

Multi-Use Management of the Medieval Anglo-Norman Forest

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Modern public perceptions of man's interaction with the environment are heavily rooted in our post-industrial setting. The environment comes to the forefront each year, especially for school children, via Earth Day celebrations. The first Earth Day in 1970 was organized as a 'teach-in' with both an educational and a protest flavour.¹ In tone, it was negative: a forum to express American concerns about degradation of the land, rivers, lakes, and air.² In this Earth Day setting, man is viewed as the destroyer, the polluter of the environment. This has a serious impact on the perception of man's historical interaction with the environment: if man has done such a bad job of keeping our environment healthy in spite of all of our modern scientific knowledge, how much more damage must he have done in the past in his ignorance?

Yet a critical look at legal documents of the first three Anglo-Norman kings, who reigned over England and Normandy from 1066 to 1135, reveals that medieval landholders in this kingdom practised conscious forestry management to balance all of the demands on woodland resources; and their practices were not that different from those implemented in the modern forestry systems of the United Kingdom and United States. Despite the commonly held view that medieval man consumed his resources without control, the Middle Ages were in fact a time of balancing the multiple uses of the forest to obtain the highest feasible short and long-term economic benefit.³

Previous historians of the English forest, including Charles Cox, Charles Young and H. A. Cronne, view medieval forestry as medieval man's attempt to conserve woodlands strictly to provide hunting grounds for noble diversions.⁴ In 'Conservation Policies in the Royal Forests of Medieval England', Charles Young specifically argues that the Norman and Angevin forest laws slowed destruction of the forest, 'even if this result was no more than incidental to the love of hunting by various English kings'.⁵ Any conservation was an unforeseen by-product of placing the human desire for sport slaughter above the environment. Landscape and ecological historians echo this viewpoint to an extent. George Peterken, a modern woodland historian and conservation specialist, recognizes efforts to preserve medieval woodlands as sources of timber in England dating back to at least the Assize of the Forest in 1184, but characterizes most forest management as 'exploitive felling and a prayer that natural regeneration would follow'.⁶ Ian Simmons notes that the multi-faceted nature of wooded forests made it 'vital not to diminish the productivity of woodlands', yet he explains only that royal forests were a 'resource-laden

asset' that could be sold or conferred on others.⁷ Oliver Rackham acknowledges that landowners and commoners often possessed rights in the king's forests, but goes on to argue that these rights destabilized the forest landscape.⁸ Except for a few references to *Domesday Book*, Rackham fails to include the Norman period when the forests were newly established, concentrating instead on the mid and late thirteenth century, after forestry practices had been radically altered because of changing politics. No previous scholarship has delved into the multi-use nature of the forest in the Anglo-Norman kingdom, both in England and the Norman Continental holdings. This article attempts to address this gap.

Although royal hunting grounds existed in England prior to the conquest, William the Conqueror imported the term 'forest' and its legal implications from the Continent. 'Forest' most often designated a legal entity consisting of extensive land, including both woodland and pasture, within which the right of hunting was reserved for the king or his designees and was subject to a special code of laws administered by local officials.⁹ The medieval 'forest' did not imply continuous tree-cover, although many examples of 'forests' were well wooded.¹⁰ Designated 'forests' included wooded lands like the Forest of Dean, but others such as Dartmoor and Exmoor were moorland, and still others like Sherwood were heath.¹¹ Yet many of the legal 'forests' were wooded and these operated as multi-purpose areas, balancing wood collection, hunting and pasturage.

This multi-use nature is evident in two charters King Henry I granted to the abbot and monks of Chertsey. In the first one, the King ordered: '... in all their woods they are to have the power of taking timber for the use of their church, without anyone's leave. They may have their own dogs to take hares and foxes and wild cats on their own land, both within and without the forest'.¹² Later the King granted the right to take 'from their own wood all that is necessary for their own use, without leave of the royal foresters or hindrance from them'.¹³ These two short passages tell us a few notable things. First, the King acknowledged the historical right of the abbey to use woodland, even though that woodland was within a designated royal forest. As in all medieval settlements, wood was required for heating, cooking, and building. No settlement could last long without wood. The King, as the ultimate church patron, knew as well as anyone that this grant was a necessity. Second, King Henry employed foresters, specific officers responsible for the control of timber collection in the area. Under critical analysis these medieval documents can tell us significant details about resource distribution. The King may have controlled the ultimate right to the forest resources, but he distributed specific rights freely. In fact, the first three Anglo-Norman kings granted specific rights on forested land to no less than eighteen religious houses – and these are only the documents that have survived for 950 years.

Modern foresters operate under similar pressures of multiple woodland uses. The United Kingdom published its national forest programme in February 2003. The principal

objective of the programme is ‘sustainable forestry’ which recognizes ‘the importance of linking the economic, environmental and social values of forests’.¹⁴ A supplementary Forestry Commission paper, ‘The Sustainable Management of Forests’, enumerates the multiple purposes of forest that must be linked: timber and wood products, employment in managing and harvesting forests, leisure and recreation, and the value of woodlands as wildlife habitat.¹⁵ In the United States, Congress passed the Multiple-Use Sustained-Yield Act in 1960 ‘to authorize and direct that the national forests be managed under principles of multiple use and to produce a sustained yield of products and services’.¹⁶ The Act listed the uses of the national forest as ‘outdoor recreation, range, timber, watershed, and wildlife and fish purposes’.¹⁷ These competing benefits were to be ‘utilized in the combination that will best meet the needs of the American people ... [with] harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land’.¹⁸ Since the law’s promulgation, the United States Forest Service (USFS) has adopted and revised planning rules in order to adhere to the Act’s requirements, always keeping in mind the multi-use nature of its mission.¹⁹ Forestry management continues to be a balancing act.

Medieval landholders practised the same type of multiple-use forestry management. In fact, the description of forest uses is almost identical: timber, range, and recreation top the list. In a charter dated 1133, the Earl of Leicester gave permission to the monks of St Mary of Garendon to cut ‘timber from the said woods [of Sheepshead and Dishley] for their houses, firing, and fencing, provided that they do not waste the woods’.²⁰ In this charter, the Earl expressed his understanding that the monks of St Mary’s needed wood for everyday life; however, he did not want the woods overused. King Henry also issued charters that included a ‘no waste’ clause. For example, in 1122, St Peter’s Hospital at York was given ‘wood for their houses and buildings and for fuel [...] and all easements in the forests which may be necessary to them, saving waste’.²¹ By setting these restrictions, the King made it clear that abuse of the woodland resources would not be tolerated; yet he recognized the necessity of limited woodcutting. This is not unlike the active resource management of modern forestry systems, which emphasize use ‘without impairment of the productivity of the land’.²²

How was this resource management mindset put into practice? Anglo-Normans practised wood conservation in many ways, collecting wood for daily use without clear-cutting. Wood collection relied on the practices of coppicing and pollarding. Trees could be cut approximately three feet above ground level to create a sprouting stump (coppicing) or higher on the trunk so that young sprouts were out of the reach of grazing animals (pollarding). Coppice stands usually consisted of one species growing from regularly spaced stumps, with larger ‘standards’ grown for construction timber scattered among them.²³ Coppicing greatly increases the amount of wood produced by the tree.²⁴ Thus a smaller area of coppiced trees is needed to fulfil demands that will otherwise require extensive clearing. The practices of coppicing and pollarding also increase the lifespan of

trees. Trees normally age because they reach a maximum height and branch size, thus fixing the amount of leaves available to gather nutrients, but continue to grow in diameter. Eventually the tree cannot supply itself with enough water and nutrients to maintain the thick trunk, so the branches begin to die. Coppice stools, on the other hand, are capable of living indefinitely because each time they are cut, the ageing process restarts.²⁵ By practising coppicing, the need for clear cutting was reduced. This was active medieval timber management at work.

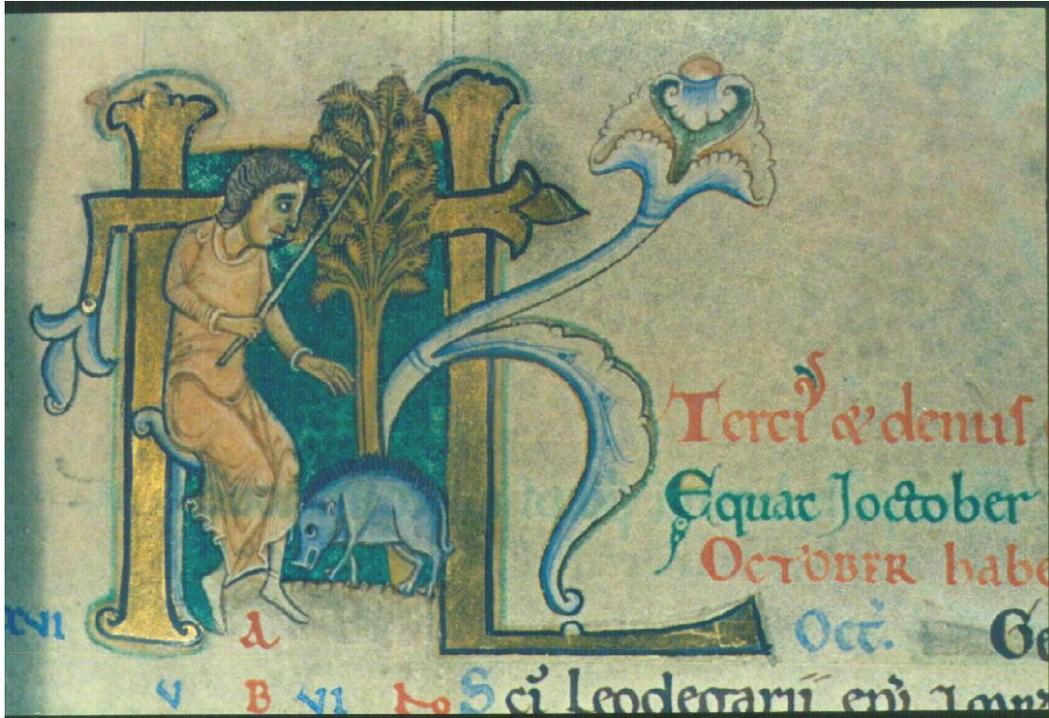


Figure 1. St. Albans Psalter c.1140 historiated initial KL in October calendar showing a swineherd knocking down acorns for a pig below. Copyright © Bodleian Library, University of Oxford, MS. Auct. D. 2. 6, fol. 6r.

The Anglo-Normans harvested the fruits of the forest in multiple ways. Not only did the forest produce timber and firewood, but it also provided pasture for animals. King Henry I gave to the abbey of St Martin at Battle in England the ‘feeding in the woods of “Bocfalde” and “Betlesparrioc” one pig for every three that the King has there’.²⁶ The King also conferred on St Mary’s in York the king’s forest of Carlisle ‘for their swine’.²⁷ Both the King and the abbey took advantage of the woods for fattening their swine, as evidenced in these charters. King Henry allowed William Mauduit pasturage for his cattle in the royal forests in the early 1130s.²⁸ This use of the royal forest as grazing for both pigs and cattle was a critical component of its value, similar to the value of grazing on forested lands in the modern era.



Figure 2. Brookland Lead Font with Calendar Images. Knocking down acorns for a pig is shown for November in the center panel, lower left. The pig slaughter represents December in center panel, lower right. Francis Bond, *Fonts and Font Covers* (London: Oxford University Press, 1908), p. 80.

Medieval illuminations affirm these pasturage practices. Contemporary calendars depict the practice of allowing pigs to gorge on acorns in the fall months to fatten up before the winter slaughter. In the Anglo-Norman period, a calendar created c. 1140 at St Albans monastery depicts a swine-herder knocking down acorns from an oak tree for his pig on the October page, followed by the slaughtering of the pig in November with a hatchet (Figure 1).²⁹ The Hunterian Psalter, illuminated in Lincoln or York in the twelfth century, shows a swineherd in a slate-coloured cloak knocking down acorns with a forked stick for three brown pigs.³⁰ A similar calendar illuminated in Normandy c. 1180 vividly depicts a swineherd knocking down acorns with a hooked staff for his four pigs as the November image, and killing and roasting the pig for December.³¹ Other forms of art also included images of this forestry practice. A late twelfth-century Norman lead font in St Augustine's Church at Brookland, Kent, illustrates a swineherd beating oaks and a pig feeding on the fallen acorns below in November, and killing the fattened pig in December (Figure 2). A very similar lead font is located at Saint-Evroult-de-Montfort in Orne. George Zarnecki has argued that both fonts have a Continental Norman origin, based on the similarities between the images portrayed in northern French calendar cycles and the Orne and Brookland fonts.³² Although both fonts may have been constructed in Normandy, the imagery series is also strikingly similar to English illuminated calendars, particularly the Hunterian Psalter, which ties the practices to England as well.³³ A late eleventh- or early twelfth-century stone baptismal font at Burnham Deepdale shows the

killing of a hog in November rather than in December.³⁴ These Occupations of the Months became common in later fourteenth-century manuscripts such as *The Hours of Jeanne d'Evreux*, in which a swineherd knocks down acorns to feed his pigs, and Jean de Berry's *Petites Heures*, in which pigs forage in October and are slaughtered in December.³⁵ Because of the necessity of providing food in the winter, the December pig slaughter was common practice, making it only reasonable that Anglo-Normans would take advantage of the extra protein found in acorns to increase the yield of a primary source of meat. This practice is witnessed in both legal documents and visual ones.

While royal forests yielded pasture and timber, they also served as hunting reserves, the traditional designation of the forest.³⁶ This tradition in England dated back at least to Saxon days when the right of the chase was reserved for the king in areas close to royal residences.³⁷ Typical 'beasts of the chase' reserved for the king within hunting grounds were red deer, fallow deer, roe deer, and wild boar.³⁸ These rights were enumerated in two Anglo-Norman charters. In Normandy, King William I retained the right to red deer, roe deer and boar within the woods he gave to the Caen abbey of Saint-Etienne.³⁹ In England, the abbot and monks of St Mary's of York had dominion throughout the forest, except that they were required to preserve the hart, hind, boar and hawk for King Henry's use alone.⁴⁰ The designation of land as forest led the Anglo Saxon Chronicler to point out the love that William the Conqueror had for the hunt in an epitaph for the King:

He made great protection for the game
And imposed laws for the same,
That who so slew hart or hind
Should be made blind.
He preserved the harts and boars
And loved the stags as much
As if he were their father.
Moreover, for the hares did he decree that they should go free.
Powerful men complained of it and poor men lamented it,
But so fierce was he that he cared not for the rancour of them all,
But they had to follow out the king's will entirely
If they wished to live or hold their land,
Property or estate, or his favour great.⁴¹

This passage must, however, be read in a political context, since religious houses relied on forestry rights for survival and those rights were often challenged. The entertainment value of the forest was an important part of forestry management, but this was integrated into holistic management practices.

Because of the value of multiple forestry resources, conflicts occurred. Count William of Evreux and the abbey of Saint-Wandrille clashed over the number of pigs that the abbey

should be allowed to feed in the Count's forests of Caudebec and Gauville. The monks claimed the right to send all of their pigs into the forests, but the Count wanted to allow only the 'customary' two herds. The parties reached a settlement permitting the monks to send four herds into the forests. The monks' pigs, however, were not allowed into the Count's fenced enclosure (park) unless the Count's herds were sent there. In addition, the monks were allowed to graze other animals in the forest.⁴² The environmental implications of this case are apparent. First, if too many pigs roamed in the forest, they could damage the forest ecosystem; therefore the Count voiced his desire to limit the number of pigs. Second, the use of the forest for fodder had to be balanced with hunting. Count William had created a fenced-off enclosure, perhaps a designated area for deer hunting. In this protected area, the vegetation could grow higher than in the surrounding wood-pasture areas to provide adequate shelter and fodder for the deer. Swine could feed within the enclosure, but the Count wished to limit this practice to avoid damage to the deer habitat. The parties involved understood the environmental implications of their practices. Conflict resolution was a required part of active forest management in these early days of the forest. This is in many ways similar to the multiple-use strategies employed by modern forestry commissions.

As a result of these numerous demands on the woods and the competing needs of the lords, monks, and peasants, foresters managed the claims on forest resources. The royal forestry system implemented by the Anglo-Norman kings required a management structure to make it work. Yet the employment of foresters had existed in England prior to the Conquest. *Domesday Book* includes several foresters who were named as holding lands in the time of King Edward: Leofwine the Forester held a virgate of land in Neatham,⁴³ Bondi the Forester held a woodland in Bampton,⁴⁴ and an unnamed forester held three virgates of land with woodland in Surrey.⁴⁵ These servants enforced the Anglo-Saxon laws protecting the woodland, such as *The Laws of Ine*, issued in seventh-century Wessex, which included fines for destruction of a tree by fire (sixty shillings) and felling (thirty shillings).⁴⁶ The fine for cutting down a tree increased to sixty shillings if the tree 'can shelter 30 swine'.⁴⁷ The *Laws of Ine* also included a provision to fine a pig owner if his pigs were discovered in another's oak or beech woods. For the first infraction, the fine was one shilling, for the second, two, and so on up to six shillings.⁴⁸ In the law code of King Alfred, dated to the late ninth century, the act of burning or felling trees carried a fine per tree based on size, five shillings for a big tree and five pence for a small one, plus a set thirty-shilling fine.⁴⁹ The Danish King Canute supposedly issued a law code specific to the forests, *Constitutes de Foresta*. The authenticity of the law code has been doubted, but it may show the general drift of Anglo-Danish forest law, even though a Norman scribe altered it to agree with post-conquest practices.⁵⁰ Capitulary 28 states that no one may touch the wood or underwood without permission of the minister of the forest, otherwise he is considered to have violated the laws of royal chase.⁵¹ This 'minister of the forest' became the Anglo-Norman forester.

The Normans continued, and increased, the foresters' role. The laws recorded during the reign of Henry I in *Leges Henrici Primi* specified offences for the cutting of wood both inside and outside the King's park or forest. Within the King's park or forest, the fine was twenty mancuses, whereas cutting other wood was fined at five.⁵² The laws also specified that a man must be seized in the act of cutting to be charged with the offence.⁵³ Additionally, *Domesday Book* recorded a customary law in the Kent folios that 'if anyone ... has felled into the road a tree that stood outside the road and has carried off branch or foliage from it, for each of these offences he shall pay 100 s. to the King'.⁵⁴ The men who served as foresters, as well as those designated as hunters and hawkers, helped enforce these restrictions.

The king was not alone in employing foresters. Local lords and abbeys also retained forest ministers to manage their own woodland holdings. *Domesday Book* records that great landholders like Earl Hugh of Chester established their own 'forests' and parks,⁵⁵ and some set up foresters to manage them. For example, Edward of Salisbury held a forty-acre meadow, woodland at fifty pigs and a forester valued at ten shillings in Elmbridge Hundred⁵⁶ and the Earl of Hereford, William FitzOsbern, 'put 2 foresters, one from Hanley [Castle], the other from Bushley, outside his manors to guard the woodlands'.⁵⁷ Earls Hugh, Roger, and William all had hunters in their personal service as well.⁵⁸ Forest-keepers employed by the nobility and by the king served the same basic functions.

Five responsibilities of forest-keepers are evident in the charters, precepts and notifications of the Anglo-Norman kings: protection of the game; protection of the trees; regulation of grazing; distribution of the hunting tithes; and financial accounting for forest resources.

First, they protected the wild game against offenders and presented violators at the forest courts.⁵⁹ By controlling the number of animals hunted through the granting of select hunting rights, the survival of species was ensured. For example, when King Henry assigned the abbot of St Mary's of York keepership of their woods instead of his own royal foresters, the King specifically required the abbot to preserve the hart, hind, boar, and hawk within the woods.⁶⁰ It is probable that the royal or baronial foresters would normally have performed this service. Henry also had to notify the royal foresters of Worcestershire that Walter de Beauchamp had permission to hunt wolves in the Worcestershire royal forest, since the foresters presumably would not have permitted such actions without such a writ.⁶¹ Thus the forest-keepers ensured the survival of the species regarded as 'beasts of the chase'.

Second, foresters offered protection for the trees and underwood. Foresters had to be consulted to identify appropriate trees for felling. In a Saint-Etienne charter dated c. 1081, Eudo specified that if the monks wished to cut down green wood, they had to seek

permission from his foresters, who would show them where best to cut. In the event that the foresters were unhelpful, they could cut the wood where they wished.⁶² In a similar charter of the abbey of La Trinité of Fécamp, the abbey granted Gilbert d'Auffay the right of pasture and firewood in the abbey's forests, 'providing that the abbot or the prior, if the abbot was absent, had been asked in advance and the wood measured by the abbey's forester so that the forest should not be too greatly damaged'.⁶³ In a third case, the abbey of Saint-Wandrille and Count William of Evreux reached an agreement in 1074 that the monks had the right to ask the Count's foresters for wood in the forests for heating and building at the monastery and seven associated manors. If the foresters refused to co-operate, the monks could take the necessary wood freely.⁶⁴ In these three cases, it is clear that the intention behind involving foresters was to regulate which trees would be cut down so that larger trees than actually needed would not be felled. This preserved the integrity of the woodlands and helped to conserve the larger timber. Although there is no extant English charter specifying this forestry role, as mentioned earlier, Canute's *Constitutes de Foresta* included a capitulary restricting the cutting of wood without permission of the forest minister; therefore, it is likely that such practices were customary in Norman England as well as Normandy. Thus the Anglo-Normans restricted indiscriminate tree cutting.

Third, just as they enforced restrictions on cutting wood, foresters and other local officials enforced restrictions on the location and number of livestock grazing in the woodlands. Swine had to be particularly closely controlled. Because of the limited amount of acorns and beechnuts produced each year, allowing pigs to feed in the woods uncontrolled could cause forest damage when the pigs turned to rooting after exhausting the fallen acorn supply. King Henry issued several notices permitting swine to feed in the woods and addressed these to his forest ministers. His 1106 charter allowing free pasture for the swine of St Mary of Bec in his forest of Aliermont was addressed to 'his officers of the comté and the forests of Arques and Aliermont',⁶⁵ and he notified his foresters that the brethren of St Peter's Hospital in York were given wood and grazing rights throughout the Yorkshire royal forest.⁶⁶ These types of notification would have been required by the forest guardians to permit such grazing.

Fourth, foresters, hunters, and hawkers were responsible for distributing the tithe of hunting to the appropriate religious houses. King Henry notified his foresters, hunters, and bowmen beyond the Severn and in Dean that the tithes of hunting in that region belonged to St Peter's of Gloucester.⁶⁷ Henry also notified Croc the huntsman and all of his servants of the forest of Windsor that he granted the entire tithe of venison taken in the forest of Windsor to St Mary of Abingdon.⁶⁸ Conflicts sometimes arose between the religious houses and the king's huntsmen, as in the case of Abbot Roger of Fécamp, who issued an order to recover the tithes of venison from the forest of Fécamp that King Henry's huntsmen had unjustly withheld.⁶⁹ Thus the ministers of the forest regulated the fruits of hunting.

Finally, foresters and hunters were fiscally responsible for the woodland resources. In a precept of King Henry, the role of foresters as financial record-keepers is explicit: 'The foresters [of William de Brix] are to be quit in the king's pleas for so many trees as the monks [of Montebourg] acknowledge in their tallies'.⁷⁰ The Pipe Roll of Henry I enumerated the violations and fines assessed by these ministers of the forest. Forest clearances, or assarts, are listed in detail, such as Geoffrey de Maisi owing twenty marks for his house and assart in Surrey.⁷¹ Hunting offences are also recorded, such as Suen, the archer, who owed twenty marks for a forest violation.⁷² In this way the forest ministers assumed a fiscal and bureaucratic role.

Some of the documents specifically addressed the royal foresters' interaction with the monasteries that had been granted access to woods. The Anglo-Norman kings often ordered their foresters not to interfere with these monasteries. For example, William Rufus issued a precept to his foresters that none of them should meddle with the wood of Aldwin, abbot of Ramsey.⁷³ In 1094, William Rufus notified Croc the huntsman and Ared the falconer that none of the King's foresters were to interfere with Abbot Godfrey of Malmesbury's own woods.⁷⁴ In addition, Croc was required to quitclaim the Abbot and his men of a plea of sixty shillings, which he had against them, presumably a fee for hunting or gathering wood without authorization in the forest.⁷⁵ In one example of many, King Henry granted to William, Abbot of Chertsey, and his successors, the right to take 'from their own wood all that is necessary for their own use, without leave of the royal foresters or hindrance from them'.⁷⁶ Even the nobility spoke out against meddling foresters. Roger, Bishop of Salisbury, issued an order to the king's foresters of Yorkshire to allow the men of the Archbishop of York to take all necessary items from the woods, including those woods 'which the king has included in his forest'.⁷⁷ These examples show the far-reaching nature of the forester's role and that they even acted outside of their legal bounds.

Foresters, hunters, and hawkers paid for the right to administer the forests and hold land because of the financial rewards and status of such a position. The Pipe Roll entries list fees paid for these official positions, such as Henry Esturmit, who paid over twenty-five pounds for the office in the forest of Marlborough, and Henry, son of Herbert, the forester, who owed half a mark of gold for the land and office of his father.⁷⁸ The *Domesday* entries list several foresters by name, hinting at the important role they served.⁷⁹ Richard the forester was the wealthiest landholder designated as a forester in *Domesday*. He held eighteen hides in both Warwickshire and Staffordshire, worth over 200 shillings.⁸⁰ Most of his holdings included wooded land, as well as arable property. Hunters and hawkers were also well landed and respected. *Domesday Book* records the holdings of numerous hunters.⁸¹ William de Pont de l'Arche, the royal chamberlain, paid a huge sum (100 pounds and three marks of gold) for custody of the land of Ulric the hunter, which hints at the vastness of Ulric's holdings.⁸² More importantly, both Ared the

falconer and Croc the huntsman were addressees and signatories of Henry's charters. All of this evidence re-affirms the important role that forest ministers served in the Anglo-Norman state.

In the age of silvo-pastoral economy, woodlands played a central role in medieval society. Because of the value of woodland products, holders of the resources of wood, fodder, and game managed and consciously distributed them to individuals and religious institutions. Medieval Anglo-Normans treated their natural resources as commodities, and managed them accordingly in order to conserve resources and avoid exhaustion. The forest had significant financial value. Its product management followed the same line of thinking as the modern forestry notion that they are 'utilized in the combination that will best meet the needs of the ... people'.⁸³

Both the king and the nobles employed foresters, hunters, and hawkers to control access to woodland resources and manage distribution of these resources to competing groups. Through their five responsibilities, protection of the game, protection of the trees, regulation of grazing, distribution of the hunting tithe, and financial accounting for forest resources, these ministers of the forest contributed a significant service in resource management for their Anglo-Norman lords.

Forests were multiple-use legal entities, which had value not only as noble hunting grounds but also as sources of timber and pastureland. They were actively managed units that required the co-operation of foresters, landowners, and end users. These management practices were not very different from our modern, scientific forestry. We must avoid falling into the trap of characterizing medieval Anglo-Norman woodland management practices as only exploitive. In reality, the Anglo-Norman forests were consciously managed to maximize the benefits of multiple land uses.

NOTES:

¹ Jack Lewis, 'The Spirit of the First Earth Day', *EPA Journal*, Jan/Feb 1990.

² Senator Gaylord Nelson, 'All About Earth Day', 'The Wilderness Society - Earth Day' website, 2003, <<http://earthday.wilderness.org/history/>>, accessed October 21, 2003.

³ Our current 'ecological crisis' and its ties to medieval practices have been the subject of several key works. Lynn White argued that Christian attitudes of mastery over nature permitted the unchecked exploitation of the environment in the Middle Ages; 'The Historical Roots of Our Ecologic Crisis,' *Science*, 155 (1967), 1203-7. Jean Gimpel included a chapter on environment and pollution in the often-read *The Medieval Machine* (New York: Holt, Rinehart & Winston, 1976), and clearly stated: 'Medieval man brought about the destruction of Europe's natural environment', p. 78. Soon afterwards, Charles R. Bowlus argued that fourteenth century problems of famine and disease had their roots in an economy that 'overexpanded relative to existing resources and available technology in the twelfth and thirteenth centuries' in his 'Ecological Crisis in Fourteenth Century Europe' in Lester J. Bilsky (ed.), *Historical Ecology* (Port Washington, NY: Kennikat Press, 1980), p. 88. Even historians writing since 1990 have viewed medieval man as an environmental destroyer: J. Donald Hughes focused on land clearance and subsequent timber shortage as the main environmental legacies of the Middle Ages in *An Environmental History of the World* (New York: Routledge, 2001).

⁴ See Charles J. Cox, *The Royal Forests of England* (London: Methuen & Co., 1905); Charles R. Young, *The Royal Forests of Medieval England* (Philadelphia: University of Pennsylvania Press, 1979); H. A. Cronne, 'The Royal Forest in the Reign of Henry I', in H. A. Cronne (ed.), *Essays in British and Irish History in Honor of James Eadie Todd* (London: Fredrick Muller Ltd, 1949).

⁵ Charles Young, 'Conservation Policies in the Royal Forests of Medieval England', *Albion*, 10/2 (1978), p. 97.

⁶ George Peterken, *Woodland Conservation and Management*, 2nd ed. (London: Chapman & Hall, 1993), p. 15.

⁷ I. G. Simmons, *An Environmental History of Great Britain from 10,000 Years Ago to the Present* (Edinburgh: Edinburgh University Press, 2001), p. 96.

⁸ Oliver Rackham, *The History of the Countryside: The Classic History of Britain's Landscape, Flora, and Fauna* (London: Phoenix Press, 2000), pp. 133-8. Rackham fails to see the differences in management and approach over the 150 years between the Norman Conquest and *Magna Carta*, which caused significant destabilization of the forestry system.

⁹ Cox, *Royal Forests*, p. 2. See also Charles Watkins, 'Themes in the history of European woods and forests', in Charles Watkins (ed.), *European Woods and Forests: Studies in Cultural History* (New York: CAB International, 1998), pp. 1-10.

¹⁰ Oliver Rackham, *The History of the Countryside*, pp. 129-30; D. M. Palliser, *The Staffordshire Landscape* (London: Hodder and Stoughton, 1976), p. 67. Palliser does note that all of the areas designated as forests in Staffordshire were indeed wooded.

¹¹ Oliver Rackham, 'The Growing and Transport of Timber and Underwood', in Sean McGrail (ed.), *Woodworking Techniques before A.D. 1500* (Oxford: Oxford University Press, 1982), p. 205.

¹² Charles Johnson and H. A. Cronne (eds.), *Regesta Regnum Anglo-Normannorum: 1066-1154*, ii (Oxford: Clarendon Press, 1956), No. 774. Hereafter cited as *RRAN II*.

¹³ *RRAN II*, No. 1818. In an earlier charter (*RRAN II*, 774), Henry I affirmed that the abbot and monks of Chertsey were 'to have the power of taking timber for the use of their church, without anyone's leave' in their woods.

¹⁴ UK Forestry Commission, 'Sustainability,' 'Forestry Commission Sustainability' website, 2003, <<http://www.forestry.gov.uk/forestry/edik-59fmzf>>, accessed October 21, 2003.

¹⁵ UK Forestry Commission, 'The Sustainable Management of Forests,' 1998.

¹⁶ *Multiple-Use Sustained-Yield Act of 1960 (MUSYA)*, Public Law 86-517.

¹⁷ *Ibid.*, Section 1.

¹⁸ *Ibid.*, Section 4.

¹⁹ *Federal Register*, 36 CFR Part 219, National Forest System Land and Resource Management Planning, Proposed Rules, December 6, 2002.

²⁰ *RRAN II*, No. 1790. Henry I confirms the gift in 1133.

²¹ *Ibid.*, No. 1328.

²² *MUSYA*, Section 4.

²³ Emily W. B. Russell, *People and the Land through Time: Linking Ecology and History* (New Haven: Yale University Press, 1997), p. 41.

²⁴ Rackham notes that sallow can grow up to 2 inches per day, and oak can grow to 7 feet high and inch thick after only one summer's growth. *The History of the Countryside*, p. 65.

²⁵ Oliver Rackham, *Trees and Woodland in the British Landscape* (London: J. M. Dent & Sons Ltd., 1976), pp. 24-5.

²⁶ *RRAN II*, No. 1238.

²⁷ *Ibid.*, No. 1753.

²⁸ *Ibid.*, No. 1847.

²⁹ Bodleian Library, Oxford, MS. Auct. D.2.6, fos. 6r and 6v.

³⁰ Hunterian Museum, Glasgow, MSS 229, 1 fo. 6r. described in *A Catalogue of the Manuscripts in the Library of the Hunterian Museum in the University of Glasgow* (Glasgow: James Maclehose and Sons, 1908), p. 172. Drawing available in James C. Webster, *The Labors of the Months in Antique and Mediaeval Art* (New York: AMS Press, 1938), Plate 60.

³¹ Koninklijke Bibliotheek, The Hague, MS. 76 F 13, fos. 11v and 12v.

³² George Zarnecki, *English Romanesque Lead Sculpture* (London: Alec Tiranti, 1957), pp. 17-18.

³³ Zarnecki's argument that the cycles in the lead fonts do not resemble the English cycles of the twelfth century is inaccurate. The series is very close to the Hunterian Psalter with only April, June and September variants.

³⁴ Webster, *The Labors of the Months*, pp. 88-9; Francis Bond, *Fonts and Font Covers* (London, New York, & Toronto: Oxford University Press, 1908), pp. 189-91.

³⁵ Metropolitan Museum, New York, Cloisters Collection, 1956 (54.1.2), fo. 11v, available for viewing on-line through the Metropolitan Museum (www.metmuseum.org/toah/hd/best/ho_54.1.2_folio_11v.htm) and Bibliothèque nationale de France, Paris, LAT 18014, fos. 5v and 6v, available for viewing on-line through BNF at http://www.bnf.fr/enluminures/manuscrits/aman9/i6_0010.htm and http://www.bnf.fr/enluminures/manuscrits/aman9/i6_0012.htm

³⁶ Della Hooke, 'Medieval forests and parks in southern and central England', in Charles Watkins (ed.), *European Woods and Forests: Studies in Cultural History* (New York: CAB International, 1998), p. 21.

³⁷ Cox, *Royal Forests*, p. 4. See also Hooke's works.

³⁸ The information about the specific beasts is derived largely from Cox, *Royal Forests*, pp. 26-31.

³⁹ David Bates (ed.), *Regesta Regum Anglo-Normannorum: The Acta of William I (1066-1087)* (Oxford: Oxford University Press, 1998), No. 54: '... retentis in meo dominio cervis, capreolis et apris silvestribus'.

⁴⁰ *RRAN II*, No. 838. This charter is dated within the first seven years of Henry's reign.

⁴¹ *The Peterborough Chronicle*, in *The Anglo-Saxon Chronicle: A Revised Translation*, trans. Dorothy Whitelock, David Douglas, and Susie Tucker (London: Eyre and Spottiswoode, 1961), year 1087, p. 165.

⁴² Bates, *RRAN I*, No. 262. 'Monachi etiam omnes suas porcherias asserebant se posse per costumam in has duas forestes absque precio ad pascuam mittere, sed comes Ebroicensis noluit nisi duas per costumam recognoscere. Unde habita consilii deliberatione pro pace et Concordia consensit adhuc et alias duas, ut quatuor numero sint que absque precio per costumam in has forestas ad pascua intrent, excepta haya sua et defensione. Ac si comes in hayam suam et defensionem suas porcharias vel aliorum miserit, tunc et monachorum porcharie absque precio licenter et sine omni calumpnia intrabunt in hayam et defensionem. Pasturam vero pecorum et animalium, sine contradicione ubicumque monachi semper habebunt'.

⁴³ John Palmer, Matthew Palmer, and George Slater (eds.), *Domesday Explorer: Great Domesday Book on CD-ROM*, Version 1.0 [CD-ROM] (Chichester: Phillimore, 2000), HAM 1, 2.

⁴⁴ *Ibid.*, OXF 1, 6.

⁴⁵ *Ibid.*, SUR 1, 2.

⁴⁶ *The Laws of Ine*, capitulary 43, in F. L. Attenborough (ed. and trans.), *The Laws of the Earliest English Kings*, (New York: Russell & Russell, 1963). 'Ðonne mon beam on wuda forbærne, & weorðe yppe on þone ðe hit dyde, gielde he fulwite: geselle LX scill., forþamþe fyr bið þeof. Gif mon afelle on wuda wel monega treowa, & wyrð eft undierne, forgielde III treowu ælc mid XXX scill ...'. Ine probably issued his laws between 688 and 694.

⁴⁷ *Ibid.*, capitulary 44. 'Gif mon þonne aceorfe an treow, þæt mæge XXX swina undergestandan, & wyrð undierne, geselle LX scill'.

⁴⁸ *Ibid.*, capitulary 49. The law begins: 'Gif mon on his mæstenne unaliefed swín gemet, genime þonne VI scill. weorð wed ...'. and continues to enumerate the penalties by the number of times the swine have been caught in the woods previously, and to specify how the penalty is paid in kind.

⁴⁹ *The Laws of Alfred*, capitulary 12 in Attenborough. 'Gif mon oðres wudu bærneð oððe heaweð unaliefedne, forgielde ælc great treow mid V scill., & siððan æghwylc, sie swa fela swa hiora sie, mid V pænigum; & XXX scill. to wite'.

⁵⁰ Cox, *Royal Forests*, p. 5. Evidence from the law supports Cox's claim. First, the law survives only in Latin, unlike the other Anglo-Saxon kings' codes. Second, the text makes a reference that would not have been present in Canute's day: the list of protected beasts of the forest includes roebuck, hare, and rabbit (*capreoli, lepores et cuniculi*). Rabbits were not introduced to England until after the Conquest; Mark Bailey, 'The Rabbit and the Medieval East Anglian Economy', *Agricultural History Review*, 36/1 (1998), 1-20.

⁵¹ *Constitutes de Foresta*, capitulary 28 in *Ancient Laws and Institutes of England*, Great Britain Record Commission (London: Eyre and Spottiswoode, 1840), p. 184. 'Bosco nec subbosco nostro, since licentia primariorum foestæ, nemo manum apponat; quod si quis fecerit, reus sit fractionis regalis chaceæ'.

⁵² L. J. Downer (ed. and trans.), *Leges Henrici Primi* (Oxford: Oxford University Press, 1972), p. 144.

⁵³ *Ibid.*, p. 126. The law also adds an interesting caveat that if the man is accused of stealing wood from his own lord's forest, he can be charged without being caught in the act.

⁵⁴ *Domesday*, KEN D 12.

⁵⁵ *Ibid.*, CHS 26, 6: 'In Eddisbury [North] Hundred Dunning holds Kingsley from the Earl ... woodland 1 league long and 1 wide, which the Earl put in his Forest; a hawk's eyrie; 4 deer parks'.

⁵⁶ *Ibid.*, SUR 27, 1.

⁵⁷ Ibid., HEF 1,44. William FitzOsbern's holdings in Herefordshire were threatened by Welsh attacks from the marshes, so his forests likely served not only to protect the forest, but his manors as well. See Judith Green's discussion of William FitzOsbern in her *The Aristocracy of Norman England* (Cambridge: Cambridge University Press, 1997), pp. 69-76.

⁵⁸ *Domesday* lists the following hunters in the service of earls: Gilbert (man of Earl Hugh, DOR 27, 1; CHS 18), Ralph (man of Earl Hugh, CHS 21; CHS FD8), Warmund (man of Earl Hugh, CHS FT3, 3), Roger (man of Earl Roger, SHR 4, 1, 2; SHR 4, 3, 15; WOR 14, 1; SHR 4, 26), Norman (man of Earl Roger, SHR 4, 25), and Jocelyn (man of Earl William, HEF 1, 40).

⁵⁹ Cox, *Royal Forests*, p. 19. Only one pipe roll survives from the period, the Pipe Roll of 1130, but it contains evidence that there had been a forest court proceeding held in the previous year to assess fines for forest law violations, and the foresters were directly involved in the proceedings (Young, *Royal Forests*, pp. 12-14). Forest courts and forester appointments became much more regularized under the Angevin kings (see Young, *Royal Forests*, chapters 2 & 3).

⁶⁰ *RRAN II*, No. 838.

⁶¹ Ibid., No. 1025. Henry also told the foresters of the forest of Feckenham that Walter had the right of taking foxes in the royal forest (No. 1035).

⁶² Bates *RRAN I*, No. 49. 'Tamen si ligna viridia excidere oportuerit, monachi seu homines eorum petant licentiam a forestariis quantinus ipsi eant et ubi competenter [inci]di possent ostendant. Qui se forte [ire] renuerint seu dolo vel aliqua calliditate monstrare despexerint aut q[uod mali] ministri facere solent locum non aptum ad incidendum monstraverint, tunc liceat monachis et eorum hominibus neglectis eis in silvam ire et ubi voluerint ad prefatos usus ligna incidere'.

⁶³ Ibid., No. 145.

⁶⁴ Ibid., No. 262. Unfortunately, the 'customary' amount is not clearly defined within the charter. An Abbey of Fontenay charter (No. 149) and a grant to St Évroul from Richard of Heugleville in Marjorie Chibnall (ed. & trans.) *The Ecclesiastical History of Orderic Vitalis, Vol. II*, (Oxford: Oxford University Press, 1969), p. 249, both mention two ass-loads as a regular amount of firewood. This may have been the 'customary' amount.

⁶⁵ *RRAN II*, No. 794.

⁶⁶ Ibid., No. 1328.

⁶⁷ Ibid., No. 594.

⁶⁸ Ibid., No. 696.

⁶⁹ Ibid., No. 1689.

⁷⁰ Ibid., No. 1951. The foresters were ordered to permit the monks of Montebourg to have 52 trees for firewood each year, building timber, and pannage in Brix.

⁷¹ *Pipe Roll, 31 Hen. I* (London: Record Commission, 1833; facs. edn., London: H.M. Stationery Office, 1929), p. 50.

⁷² Ibid., p. 75.

⁷³ *RRAN I*, No. 332. The precept specifies that the foresters are not to meddle in concerns of hunting or wood cutting: 'nisi de bestiis et de essartis'. A similar precept was issued to Walter son of Oter, the king's forester in Berkshire, on behalf of Rainald, abbot of Abingdon (No. 391).

⁷⁴ Ibid., No. 347.

⁷⁵ Croc the Huntsman watched over lands in one royal forest (*RRAN II*, No. 616). Croc was ordered to allow the monks of Abingdon to improve their land within the king's forest. *RRAN II*, No. 615 is a similar order to Croc. Early in Henry's reign, he ordered that Ared the falconer allow the men of Abbot Faritius to transport the timber and brushwood that had been given or sold to them for building operations (*RRAN II*, No. 855). This charter is dated 1100-1107.

⁷⁶ *RRAN II*, No. 1818. In an earlier charter (*RRAN II*, No. 774), Henry I affirmed that 'no forester or other official is to disturb or impede the monks' of Chertsey who were 'to have the power of taking timber for the use of their church, without anyone's leave' in their woods. Other charters

of Henry I forbidding foresters to interfere with monks in the King's forest are: *RRAN II*, No. 528a, which stated that no one was to interfere with the holdings of Abbot Aldwin of Ramsey in Huntingdonshire; *RRAN II*, No. 577, which benefited the abbot and monks of Colchester and stated that the foresters were not to hinder them from taking anything in their own wood; *RRAN II*, No. 836, which notified Osbert the sheriff that Stephen, Abbot of St Mary's of York, had been given custody of the King's forest within Stephen's land and forbade 'foresters to interfere therein'; *RRAN II*, No. 1844, which commanded to all the King's foresters of Whittlewood in Northamptonshire 'that the prior and monks of Luffield be in the king's peace and have their easements in the king's forest'; *RRAN II*, No.838, which ordered that the King's foresters were not to interfere with the abbot and monks of St Mary's of York; and *RRAN II*, No. 1658, which commanded the forester of Malvern not to meddle with the wood of Woolridge and Corswell because the King had given it to the monks of Gloucester.

⁷⁷ *RRAN II*, No. 1989. The charter was issued sometime between 1114 and 1135.

⁷⁸ *Pipe Roll, 31 Hen. I*, p. 17 and p. 38 respectively as discussed in Cronne, 'The Royal Forest', pp. 17-19. In a charter of Henry I (*RRAN II*, No. 1518), land that had belonged to Geoffrey the forester in Hatfield in return for his keepership of the forest was passed on to Eustace of Barenton. The charter also grants Eustace the 'land of Adam who incurred forfeiture in the forest'. This curious phrase may mean that Adam had originally been granted land of the forest but, because of mismanagement, the grant was revoked.

⁷⁹ According to *Domesday*, Herbert the forester held 1 virgate in Lyndhurst, Boldre Hundred, from the King himself. The remainder of the king's holdings in the area was in the Forest (HAM 1, 31). Peret the forester held ½ virgate in Battramsley from the King (HAM NF 9, 24) and William the forester held ½ hide in Chilton from William son of Azor (HAM IoW 7, 20). Other entries mention only that a forester held land or was present. A forester held ½ virgate of land in Hanley Castle, Tewkesbury Hundred, Gloucestershire (HEF 1, 42).

⁸⁰ His holdings consisted of approximately 10 hides worth 137 shillings (*Domesday*, WAR 44) and another 8 hides worth 69 shillings (STS 13).

⁸¹ *Domesday* lists the following hunters who held land from the king: Ketel (SUR 36, 9), Wulfwy (SUR 36, 10), Waleran (HAM 6, 16; HAM 45; HAM NF 9, 14; WIL 37; DOR 40), Croc (HAM 60), Cola (son of Wulfgeat, HAM 69, 32; HAM 69, 52), Wulfgeat (HAM 69, 36; HAM IoW 1, 6; HAM IoW 1, 9; WIL 67, 77; DOR 56, 16), Edwin (HAM 69, 41; DOR 56, 31-33), Wulfric (HAM 69, 47; WIL 67, 65-72; DOR 56, 13; DOR 56, 18; DOR 56, 30), Aelfric (DOR 56, 6; DOR 56, 12; DOR 56, 52; DOR 56, 57; DOR 56, 59-60, DOR 56, 65), Godric (WIL 67, 45; DOR 56, 4), Godwin (DOR 56, 24; DOR 56, 27), Edward (DOR 56, 66), Siward (OXF 58, 23), Robert (holds of Robert of Stafford, WAR 21, 1; WAR 22, 10), and Richard (WAR 44, 7-8).

⁸² *Pipe Roll, 31 Hen. I*, p. 37. The pipe roll also records that an archer in Northamptonshire paid over 16 shillings for the land of his predecessor (p. 128).

⁸³ *MUSYA*, Section 4.