

# The Rabbit and the Medieval East Anglian Economy\*

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## Abstract

The rabbit was a rare beast in medieval England, and much sought after for both its meat and its fur. This investigation plots the early history of commercial rabbiting in East Anglia, and its transition from a low output concern to a growth industry in the later Middle Ages. The development of the rabbit-warren into a highly lucrative source of income is explained in terms of the changing economic and social conditions after the Black Death, and the more intensive management of warrens by landlords. The occupational spin-offs from rabbiting, and the social implications of poaching in a region where resistance to the feudal order was endemic, are also explored. Final consideration is given to the economic impact of the rabbit on areas of poor soil, and its ability to compensate for their inherent disadvantages in grain production.

AN HISTORICAL study of a creature so manifestly commonplace as the rabbit might initially appear uninteresting, for it is the unusual which most readily excites intellectual curiosity. The rabbit is still regarded as prolific, destructive, and of little value, despite its terrible suffering under the myxomatosis virus since the 1950s. Yet this modern view is not consistent with the severe attitude adopted by manorial courts towards poachers in the Middle Ages. An example from a court held at Westwood near Dunwich (Suff) in 1442 illustrates the point. In the autumn of that year, three Augustinian canons from Blythburgh Priory had been caught poaching rabbits with their own, specially reared, greyhounds, a flagrant display of the increasing worldliness of religious orders. The outraged court officials fined them the substantial sum of 46s 8d, and also recorded that the operation had the express knowledge and support of no less a person than the Prior himself.<sup>1</sup> If the medieval rabbit was valueless, why did such illustrious men take up poaching and

why were the courts so determined to stop them?

In fact, this modern reputation belies historical experience, and for much of its history the rabbit has remained a rare and highly prized commodity. The animal is not indigenous to the British Isles, unlike the hare, but was deliberately introduced from France or its native western Mediterranean by the thirteenth century.<sup>2</sup> Its value lay both in its meat and fur, and as one seventeenth-century commentator noted, 'no host could be deemed a good housekeeper that hath not plenty of these at all times to furnish his table'.<sup>3</sup> Fur was used as clothing as well as on clothing, and although neither the most fashionable nor valuable, rabbit fur was increasingly popular from the thirteenth century.<sup>4</sup>

Yet initially the rabbit found the English climate inhospitable and required careful

<sup>2</sup> The rabbit was apparently indigenous to Britain in a previous interglacial but subsequently became extinct, A M Tittensor, *The Rabbit Warren at West Dean near Chichester*, published privately, 1986, no page numbers. For its reintroduction by the Normans, see E M Veale, 'The Rabbit in England', *Ag Hist Rev*, V, 1957, pp 85-90. An excellent general study of the animal is J Sheail, *Rabbits and their History*, Newton Abbot, 1971. See also O Rackham, *A History of the Countryside*, 1986, p 47.

<sup>3</sup> F Hervey (ed), *Reyce's Breviary of Suffolk*, 1902, p 35.

<sup>4</sup> E M Veale, *The English Fur Trade in the later Middle Ages*, Oxford, 1966, chap 1.

\* This study is concerned with Cambridgeshire, Norfolk and Suffolk. I am grateful to Edward Miller and Duncan Bythell for reading and commenting on an earlier draft of this paper.

<sup>1</sup> Ipswich and East Suffolk Record Office, HA30:312/195.

rearing and cosseting inside specially created warrens.<sup>5</sup> For the next five centuries the vast majority of England's rabbit population lived protected within these confines, and not until the eighteenth century did it successfully colonize a much wider area. As Sheail writes, 'the agricultural revolution made it possible for the rabbit as a species to survive in a feral state' and provided a launch pad for its demographic explosion, an explosion which ultimately undermined its economic value.<sup>6</sup> Even in the seventeenth century the rabbit was still regarded as an important cash crop and, in some areas, as a form of agricultural improvement.<sup>7</sup> In the Middle Ages rabbit-warrens represented almost the sole source of supply for rabbits and their scarcity made them a valuable and fiercely guarded commodity. Indeed, the collapse of the grain market in the later fourteenth and fifteenth centuries encouraged some landlords to develop their warrens as an alternative source of income, to the extent that rabbiting can be classed as an unlikely but successful late medieval growth industry.

# I

Throughout the Middle Ages the right to hunt and kill any beast or game was a special privilege granted by the king, so that all hunting was carefully controlled and restricted. Hunting in the extensive royal forests was the privilege of the king alone, but outside these areas the Crown was prepared to sell exclusive hunting rights by means of a charter of free-warren. In effect, the recipient of this charter was

granted the *sole* right to kill the beasts of warren – which basically consisted of the pheasant, partridge, hare and rabbit – within a specified area. Hence the right to keep and kill rabbits was the exclusive privilege of the owner of free-warren and it was therefore illegal for anybody else to attempt to do so. Free-warren was consequently a valuable privilege, jealously guarded by its owner, and charters for most East Anglian villages had been granted by the 1280s.<sup>8</sup>

There is obviously an important distinction to be made between the warren in its legal and its practical senses. In modern usage the rabbit-warren refers to a piece of waste ground on which wild rabbits burrow, but in the Middle Ages it specifically meant an area of land preserved for the domestic or commercial rearing of game. Furthermore the sites of medieval warrens were selected according to strict topographical criteria and not at random. The modern rabbit has developed a resilience to the damp British climate, but still prefers to avoid moisture and hence burrowing in water-retentive clays and loams. Its medieval predecessor felt this aversion more keenly, for the distribution of warrens in East Anglia corresponds closely with areas of dry and sandy soil (see Map 1). Landlords also sought slopes for colonization, as a gradient facilitated both drainage and the dispersal of burrowed soil.<sup>9</sup> Significantly the largest concentration of warrens was in Breckland, a region of undulating heathland, low rainfall and deep, porous sands, in other words an ideal habitat for the rabbit. In 1563 a lease of Brandon warren in the heart of Breckland noted it 'is very Wyde and Large but of very Baren Soyle nevertheless very good for brede of Conyes'.<sup>10</sup>

<sup>5</sup> Rackham, *op cit*, p 47.

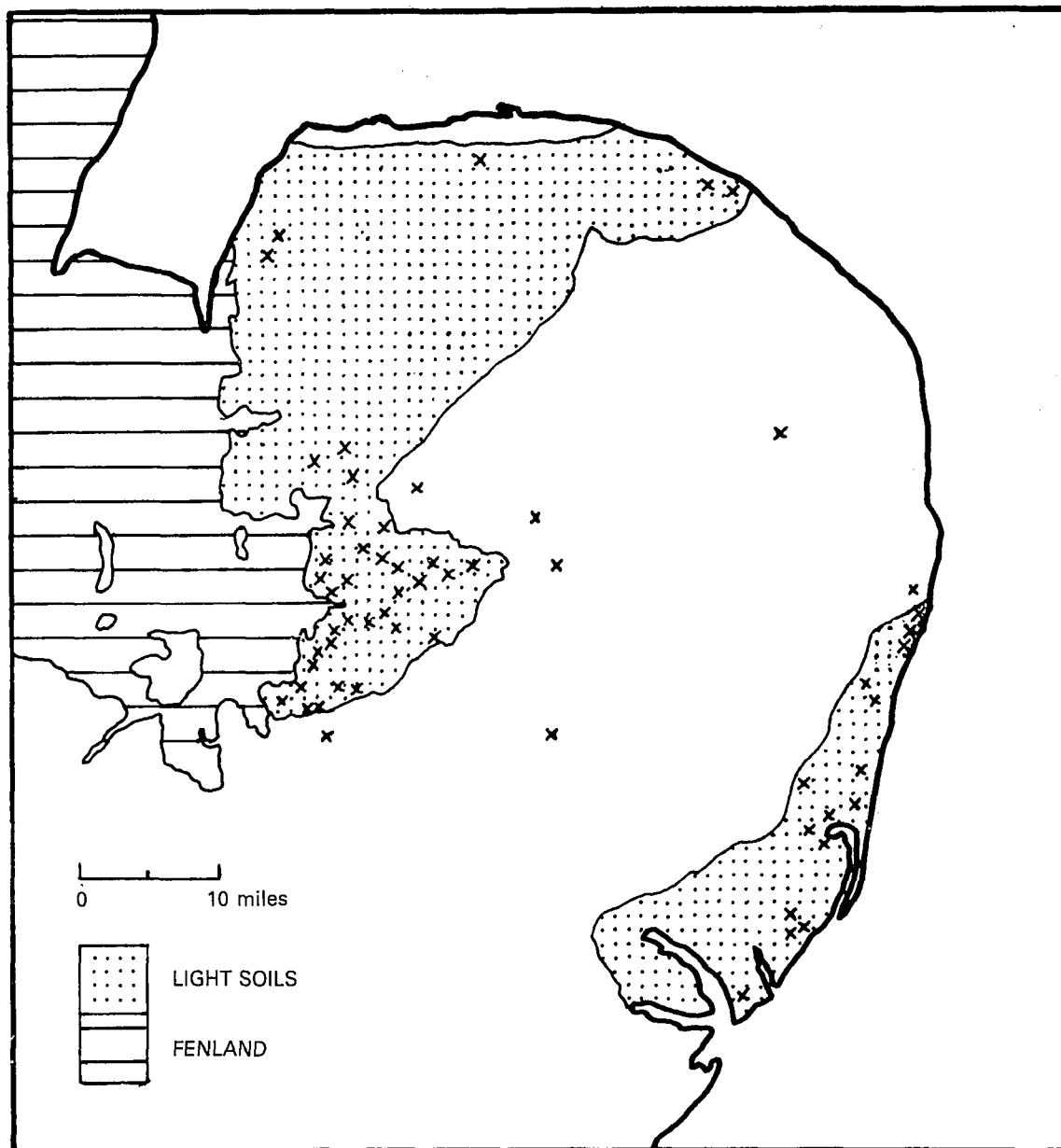
<sup>6</sup> J Sheail, 'Rabbits and Agriculture in post-Medieval England', *Jnl Hist Geog*, IV, 1978, p 355. See also Sheail, *op cit*, 1971, pp 9-10 and 31-2.

<sup>7</sup> Sheail, *op cit*, 1978, p 349. Sheail's article considers the revived interest in rabbit rearing in the early modern period, and attempts to correct the 'impression that rabbit-warrens were always inimical to progressive land management', p 344. Indeed, the value of some warrens suggests that commercial rabbiting could represent the optimum use of poor soils. Such arguments could be equally applicable to the medieval period, but no study of the fortunes of rabbit rearing in the Middle Ages has hitherto been attempted.

<sup>8</sup> The Hundred Rolls nominate the owners of free-warren charters in most East Anglian villages. For the concept of free-warren see Sheail, *op cit*, 1971, p 35 and C R Young, *The Royal Forests of Medieval England*, Leicester, 1979, pp 10-11 and 46.

<sup>9</sup> Sheail, *op cit*, 1971, p 39.

<sup>10</sup> PRO, E 310.24/138. See below, n 109.



MAP I

Documented Rabbit-warrens and Areas of Light Soil in East Anglia, 1200-1540\*

\*warrens marked are those mentioned in text

The earliest warrens were founded almost exclusively on heathland and permanent pasture, although at Chippenham (Cambs) the Hospitallers bought out common rights on small pieces of arable for

inclusion in their warren in the 1280s.<sup>11</sup> Although most nineteenth-century war-

<sup>11</sup> M. Spufford, *A Cambridgeshire Community: Chippenham from Settlement to Enclosure*, Occasional Papers, Dept of Local History, Leicester University, XX, 1965, pp 22-3.

rens were enclosed by ditches and banks topped with gorse to restrict the movement of predators, there is little evidence to indicate that this was widespread in the Middle Ages. At Lakenheath (Suff) a ditch probably divided the west end of the warren from the village arable, but such examples are rare and most remained open and without physical delimitation.<sup>12</sup> However, enclosed deer-parks were sometimes used for breeding rabbits, and these must have been an ideal, ready-made medium for their introduction so long as damage to pasture remained slight. The association between rabbits and deer-parks is strong at Staverton (Suff), and at Benhall (Suff) where a warren was mentioned in 1349 although not subsequently, but in 1543 the famous park was leased for £20.<sup>13</sup> There was also a substantial deer-park at Lopham by the end of the thirteenth century, which in 1386 produced 300 rabbits for the Countess of Norfolk's table.<sup>14</sup>

Most of the warrens in Map 1 had been founded by the late thirteenth century, many by ecclesiastical landlords. The Bishops of Ely and Rochester created warrens at Brandon and Freckenham (Suff) respectively; Bury St Edmunds Abbey did likewise at Mildenhall (Suff); and so did West Acre Priory at Wicken and Cuthorpe (Norf).<sup>15</sup> The Prior and Convent of Ely were granted free-warren in Lakenheath in 1251 and in 1300 the specific right to a

*cunicularium* was added to the charter.<sup>16</sup> The rabbit was a particularly favoured delicacy of the Abbot of St Edmunds who had a warren created at his country retreat in Elmswell and at Long Melford (Suff), whilst both West Acre and West Dereham Priors also established their own warrens nearby.<sup>17</sup> Various lay landlords were also prominent in this new experiment, notably the Warennes, earls of Surrey, at Methwold, Thetford, Tunstead and Gimingham (Norf), and the earls of Norfolk who founded seven warrens centred on east Suffolk.<sup>18</sup>

It is difficult to ascertain the exact area of these early warrens, although the largest swept down the western edge of Breckland from Thetford through Wangford to Eriswell.<sup>19</sup> By the end of the Middle Ages such warrens had probably grown to occupy the 1000 acres plus they were to reach at their zeniths. However, other warrens may never have been larger than that at Coney Weston (Suff), where in 1302 'there are two acres two roods of herbage in the rabbit warren with furze included which are valued at 8d per annum, but there are no profits from the rabbits'.<sup>20</sup> These differences in warren size and capacity are illustrated by the wide variety of warren lease valuations: Snettisham and Wighton warrens (Norf) were valued at 66s 8d and 6s 8d respectively in the fifteenth century, whilst Leiston warren (Suff) produced £20.<sup>21</sup>

<sup>12</sup> Cambridge University Library, EDC.7/15/II/Box 1/9 m.22 records that three Lakenheath men grazed their animals 'in fossato de la coneger' in 1333.

<sup>13</sup> Staverton park is well documented as far back as the 1260s, and a warrener was employed there in 1267, Rackham, *op cit*, p. 147 and PRO,SC6.1005/7; for Benhall see Inquisitions Post Mortem, IX, p. 300, and W A Copinger, *The Manors of Suffolk*, 7 vols, 1896-1905, vol V, p. 103.

<sup>14</sup> Thirteenth-century accounts of Lopham mention neither rabbits nor warrener, although a park was patently in use, PRO,SC6.938/1-10. Yet in 1386 it was the largest individual source of rabbits on the Countess of Norfolk's estates, J M Ridgard (ed), *Medieval Framlingham: Select Documents 1270-1524*, Suffolk Record Society, XXVII, Woodbridge, 1985, p. 115.

<sup>15</sup> For Brandon see PRO,SC6.1304/23; E Callard, *The Manor of Freckenham*, 1924, pp. 59-60; Mildenhall, Bodleian Library Oxford, Suffolk Rolls 21; F Blomefield, *An Essay towards a Topographical History of the County of Norfolk*, 5 vols, 1739-75, vol IV, p. 752.

<sup>16</sup> G Crompton, 'A History of Lakenheath Warren', *Report to the Nature Conservancy Council*, 1972, p. 14.

<sup>17</sup> For a map of Elmswell warren in the sixteenth century see N Scarfe, *The Suffolk Landscape*, 1972, p. 195; PRO,SC6.Hen. VIII/2632 m.8 and m.16.

<sup>18</sup> The Warennes were responsible for introducing rabbits on these estates, but in the fourteenth century they were taken over by the Duchy of Lancaster, Blomefield, *op cit*, IV, p. 318, and PRO,DL29.288/4719 (1358-9). In 1386 the Countess of Norfolk received rabbits from warrens at Kennett, Dunningworth, Hollesley, Staverton, Walton, and Chesterford, n. 14 above.

<sup>19</sup> Crompton, *op cit*, map VI.

<sup>20</sup> British Library, Harl.Ms.230, fo. 155. The name Coney Weston is not derived from 'rabbit' but is in fact a corruption of King's Weston.

<sup>21</sup> Snettisham and Wighton, PRO,DL29.291/4790 (1431-2); Leiston warren was leased by Robert Brown in 1539, PRO,SC6.Hen.VIII/3420 m.38.

Were all medieval warrens deliberate seigneurial creations, or did in fact some landlords just exploit an indigenous colony? There is explicit evidence that the earliest warrens were deliberate creations. For example, the Despencers gave Henry III ten live rabbits to begin a colony at Guildford (Surrey) in 1235 and the King himself donated 100 to the Bishop of Chichester, but unfortunately no comparable examples are extant from East Anglia.<sup>22</sup> However, indirect evidence proves that the rabbit's migratory scope was very limited in the Middle Ages, and so most warrens must have been artificial creations. The distinctive clustering of warrens displayed in Map 1 indicates that the rabbit did not colonize a wide geographical area, and even in central parts of East Anglia it remained a rare beast.<sup>23</sup>

This might surprise a modern reader familiar with the animal's ubiquity and fecundity, but the medieval rabbit was fragile and uncomfortable in its new, cold environment, and under constant threat from predators and harsh winter conditions. Consequently, low fertility and high mortality rates restricted natural increase, even within the relative safety of the warren. This placed severe restrictions on long-distance migrations, although undoubtedly some fledgling warrens were spawned in the vicinity of the early warrens, and these were then exploited by eager landlords. Hence two colonies near Methwold warren were leased separately in 1413-15 for a small sum.<sup>24</sup> Iken (Suff) lay

at least two miles east of Dunningworth warren (established by 1274), but rabbits only appear in its court rolls after 1364, significantly one year after the right of free-warren was first granted in the village.<sup>25</sup> This almost certainly indicates the arrival of a colony in Iken and by 1390 the court jurors were recording damage caused by rabbits from Dunningworth. This Iken colony must have flourished, because in 1392 documents refer to a locality as 'le coniger'.<sup>26</sup> There was a similar spread from the large Breckland warrens around the same time, and at Saxham (Suff) on the region's southern edge a few rabbits were recorded in the village by 1365.<sup>27</sup>

It is impossible to estimate accurately the rabbit population in any warren because of the immense difficulty of counting rabbits in colonies, and documentation is consequently uninformative. The only indications as to population size are the annual cullings entered in manorial accounts, although even these disappear in fifteenth-century documents as landlords abandoned direct management of warrens and leased them for a fixed rent income instead. The figures detailed in Table 1 indicate that the rabbit population expanded in the later Middle Ages, a trend substantiated by the rising value of Hilborough warren (Norf) from £2 13s 6d in the 1250s to £30 in the late fifteenth century.<sup>28</sup> However, even at its peak the medieval population still remained less than one-tenth the size it was to reach in the nineteenth century. For instance, few medieval warrens ever culled more than around 3000 rabbits in one year,

22 *Calendar of Close Rolls, Hen. III* vol 3, p 217, and *Hen. III* vol 5, pp 329 and 380. Veale, *op cit*, 1957, pp 88-9 discusses the evidence for created warrens but not the rabbit's spread subsequently.

23 The rabbit was rare in the Middle Ages in the central Suffolk village of Worlingworth, J M Ridgard, 'The Local History of Worlingworth, Suffolk, to 1400 AD', unpublished PhD thesis, Dept of Local History, Leicester University, 1984, p 69. Sheail, *op cit*, 1971, p 132 comments that the rabbit was not widespread in Norfolk until the nineteenth century.

24 In 1413-14 twenty shillings were paid for the farm of the warrens at Oteringhamthe, Santon and Brundale, and in the next account ten shillings were rendered for rabbits 'taken at Weeting hill', PRO, DL29.290/4765 and 4769.

25 Rabbits are first mentioned at Dunningworth in the account of 1274, PRO, SC6.995/15. Extant Iken court rolls are extensive, but I could not find any reference to rabbits until the court held in December 1364, IESRO, HD32:293/390 m.44. Free-warren is not mentioned in the village in the Hundred Rolls and according to Copinger was not granted until 1363, Copinger, *op cit*, V, p 144.

26 IESRO, HD32:293/387, courts held November 1390 and September 1392.

27 The stock account of 1364-5 includes the heading 'amiciuli', although none were actually taken, West Suffolk Record Office, Bury St Edmunds E.3/15.14/1.7.

28 Blomefield, *op cit*, III, pp 437-8.

TABLE I  
Decennial Means of Culled Rabbits and Their  
Disposal, Selected Manors

Decade	A/Cs	Mean culled	Sold	Lord	Misc
<i>Brandon</i>					
1340-9	4	158	11%	89%	—
1350-9	3	160	81%	11%	—
1360-9	6	301	46%	48%	6%
1370-9	4	622	29%	62%	9%
1380-9	4	2811	85%	5%	10%
1390-9	7	2267	86%	4%	10%
<i>Dunningworth</i>					
1270-9	1	199	100%	—	—
1280-9	2	51	100%	—	—
1290-9	5	30	100%	—	—
1300-9	3	41	28%	72%	—
<i>Kennett</i>					
1270-9	4	414	75%	25%	—
1280-9	4	195	78%	22%	—
1290-9	6	750	91%	9%	—
1300-9	4	213	96%	4%	—
<i>Lakenheath</i>					
1300-9	1	50	—	100%	—
1320-9	3	34	—	100%	—
1330-9	3	327	14%	86%	—
1340-9	2	265	17%	83%	—
1350-9	2	788	70%	29%	1%
1360-9	3	382	73%	27%	—
1370-9	3	850	73%	27%	—
1380-9	2	3639	80%	19%	1%
1390-9	2	3056	80%	20%	—
1420-9	1	758	99%	1%	—
<i>Methwold</i>					
1350-9	1	320	75%	25%	—
1390-9	1	9450	100%	—	—
1420-9	3	3933	100%	—	—
1430-9	6	1972	100%	—	—
1440-9	4	2055	100%	—	—
1450-9	4	1031	100%	—	—
1460-9	3	1897	100%	—	—

Sources: Brandon, PRO,SC6.1304/23-36, Bacon 644-63; Dunningworth, PRO,SC6.995/15-25; Kennett, PRO,SC6.768/5-24; Lakenheath, CUL,EDC. 7/15/1/1-31; Methwold, various accounts in series PRO,DL29.288/4719 to DL29.310/5007.

yet at Thetford in 1860 nearly 36,000 were slaughtered.<sup>29</sup>

<sup>29</sup> See Table 1. The Thetford figure is from Sheail, *op cit*, 1971, p 59.

Inconsistent output was another distinctive feature of the medieval warrens. Cullings varied enormously from year to year, reflecting wild fluctuations in the rabbit population and illustrating the early warrens' precariousness. The bailiff of Guildford was ordered to send fifty rabbits to Henry III at Windsor, but only if the colony could sustain the losses, and a warrener was employed at Staverton between 1267 and 1300 although there were only seventy-two recorded cullings during that time.<sup>30</sup> A low population base in Kennett warren (Cambs) meant that only 169 rabbits could be taken between 1286 and 1291, yet a rapid recovery in 1292 resulted in localized damage to pasture ground and a bumper harvest of 1698 rabbits.<sup>31</sup> Warreners therefore had to exercise considerable discretion over the number to be culled each year, and the primary concern was always to maintain sufficient breeding stock. This was still the case in the fifteenth century, and even in a substantial warren such as Methwold it was not always possible to cull any rabbits because numbers were dangerously low.<sup>32</sup> Hence lessees held Swaffham warren (Norf) under a £10 penalty to leave it 'sufficiently stocked' at the end of the lease, and in 1498 John Wareyn was obliged to leave Blythburgh warren (Suff) 'well replenyssed with two thousand coneys or more'.<sup>33</sup> Yet even these precautions could not always prevent reckless plundering of the stock. Gressinghall warren (Norf) was ruined by its lessees in 1391, and that at Gimingham could not be leased in 1427-8 because of the devastation wrought by Edward Custans.<sup>34</sup>

As the rabbit population acclimatized to its new surroundings and gradually grew in size, so its capacity for crop destruction also increased. As early as 1341, 400 acres

<sup>30</sup> CCR, Hen.III vol 6, p 327; Staverton, PRO,SC6.1005/7-18.

<sup>31</sup> PRO,SC6.768/11-16.

<sup>32</sup> See for example, PRO,DL29.292/4796, 4808, 293/4817, and 295/4846.

<sup>33</sup> PRO,SC6.944/12 (1434-5); IESRO,HA30:50/22/1.11 (1498).

<sup>34</sup> PRO,DL29.310/4980 and 291/4782.

at Gazeley (Suff) lay uncultivated 'because of the poverty of the tenants and destruction by the lord's rabbits', but the main problems emerged after the later fourteenth century.<sup>35</sup> At Elmswell in 1378, 16 per cent of the sown demesne area was destroyed by rabbits, and in 1391 the Mildenhall demesne lost all its oats crop.<sup>36</sup> In 1404 the vicar of Tottington (Norf) complained that the value of his tithes had been reduced by the spread of rabbits from John FitzRauf's warren, and an inquisition at Methwold in 1522 declared that 'much of the Corne of the said londe destroyed yerely with Conyes which be so greatly encreased'.<sup>37</sup> Such protestations should be treated with a little scepticism, but they do illustrate the rabbit's tendency to colonize a wider area, so that by the sixteenth century the spread from the largest warrens had become quite marked. At Freckenham in 1551 rabbits were described as 'increasing and multiplying on the common land' and the warren lessee was ordered to block up rabbit holes on common land, whilst a 1589 lease of Brandon warren commented on the 'growth and renewal' of stock outside the warren.<sup>38</sup> Yet for all this demographic expansion, the rabbit still remained scarce in many areas, and the Poulterers' company of London was sufficiently concerned about stocks to impose a spring close season on cullings for much of the sixteenth century.<sup>39</sup>

The exploitation of warrens was a highly skilled business, and careful management underpinned the warren's transition from fledgling experiment to successful commercial enterprise. Most warreners were full-time manorial officials, although on smaller warrens they tended to combine duties, so that the warrener at Bury Abbey's grange also doubled as the rent collector.<sup>40</sup> Landlords soon realized that this was 'a trade not learnt in five minutes and one good warrener is worth any number of poor ones' and paid them handsome wages.<sup>41</sup> At Dunningworth in 1302 the warrener was the highest-paid manorial official, receiving fifty-two shillings a year.<sup>42</sup> In the fifteenth century, Ely Abbey drew up detailed contracts with their warreners, paying them at least £5 per year, stipulating their exact duties, and reserving the right of dismissal if their work was unsatisfactory.<sup>43</sup> To some extent these high wages were designed to reward the warrener's loyalty: the attentions of poachers made the job occasionally dangerous, and by acting as the guardian of a seigniorial privilege the warrener might expect little sympathy in village society. Besides financial remuneration, most warreners enjoyed other perks such as extra pasture rights and free accommodation within the warren lodge. The pressures of their work were largely seasonal and peaked with cullings in the autumn when the rabbit's fur was thickest. Extra help was often required in this busy period, as at Lakenheath in 1384 when seven men were hired for twenty weeks.<sup>44</sup> The most common method of trapping was with ferrets and nets, the ferrets being released into specific burrows to drive the rabbits above ground and into nets tended by trappers. Most warreners reared their own ferrets,

35 *Nonarum Inquisitiones*, p 99.

36 WSROB.E.7/8/1 and E.18/455/1.

37 M R Postgate, 'An Historical Geography of Breckland 1600-1800', unpublished MA thesis, London University 1960, p 77.

38 WSROB.613/686/1 October 1549 and October 1551; PRO.E310.24/138.

39 P E Jones, *The Worshipful Company of Poulterers of the City of London*, 1939, pp 82-3. Whilst the rabbit was obviously becoming more commonplace in the immediate vicinity of warrens in the Middle Ages it was still reckoned to be a rare beast, Sheail, *op cit*, 1971, p 9. However in the sixteenth century the price for rabbit rose less steeply than the price for other goods, which indicates that it was gradually becoming more common. J E T Rogers, *A History of Agricultural Prices and Wages in England 1259-1793*, 7 vols, Oxford, 1866-1902, vol IV, p 717. Other authors have subsequently argued that the rabbit was altogether more numerous in the sixteenth and seventeenth centuries, H V Thompson and A N Worden, *The Rabbit*, 1956, p 13.

40 WSROB.A.6/1/9.

41 T W Turner, *Memoirs of a Gamekeeper*, 1954, p 103.

42 PRO.SC6.995/24.

43 See those drawn up for Lakenheath in 1411 and Brandon in 1492, CUL,EDR.G/2/3, fo 34 and Bacon 685.

44 CUL,EDC.7/15/1/28.

although sometimes a ferreter was hired at no little expense.<sup>45</sup>

For much of the year the warrener worked alone, guarding his rabbits against hunger and predators and even seeking ways to encourage breeding. The early rabbits appear to have been reluctant burrowers, which prompted some warreners to construct artificial burrows or 'pillow-mounds'.<sup>46</sup> These were designed to provide dry, well-ventilated burrows in which the rabbit could breed, and their very existence again emphasizes both the animal's unease in the damp climate and the need to tend it carefully.<sup>47</sup> Archaeological evidence for medieval pillow-mounds – as opposed to those from later centuries – is rare, particularly in East Anglia, although the region's warreners were certainly very protective of the rabbit's own burrows.<sup>48</sup> At Walberswick (Suff) John Huntsman was amerced in the standard court format for poaching and then indicted separately for 'searching in the burrows', whilst John Baret blocked up holes 'with mud and a lotion of salted herrings'.<sup>49</sup> Poachers were problem enough without their clumsiness causing untold physical damage to the warren's structure.

In many places warreners took positive steps to curtail the rabbit's high mortality rates, particularly after the late fourteenth century. Shortage of winter food was a

perennial problem, although on the heathlands gorse provided a cheap and convenient source.<sup>50</sup> Drought at Staverton in 1306 resulted in the provision of gorse for the warrener, Robert Tendenil, presumably to feed the rabbits, and in the late fourteenth century oats were regularly given to rabbits at Lakenheath.<sup>51</sup> In the fifteenth century, warren leases often included some meadowland for the same purpose, such as at Desning in 1506.<sup>52</sup> Warreners also waged a perpetual war against the rabbit's natural predators and poachers, and the growth of the warren population signifies their success. The fox, stoat, weasel, wildcat and polecat stalked with ruthless efficiency, so that Brandon and Lakenheath warrens were set with numerous traps and snares 'for nocturnal predators', and the Kennett warrener was paid extra expenses for catching foxes and polecats.<sup>53</sup>

The real threat of both predators and poachers resulted in the construction of a wooden watchtower in Lakenheath warren in 1365, and of a stone lodge in Methwold by 1413.<sup>54</sup> These lodges were a feature of medieval Breckland, and that at Thetford still stands. Most date from the late fourteenth century, and at once reflect the threat posed by poachers and the determination of landlords to protect increasingly valuable assets. These remarkable buildings also absorbed much of the capital invested in warrens, for they were expensive to build and maintain. Brandon lodge was completed in the 1380s at a cost of over £20, stood at two storeys high, and was protected by slit windows and flint walls three feet thick; and at Elmswell in the early sixteenth century, the warren lessee

45 In Kennett warren in 1291–2 three ferreters were hired at a cost of 18s 6d, with an extra 5s 6d subsistence allowance for the ferrets themselves, PRO,SC6.768/16; on other occasions the warrener hired the ferrets only, SC6.768/5.

46 Sheail, *op cit*, 1971, pp 57–8; Rackham, *op cit*, p 47; Tittensor, *op cit*.

47 C F Tebbutt, 'Rabbit Warrens on Ashdown Forest', *Sussex Notes and Queries*, XVII, 1968, pp 52–4.

48 Most of the known pillow-mounds in Wales, for instance, date from the second phase of rabbit warren creation in the seventeenth and eighteenth centuries, *An Inventory of the Ancient Monuments in Glamorgan*, vol III: 'Medieval Secular Monuments, Non-defensive' Royal Commission on Ancient and Historical Monuments in Wales, HMSO, Cardiff, 1982, p 321.

49 John Huntsman, IESRO,HA30:312/194, court held August 1443. Baret was amerced twenty shillings for obstructing holes 'iuxta Cobbeshill infra garrena domini cum luto et locion' allec' sals', HA30:312/195 December 1446; in June that year seven men were presented for obstructing burrows. This could conceivably refer to the act of trapping, but then we would expect the offenders to be amerced for poaching in the conventional court manner. One suspects that these men were blocking holes near arable land to stop their crops being damaged by the rabbits.

50 Turner, *op cit*, p 101; Sheail, *op cit*, 1971, p 50.

51 Staverton, PRO,SC6.1005/21; CUL,EDC.7/15/1/17 and 31.

52 PRO,SC6.Hen.VII/692; see also G Crompton and J Sheail, 'The Historical Ecology of Lakenheath Warren in Suffolk; a Case Study', *Biological Conservation*, VIII, 1975, p 305.

53 Brandon, PRO,SC6.1304/32; Lakenheath, CUL,EDC.7/15/1/28–9; Kennett, PRO,SC6.768/14 and 22.

54 CUL,EDC.7/15/1/20; PRO,DL29.290/4765.



was allowed over one-sixth the value of the lease each year to spend on upkeep.<sup>55</sup> Rabbit rearing was otherwise a relatively inexpensive business, with the major expenditure on labour.

Whilst these new methods were successful in increasing the rabbit population in the fifteenth century, they also created new problems for warren owners. Greater numbers inevitably meant greater competition for food and greater psychological stress amongst the rabbit community, which led to a higher rate of migration from the warren itself, despite the protection it offered.<sup>56</sup> Not only were the warrens losing their monopoly of supply, but localized damage to crops became a more serious problem. Increased population density in the warrens also led to inbreeding and a reduction in the quality of stock. Colonies then became more susceptible to disease, although the documents are frustratingly silent about its nature or incidence.<sup>57</sup> Coccidiosis and liver-fluke were probably major scourges:<sup>58</sup> indeed, liver-fluke also afflicts sheep, and as sheep and rabbits commonly shared pasture grounds throughout East Anglia then it is possible that they infected each other. Significantly, references to disease appear more frequently in the fifteenth century, and it was an important factor in the accumulation of arrears at Brandon warren in the 1480s and 1490s. In 1483 the warrener was pardoned the year's rent because of murrain amongst his stock, and in 1491 a further £11 1s 5d was allowed due to 'a great mortality in the winter'.<sup>59</sup> Now that competition for food amongst the rabbits had increased, harsh winters could threaten the existence

of whole communities. Breckland warrens were badly afflicted by intense cold in the successive winters of 1434 and 1435, and both Swaffham (Norf) and Methwold lost much of their stock. The rent of £6 13s 4d remained unpaid at Swaffham until at least 1441 when the warren was to be restocked 'for the lord's greater profit'.<sup>60</sup> At Methwold £5 was spent on restocking in 1435 and another sixty live rabbits were bought in 1439, whilst gorse had been specifically planted as winter feed for the rabbits in 1437.<sup>61</sup>

The increasing migration of rabbits from the warrens, either permanently or temporarily in search of food, resulted in further damage to arable in the immediate vicinity of warrens. As the later Middle Ages was a period of slack demand for land, tenants were understandably reluctant to cultivate such ground, which encouraged and allowed landlords to absorb it within the official warren area. At Brandon before the Black Death, Oxwickfield was used as occasionally-cropped 'outfield' land, but thereafter was converted to permanent warren pasture, which explains why the bailiff of Brandon was acquitted rent owed on sixty acres of free land in 1389.<sup>62</sup> The value of Mildenhall warren tripled in the quarter-century after 1381, corresponding with a number of rent allowances on certain peasant lands which had been absorbed within the warren.<sup>63</sup> In 1425 William Gaylon was awarded eighteen acres in recompense for his own arable lands which now 'lay within the warren'.<sup>64</sup> By the mid-fifteenth century other lands had been similarly abandoned at Lakenheath and Swaffham.<sup>65</sup>

55 Bacon 651 and Rackham, *op cit*, p 293. For Thetford lodge see W G Clarke, *In Breckland Wilds*, Cambridge, 1926, p 144. Redstone, *op cit*, p 334. An analysis of costs in Blythburgh warren is given in C Richmond, *John Hopton: a Fifteenth Century Suffolk Gentleman*, Cambridge, 1981, p 39.

56 Sheail, *op cit*, 1978, p 353; Crompton and Sheail, *op cit*, p 306.

57 Sheail, *op cit*, 1971, p 57; Thompson and Worden, *op cit*, pp 109-10.

58 *Ibid*, pp 115-18.

59 Bacon 677 and 683.

60 PRO,SC6.944/15.

61 PRO,DL29.292/4792, 4796, and 4798; the 1437-8 account records fines levied on various men who had destroyed 'les whynnes' planted to sustain the lord's rabbits.

62 Mark Bailey, 'At the Margin: Suffolk Breckland in the Later Middle Ages', unpublished PhD thesis, Cambridge University, 1986, pp 251 and 264.

63 *Ibid*, p 264.

64 WSROB,E.18/451/4.

65 CUL,EDC.7/15/1/34; PRO,SC6.944/12.

## II

The fortunes of commercial rabbiting in the Middle Ages are easier to describe than to explain with precision. Output from most warrens remained low until the later fourteenth century. Cullings varied wildly from year to year, but seldom exceeded a couple of hundred (Table 1). The sale price of the rabbit reflects its scarcity (Table 2), and for a century after its introduction to East Anglia it cost at least 3d each, which was equivalent to the wage of almost two days' unskilled labour. The highest recorded price is at Kennett where one rabbit fetched 4½d in 1297–8.<sup>66</sup> Whilst produce from the earl of Norfolk's early warrens tended to be mainly distributed to unspecified markets, most ecclesiastical warrens dispatched their rabbits to the monastic kitchens before c.1350. Produce from Elmswell warren was almost exclusively consumed by the Abbot of St Edmunds and his retinue.<sup>67</sup> Rabbits also proved most acceptable gifts to friends, favourites and eminents, and the Prior of Ely sent sixty to Edward III in 1345.<sup>68</sup>

The main changes in the destination of produce came with the rapid growth in output in the latter decades of the fourteenth century, and even the ecclesiastical warrens diverted produce from their tables to the market.<sup>69</sup> Such a remarkable increase brought equally spectacular rewards. Between 1300 and 1348 the Brandon

demesne received a negligible income from rabbit sales, yet in the next half-century they constituted one-fifth of gross manorial revenue, and in 1386–7 produced a record £40 4s 0d or 40 per cent of gross income. At Lakenheath in 1384–5 sales reached £37, or twice the income received from wool sales, hitherto the staple demesne product. From sales at Methwold the Duchy of Lancaster received a staggering £75 in 1391.<sup>70</sup>

The late fourteenth century was probably the heyday of commercial rearing in medieval East Anglia, although a shortage of direct evidence from the fifteenth century makes it impossible to be certain of this. However, most landlords had abandoned direct management of warrens and had leased them as part of a general movement towards the security of rentier farming by the 1400s.<sup>71</sup> Underpinning this movement was a continuing rise in wages relative to prices which had begun around the mid-fourteenth century. For example, the Lakenheath warrener received a flat rate of 30s 4d in 1355 but in 1470 was paid 60s 8d and an additional sum for trapping the rabbits.<sup>72</sup> Prices however fell from their earlier peak as the animal became more common, but held steady at around 2d per rabbit for most of the fifteenth century. Whilst this meant that the rabbit was still a relatively expensive commodity, it could not offset the continuing rise in wages and transport costs, and the industry must have suffered from declining profit margins.

Table 3 reflects the decline in warren values, which might suggest that commercial rabbiting, along with many other sectors of the English economy, suffered from depression in the middle years of the fifteenth century. Larger warrens fell to

66 Kennett, PRO,SC6.768/19; the average wage rate for a day's labouring on eight Winchester manors between 1301 and 1310 was 1.49d, J Hatcher, *Plague, Population and the English Economy 1348–1530*, 1977, table II. At these prices the rabbit cost about as much as a goose.

67 In 1377–8 the Elmswell warren produced 446 coneys and 244 rabbits, all of which were consumed by the Abbot of St Edmunds. In fact the Kennett warren did produce some rabbits for the Norfolk family's indulgence before the Black Death. In 1280 169 were taken to Hanworth (Norf) in time for Christmas; see PRO,SC6.768/11 and also 768/17 and 21.

68 CUL,EDC.7/15/1/13.

69 Not that this sudden increase in market production totally eclipsed domestic consumption: in 1385–6 Norfolk's household consumed 658 rabbits at Framlingham and in 1525 it managed 263 in just twenty-six days at Kenninghall, Ridgard (ed), *op cit*, p 115 and R Howlett, 'The Household Accounts of Kenninghall Palace in the Year 1525', *Norfolk Archaeology*, XV, 1902–4, p 58.

70 Brandon, WSROB, Iveagh Suffolk Ms.148; Lakenheath, CUL,EDC.7/15/1/28; Methwold, PRO,DL29.310/4980.

71 'By the last decade of the century, landlords nearly everywhere had ceased to farm their own land,' M McKisack, *The Fourteenth Century*, Oxford, 1959, p 390.

72 CUL,EDC.7/15/1/16 and 34.

TABLE 2  
Sale Prices of Rabbits on East Anglian Manors

Period	A/Cs	Gross income (d)	Total no. of rabbits	Price per rabbit (d)	Indices
1250-99	12	22952	6404	3.58	158
1300-49	9	3924	1145	3.43	151
1350-9	6	3957	1732	2.29	101
1360-9	9	12261	4908	2.50	110
1370-9	7	12823	4913	2.61	115
1380-9	6	43033	16742	2.57	113
1390-9	12	68522	31574	2.17	96
1420-9	4	22620	11750	1.93	85
1430-9	4	14242	7840	1.82	80
1440-9	3	15928	8220	1.94	85
1450-9	1	7783	4124	1.89	83
1460-9	2	10044	5692	1.76	78

1250-1469 = 100

TABLE 3  
Warren Lease Valuations, Selected Years

Warren	Year	Valuation (£ s d)
Brandon	1398-9	20. 0.0
	1463-4	13. 6.8
	1480-1	20. 0.0
	1541-2	20. 13.6
Blythburgh	1480-1	8. 0.0
	1505-6	6. 13.4
Gimingham	1424-5	3. 10.0
	1437-8	4. 0.0
Lakenheath	1427-8	15. 0.0
	1442-3	12. 0.0
	1481-2	10. 0.0
	1487-8	18. 0.0
	1540-1	20. 0.0
Mildenhall	1400-1	4. 13.4
	1407-8	5. 0.0
	1444-5	2. 6.8
	1467-8	4. 0.0
	1539-40	5. 0.0
Tunstead	1437-8	5.0
	1443-4	3.0

Sources: Brandon, Bacon 663-4, 675 and 696; Blythburgh, Richmond, *op cit*, p 38; Gimingham and Tunstead, PRO,DL29.291/4776, 292/4796, 293/4809; Lakenheath, CUL,EDC.7/15/1/35, 39, 47, and 48, EDC.1.C.3; Mildenhall, BL,Add.Roll 53120, 53124, 53137, 53139, and LJ Redstone, 'First Minister's Account of the Possessions of the Abbey of St Edmund', *Proceedings of the Suffolk Institute of Archaeology and History*, XIII, 1909, pp 347-8.

around two-thirds their earlier value, and a small warren at Cavenham (Suff) lay vacant for want of a tenant.<sup>73</sup> The figures then appear to suggest a recovery from the 1460s, but it is doubtful whether this was really the case. For instance, at Brandon the warren lessee, Robert George, paid the £13 6s 8d rent in full in the 1470s which encouraged the Bishopric of Ely to increase it in 1480. George promptly defaulted on payment, running up substantial arrears by the 1490s.<sup>74</sup> Arrears at Desning warren amounted to £44 in 1506, all of which had been accumulated by four different lessees in the previous six years.<sup>75</sup> Yet despite these difficulties, rabbiting remained an integral part of seigneurial revenue. Excluding arrears the Brandon warren lease comprised 33 per cent of gross manorial income between 1400 and 1550, and 20 per cent at Gooderstone in 1500. At Hilborough it represented the biggest single source of manorial revenue.<sup>76</sup> So whilst its profitability in absolute terms declined, rabbiting maintained its relative importance in demesne farming.

<sup>73</sup> PRO,SC6.1117/12.

<sup>74</sup> Bacon 657-690 and 695.

<sup>75</sup> PRO,SC6.Hen.VII/692.

<sup>76</sup> Bailey, *op cit*, p 308; Blomefield, *op cit*, III, pp 403 and 438.

Explaining these contrasting fortunes is more difficult than merely outlining them. Prior to the Black Death of 1348-9, rabbit production was a distinctly low-output concern geared primarily towards household consumption. It presented some commercial opportunities in the luxury goods market, but its mass marketing potential was restricted by its high price and the low incomes of most Englishmen. The early warrens often represented a net financial loss in many years, emphasizing that rabbits were essentially an indulgence enjoyed only by the very wealthy.<sup>77</sup> However, the drastic reduction in the human population after the mid-fourteenth century heralded a remarkable change in fortunes for commercial rabbiting. The exact chronology of late medieval demographic decline is hotly debated by historians, but few dispute that after the 1370s it resulted in rapid gains in living standards and purchasing power for many people.<sup>78</sup> Whilst the grain market collapsed and arable cultivation contracted severely, this increased purchasing power induced changes in taste and fashion, and opened up a new market for goods previously considered as non-essential.<sup>79</sup> Hence in the late fourteenth century there was considerable growth in output of goods with relatively high income elasticities of demand, such as woollen cloth, cutlery, leather goods, pewter and wine.

Commercial rabbit rearing benefited from the changing economic conditions in a number of ways. First, the labour costs of rabbit keeping were low compared to grain farming and this enhanced its attractiveness to landlords in a period of rising wages. Furthermore, cullings could be

sharply increased without a big rise in labour inputs, so that *unit* costs in rabbit production fell appreciably in the fourteenth century (although they rose slightly in the fifteenth).<sup>80</sup> Secondly, the demand for meat rose, and although there are no grounds for supposing that the rabbit suddenly became the meat of the masses, it certainly descended the social scale. Lastly, demand for better clothing increased and chroniclers commented on the rising standard of dress amongst the masses:<sup>81</sup> being a low-value fur, rabbit was most likely to benefit from any expansion in the mass clothing market. The common grey rabbit was most numerous in East Anglian warrens and was used for warmth rather than for display.<sup>82</sup> On the other hand, Methwold, Wretham (Norf) and some coastal warrens specialized in the rarer silver-grey and black rabbits.<sup>83</sup> These were much more fashionable as an adornment on clothing, and apparently Henry VII possessed night attire tailored with black rabbit fur.<sup>84</sup> Its fur also bore a close resemblance to the more expensive ermine, and was much in demand as an imitation.<sup>85</sup> The ability of warrens to meet these new market opportunities depended partly on careful management but also on favourable climatic conditions. The remarkable growth in output from the 1370s to 1390s coincided with a period of warm weather in which the rabbit population flourished.<sup>86</sup>

At first glance, the price evidence for rabbits does not seem to indicate their rising popularity in the fourteenth century. In the second half of the century, falling

80 A crude analysis of running costs (excluding major capital investment programmes) at Lakenheath warren in the fourteenth century indicates a fall from 2.12d per rabbit in 1300-49 to 0.45d in 1390-9, Bailey, *op cit*, p 267.

81 Hatcher, *op cit*, p 34.

82 Veale, *op cit*, 1966, p 176.

83 Sheail, *op cit*, 1971, p 25; Tittensor, *op cit*.

84 Veale, *op cit*, 1966, pp 15 and 141.

85 I am grateful to Margaret Windham Heffernan for this information.

86 The supposition that climate improved is based on knowledge that harvests were bountiful and grain prices low in this period, Hatcher, *op cit*, p 51.

77 This was inevitable in the thirteenth century when warren populations were low and variable and yet warreners' wages were high.

78 E H Phelps Brown and S V Hopkins, 'Seven Centuries of the Price of Consumables, Compared with Building Wage-rates', *Economica*, XXIII, 1956, pp 296-313.

79 For a general survey of these trends see Hatcher, *op cit*, pp 31-47.

demand for bread grains was reflected in a drop in price of about 22 per cent between 1351–60 and 1391–1400, and so conversely we might expect a rise in rabbit prices: in fact the data in Table 2 suggest a fall of 5 per cent over the same period.<sup>87</sup> Whilst this patently conceals a rise in *real* terms relative to grain whose price fell more rapidly, it compares unfavourably with beef prices which rose by around 11 per cent.<sup>88</sup> Yet this does not necessarily mean that demand for rabbit was less buoyant than for other meats, rather that its rapidly expanding population led to a rise in supply which exceeded the rise in demand, thus deflating prices.

The most cursory glance at the documents reveals that East Anglian rabbits were in demand from all quarters in the late fourteenth century. Even a lowly thief captured in Brandon possessed 'one gown furred with rabbit', and rabbit meat was also in demand on local markets, although retailers could not always meet that demand. Why else were butchers from Sudbourne and Orford (Suff) repeatedly poaching in Iken warren in the 1380s?<sup>89</sup> Distant markets proved even more lucrative, so that much of Brandon's output was bought in bulk by William Staunton, the renowned London merchant.<sup>90</sup> This heralded the beginning of a long tradition of trade between East Anglian warrens and London poulterers and skinner, and in the early seventeenth century Reyce noted that Suffolk 'conies . . . are carried to London with noe little reckoning'.<sup>91</sup> Accessibility to major markets was crucial because high transport costs undermined profits and long delays could ruin stock, as happened in 1388 when 3000 skins from remote

Pembrokeshire warrens had rotted by the time they reached Bristol.<sup>92</sup> The great advantage of East Anglian warrens was their proximity to the lucrative London market, which was reached either directly from the coast or overland.<sup>93</sup> In London many skins were treated or made into felt and then exported, the most common destinations being Calais and the Low Countries. In 1365 John Calwer shipped 12,000 skins to Flanders, and eighteen years later Collard Chierpetit exported 10,000 to Holland.<sup>94</sup>

A marked fall in the price for rabbits between 1390 and 1420 coincided with a drop in production on some warrens, indicating a check in the boom by the early fifteenth century, a feature also common to other late medieval 'growth' industries.<sup>95</sup> If the fourteenth-century successes had been based upon an ability to meet rising per capita demand for meat and fur, then the early fifteenth-century downturn was based on a tendency to over-supply. Despite a century when its price fell gradually, the rabbit was still a relatively scarce and expensive commodity in 1400 and demand was unlikely to expand indefinitely. The rabbit had a higher income elasticity of demand than, for example, bread grains, but it was not totally elastic. Furthermore, continued demographic decline in the early fifteenth century was likely to have sapped aggregate demand. Yet new warrens were still appearing, as at Wighton (Norf), whilst older warrens all over southern England continued to raise capacity, and eventually must have saturated the market.<sup>96</sup> Indeed, the tend-

<sup>87</sup> *Ibid.*, p. 51.

<sup>88</sup> L. Genicot, 'Crisis: from the Middle Ages to Modern Time', in M. M. Postan (ed.), *The Cambridge Economic History of Europe*, vol. II, 'The Agrarian Life of the Middle Ages', second edition, Cambridge, 1966, p. 686.

<sup>89</sup> Bacon 293/5; IESRO, HD32:293/387 May 1391.

<sup>90</sup> Bacon 653, 655–7.

<sup>91</sup> Hervey (ed.), *op cit.*, p. 35.

<sup>92</sup> H. Owen (ed.), *A Calendar of the Public Records Relating to Pembrokeshire*, 1911, vol. I, p. 80.

<sup>93</sup> Even the 'inland' warrens of Breckland enjoyed good river communications to Lynn via the Great Ouse.

<sup>94</sup> *Calendar of Patent Rolls*, 1364–7, p. 93; CCR, Ric. II vol. 6, p. 330; CCR, Hen. IV vol. 1, pp. 455–6, 523. Compare this export trend with the early thirteenth century when merchants of France and Spain imported rabbit skins to London, CCR, Hen. III vol. 3, p. 479.

<sup>95</sup> Hatcher, *op cit.*, pp. 35–6.

<sup>96</sup> In 1413–14 the Wighton account refers to 'nova warrena', PRO, DL29.290/4765.

ency to excess-supply even in the boom years has been noted, and the sudden leveling of demand exacerbated that tendency.

The sharp drop in rabbit prices between 1390 and 1420 was followed by a century of stability when they held steady at just under 2*d* each, a remarkable performance considering the continuing price decline of other goods and the general deflationary trend of the period. Yet this evidence apparently contradicts that of warren values and rent payments, which suggest continuing decline and deepening depression in the industry during this century. A possible explanation for this paradox is that the warren as a means of rabbit production fell in value, whilst market demand for the rabbit *per se* was more buoyant. Warren values were primarily undermined by the rabbit population's slow but inexorable rise, which might have depressed the quality of warren stock, but certainly broke the warrens' monopoly of supply by increasing the rate of escape from the warren area. Otherwise the drop in warren rents may be explicable in terms of the general contraction in rents – particularly for land – around this time. As the tenant position grew stronger relative to the landlord in the fifteenth century, and as rental opportunities increased and diversified, so there occurred a general slippage of rents, which would have afflicted warren values.

The supposition that it was the value of warrens rather than the market for the rabbit which declined in the fifteenth century requires further verification. In part this comes from seigneurial efforts to regulate the exploitation of extraneous colonies within their jurisdiction. Legally these 'wild' rabbits remained under the protection of the free-warren charter, but in *practical* terms it was much harder for the lord to enforce his rights outside the protection of the rabbit-warren, and so peasant access to the animal became easier. Seigneurial response to this new situation varied

considerably. The demands that the Frecklenham warrener destroy burrows on the common land noted earlier appear to be a response to the damage inflicted on pasture, but in reality they could have been a cunning ruse to restore the warren's monopoly.<sup>97</sup>

Other landlords accepted the new conditions more stoically, and the Duchy of Lancaster merely charged 10*s* for the right to take rabbits at a wild colony in Weeting (Norf) from 1414, although by 1420 it had abandoned the idea.<sup>98</sup> Elsewhere a compromise between lord and tenant was reached. At Gimingham (Norf) in the sixteenth century the villagers 'shoold have all the conyes breedyng and dwelling uppon every of ther severall groundes to increase or distroy at their liberties and pleasures, except such as shoold brede uppon the demeanes of the said manor which shoold have bene free chase and rechase to feede uppon any of the tenants grounds without lett or disturbance of any of the said tenants', and the tenants should render 53*s* 4*d* each year for this right.<sup>99</sup> The agreement must have presented insuperable practical difficulties, for it is hard enough to distinguish one rabbit from another, let alone identify their burrow of origin. The lord had obviously imposed the rent in self-recompense for all the extraneous cullings which he could no longer control. No wonder the villagers were refusing to pay. This type of 'agreement' also best explains the payment of 12*d* 'pro le warrene monye' by John de Porter of Boyton (Suff) in 1539.<sup>100</sup> Such agreements might have been commonplace in the early sixteenth century until landlords recognized their ultimate futility.

Another important factor in undermining the value of the warren in the fifteenth century was the continuing popularity and

<sup>97</sup> See above, n 41.

<sup>98</sup> PRO,DL29.290/4765 and 4773.

<sup>99</sup> PRO,DL44.295.

<sup>100</sup> PRO,SC6.3420 m.22.

increasing sophistication of poaching. Not only are court rolls much more explicit about the methods of poachers, but by mid century the size of amercements levied on them had risen appreciably, sometimes to remarkable levels. In the 1460s the Bishopric of Ely amerced four Thetford and Downham men a total of £21 for their activities in Brandon warren, and Thomas Church of Risby (Suff) was ordered to pay £10 at Lackford (Suff) 'as an example to other wrong-doers' in 1516.<sup>101</sup> It is doubtful whether such large sums were ever paid, although their size reflects the extent of seigneurial concern over continued and successful attempts to breach the monopoly of the warren.

That the market for rabbits retained some buoyancy in the same period is evident from a number of sources. Its price stability is highly suggestive, reflecting a balance between supply and demand not apparent in other sectors of primary production. New and bigger markets for English rabbit producers emerged in the fifteenth century. Veale has suggested that by mid-century the rabbit had replaced the Russian squirrel as the basic fur of north-west Europe, and the growth of exports from London points to England's role as a major supplier.<sup>102</sup> London was not the only port to benefit, for at Blakeney (Norf) in the sixteenth century rabbit skins were the fourth-largest export commodity.<sup>103</sup> The Low Countries remained an important market, but Norfolk ports also sent furs to Danzig and the Baltic.<sup>104</sup>

Although lower prices and higher costs inevitably meant that profit-margins were lower than they had been in the fourteenth century, the rabbit trade between East

Anglia and London remained prosperous. Methwold warren was a regular supplier to the London market, whilst John Hopton entertained London merchants viewing his stock at Blythburgh and Easton warrens (Suff) in the 1460s.<sup>105</sup> In 1529 a London merchant was fined for importing East Anglian rabbits during the close season imposed by the Poulterns.<sup>106</sup> Throughout the Middle Ages this guild had fixed the price of rabbits on the London market, and in the fifteenth century one would fetch between 3d and 4d.<sup>107</sup> Hence a merchant shipping a load of 5000 East Anglian rabbits purchased at 2d each would still make a minimum gross profit of £21 or a maximum of £40, depending on the current price. Even after the relatively high costs of transport and labour, the net profit on one trip was still considerable.

Nor does the accumulation of substantial arrears on the payment of warren leases in the fifteenth century necessarily reflect depressed demand for the rabbit. The large annual rents demanded by some warrens were undoubtedly justified in years of normal cullings when the profits would be large, but the rabbit population could fluctuate greatly over short periods. Hence it was by no means certain that a lessee could cull enough stock to raise the price of the lease, and a run of bad years could prove disastrous. The attitude of landlords to these arrears could also prove vital to the well-being of their warrens. An intransigent and demanding creditor may have forced a desperate lessee to cull dangerously large amounts of stock in order to meet his debts. So even as rentier farmers, landlords had to manage their warrens with great care.

<sup>101</sup> Bacon 668; WSROB, E.3/15.12/1.17.

<sup>102</sup> Veale, *op cit*, 1966, p 177.

<sup>103</sup> J Thirsk, 'Farming Regions of England', in J Thirsk (ed) *The Agrarian History of England and Wales*, IV, Cambridge, 1967, p 43.

<sup>104</sup> B Cozens-Hardy (ed), *The Maritime Trade of the Port of Blakeney, Norfolk 1587-1590*, Norfolk Record Society, VIII, 1936, p 32.

<sup>105</sup> In 1453 the Methwold reeve received £14 6s 7d from 'John Edmond, Pultere of London', PRO, DL29.293/4826; Richmond, *op cit*, pp 39 and 81.

<sup>106</sup> Jones, *op cit*, p 83.

<sup>107</sup> *Ibid*, pp 124-36.

## III

The rabbit undoubtedly made a significant impact upon those areas to which it was introduced. East Anglian soils display a wide variety of type and composition, from fertile clays to thin, acidic sands, and in the Middle Ages these sands presented a formidable obstacle to cultivation. Hence Breckland was unable to sustain much arable farming, and has consequently been regarded by historians as economically under-developed.<sup>108</sup> Yet Breckland, like the Norfolk Goodsands and Suffolk Sandlings, became an important sheep-rearing area and the subsequent emergence of rabbiting also helped to generate wealth and to counteract its deficiencies in arable production. Rabbits were valuable precisely because they provided an opportunity to make productive use of the poorest soils, and indeed some warrens were founded on soils described as fit *only* for rabbits.<sup>109</sup> Furthermore, as areas of poor soil were most likely to suffer the brunt of the declining grain market in the later Middle Ages, then rabbiting offered a welcome source of alternative income in a difficult period.

The industry presented a range of employment opportunities, not all of them legal, and as output increased so did the occupational spin-offs. The position of warrener was itself financially rewarding, whilst helping with the trapping or guarding of rabbits could provide a useful source of supplementary income at the very least. The preparation of furs was a skilled and specialized task, and towns and villages near the warren areas harboured a number of skimmers and barkers dependent on the local rabbit and sheep trades.<sup>110</sup> They were prominent in medieval Thetford and Bury St Edmunds, and at Mildenhall in 1381 John Cope, *pelliparius*, could afford 8s

annual rent for a newly constructed workshop.<sup>111</sup>

The rabbit industry also encouraged other specialists in the clothing trades, such as listers and glove-makers, and for instance Simon Glover of Brandon owed the local warrener for 253 skins in 1477.<sup>112</sup> It is also probable that the fur was sometimes shorn from the skin and then felted, again for use in clothing. Unfortunately there are no direct references to this art, although if it was undertaken by the group collectively known as 'skimmers' then it is unlikely that it would leave any more precise record in medieval documents.<sup>113</sup> Of course, the amount of specialist craft-work generated by the rabbit industry locally should not be overstated, for the largest warrens tended to send their produce directly to London, and so some of the benefit accrued to London skimmers and poulterers. However, this trade, though largely seasonal, did then provide much-needed stimulus to the boatmen and carriers of the region.

As the mass of the peasantry was legally excluded from taking the rabbit, any benefit to them from the growth of the industry would appear negligible. However, court rolls overwhelmingly suggest that many peasants living in the vicinity of warrens secured a reasonable supply of rabbits illegally, either for domestic consumption or for distribution through the black market. The incidence of poaching as recorded in these rolls increases rapidly from the mid-fourteenth century, reflecting both the growth in rabbits and of poaching itself. There can be no doubt that the recorded cases represent only a part of the total number of offences, as illustrated by a plea to Brandon jurors to ascertain

108 Bailey, *op cit*, pp 1-10.

109 Sheail, *op cit*, 1978, p 348.

110 Bailey, *op cit*, pp 201-4.

111 A Crosby, *A History of Thetford*, Chichester, 1986, pp 51 and 58; R S Gottfried, *Bury St Edmunds and the Urban Crisis 1290-1539*, Princeton, 1982, pp 111-20; BL, Add. Roll 53117.

112 Bacon 296/29 June 1477.

113 M E Burkett, *The Art of the Feltmaker*, Kendal, 1979, pp 100-4; for the export of felt see CCR, Ric. II vol 1, p 146.



the names of 'wrong-doers in the warren' in the 1380s.<sup>114</sup>

The attraction of poaching was its simplicity and its profitability. Most warrens were situated on vast and isolated tracts of heathland, some distance from the nearest village and were therefore exposed and palpably difficult to protect. In addition, the rabbit prefers to leave its burrow and graze nocturnally, thus presenting poachers with excellent cover from the protective gaze of warren officials and with easier pickings on the ground. With no necessity to drive the colony from its burrows, they merely surrounded the unsuspecting animals with nets and rounded them up with dogs. The stout warren lodges provided a base for the warreners' operations against the poachers and welcome protection in case of danger, but they fought a losing battle.

Many of the peasants who lived in the rabbit-producing regions must have poached at some stage during their lives, and most of the reported cases involved one-off offenders. Occasionally the court jurors distinguished between those actually operating in the rabbit-warren and those who contravened the seigneurial right of free-warren in its more general sense. Hence there are some presentments against men killing hares ('*lepores*') 'within the lord's warren', which patently refer to the legal, rather than physical, concept of warren.<sup>115</sup> However, the countless references to the use of nets, ferrets and dogs largely concern planned operations within the rabbit-warren itself, and often the perpetrators of these deeds are called '*communes venatores*', common or habitual poachers. Some travelled appreciable distances to poach, such as the nine miles by an Ickburgh (Norf) man to Brandon warren,

and the seven miles by John Newman of Spexhall (Suff) to Westwood warren.<sup>116</sup>

It is also apparent that no-one was beyond reproach, judging by the number of petty clerics involved in poaching. In 1435 the parson of Cressingham (Norf) owed a £10 amercement for poaching at Swaffham, and Augustinian canons from Blythburgh Priory were regular unwanted visitors to Westwood warren. In 1425 one of their number, Thomas Sherman, was described in the court roll as 'a poaching canon'.<sup>117</sup> Most of these regular poachers reared their own ferrets and dogs, and made their own nets. Greyhounds were popular, and were certainly favoured by the Blythburgh canons. However, rough heathland terrain proved demanding and other poachers preferred the more hardy lurcher, a cross between the greyhound and the collie.<sup>118</sup> Court officials kept a watchful eye over these men, and John Brette of Flempton (Suff) was fined because 'he kept a certain dog in order to kill the lord's rabbits'.<sup>119</sup> Some poachers, such as Geoffrey Sewale of Walberswick, preferred to set traps in the warrens instead, but for many ferreting remained ever popular.<sup>120</sup> Indeed, they were in such demand on the Suffolk Sandlings in the fifteenth century that one Blythburgh canon ran a profitable business in leasing his well-trained ferrets to other poachers, presumably for a suitable fee.<sup>121</sup>

By the later Middle Ages poaching had become a sufficiently serious and lucrative business for poachers to organize themselves into gangs. These were not merely some haphazard extension of individual operations, but represented a deliberate and

<sup>114</sup> Bacon 292/5.

<sup>115</sup> See for example the case of Henry Ingellhous, *chivaler*, of Tunstead who in 1426 hunted hares with his greyhound, PRO,DL30.103/1423.

<sup>116</sup> Bacon 289/4 February 1329; IESRO,HA30:312/195 December 1449. The court jurors at Methwold in 1370 complained that one John de Burgh of Cambridgeshire had been poaching in the warren, PRO,DL30.104/1471 m.8.

<sup>117</sup> PRO,SC6.944/12; IESRO,HA30:312/194 October 1430, 312/195 December 1442, and 312/196 February 1425.

<sup>118</sup> Turner, *op cit*, p 105.

<sup>119</sup> WSROB,E.3/15.12/1.14 December 1410.

<sup>120</sup> Sewale was amerced 6d for setting *laqueus* for rabbits, IESRO,HA30:312/195 April 1448.

<sup>121</sup> IESRO,HA30:312/195 July 1449.

carefully planned pooling of knowledge and resources. Their activities were characterized by efficiency and ruthlessness, and they entered warrens heavily armed and equipped with a comprehensive range of poaching accessories. Their success undoubtedly prompted manorial officials to try and catch them with incriminating evidence even before they entered the warrens. The homes of an east Suffolk gang were scrutinized by court officials from Walberswick, who allegedly found four men keeping lurchers 'in their tenements', one man keeping ferrets and a net 'in his house', and another with a supply of 'haypenne' nets.<sup>122</sup> A Thetford gang of the 1440s, equally well equipped but more elusive, was reportedly operating in Downham warren (Suff) attired with 'soldiers tunics, steel helmets, bows and arrows', whilst others were armed 'with cudgels and staffs'.<sup>123</sup> In September 1444 this formidable bunch attacked and wounded three members of a rival gang from Elveden (Suff) 'and without licence abducted and unjustly imprisoned them in the town of Thetford'.<sup>124</sup>

Many of these Breckland gangs were comprised of skilled craftsmen, notably bakers, weavers, fishermen, and hostellers, and with their wide range of contacts hostellers may have been particularly important in co-ordinating activities.<sup>125</sup> It is also possible that some warreners played a double game, for their expertise and local knowledge would have been invaluable. Robert Fisher, a warrener domiciled in Thetford, certainly poached in nearby Downham warren in 1446.<sup>126</sup> With or without inside help, most poaching gangs included a number of men drafted from outside the locality. Court rolls always listed those culprits known to them, but

often complained that these were joined 'by many other unknown men'.<sup>127</sup> Such anonymity reduced the courts' chances of breaking up gangs, and provided the gangs themselves with a wider range of dispersal points for their illicit gains.

It is possible that the rise in poaching was motivated by a sense of social grievance as much as by economic necessity. Resistance to the feudal order was endemic in late-medieval East Anglia, and court rolls repeatedly record refusals to perform manorial offices, labour services and the like.<sup>128</sup> Occasionally this flared into violent protest, and most commentators have noted the vehemence of the 1381 revolt in the region.<sup>129</sup> The criminal activities of the poaching gangs were primarily directed against a privilege of the feudal order, and so might have been championed and condoned by other peasants: if this was the case, then it would confirm Hobsbawm's theory of social banditry.<sup>130</sup> The rabbit was undoubtedly a very tangible embodiment of seigneurial privilege and status, and therefore an ideal medium for social protest. The Smithfield rebels of 1381 explicitly demanded that all men should have the right to take game and to hunt hares in the field.<sup>131</sup> The physical damage caused by mauling rabbits was certainly a source of friction and was amongst the grievances cited in Kett's Rebellion in Norfolk in 1549.<sup>132</sup> Unfortunately, conclusive proof that poaching was a major form of social protest is elusive. Its increase

<sup>122</sup> *Ibid.*, March 1447.

<sup>123</sup> WSROB, 651/31/4.

<sup>124</sup> *Ibid.*

<sup>125</sup> WSROB, 651/31/3 and 4.

<sup>126</sup> WSROB, 651/31/4.

<sup>127</sup> In 1426 it was noted that Roger Geddown 'gathered with various other people' in the lord's warren at Northreppes, PRO, DL30.103/1423.

<sup>128</sup> See for example Gottfried, *op cit*, chap 6; C Dyer, 'The Social and Economic Background to the Rural Revolt of 1381', in R H Hilton and T H Aston (eds), *The English Rising of 1381*, Cambridge, 1984; M K McIntosh, *Autonomy and Community: the Royal Manor of Havering 1200-1500*, Cambridge, 1986, pp 50-85; Bailey, *op cit*, pp 223-4, 246, and 279-80.

<sup>129</sup> E Powell, *The Rising in East Anglia*, Cambridge, 1896; R Hilton, *Bondmen Made Free: Medieval Peasant Movements and the English Rising of 1381*, 1977, chap 6.

<sup>130</sup> E J Hobsbawm, *Bandits*, 1969, pp 13-23.

<sup>131</sup> R B Dobson, *The Peasants' Revolt of 1381*, p 186.

<sup>132</sup> Sheail, *op cit*, 1978, p 352.

in the later fourteenth century certainly corresponded with a rise in social tensions, but also with a rise in the demand for the rabbit. Indeed, there was little sense of camaraderie or social unity between those Thetford and Elveden gangs in the 1440s.

#### IV

Until evidence about the fortunes of commercial rabbiting from other regions is compiled and assimilated, one must be wary of drawing general conclusions from the experience of East Anglia. This was undoubtedly a favoured area by virtue of its ability to reach the bigger markets cheaply and efficiently, and it remains to be seen how the more remote warrens fared in the Middle Ages.<sup>133</sup> Yet the East Anglian experience provides an interesting insight into patterns of demand in the medieval economy, especially after the Black Death. The limited commercial potential of the rabbit when real wages were low in the thirteenth century comes as no surprise, nor indeed that demand for rabbits – no less than for other ‘luxury’ goods – should increase with per capita incomes in the late fourteenth century. What is surprising is the very rapid increase in aggregate output in the quarter-century after 1370, which suggests that historians may not have realized the potentially wide demand differential between basic and non-essential goods in the later Middle Ages, nor indeed the speed at which new markets expanded. Rabbiting also reveals something about patterns of supply in this period. Landlords, particularly ecclesiastical landlords, have often been regarded as rather conservative, slow to respond to economic change and notoriously poor investors in their agrarian operations.<sup>134</sup> Yet

this evidence reveals a remarkable willingness and readiness by landlords to transfer capital/investment into a high-growth project, at the very time that arable farming was becoming less profitable. This flexibility earned them handsome profits initially, and provided an important source of income in the difficult years of the fifteenth century.

The rabbit’s ability to convert unproductive heathland into a source of not inconsiderable wealth also carries important implications for regions of poor soils, the so-called marginal economies of England. Because of their inherent and insuperable disadvantages in arable farming, these regions are assumed to have been economically underdeveloped and to have borne the brunt of the late-medieval agrarian depression. After the Black Death, arable cultivation certainly declined in the poor-soil regions of East Anglia, but the extent of economic decline was mitigated to some degree by their ability to develop alternative sources of income.<sup>135</sup> The profitability of commercial rabbiting helped to offset seigneurial losses in income from arable farming, and its occupational spin-offs – legal or not – helped to diversify their economies and bolstered their resilience to demographic decline. There is consequently an intriguing general implication from this study, namely that marginal regions could possess much more flexible and wealthy economies than hitherto assumed, because historians have tended to neglect their ability to develop other specialist agrarian or industrial roles which could offset their natural disadvantages in grain production. As Blomefield succinctly commented, ‘the rabbits . . . on the most barren part are not only the more excellent for that reason, but render that which would otherwise be of no use to be of equal value with much better land’.<sup>136</sup> What

<sup>133</sup> Sheail, *op cit*, 1971, pp 69–70 has commented on the importance of market accessibility in maintaining a successful warren, and explains the limited development of some Scottish and Welsh warrens in these terms.

<sup>134</sup> M M Postan, *The Medieval Economy and Society*, Harmondsworth, 1975, pp 112–16.

<sup>135</sup> Bailey, *op cit*, chaps 4 and 5.

<sup>136</sup> Blomefield, *op cit*, I, p 554.

Sheail suspected of the early modern period was certainly true of the Middle Ages; the rabbit's meat and fur were so highly regarded that its value far outweighed its destructive capacity. In our nursery days few of us ever realized that when Daddy went a-hunting, he was not after any old skin to wrap the baby Bunting in.

## Notes on Contributors

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