1971), pp. 1–13.

¹⁷ H. C. Darby and E. M. J. Campbell (eds) *The Domesday geography of south-east England* (1962).

¹⁸ Darby, *Domesday geography*, pp. 199–200.

¹⁹ J. Morris (ed.) *Domesday Book: Sussex* (1976), entry for Pagham (2,5).

²⁰ J. Morris (ed.) *Domesday Book: Surrey* (1975), entries for Battersea (6,1) and Malden (19,23).

rent for the right of pasturage. Within Domesday, the amount of woodland was normally indicated by the formula '*silva de porcis*' or '*silva n porcis*', which is sometimes expanded to '*de pasnagio silvae n porci*' or '*silva [de] n porcis de pasnagio*'. The swine in these entries constituted the rent paid to a lord in return for pannage in his wood and these were normally given as a round number (e.g., 20, 50 and 150) indicating estimates.²¹ Despite these records there is no satisfactory way of elucidating what acreage of woodland these figures imply and as it came to simply be a means of assessing the size and value of a woodland we should question whether it was always necessarily the case that pigs (or pigs alone) were being pastured there.²² Indeed, that swine renders are not equivalent to the number of pigs kept in a woodland is clearly demonstrated by the evidence of 'Little Domesday'. Here the records show that the number of pigs on the demesne of a holding was rarely the same as the number its woodland was said to be capable of supporting. Usually it was less, but sometimes it was more. Pigs were occasionally recorded for holdings without any wood.²³

Nationally, many manors kept a few pigs on the demesne, the *Recititudines* envisaged a demesne swineherd who would also look after the pigs of the peasantry in return for payments of bread.²⁴ Domesday, however, indicates that the number of pigs kept on most demesnes was too small to make a swineherd viable,²⁵ but it is well known that at the time it was peasant producers who favoured the keeping of swine. This was especially true of manors bordering the Weald. According to Harvey more than 80 manors in the five south-eastern counties received payments of over 75 pigs a year, a scale that demonstrates why lords could afford to limit their engagement with pig production.²⁶

In terms of the length of the pannage season most commentators agree that it ran between August and December, however, after the Conquest an October to November date became the norm.²⁷ As part of the medieval agricultural cycle, swine fattening on mast was so synonymous with autumn that it became the standard calendar depiction for either October/November or November/December.²⁸ Medieval pictorial representations of swine pannage have also been shown by Jørgensen²⁹ to be particularly helpful in illustrating the practicalities of the method of feeding pigs. Swineherds are shown beating trees to dislodge the nuts, shaking the trees or climbing them to knock down the mast to foraging animals (Figure 3).

Beyond pictorial representations, William Gilpin's late eighteenth-century account of pig-keeping in the New Forest surely holds echoes of the medieval practice. He shows the swineherd's first step was to find part of the forest that was well watered and had plenty of acorns and beech nuts. He next wattled a slight circular fence around a spreading mast tree,

²¹ S. H. King, 'Sussex', in Darby and Campbell, *Domesday geography*, pp. 444–5; C. W. Lloyd, 'Surrey', in Darby and Campbell (eds), *Domesday geography*, pp. 386.

²² Margetts, 'Wandering herd'; Margetts, 'To browse and mast', p. 220.

²³ Darby, *Domesday geography*, pp. 144, 200, 256.

²⁴ F. Liebermann, *Die Gesetze der Angelsachsen* (1903).

²⁵ S. Harvey, 'Domesday England', in E. H. Hallam (ed.), *The agrarian history of England and Wales* [hereafter *AHEW*], II, 1042–1350 (1988), p. 127.

²⁶ Harvey, 'Domesday England', pp. 128–9.

²⁷ K. P. Witney, 'The woodland economy of Kent, 1066–1348', *AgHR* 38 (1990), p. 22; U. Albarella, 'Pig husbandry and pork consumption in medieval England', in C. M. Woolgar, D. Serjeantson and T. Waldron (eds), *Food in medieval England: Diet and nutrition* (2006), p. 79; D. Jørgensen, 'Pigs and pollards: medieval insights for UK wood pasture restoration', *Sustainability*, 5 (2013), p. 389; D. Banham and R. Faith, *Anglo-Saxon farms and farming* (2014), p. 130.

²⁸ Jørgensen 'Pigs and pollards', p. 389.

²⁹ Ibid.



FIGURE 3. Harvesting acorn to feed swine; detail of a miniature from the Queen Mary Psalter (BL Royal 2 B VII)

covering it roughly with boughs and sods and filling it with plenty of litter. He then drove his herd of swine (five or six hundred strong)³⁰ to the enclosure, giving them a plentiful supper of acorns or beech mast, during which he sounded his horn. He then turned them into the litter, where after a long journey, and a hearty meal, they slept. The next day he turned them loose, but as evening drew on he then rained down acorns again to the sound of his horn. As time went on the pigs could wander, but got used to coming home at night or to the sound of the horn, even though they often wandered two or three miles from their sty by day.³¹

IV

As intimated above, understanding of the landscape and settlement history of south-east England has been significantly influenced by its medieval record of swine pannage. Within the region's 'marginal' *pays*, such as the Weald or Romney Marsh, settlement was often tied to pastoral exploitation, which acted as a driver of colonization based initially on seasonal usage

³⁰ A large herd size comparable to what is still found in the Spanish *dehesa* and was once found in Sardinia; A. Hadjikoumis, 'Traditional pig herding practices in southwest Iberia: Questions of scale and zooarchaeological implications', *J. Anthropological Archaeology* 31 (2012), pp. 353–64; U. Albarella, F. Manconi and A. Trentacoste, 'A week on the plateau: pig husbandry,

mobility and resource exploitation in central Sardinia', in U. Albarella, and A. Trentacoste (eds), *Ethnozooarchaeology. The present and past of human-animal relationships* (2011), pp. 143–59.

³¹ W. Gilpin, *Remarks on forest scenery, and other woodland views* (2 vols, 1791), II, pp. 113–15.

and subsequently on more permanent occupation. The use of the Weald as a pastoral resource, particularly for swine, has dominated scholarly understanding of how settlements evolved in ancient woodland landscapes.³²

The progression from a seasonally intercommonable Weald of the early Anglo-Saxon period to a permanently settled Weald of the late medieval period was tied to the development of the pastoral economy as well as other factors such as lordly intervention. Nevertheless, despite the prominence of swine renders in documents such as Domesday there has been some disagreement about how important the feeding of pigs in medieval woodland really was. Most commentators have historically considered the main usage of Wealden wood-pasture to be for the pannage of swine during the Anglo-Saxon period, whereas Rackham has categorized swine pasture as 'a famous, though not very important, use of wood-pasture'.³³

The distance between some outlying *denns* and their parent settlements (c.15–20 km) has led to a questioning of the nature of our past understanding and the validity of seasonal pastures for pannage.³⁴ Rackham has stated how pannage customs were often jocular, fanciful or even deliberately prohibitive and has questioned the practicalities of breeding animals with the aim of utilizing such an unpredictable resource as the mast crop.³⁵

Modern ethnoarchaeological studies of traditional free-ranging pig husbandry have nevertheless shown that unimproved long-legged breeds were capable of being moved over substantial distances, sometimes in excess of 100 km.³⁶ Long-distance movement of pigs to market has also been suggested for Roman Italy on the basis of zooarchaeological evidence,³⁷ whereas historical evidence from Hungary and other parts of central and eastern Europe also support medieval and post-medieval long-distance movement of swine.³⁸

On the question of the unpredictable nature of the mast crop, studies of traditional Sardinian pig husbandry have shown how, during a bad acorn year, pigs were driven towards areas that bore different types of mast or had experienced more successful acorn crops.³⁹ Although we should be wary of projecting later husbandry techniques as a model for past livestock management, such analogies help demonstrate the viability of pig transhumance and use of wood-pasture for pannage in medieval England.

Jørgensen has also challenged the notion that the unpredictability of mast was an impediment to widespread pig pannage. She has cited oak silviculture studies that demonstrate how acorn production varies from very poor to very good (mast years for the pedunculate oak occurring every two to six years), but that moderate crop sizes are just as common as extreme years. Thus in the oak woods of medieval England acorns were probably available almost every year, even though the exact amount differed annually.⁴⁰

³² E.g., Everitt, *Continuity and colonization*; Witney, *Jutish forest*; Hooke, 'Wealdbæra and Swina Mæst'.

³³ Hooke, 'Wealdbæra and Swina Mæst'; O. Rackham, *The history of the countryside* (1986), p. 122.

³⁴ D. Turner, 'Thunderfield Surrey: central place or shieling?', *Medieval Settlement Res.* 12 (1997), p. 10; D. Turner and R. Briggs, 'Testing transhumance: Anglo-Saxon swine pastures and seasonal grazing in the Surrey Weald', *Surrey Archaeological Collections* 99 (2016) pp. 165–93; Margetts, 'Wandering herd'.

³⁵ Rackham, *History of the countryside*, p. 122.

³⁶ E.g., Albarella *et al.*, 'Week on the plateau', p. 155.

³⁷ D. Steele, 'The analysis of animal remains from two late Roman middens at San Giovanni di Ruoti', in M. Gualtieri, M. Salvatore and A. Small (eds), *Lo scavo di S.Giovanni di Ruoti e il periodo tardo-antico in Basilicata* (1981), pp. 75–84.

³⁸ Zatyko, 'Seasonality'.

³⁹ Albarella *et al.*, 'Week on the plateau', p. 156.

⁴⁰ Jørgensen, 'Pigs and pollards', p. 392.

One further outstanding question surrounding pig pannage is whether pigs were kept in the woods only during the time of mast, or for longer periods, or even permanently. Texts, including custumals, frequently refer to droving and suggest the seasonal movement of swine. For example, William Pulayn and William Ailmer of the manor of Amberley in the South Downs were to have 'at the lord's mast in the forest all their pigs for 2d. each and likewise in Pubeherst. In the wood called Mennessé they shall have all their pigs at the lord's mast for nothing'.⁴¹ 'Pubeherst' or Pephurst constituted a detached Wealden wood-pasture associated with an oval enclosure (see below).⁴²

One of Robert de la Wode's obligations on the manor of Ferring (Sussex) was to: 'fetch pigs and drive them to Chichester, Aldyngbourne, Ferryng, Amberle or Durryngewyke at his own cost and from Dorkyng to London at the lord's cost'.⁴³ Occasionally records show that pigs were sent to a certain district as good pannage had become available and were fattened and slaughtered there (e.g., the archbishop's 'larder' at Slindon on the South Downs.⁴⁴ Du Boulay also cites an interesting arrangement at Westgate, Canterbury, where tenants had to guard the lord's pigs in pannage.⁴⁵ The group was organized in a roster: John le Suontook took the first quarter of the year, Stephen Spicer the second, Robert Lardiner and John Mot the third, and Luke Pips, Robert Godsman and John the son of Henry Joce the fourth. As pannage only becomes available in the autumn this implies the permanent pasturing of demesne pigs in the woods. The name 'Robert Lardiner' may even signify the additional function of butchering.⁴⁶

V

In order to help answer some of the outstanding questions surrounding the nature of medieval pig pannage and associated transhumance it is possible to look to elements of the south east's landscape. The Old English place-names of the region often came to reflect a pastoral model of settlement with names such as fold (*fald/falod*), *denn* (a forest retreat put to pastoral use), *gesell* (herdsmen's buildings) and *wic* (dairy farm or specialized settlement)⁴⁷ serving to highlight areas in which pastoral economies dominated. The Old English elements (*ge*)sell ('a shed, a shelter for animals, a herdsman's hut'), *scydd/scedd* ('a hovel, a shed, a pig-sty') are common elements in both Kent and Sussex,⁴⁸ but less so in Surrey and have been related to seasonal settlement associated with transhumance huts including those used during the time of pannage.⁴⁹ The meaning of *denn* elements has been interpreted as 'a woodland pasture,

⁴¹ W. D. Peckham (ed.), *The chartulary of the high church of Chichester* (Sussex Rec. Soc. 46, 1942), pp. 269–70.

⁴² Margetts, 'Wandering herd', p. 252.

⁴³ W. D. Peckham (ed.), *Thirteen custumals of the Sussex manors of the Bishop of Chichester* (Sussex Rec. Soc. 31, 1925), p. 77.

⁴⁴ Du Boulay, 'Denns', p. 80.

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ Mawer and Stenton, *Place-Names of Sussex, Part 1*;

A. H. Smith, *English place-name elements*, Part 1, *The elements A–IW, maps* (EPNS 25, 1956); A. H. Smith, *English place-name elements*, Part 2, *The elements JAFN–YTRI, index and maps* (EPNS 26, 1956).

⁴⁸ Smith, *Place name elements*, Part 2.

⁴⁹ A. Margetts, *Wealdbāra: excavations at 'Wickhurst Green', Broadbridge Heath and the landscape of the West Central Weald* (Archaeology South-East (UCL)/Surrey County Archaeological Unit Spoilheap Monograph Ser. 18, 2018); Margetts, 'Wandering herd', pp. 389–90.

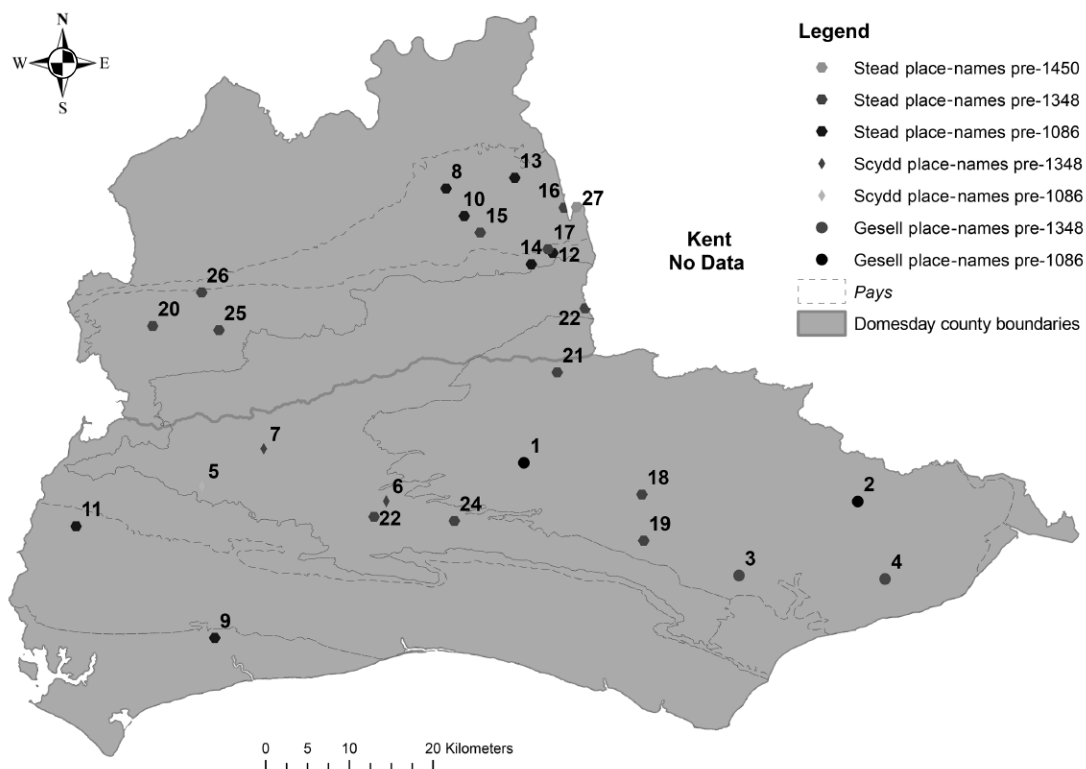


FIGURE 4. 'Shieling place-names of Sussex and Surrey recorded prior to 1450 (drawn by the author)

especially for swine⁵⁰ and the place-name perhaps has the strongest relationship with Wealden pig pastures, despite associations with cattle and other livestock.⁵¹ In contrast to the prevalence of *denn* place-names in Kent, major names directly related to swine in the south east are relatively rare with just three examples cited by Hallam.⁵²

Important or 'major' place-names most relevant for the swine economy of the south east include those with seasonal pastoral connotations (*denn*, *falod*, *snoad*) as well as those that indicate the habitations of people engaged in the movement of livestock to the commons ('sheiling names'; (*ge*)sell, *scydd*/*scedd*, *stead*). Important place-names containing these elements were mapped for those historic counties of the south east that are provided with an English Place-Name Society (EPNS) volume (Sussex and Surrey; Figures 4 and 5). No EPNS volume yet exists for Kent so that county was omitted from the study. The bold numbers provided in brackets after a place-name (e.g., Buxshalls (1)) refer to its entry in the accompanying Tables 1 and 2 as well as the distribution maps.

By examining Figure 4 it is obvious that major (*ge*)sell names recorded before 1450 are entirely restricted to the Sussex High Weald. The names include elements that indicate the

⁵⁰ Smith, *Place-name elements*, Part 1, p. 129.

⁵¹ See Margetts, 'Wandering herd', pp. 423–4.

⁵² H. E. Hallam, 'England before the Norman Conquest', in Hallam (ed.), *AHEW*, II, table 1.10.

TABLE 1. 'Shieling' place-names of Sussex and Surrey recorded prior to 1450
(Margetts 2020, table 4.4)

No.	Place-name	Elements 'meaning'	County	Date of first recording	Sub-type
1	Buxshalls	<i>boc, sele</i> 'buildings by the beechtree'	Suss.	765	Gesell
2	Drigsell	<i>dryhten, geselle</i> 'lord's hut, buildings or the like'	Suss.	1086	Gesell
3	Bemzells	<i>beam, sele</i> 'house by (some prominent) tree'	Suss.	1296	Gesell
4	Breadsell Farm	'building made of planks or boards'	Suss.	1189–99	Gesell
5	Limbo Farm/ <i>Palshuddes</i>	<i>Ingas, scydd</i> 'sheds or swine-cotes belonging to the people of Poling'	Suss.	898	Scydd
6	Bowshots Farm	<i>burh, scydd</i>	Suss.	1296	Scydd
7	Gunshot Common	<i>Guma, scydd</i> 'Guma's shed or swine-cot'	Suss.	1279	Scydd
8	Banstead	<i>stede</i> 'place where beans are cultivated'	Surr.	675	Stead
9	Binsted	'Bean stede'	Suss.	1086	Stead
10	Chipstead	<i>ceap, stede</i> 'place where a market existed'	Surr.	675	Stead
11	Elsted	<i>ellen, stede</i> 'elder-tree place'	Suss.	1086	Stead
12	Oxted	<i>ac, stede</i> 'place of oak trees'	Surr.	1086	Stead
13	Sanderstead	<i>sanden, stede</i> 'sandy place'	Surr.	880	Stead
14	Walkingstead	<i>stede</i>	Surr.	970	Stead
15	Alderstead Farm	<i>stede</i> 'probably alder place'	Surr.	1225	Stead
16	Bedlested	<i>byden, stede</i>	Surr.	1235	Stead
17	Bursted	<i>beorg, stede</i>	Surr.	1255	Stead
18	Buxted	<i>boc, stede</i> 'place of beech-trees'	Suss.	1199	Stead
19	Crockstead	'place where crocks or pots were made'	Suss.	1268	Stead
20	Elstead	<i>ellen-stede</i> 'place of the elder-trees'	Surr.	1128	Stead
21	Grinstead (East)	'green place'	Suss.	1271	Stead
22	Grinstead (West)	<i>grene, stede</i> 'green place'	Suss.	1230	Stead
23	Haxted	<i>heah, stede</i> 'high place'	Surr.	1235	Stead
24	Hickstead	<i>stede</i> 'high (or highest) place'	Suss.	1279	Stead
25	Munstead	<i>stede</i>	Surr.	12th c	Stead
26	Polsted Manor	<i>pol, stede</i> 'place by the pool'	Surr.	1160–70	Stead
27	Lusted	<i>lufu, stede</i> 'place of love'	Surr.	1402	Stead

buildings timber construction, *bēam* in Bemzells (3)⁵³ and *bred* in Breadsell (4)⁵⁴ as well as an association with mast bearing trees in Buxshalls (1) and with status in Drigsell, which means 'lord's hut' or similar.⁵⁵ All are located within a mile of watercourses indicating the needs of people and their livestock. In contrast to (*ge*)*sell* names, *scydd* names are associated with the

⁵³ Mawer and Stenton (eds), *Place-Names of Sussex*, Part 2, p. 480.

⁵⁴ *Ibid.*, p. 496.

⁵⁵ *Ibid.*, p. 458.

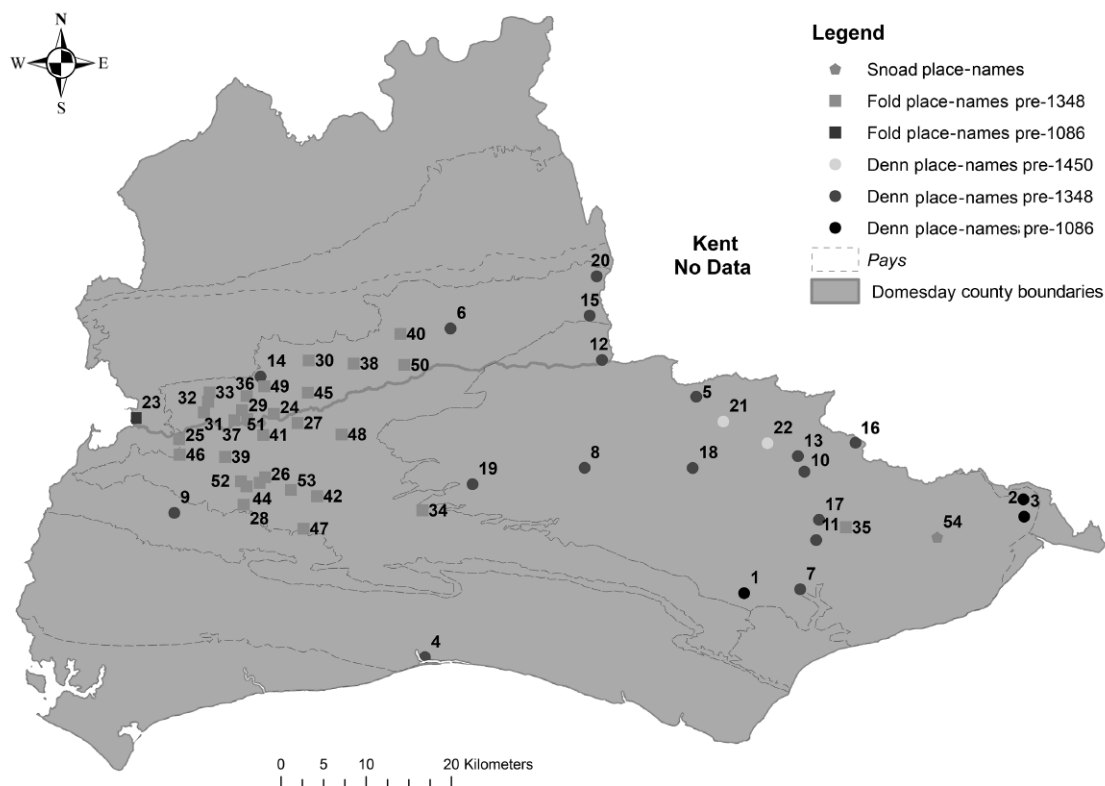


FIGURE 5. 'Den', 'Fold' and 'Snoad' place-names of Sussex and Surrey recorded prior to 1450 (drawn by the author)

Sussex Low Weald rather than the High Weald perhaps indicating localized nomenclature for 'shieling' sites between the two *pays*. They do, however, share similarities with the *gesell* names in that they too are located close to river sources; in this case Bowshots (5) with the Arun and Gunshot (6) with the Adur.

Stede place-names are more difficult to link to swine pannage and may be more strongly associated with sheep and cattle husbandry. This is possibly reflected in their early distribution, which is largely confined to the area of the North Downs. By the thirteenth century, 'steads' (from *stede*) expanded into the Weald with nine examples located in the High and Low Wealds jointly. This may, however, simply reflect the generally later date that Wealden names entered the documentary record.

In the Weald of Surrey and Sussex *denn* place-names are, in comparison to the large numbers from Kent, uncommon. Of a systematic search of the relevant EPNS volumes only 22 enter the record by 1450.⁵⁶ The '*fald/falod*' names of the region are largely located on the clay-lands of the north-western Sussex Weald and adjoining parts of Surrey. This distribution

⁵⁶ Mawer and Stenton (eds.), *Place-Names of Sussex Parts 1 and 2*; A. Mawer and F. M. Stenton (eds.) *The place-names of Surrey* (EPNS 11, 1934).

TABLE 2. 'Den', 'Fold' and 'Snoad' place-names of Sussex and Surrey recorded prior to 1450
(Margetts 2020, table 4.5)

No.	Place-name	Elements 'meaning'	County	Date of first recording	Sub-type
1	Hendon	<i>heah, denn</i> 'at the high swine- pasture'	Suss.	1086	Denn
2	Iden	<i>iw, denn</i> 'yew- tree swine- pasture'	Suss.	1086	Denn
3	Playden	<i>denn</i> 'Plega's swine-pasture'	Suss.	1086	Denn
4	Brambleden	<i>Den</i>	Suss.	1100	Denn
5	Birchden	<i>biercen, denn</i> 'swine-pasture overgrown with birches'	Suss.	1203	Denn
6	Collendean	<i>Cufela, denn</i> 'Cufela's denn or swine pasture'	Surr.	1223	Denn
7	Cowden	<i>cu, denn</i>	Suss.	1296	Denn
8	Danehill	<i>Den</i>	Suss.	1279	Denn
9	Gosdenheath	<i>gos, den</i>	Suss.	1249	Denn
10	Hammerden	<i>Den</i>	Suss.	1279	Denn
11	Haselden	<i>denn</i> 'hazel swine-pasture'	Suss.	1200–5	Denn
12	Lullenden Farm	<i>denn, ing</i> 'swine pasture of Lulla or of his people'	Surr.	1296	Denn
13	Maplesden	'denn of the maple-tree'	Suss.	1190	Denn
14	Painshill Farm (formerly Dunhurst)	<i>denn, hyrst</i>	Surr.	1235	Denn
15	Puttenden Farm	<i>Puda, denn</i> 'Puda's swine pasture'	Surr.	1198	Denn
16	Ringden Wood	<i>hring, denn</i>	Suss.	1271	Denn
17	Rounden	<i>ruh, denn</i> 'at the rough swine pasture'	Suss.	1197	Denn
18	Rumsden Farm	<i>rum, denn</i> 'spacious swine- pasture'	Suss.	1295	Denn
19	Thorndean Farm	<i>denn</i> 'thorny woodland pasture'	Suss.	1288	Denn
20	Stockenden Farm	<i>denn</i> 'stony swine pasture'	Surr.	1312	Denn
21	Danegate	<i>dun or den</i>	Suss.	1428	Denn
22	Riseden	<i>hris, denn</i> 'swine-pasture overgrown with brushwood'	Suss.	1438	Denn
23	Pitfold House	<i>pytt, fal(o)d</i> 'fold in the pit or hollow'	Surr.	909	Fold
24	Alfold	<i>fal(o)d</i> 'the old fold'	Surr.	1227	Fold
25	Barfold Farm	<i>burh, falod</i>	Suss.	1300	Fold
26	Barkfold	<i>falod</i> 'Beadeca's fold'	Suss.	1279	Fold
27	Barnsfold	<i>bern, falod</i>	Suss.	1279	Fold
28	Buckfold Farm	<i>boc, falod</i> 'beechtree fold'	Suss.	1273	Fold
29	Burningfold Hall	<i>ingas, fal(o)d</i> 'fold of Brūn's people'	Surr.	1177	Fold
30	Canfold Farm	<i>fal(o)d</i>	Surr.	1298	Fold
31	Cherfold	<i>cirice, fal(o)d</i> 'church fold'	Surr.	1298	Fold
32	Chiddingfold	'fold (or open land) of the dwellers in the hollow'	Surr.	1130	Fold
33	Cotterfold	'fold of the cottars'	Surr.	1199	Fold
34	Cowfold	<i>Falod</i>	Suss.	1255	Fold

TABLE 2. *continued*

No.	Place-name	Elements 'meaning'	County	Date of first recording	Sub-type
35	Darwell Furnace Farm	<i>deor, fald</i> 'deer- fold'	Suss.	1294	Fold
36	Dunsfold	<i>falod</i> 'Dunt's fold'	Surr.	1241	Fold
37	Durfold	<i>deor, fal(o) d</i> 'animal enclosure'	Surr.	1295	Fold
38	Fishfold Farm	<i>fisc, fal(o)d</i>	Surr.	1241	Fold
39	Frithfold Farm	<i>fryhþ, falod</i> 'wood fold'	Suss.	1280	Fold
40	Henfold	<i>henne, falod</i> 'hen fold'	Surr.	1250	Fold
41	Ifold House	<i>Eg</i>	Suss.	1296	Fold
42	Kingsfold	<i>Falod</i>	Suss.	1279	Fold
43	Linfold	<i>lind</i> 'lime-tree'	Suss.	1239	Fold
44	Petsalls Copse	<i>pytt, falod</i> 'fold of or in the pit or hollow'	Suss.	1280	Fold
45	Pollingfold Farm	<i>ing, fal(o)d</i> 'fold of the people of Poll(a)'	Surr.	1279	Fold
46	Ramsfold Farm	<i>Falod</i>	Suss.	1279	Fold
47	Redfold	<i>Falod</i>	Suss.	1296	Fold
48	Slinfold	<i>slind</i> 'fold on the slind or slope'	Suss.	1165	Fold
49	Stovoldshill Farm	<i>stan, fal(o)d</i> 'stone fold'	Surr.	1229	Fold
50	Temple Farm/ Temple Elfande	<i>ellen, fal(o)d</i> 'elder-tree fold'	Surr.	1235	Fold
51	Upper Ifold	<i>eg, fal(o)d</i> 'fold by or on the well-watered land'	Surr.	1241	Fold
52	Crawfold Farm	<i>crawe, falod</i>	Suss.	1310	Fold
53	Orfold Farm	<i>ofer, falod</i> 'fold by the bank'	Suss.	1338	Fold
54	Snathurst Wood	<i>snad, hyrst</i>	Suss.	1422	Snoad

was clearly apparent to the writers of the EPNS volumes⁵⁷ and it seems that this concentration of names denote similar outlying pastures to the Kentish '*denns*'.⁵⁸ That fold names were associated with early medieval communal use of the Wealden forest is reflected in the names Burningfold (29) and Chiddingfold (32) which both contain the Old English *ing* element⁵⁹ and it seems that individuals (Barkfold [26], Canfold [30]) and even kings (Kingsfold [42]) were keen to claim these Wealden pastures. The use of 'folds' extended to lower sections of society too as evidenced by the place-name Cotterfold (33) which means 'fold of the cottars'⁶⁰ and even to ecclesiastics as shown by Cherfold (31) and Temple Farm/Temple Elfande (50).

Only a single '*snoad*' name was encountered within Sussex and Surrey, Snathurst Wood (54) in the eastern Sussex Weald. A '*snoad*' was an area severed from the common use of the forest

⁵⁷ Mawer and Stenton (eds), *Place-Names of Sussex*, Part 2, p. 550.

⁵⁸ P. Brandon, *The Sussex landscape* (1974), p. 72.

⁵⁹ Mawer and Stenton (eds), *Place-Names of Surrey*, pp. 186–7, 235.

⁶⁰ *Ibid.*, p. 188.

and these place-names denote a contrasting type to the ‘*denns*’. Names in *snoad* appear to be of earlier derivation from a time before *denns* were appropriated or had become manorial. This was a time when the only parts of the forest that were not intercommonable were the parts owned by the early Saxon kings.⁶¹

Examination of the place-names of Sussex and Surrey has shown the High and Low Weald to be the only *pays* where names indicative of the transhumance huts of the type thought to be used in seasonal swine pannage existed. Similarly, the communal seasonal pastures indicated by the ‘*fald/falod*’ names of the region also correspond with the heavily wooded clay lands of the Low Weald where wood-pasture was prevalent and swine could be pastured away from the community’s corn-land. As well as helping confirm where pannage grounds may have been located, the place-name data also demonstrated something of the nature of transhumance huts, the status of people engaged in seasonal pasturing and the importance of water.

VI

Droeways were essential for the movement of swine during the medieval period. These routeways linked parent settlements with seasonal pastures as well as common and areas of Forest and Chase (medieval hunting grounds that were also often used for the grazing of livestock). The origin of south east England’s droeways is still poorly understood, although this is beginning to change with archaeological excavation, the development of scientific dating programmes and detailed studies.⁶² By examining the region’s routeway layout the articulation of the south east’s landscapes can potentially be realized, including in relation to the seasonal movement of animals.

Past study of the patterns of old droeways in Kent, Sussex and Surrey has shown that they clearly reflect the system of parent and outlier linked via transhumance.⁶³ Due to the Weald’s broadly elliptical shape, roads have tended to radiate from the central high ground towards the region’s circumference (see Figure 6). In order to both illustrate the south east’s medieval road network, and to subsequently highlight the droeways utilized by swineherds, a staged process was devised. This was based on a transect of the south east used in an earlier study⁶⁴ (Figure 7). The historic routeway layout is shown in Figure 8 and is briefly summarized below.

Routeways developed over a long period of time and were significantly influenced by environmental factors such as geology, hydrology and topography. The varied landscapes of the south east gave rise to distinctive physical routeways formed in contrasting ways, but based largely on the movement of animals. In areas of rising ground with underlying geologies prone to erosion, deep holloways developed. By contrast, in areas of lower relief where heavy soils

⁶¹ Witney, *Jutish forest*, pp. 61–3.

⁶² Margetts, *Wealdbæra*; Margetts, ‘Wandering herd’, ch. 5; M. Bell, *Making one’s way in the world: The footprints and trackways of prehistoric people* (2020).

⁶³ Witney, *Jutish forest*, pp. 132–9; Brandon, *Sussex*

landscape, pp. 73–4; J. Blair, *Early medieval Surrey: Landholding, church and settlement before 1300* (1991), pp. 6, 14–5.

⁶⁴ Margetts, ‘Wandering herd’, ch. 5.

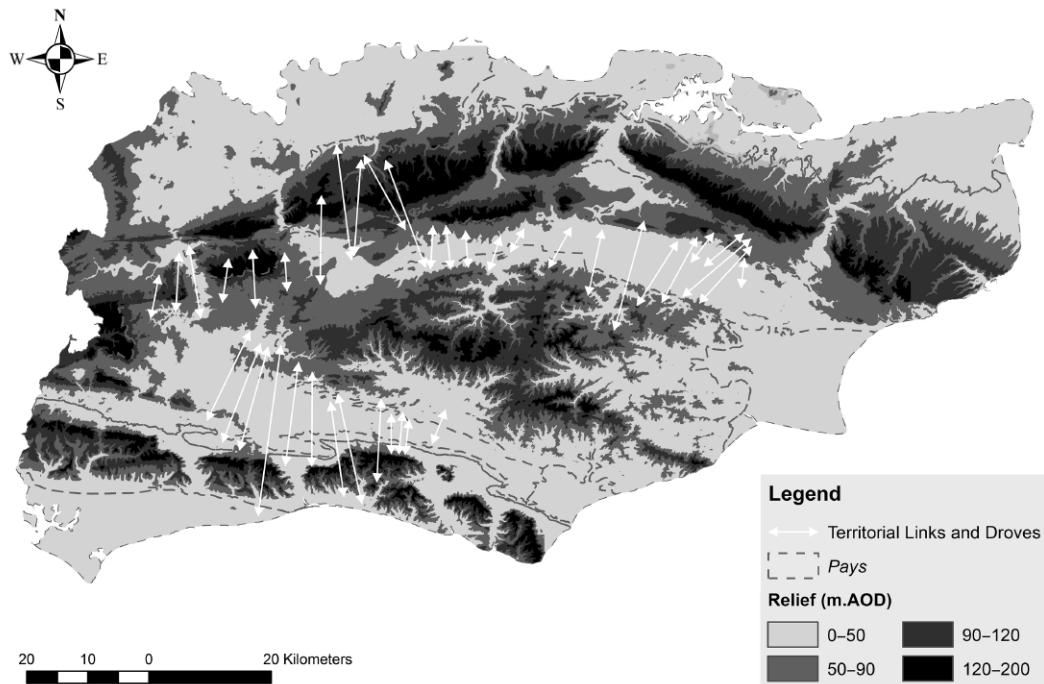


FIGURE 6. Simplified mapping of territorial links and droves of the south east showing the dominant pattern around the circumference of the Weald
(drawn by the author after P. Brandon, *The Sussex landscape* (1974), fig. 5; K. P. Witney, *The Jutish forest: a study of the Weald of Kent from 450 A.D. to 1380 A.D.* (1976), fig. 14; J. Blair, *Early medieval Surrey: Landholding, church and settlement before 1300* (1991), fig. 5)

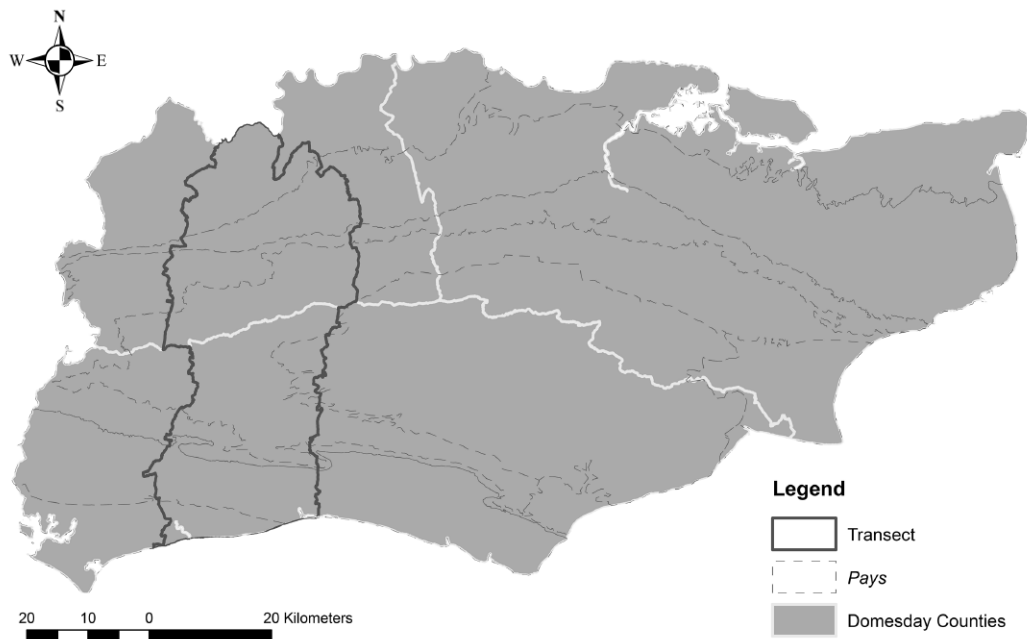


FIGURE 7. Main study area showing location of transect (drawn by the author)

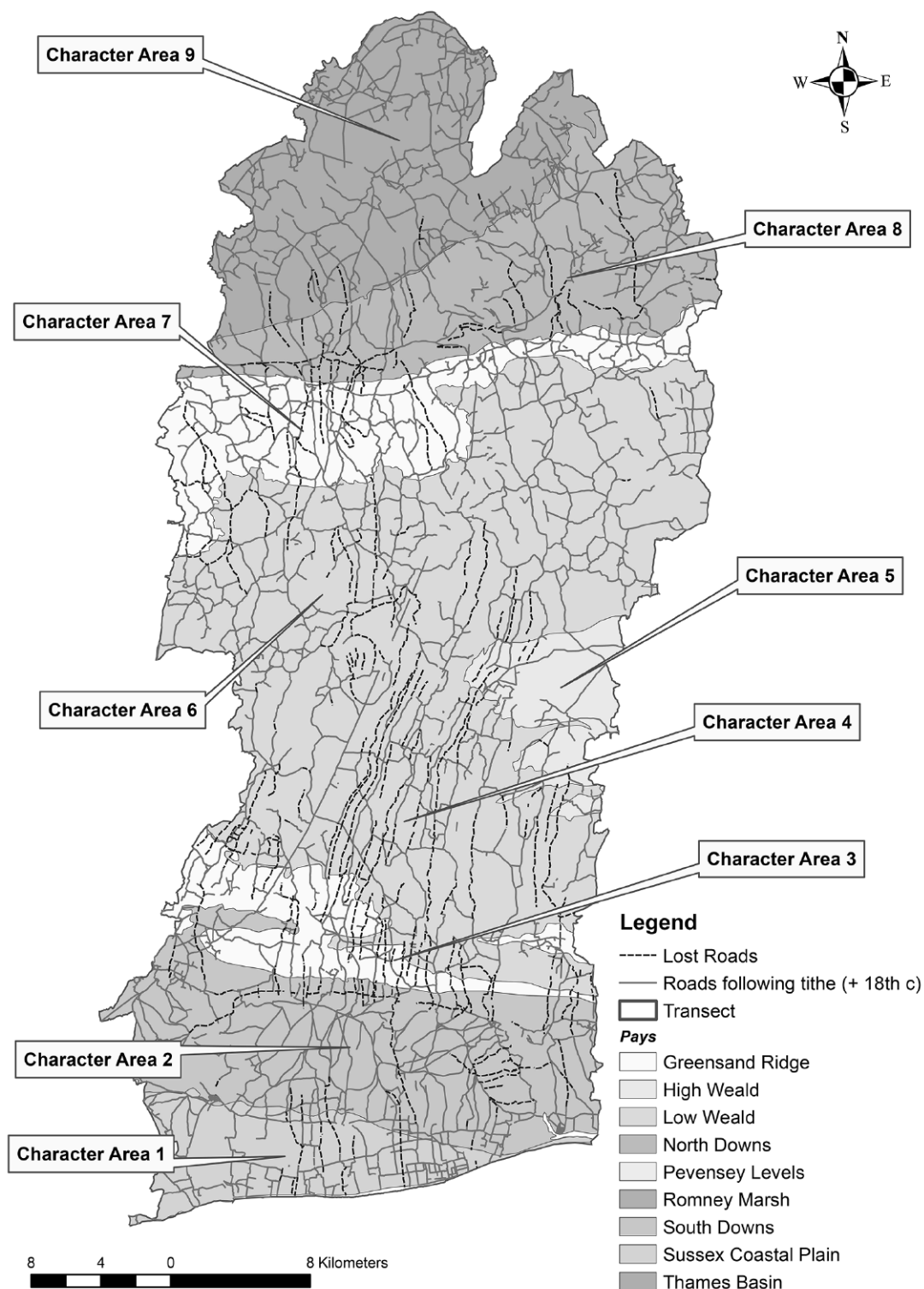


FIGURE 8. The medieval road system in relation to the *pays* of the transect study area (drawn by the author)

inclined to waterlogging existed, wide but relatively straight routes often evolved. These were habitually bounded by hedgebanks and extensive areas of roadside waste.

Local choices in land use, as well as varied systems of land management and resource exploitation may partially account for the dramatic contrasts in routeway arrangements found within character areas of the transect study area (Figure 8). Some roads appear to have been deliberately sited to allow access to extensive pastoral resources, including wood-pasture and pannage grounds. These routeways were characterized by a regular pattern of parallel roads that extended from the scarp foot of the South Downs and the parent settlements of the 'Sussex Spring-line', across the Greensand Ridge and southern Low Weald to the north-western Low Weald and the edges of the 'uplands' of the High Weald.

The parallel routes appear to be related to a systematic and large-scale division of the landscape connected to the region's banded resources and their exploitation. This pattern could be the result of early medieval multiple estates, but earlier origins are also possible. Such landscapes are most often associated with the intensively studied co-axial field-systems which have been identified in a number of areas of England.⁶⁵ These regular patterns of parallel routes bounding strip-like areas of loosely co-axial fields that characterize the southern Low Weald, contrasted markedly to the irregular more roughly organized patterns bounding polygonal or sub-oval intervening spaces of the north-western Low Weald or the sparse routeways that traverse the High Wealden plateaus (Figure 8).

It was postulated that the differences found within these contrasting road systems owes much to hydrology and topography, however, it is also possible that differences in land-use approach also played a role. The north-western Low Weald and the fringes of the High Weald are noted for their parochial detachments, themselves a legacy of earlier seasonal pastures. The High Weald was dominated by medieval Forest and Chase accounting for the sparse routeways, but was edged by small commons intimately related to droveways. Additionally, the north-western Low Weald is roughly analogous with the seasonal 'fold area' identified by Chatwin and Gardiner⁶⁶ and highlighted by the place-name evidence above. This well-wooded country possessed a higher number of commons than its more regular Low Wealden counterpart and place-names linked to seasonal settlement were prevalent. It may be that this area developed in some way differently to its south-easterly neighbor via differing forms of woodland exploitation.⁶⁷

In summary, examination of the historic routeways of a portion of the south east demonstrates the network of roads that would have been available to medieval swine herders engaged in pannage and seasonal transhumance. It may be no coincidence that a regular layout of droveways led from the primary settlement zone fringing the Weald to the seasonal pastures within the Wealden interior highlighted by the place-name evidence above.

⁶⁵ T. Williamson, *Environment, society and landscape in early medieval England: Time and topography* (2013), pp. 93–8.

⁶⁶ D. Chatwin and M. Gardiner, 'Rethinking the

early medieval settlement of woodlands: evidence from the western Sussex Weald', *Landscape Hist.* 27 (2005), pp. 31–49.

⁶⁷ Ibid.

VII

Within the south east, particularly within the Weald, a class of oval can be found.⁶⁸ The ovals are thought to relate to early intakes of land within relatively open unappropriated landscapes. They measure from c.9–60 hectares (c.22–150 acres), with the majority being over 40 hectares (100 acres). Chatwin and Gardiner⁶⁹ found this category of enclosure tended to be surrounded by roads and tracks aligned in a similar direction, to bear a resemblance to, but have no evidence of being, medieval parks, and often to become tenurially distinct by the late medieval period. They were shown to have a distribution that correlates with that of the Anglo-Saxon *fald/falod* names of the region which occur largely in the north-western Sussex Weald and across the border with Surrey. Thus they may be linked to the early, seasonal, pastoral origins of Wealden colonization.

Oval enclosures are a reasonably widespread component of the historic landscape.⁷⁰ On the whole they appear to predate the more extensive enclosure of the surrounding countryside and comprise areas distinct from the more characteristic land division (or lack thereof) which had, by the late medieval period, come to typify the areas in which they are found. It is possible therefore that many of the enclosures relate to a stage of colonization when older intercommonable pastures were being appropriated either by estates or so-called folk groups. In the downland landscapes of Sussex and Surrey, oval enclosures are present but uncommon. Such enclosures appear to be a more common feature of traditionally wooded environments of areas such as the Weald or western South Downs. The absence of oval enclosures from the High Weald may be a product of the relatively reduced size of the examined *pays* within the transect study area.

Twenty-six oval enclosures were encountered during a transect investigation of the south east.⁷¹ They appeared to be intimately tied to waterside locations either beyond or on the edge of tidal reaches, an association which looks to have influenced both their siting and formation. The choice to be near areas with a ready water supply may account for the generally low-lying nature of many of the sites, although the vast majority occupied the slopes of rising land. Apart from the downland examples, these slopes are often south facing, possibly a product of land appropriation prior to more widespread colonization of the surrounding landscape. The areas in which oval enclosures are found are characterized by irregular routeway layouts rather than the regularly spaced roads that exist on these area's fringes. Such a situation may indicate that the ovals were the destination of regularly spaced droveways that characterize the surrounding zones. This would certainly bear out the place-name associations which show a broad correspondence with those elements which have seasonal connotations (i.e., *wic* and *fold/falod*). Thus indicating that many of the ovals probably existed during the Old English period. Indeed, the name Ringden (AD 1271, *hring, denn*;⁷² *hring* meaning 'a ring,

⁶⁸ J. English, 'A possible early Wealden settlement type', *Medieval Settlement Research Group Annual Report* 12 (1997), pp. 5–6; Chatwin and Gardiner, 'Rethinking'; Margetts, *Wealdbæra*; Margetts, 'Wandering herd', ch. 6.

⁶⁹ Chatwin and Gardiner, 'Rethinking'.

⁷⁰ Margetts, 'Wandering herd', ch. 6.

⁷¹ Ibid.

⁷² Mawer and Stenton (eds), *Place-Names of Sussex*, Part 2, p. 453.

a circle', used of something circular'),⁷³ suggests an oval form to *denn* related landscape elements. Given the cumulative evidence it is probable that many of these relict oval features are related to early medieval seasonal pastures. Some or all of these pastures at one time or another were very likely used for the pannage of swine.

VIII

In the section on place-names above it has already been demonstrated that transhumance shelters would have been required by those engaged in seasonal pannage activities. Rare glimpses of these seasonal huts are found within Anglo-Saxon charter evidence with references such as those to 'the swineherds' sheds of the *Palingas* or people of Poling (AD 953).⁷⁴ In the south east, *gesells*, *scydds*, or *schittas* may mark the Old English equivalents of shielings or *hafods* of the north and west of Britain.

New evidence gleaned from the author's excavations for Archaeology South-East (UCL Institute of Archaeology) has begun to shed light on the possible form of Wealden transhumance shelters and seasonal herders' huts. At Wickhurst Green within a detached seasonal pasture characterized by an oval enclosure two small buildings and a sub-rectangular livestock pen were encountered. The cluster of archaeological features bordered a stream.⁷⁵ The pen was defined by shallow ditches that produced a single sherd of Anglo-Saxon pottery (dating from the mid-eighth to early eleventh century; Figure 9).

The buildings would have been constructed in timber measuring roughly 3 by 4 m. In plan they resembled the stone-built shielings, *hafads*, and booley huts of northern and western Britain. It is likely they represent the habitations of graziers, those herders who were using the animal pen whilst pasturing at the Wickhurst. Strengthening the case for this early medieval seasonal activity was evidence of a further possible building located to the north west. This example had a depressed floor and was associated with a possible hearth made from a broken piece of Roman tegula. It also produced a single sherd of pre-Conquest Anglo-Saxon pottery and a nearby pit was filled with burnt bone and charcoal radiocarbon dated to the seventh to tenth centuries.⁷⁶ The limited quantity of pottery sherds retrieved from these features may be a reflection of the complete impracticality of ceramic vessels for those engaged in transhumance. Horn, leather, and wooden containers are lighter and less prone to breakage, and are far more suitable for people on the move.

The buildings evidence described above helps illuminate the kind of wooden transhumance huts that would have been occupied by those engaged in seasonal pasturing during the high point of Wealden swine pannage. It is likely that the evidence indicates thatched, post-built structures, with panels constructed of wattle and daub. The example with the depressed floor is reminiscent of sunken-feature buildings, isolated examples of which have been interpreted elsewhere as seasonal herders' huts. Though too much emphasis should not be placed on a single site, the evidence appears to demonstrate that two distinct types of medieval

⁷³ Smith, *English place-name elements*, Part 1, p. 265. 'Wandering herd', p. 388–90.

⁷⁴ Sawyer, *Anglo-Saxon charters*, Charter 562.

⁷⁶ Margetts, *Wealdbāra*, pp. 150–5.

⁷⁵ Margetts, *Wealdbāra*, pp. 150–5; Margetts,

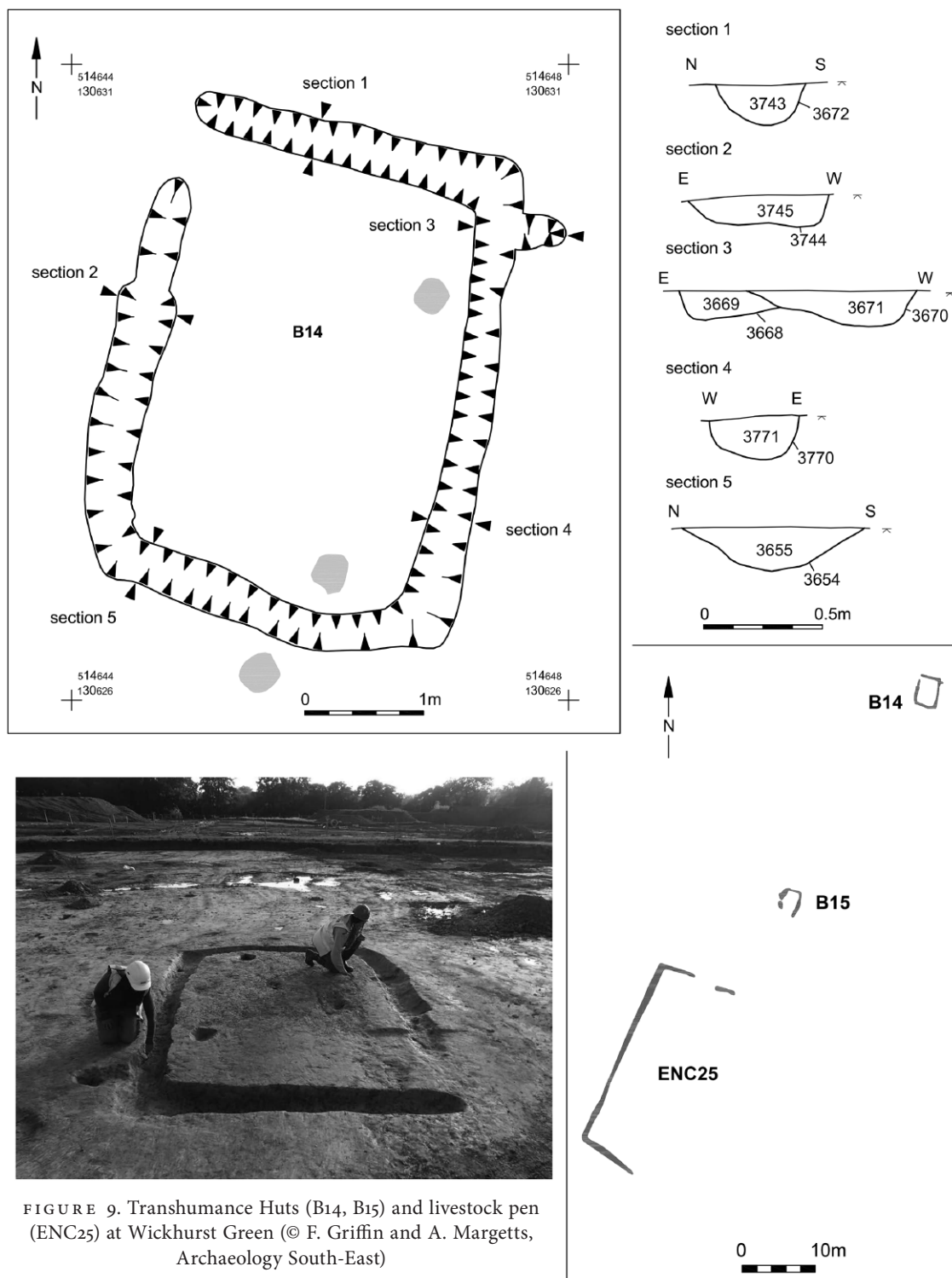


FIGURE 9. Transhumance Huts (B14, B15) and livestock pen (ENC25) at Wickhurst Green (© F. Griffin and A. Margetts, Archaeology South-East)

transhumance hut may have been exploited by swine herders in this part of England. Examples with depressed floors and small rectangular buildings constructed of wattle and daub panels and timber uprights.⁷⁷

The word *(ge)sell* ('a shed, a shelter for animals, a herdsman's hut') is only found in charter place-names.⁷⁸ The meaning 'collection of sheds' is implied by the prefix *ge*, which is used for forming nouns with a collective sense.⁷⁹ In Kent there are instances where the element is combined with names indicating swine (e.g. Boarzell, *bar*, 'boar'), in Sussex with mast-bearing trees (Buxshall, *boc*, 'a beech-tree') and in Surrey with dirt (Horsell, Surrey, *horu*, 'filth, dirt'). It is unlikely the huts would have stood in isolation. As well as the prefix *ge*, names such as Wormshill (Kent, *weorn*, 'multitude') indicate they occurred in groups, some of which may have been large. The words are often combined with place-name elements with topographic or enclosure meanings⁸⁰ and appear to be associated with wooded places held in common.⁸¹ They are associated with woodland pasture (*denbrera*),⁸² especially for swine (*pascua porcorum*).⁸³

IX

As well as demonstrating the pervasive nature of pig-keeping in the documentary evidence of south-east England, the exploration above also serves to illustrate something of the infrastructure and mechanics of seasonal pig husbandry. So what of the remains of medieval pigs themselves? What do excavated animal bone assemblages tell us of the degree of pork consumption in this part of medieval England?

In order to test our understanding of the south east's record of medieval swine pannage it is possible to compare and contrast the bone assemblages of the three major domesticates (cattle, sheep/goat and pig) across the region. This with a view to examining if the regional emphasis placed on swine holds up and how consumption changed over time. The analysis was based on excavated bone assemblages gathered from Sykes's *The Norman Conquest: a zooarchaeological perspective*, Archaeology South-East's project database, published site reports and the Archaeology Data Service's grey literature report library.⁸⁴

In total, 87 animal bone assemblages were examined across the medieval period. The number of assemblages by period and *pays* are recorded in Table 3. An even spread of assemblages across the landscape zones is obviously more desirable in terms of giving a representative picture of the region. Within the study of animal bone assemblages, a minimum of 100 identifiable fragments are required to be statistically reliable, although assemblages of over 500 fragments are preferred. The emphasis here is to group data to illuminate the relative importance of regional medieval pig husbandry. As a result, the individual sizes of site assemblages are less

⁷⁷ Margetts, 'To browse and mast'.

⁷⁸ Smith, *English place-name elements*, Part 2, pp. 117–18.

⁷⁹ Smith, *English place-name elements*, Part 1, p. 197.

⁸⁰ See examples in Smith, *English place-name elements*, Part 2, p. 115.

⁸¹ E.g. Sawyer, *Anglo-Saxon charters*, Charters 104

and 562.

⁸² Ibid., Charter 425.

⁸³ Ibid., Charter 562.

⁸⁴ N. J. Sykes, *The Norman Conquest: A zooarchaeological perspective* (2007); the data can be found in Margetts, 'Wandering herd', appx 4–10.

TABLE 3. Medieval animal bone assemblages from the three major domesticates from the various *pays* of the south east

<i>Pays</i>	<i>Early medieval</i> (AD 410–1066) <i>no. assemblages () = >100+</i>	<i>High medieval</i> (AD 1066–1348) <i>no. assemblages () = >100+</i>	<i>Late medieval</i> (AD 1348–1500) <i>no. assemblages () = >100+</i>
Coastal Plain	1	7 (4)	3 (2)
Greensand Ridge	2 (1)	3 (2)	2 (2)
High Weald	0	4 (1)	4 (1)
Low Weald	0	4 (2)	4 (3)
North Downs	1 (1)	5	1
North Kent Plain	8 (2)	4 (3)	1
Pevensey Levels	0	2 (1)	1
Romney Marsh	0	3	2
South Downs	7 (3)	7 (3)	2 (2)
Thames Basin	2 (2)	5 (3)	2
Total	21 (9)	44 (19)	22 (10)

important. This said, the number of assemblages of over 100 fragments in a given group are shown in the table as to some degree this effects the reliability of the data.

For reasons of assemblage reliability and geographical spread the high medieval data should be considered the most reliable. Though all of the period datasets suffer from just under half of the information being comprised of small assemblages, the early medieval material also suffers in terms of the number of *pays* represented.

In examining the data it must be remembered that most zooarchaeological records are retrieved from settlement sites and are not necessarily representative of the animals that were actually being grazed in the surrounding landscape. Whilst assemblages from low status rural sites maybe reasonably representative of local pastoral conditions or cultural trends, those derived from sites belonging to the seigneurial or ecclesiastical elite could have been drawn from vast estates. Sites belonging to lay lords also had a tendency towards specialization and being geared towards the local or regional market. The remains of animals found in urban assemblages or at castle sites may have been brought on the hoof from a much wider catchment area prior to slaughter. The number of assemblages by period and settlement type are shown in Table 4.

What must also be recognized is that relative percentages of the various domesticates do not directly translate into the different proportions of animals consumed. Cattle can often be over-represented, as their large, robust bones tend to survive better in the archaeological record than those of smaller species.⁸⁵ It is also known that pigs have a larger number of bones than cattle or sheep and that animals kept for their meat were often killed young leading to

⁸⁵ T. O'Connor, 'Animal husbandry', in H. Hamerow, D. A. Hinton and S. Crawford (eds), *The Oxford handbook of Anglo-Saxon archaeology* (2011), pp. 88.

TABLE 4. Assemblages by period and settlement type

Settlement type	Early medieval (AD 410–1066)		High medieval (AD 1066–1348)		Late medieval (AD 1348–1500)	
	No. assemblage	Total fragments	No. assemblage	Total fragments	No. assemblage	Total fragments
Towns	3	380	22	33,009	14	4483
Monastic	0	0	2	383	1	164
Castle	0	0	2	3189	2	963
Manorial	0	0	5	679	0	652
Rural	18	9148	13	3304	5	773
Total	21	9528	44	40,564	22	7035

an over-representation compared to livestock kept into maturity for products such as wool and milk.⁸⁶ A further aspect of bone assemblages that is worthy of consideration is the large differences in the body sizes of cattle, sheep and pigs. This must be taken into account when assessing the relative amount of beef, mutton and pork in the diet.⁸⁷ The total fragment counts of the combined animal bone assemblages for each of the three major domesticates is shown in Table 5 alongside the relative proportions displayed as a percentage. This data is also represented on Figure 10.

In choosing a statistical method of collecting the data, fragment counts or Number of Identified Specimens (NISP) are the most frequently used methods of quantifying bones by species from archaeological sites and syntheses have most often been produced on this basis.⁸⁸ These raw fragment counts usually exaggerate the importance of cattle as their large bones tend to fragment into more identifiable pieces, while estimations based on the other method of quantification, Minimum Numbers of Individuals (MNI), tends to produce a bias towards higher levels of sheep/goat and pig.⁸⁹ As the majority of animal bone reports only provide a simple fragment count or Number of Identified Specimens (NISP), these are the data utilized here. For the reasons outlined above, a selection ‘for’ cattle and ‘against’ sheep should be assumed for all assemblages covered by this investigation.

The combined assemblages provided by this study have some significance and in the future hold potential to be used in much wider and more sophisticated studies (e.g., isotopic, age at slaughter and biometric analysis), but for a simple illustration of taxonomic proportions the combined assemblages provide us with a superficial indication of the relative importance of pigs in the south east over the medieval period. With all the caveats provided above in mind, the data shows that pigs were most important during the early medieval period. That importance declines during the high medieval period before a slight resurgence towards the end of the middle ages.

⁸⁶ S. Rippon, *Making sense of an historic landscape* (2012), p. 242.

⁸⁷ A. Grant, ‘Animal Resources,’ in G. Astill and A. Grant (eds), *The countryside of medieval England*

(1998), pp. 162.

⁸⁸ Sykes, *Norman Conquest*, p. 9.

⁸⁹ *Ibid.*, p. 28.

TABLE 5. The combined number of fragments and relative proportions of the three major domesticates of medieval south-east England by period

	Cattle		Sheep		Pigs		Total
	No. of fragments	Cattle %	No. of fragments	Sheep %	No. of fragments	Pigs %	
Early medieval	2848	30.0	4173	44.0	2507	26.0	9528
High medieval	16,250	40.0	17,801	44.0	6513	16.0	40,564
Late medieval	3410	48.5	2399	34.0	1226	17.5	7035

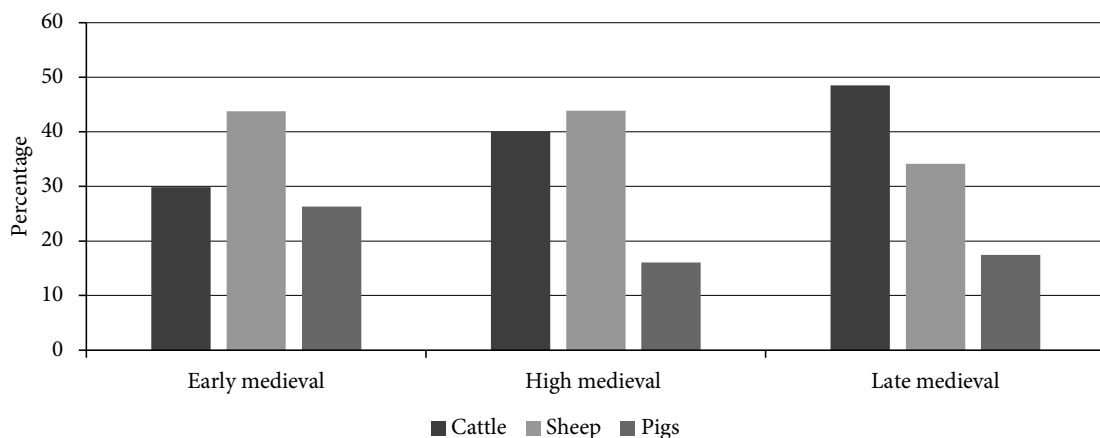


FIGURE 10. The relative proportions of the three major domesticates of medieval south-east England by period

The early medieval evidence supports the historical record of the importance of contemporary pig husbandry within the south east. The percentage of pig remains of the combined early medieval assemblages (26 per cent) is high when compared to the combined data found in national⁹⁰ and regional overviews for the period.⁹¹ As pointed out above, the early medieval data has clear limitations. One of these is that there are currently no early medieval animal bone assemblages known from the Weald at this time. This is a product of the acidic soils of the area, which are uncondusive to the preservation of bone, but also a historical lack of fieldwork in the Weald and the largely seasonal usage of this *pays* during Anglo-Saxon times.

More data and more sophisticated analysis are clearly needed to make firmer judgements on how well animal bone assemblages reflect the early medieval record of pig pannage, but as a demonstration of the importance of pig in the diet of communities that fringe the Weald, this basic study has some value. As we would expect, consumption of pig appears to have been

⁹⁰ 24%, calculated from the data contained in T. O'Connor, 'Livestock and animal husbandry in early medieval England', *Quaternary International* 346 (2014), pp. 109–118.

⁹¹ M. Holmes, *Southern England: A review of animal remains from Saxon, medieval and post-medieval archaeological sites* (Historic England Res. Rep. Ser. 08/2017, 2017), p. 27.

important on low status rural sites, especially those in the primary settlement zone that had rights of common in the Weald.

The reduction of pig consumption during the high medieval period may reflect known patterns in the decline of the pannage system following its climax in the tenth and eleventh centuries. The diminishing number of swine can be attributed to the restriction of pannage rights, the increasing profitability of cattle and sheep and the decline in woodland cover as more of the Weald was given over to permanent settlement. The new-found value placed on the regional sheep and cattle economy is apparent as the relative proportions of these domesticates (40 and 44 per cent respectively) exceeds what would be expected nationally (38 per cent for both species).⁹²

In contrast to our perception of the regional importance of pigs, high medieval swine consumption (16 per cent) actually fell below what would be considered normal nationally (24 per cent⁹³). Whilst this may seem strange given the historical records that indicate the continuation of Wealden pannage until the fifteenth century, the numbers are probably more a reflection of the relative importance of both downland sheep-corn husbandry and the cattle economy at this time. When examining the data in more detail, the Greensand Ridge, Low and High Weald (areas in which we would expect pig consumption to be high), all have proportions of pig remains that are in excess of Sykes's national average.⁹⁴ Though in places these *pays* suffer from small assemblage sizes, the data likely reflects significant regionalization in the livestock economy. More animal bone assemblages from these areas are certainly required before any firmer conclusions can be made.

There was an increase in the importance of both cattle and pig during the late medieval period. The increase in cattle consumption is in line with known changes in the livestock economy that resulted from demographic decline and a switch in emphasis from arable to pastoral farming. The late medieval importance of cattle was a product of the increase of beef in the diet and the decline in demand for wool.⁹⁵ The increase in pigs was potentially tied to evidence being drawn from urban sites and the keeping of swine in backyard plots and gardens, particularly in the High Weald.⁹⁶ The evidence of good numbers of pigs from Romney Marsh and the Pevensy Levels by contrast, possibly reflects the medieval importance of wetlands for the keeping of swine on grass (see above).

X

The density of tree cover within the Weald and the common occurrence of oak, beech and other mast-bearing trees meant that wood-pasture for swine was extensive enough for it to still be worthwhile into the later medieval period. Nevertheless, historical evidence indicates it was in the early medieval period that the practice was most important. Pig-keeping appears to have been prevalent in the south east during the eleventh century.⁹⁷ The viability of the Weald

⁹² N. Sykes, 'Animals, the bones of medieval society', in R. Gilchrist and A. Reynolds (eds), *Reflections: 50 Years of medieval archaeology, 1957–2007* (2009), pp. 347–61, fig 17.1.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Margetts, 'Wandering herd', p. 432.

⁹⁶ Ibid., pp. 356–7.

⁹⁷ Harvey, 'Domesday England', p. 130.

for extensive early pig husbandry is likely to have been a product of cultural and underlying environmental factors, but also potentially significant reforestation in the post-Roman era. Studies of the levels of pig consumption on Roman and early medieval sites in France and Belgium have suggested that the keeping of pigs increased in relation to the prevalence of suitable woodland habitats.⁹⁸

Though we have demonstrated that swine renders do not equate to the numbers of pigs kept, they do provide some indication of the extent of woodland and potential pannage grounds. In the earlier medieval south east these appear to have been vast. The total pannage dues recorded by Domesday for the whole of Kent amounted to just under 7,350.⁹⁹ The renders for Sussex and for Surrey were somewhat smaller despite the combined area being twice that of the Kent Weald.¹⁰⁰ Population difference does not appear to be a factor here and it is possible that the wealthier population in Kent could afford to keep more pigs or that use of wood-pasture in the west was slightly different in nature.¹⁰¹

Traditional free-range pig-keeping favours the slaughter of two-year-old beasts¹⁰² and at the time of Domesday it is very likely that most of the swine driven to the autumn woods were young animals. They belonged to ordinary husbandman, who might have one or two breeding sows, serviced by boars either shared between neighbours or belonging to the lord. That the remnants of the old forest were a seasonal home to great herds of foraging swine is apparent in the south east's documentary evidence and to a certain extent the early medieval animal bone assemblages. People who lived close to the Weald clearly took most advantage of its extensive pannage and the Greensand Ridge as well as the primary zone of settlements on the fringes of the Downs appear to have been important pig-consuming regions. The destination of the medieval pig-herder was the Anglo-Saxon seasonal pasture, sometimes characterized by an oval enclosure and often referred to as a *denn*. This article has demonstrated that in Sussex and Surrey it was the area of the north-western Weald and the fringes of the High Weald where seasonal settlements akin to these *denns* existed. These landscapes had access to extensive woodlands, were well watered and were the destination of the south east's famous pattern of droveways. It is often these areas that are testified as pannage grounds in medieval documents and it has been shown that they were a focus of place-names linked to seasonal settlement.

Analysis of animal bone assemblages demonstrates that pigs were a ubiquitous element of the south east's medieval pastoralism. Though pig consumption featured in all the *pays* of the region, it was the Weald that comprised the major resource for feeding swine on mast (Figure 11). Historical documents show that the Crown regarded Ashdown Forest and Tonbridge South Frith as great providers of pig meat, a supply to be used whenever the king campaigned in Ireland or the Continent.¹⁰³ At times, and in places, the medieval south east

⁹⁸ S. Vanpouke, F. Pigière, A. Defgnée and W. Van Neer, 'Pig husbandry and environmental conditions in northern Gaul during antiquity and the early middle ages: the contribution of hypoplasia analysis', *Archaeofauna* 16 (2007), pp. 7–19.

⁹⁹ Witney, 'Woodland economy' p. 23.

¹⁰⁰ P. Brandon, *The Kent and Sussex Weald* (2003).

¹⁰¹ Ibid.; Margetts, 'Wandering herd', pp. 461–8.

¹⁰² Albarella *et al.*, 'Week on the plateau', p. 154; P. Halstead and V. Isaakidou, 'A pig fed by hand is worth two in the bush: Ethnoarchaeology of pig husbandry in Greece and its archaeological implications', in Albarella and Trentacoste (eds), *Ethnozooarchaeology*, pp. 160–74; Hadjikoumis, 'Traditional pig herding', p. 361.

¹⁰³ P. Brandon, 'Farming techniques: South-eastern England', in Hallam (ed.), *AHEW*, II, pp. 312–24.

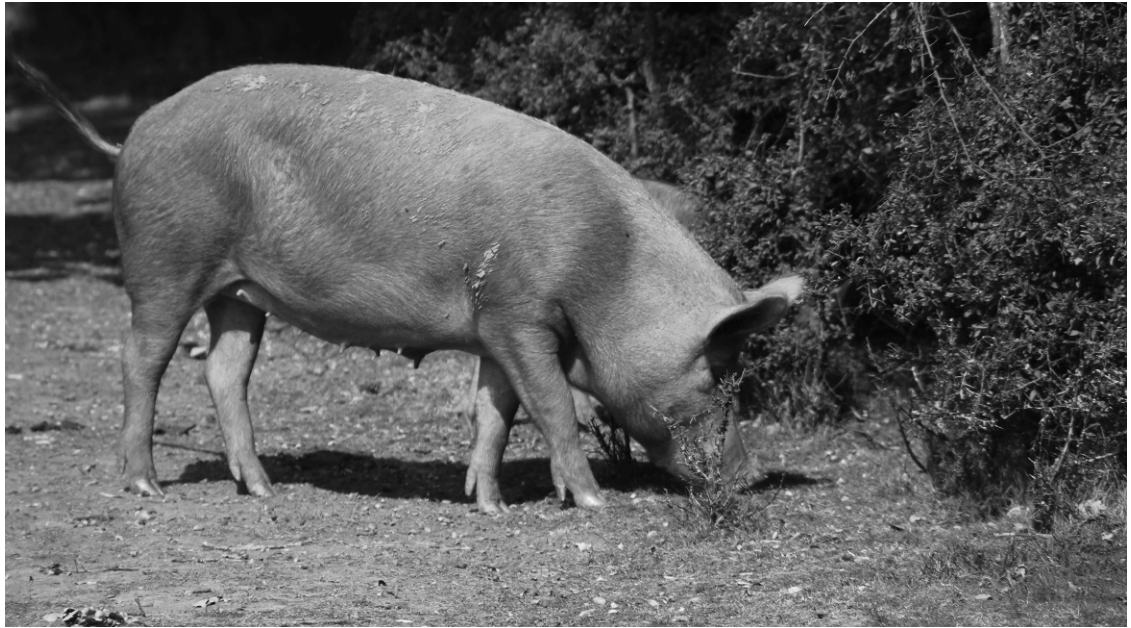


FIGURE 11. The Wealden mast diet remains exploitable by the free-grazing Tamworth pigs on the Knepp Estate, West Sussex (image courtesy of Lauren Gibson)

had high numbers of pigs when compared to national trends. This is implied by documents such as Domesday and is superficially demonstrated by the region's animal bone assemblages. The numbers help justify the historic regional emphasis placed on this livestock type. We should remain wary, however, as to how accurately records of swine pannage directly reflect the numbers of pigs kept on a particular holding or estate.

On the basis of the work attempted here we can be confident that pannaged pigs of the peasantry were largely turned out in the Weald on a seasonal basis and were unlikely to have been kept in the area all year round. Less representative lordly patterns may have been more complex. Documentary material when supported by the evidence of the south east's animal bone assemblages and road network, is illustrative of a system where pigs were brought back to their home settlements for consumption. The evidence appears to favour a phase of personal transhumance in the earlier medieval period that gave way to impersonal transhumance by the twelfth and thirteenth centuries. The latter was driven by manorial obligations and seigneurial control and could take place over distances of around 15–20 km. By the late medieval period pannage was in severe decline. The slight rise in the consumption of pork in the animal bone assemblages was likely being driven by more intensive and sedentary husbandry when compared to what had gone before. Of course, it remains possible that some swine were slaughtered in the Weald during the time of pannage, but the high numbers of pig remains in areas that bordered these *pays* probably help demonstrate that the Weald was a central resource to be utilized by the more permanently settled surrounding zones. This at least was the situation during the high point of swine pannage in the tenth and eleventh centuries and for the main pig producers, the peasantry.