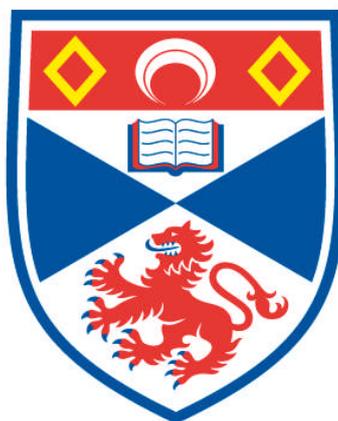


**"FOR TO KNOWEN HERE SICKNESSE AND TO DO THE  
LECHECRAFT THERE FORE" : ANIMAL AILMENTS AND THEIR  
TREATMENT IN LATE-MEDIAEVAL ENGLAND**

**Briony Louise Aitchison**

**A Thesis Submitted for the Degree of PhD  
at the  
University of St Andrews**



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**“for to knowen here sicknesse and to do the  
lechecraft there fore”: Animal Ailments and their  
Treatment in Late-Mediaeval England**

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Department of Mediaeval History  
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Thesis submitted in application for the degree of Doctor of Philosophy  
17 July 2009

I, Briony Louise Aitchison, hereby certify that this thesis, which is approximately 80,000 words in length, has been written by me, that it is the record of work carried out by me, and that it has not been submitted in any previous application for a higher degree.

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## Abstract

Veterinary medicine in late-mediaeval England has thus far received little attention. This study therefore aims to partly fill this gap by providing an insight into English veterinary practices at this time. The introduction places the animals under discussion into context, from the noble war-horse to the lowly pig. Also discussed are the sources, with their intended audience and evidence for use. The first chapter concentrates on those who were responsible for treating animals when ill, examining the qualities sought in such people, and the source of their learning. In the second chapter the ailments suffered by mediaeval animals are discussed, together with the causes of illness and methods of diagnosis. The third, and final, chapter examines the treatment meted out to animals. Firstly the factors influencing this are explored, followed by surgical intervention, then therapeutic methods of treatment. The precautions taken when treating animals are looked at, as too is the efficacy of the remedies, whilst finally the preparation of medicines, the instruments used, and the *materia medica* employed are discussed.

The aim of this study is not only to provide an insight into the state of veterinary medicine in late-mediaeval England, but also to adopt a broader and more comparative approach than has hitherto been undertaken. It therefore draws upon veterinary texts, hawking and hunting manuals, husbandry treatises, and recipe collections, in order to compare and contrast the ailments and treatment meted out to a variety of animals. Another important facet is to examine the reality of care, which is achieved through an examination of sources such as household and manorial accounts. By marrying the actuality of care with the theory and recommendations of treatises and recipe collections, our understanding of animal welfare is more greatly enhanced.

## Acknowledgements

A number of people have offered help and advice through the writing of this study, but thanks must first be given to the AHRC for funding this project for three years, without which I would have struggled to undertake this research. My greatest thanks, however, must go to my supervisors, Simone Macdougall and Chris “Grampa Buffalo” Given-Wilson. Without Simone’s enthusiasm I would never have started upon this project, and I can only hope that I have not intruded too much upon her retirement – all would probably be forgiven if I had mentioned the ostrich, but sadly there was no room to do so. Chris has provided me with invaluable advice since taking over from Simone, and I can only be grateful that he continued to do so long after he thought he would be rid of me.

My thanks must also be given to the secretaries of the department, both past and present: Berta Wales, Anne Chalmers, Dorothy Christie, and Audrey Wishart. Throughout my time here they have offered moral support and encouragement – and not least, the use of the photocopier. I am also grateful to Dorothy for allowing me to interrupt her busy schedule in order to print the images contained in this thesis. Others must also receive a personal mention: Tig Lang for helping to identify herbs; Julie Kerr for her innumerable references, and discussions over coffee or ice-cream; Christoph Egger for obtaining parts II and III of Theodoric of Cervia’s *Mulomedicina*; Rob Bartlett for answering my questions regarding saints and animals; Linsey Hunter for providing me with many articles about dogs at the beginning of my studies; Peter Maxwell-Stuart for help with some of my Latin translations (any mistakes remain my own); Margaret Connolly for providing a draft copy of *IMEP XIX* regarding Cambridge University Library manuscript Dd.4.44, and for her discussion upon charms; Norman Macdougall for his helpful comments; and Chris McGuire for providing me with accommodation in London, often putting up with my descents at short notice.

I am also deeply grateful to the staff of the British Library, London; the Bodleian Library, Oxford; the National Library of Scotland, Edinburgh; Durham University Library; Durham Cathedral Muniments; and the National Archives, Kew. They were always most helpful, and dealt with my queries quickly and efficiently.

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## Abbreviations

AASS	<i>Acta Sanctorum</i> , ed. J. Bolland, <i>et al.</i> , October vols. I and IV (9 <sup>th</sup> edition, Paris, 1866)
ABBA	<i>The Account-Book of Beaulieu Abbey</i> , ed. S.F. Hockey, Camden Fourth Series 16 (London, 1975)
Albertus Magnus, <i>On Animals</i>	Albertus Magnus, <i>On Animals: A Medieval Summa Zoologica</i> , tr. K.F. Kitchell Jr. and I.M. Resnick, vol. I (Baltimore, 1999)
<i>Annales Monastici</i>	<i>Annales Monastici</i> , ed. H.R. Luard, 5 vols., Rolls Series 36.i-v (London, 1864-69)
AT	<i>De avibus tractatus</i> , in Adelard of Bath, <i>Conversations with his Nephew: On the Same and the Different, Questions on Natural Science, and On Birds</i> , ed. and tr. C. Burnett (Cambridge, 1998), 238-74
AVCA	Frederick II of Hohenstaufen, <i>The Art of Falconry, being the De Arte Venandi Cum Avibus</i> , ed. and tr. C.A. Wood and F.M. Fyfe (Stanford, 1943)
BAA	<i>Accounts of the Cellarers of Battle Abbey 1275-1513</i> , ed. E. Searle and B. Ross (Sydney, 1967)
BHB	'The Beauchamp Household Book: An Account of a Journey to Warwick in 1432', ed. H.A. Cronne and R.H. Hilton, <i>University of Birmingham Historical Journal</i> 2 (1949-50), 208-18
BL	The British Library, London
BMH	London, British Library MS Harley 6398, ff.1r-58r ( <i>The Boke of Marchalsi</i> , mid-fifteenth century)
BMO	<i>The Boke of Marchalsi: A 15<sup>th</sup> Century Treatise on Horse-Breeding and Veterinary Medicine Edited from MS. Harley 6398</i> , ed. B. Odenstedt, Stockholm Theses in English 10 (Stockholm, 1973)
BMT	Cambridge, Trinity College MS R.14.51, ff.48r-77v ( <i>The Boke of Marchalsi</i> , latter half of the fifteenth century)
BnF	Bibliothèque Nationale de France, Paris

- BodL The Bodleian Library, Oxford
- Boor-van der Putten, “Maladies de Chiens” I.M.E. Boor-van der Putten, “Des Maladies de Chiens et de Leurs Curacions”: La Médecine Canine à la fin du XIVe Siècle d’après *Le Livre de Chasse* de Gaston Phébus’ (unpublished PhD thesis, Utrecht University, 1988)
- BPC *The Bolton Priory Compotus, 1286-1325, Together with a Priory Account Roll for 1377-1378*, ed. I. Kershaw and D.M. Smith, Yorkshire Archaeological Society, Record Series 154 (Woodbridge, 2000)
- BSA *English Hawking and Hunting in The Boke of St Albans: A Facsimile Edition of sigs. a2-f8 of The Boke of St Albans (1486)*, ed. R. Hands (Oxford, 1975)
- BVD *Black’s Veterinary Dictionary*, ed. E. Boden (London, 2005), <http://www.credoreference.com/vol/541>
- BWA Bishopric of Winchester, Ministers’ Accounts
- BWM *The Book of William Morton, Almoner of Peterborough Monastery 1448-1467*, ed. P.I. King and C.N.L. Brooke, transcribed and annotated W.T. Mellows, Northamptonshire Record Society 16 (Oxford, 1954)
- CBP *Abstracts of the Charters and Other Documents Contained in the Chartulary of the Priory of Bridlington in the East Riding of the County of York*, ed. W.T. Lancaster (Leeds, 1912)
- CCR *Calendar of Coroners Rolls of the City of London A.D. 1300-1378*, ed. R.R. Sharpe (London, 1913)
- Cely Letters *The Cely Letters, 1472-1488*, ed. A. Hanham, Early English Text Society 273 (London, 1975)
- CHEC *The Court and Household of Eleanor of Castile in 1290: An Edition of British Library Additional Manuscript 35294 with Introduction and Notes*, ed. J.C. Parsons (Toronto, 1977)
- Chronica Albani* *Chronica Monasterii S. Albani*, ed. H.T. Riley, 7 vols, Rolls Series 28.i-vii (London, 1863-76)
- Chronicles Edward* *Chronicles of the Reigns of Edward I and Edward II*, ed. W. Stubbs, 2 vols., Rolls Series 76.i-ii (London, 1882-83)

- Chronicon Lanercost*      *Chronicon de Lanercost, 1201-1346*, ed. J. Stevenson (Edinburgh, 1839)
- Cirurgie des chevaux*      *Cirurgie des chevaux*, in B. Prévot and B. Ribémont, *Le Cheval en France au Moyen Age. Sa Place dans le Monde Médiéval; sa Médecine: l'Exemple d'un Traité Vétérinaire du XIV<sup>e</sup> Siècle, la Chirurgie des Chevaux* (Orléans, 1994), 349-428
- CLR      *Calendar of Liberate Rolls*, ed. H.C. Maxwell Lyte, 6 vols. (London, 1916-64)
- CMR      *Manorial Records of Cuxham, Oxfordshire, circa 1200-1359*, ed. P.D.A. Harvey (London, 1976)
- CPR      *Calendar of the Patent Rolls Preserved in the Public Record Office*
- CPR: Edward I      *Calendar of the Patent Rolls Preserved in the Public Record Office: Edward I A.D. 1272-1307*, 4 vols. (London, 1893-1901)
- CREC      *Court Rolls of Elmley Castle, Worcestershire, 1347-1564*, ed. R.K. Field, *Worcestershire Historical Society, New Series 20* (Worcester, 2004)
- CUL      Cambridge University Library
- Culpeper, *Complete Herbal*      Nicholas Culpeper, *Culpeper's Complete Herbal: Consisting of a Comprehensive Description of Nearly all Herbs with their Medicinal Properties and Directions for Compounding the Medicines Extracted from Them* (Leeds, no date)
- DAB      *Select Documents of the English Lands of the Abbey of Bec*, ed. M. Chibnall, *Camden Third Series 73* (London, 1951)
- DAR      *Extracts from the Account Rolls of the Abbey of Durham, from the Original MSS*, ed. J.T. Fowler, 3 vols., *Surtees Society 99, 100, 103* (Durham, 1898-1901)
- Dancus Rex*      *Dancus Rex, Guillelmus Falconarius, Gerardus Falconarius: Les Plus Anciens Traités de Fauconnerie de l'Occident Publiés d'après tous les Manuscrits Connus*, ed. G. Tilander, *Cynegetica 9* (Lund, 1963)

- Davis, *Medieval Warhorse* R.H.C. Davis, *The Medieval Warhorse: Origin, Development and Redevelopment* (London, 1989)
- DCM Durham Cathedral Muniments
- De animalibus* Albertus Magnus, *De Animalibus Libri XXVI*, ed. H. Stadler, vol. II (Münster, 1920)
- Death and Memory* *Death and Memory in Medieval Exeter*, ed. D. Lepine and N. Orme, Devon and Cornwall Record Society, New Series 47 (Exeter, 2003)
- DHA Dunster Household Accounts, cited in H.C. Maxwell Lyte, *Dunster and its Lords 1066-1881* (Exeter, 1882), 114-33
- DT 'The Durham Treatise of Falconry', ed. B. Danielsson, *Studier i Modern Språkvetenskap*, New Series 4 (1972), 21-37
- DUL Durham University Library
- Eckenrode, 'English Cistercians' T.R. Eckenrode, 'The English Cistercians and their Sheep During the Middle Ages', *Citeaux* 24 (1973), 250-66
- EETS Early English Text Society
- ERS *The Exchequer Rolls of Scotland*, ed. J. Stuart, *et al.*, 23 vols. (Edinburgh, 1878-1908)
- Expenses Brabant* *Account of the Expenses of John of Brabant and Thomas and Henry of Lancaster, A.D. 1292-3*, ed. J. Burtt, *The Camden Miscellany II*, Camden Society 55 (London, 1853)
- Expenses Eleanor* 'An Account of the Expenses of Eleanor, Sister of Edward III, on the Occasion of her Marriage to Reynald, Count of Guelders', ed. E.W. Safford, *Archaeologia* 77 (1929), 111-40
- FBH John Fitzherbert, *The Book of Husbandry: Reprinted from the Edition of 1534*, ed. W.W. Skeat (London, 1882)
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- Flores Historiarum* *Flores Historiarum*, ed. H.R. Luard, 3 vols., Rolls Series 95.i-iii (London, 1890)
- 'Fragment d'un Traité' 'Fragment d'un Traité de Fauconnerie Anglo-Normand en Vers', ed. G. Tilander, *Studier i Modern Språkvetenskap* 15 (1943), 26-44
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- HAME *Household Accounts from Medieval England*, ed. C.M. Woolgar, 2 vols., *Records of Social and Economic History*, New Series 17, 18 (Oxford, 1992-93)
- Hands, 'Prince Edward's Book' R. Hands, 'Prince Edward's Book – a Survey of the Related Texts', *Archiv für das Studium der Neueren Sprachen und Literaturen* 209 (1972), 26-42
- HawkRemI* *Hawk Remedies I* (British Library MS Harley 2340, ff.23r-34r), in *Of Hawks and Horses: Four Late Middle English Prose Treatises*, ed. W.L. Braekman, *Scripta* 16 (Brussels, 1986), 15-37
- HawkRemII* *Hawk Remedies II* (Cambridge University Library MS Ll.I.18, ff.59r-61v), in *Of Hawks and Horses: Four Late Middle English Prose Treatises*, ed. W.L. Braekman, *Scripta* 16 (Brussels, 1986), 39-48
- Hawks and Horses* *Of Hawks and Horses: Four Late Middle English Prose Treatises*, ed. W.L. Braekman, *Scripta* 16 (Brussels, 1986)
- HBA *The Household Book of Dame Alice de Bryene, of Acton Hall, Suffolk, Sept. 1412 – Sept. 1413 with Appendices*, tr. M.K. Dale, ed. V.B. Redstone (Ipswich, 1931)
- HBI *The Household Book of Queen Isabella of England, for the Fifth Regnal Year of Edward II, 8<sup>th</sup> July 1311 to 7<sup>th</sup> July 1312*, ed. F.D. Blackley and G. Hermansen (Alberta, 1971)

- HBNS *Household Books of John Duke of Norfolk and Thomas Earl of Surrey; temp. 1481-1490*, ed. J.P. Collier, Roxburgh Club 61 (London, 1844)
- HCR Heacham Court Rolls, cited in H. Harrod, 'Some Details of a Murrain of the 14<sup>th</sup> Century, from the Court Rolls of a Norfolk Manor', *Archaeologia* 41 (1867), 10-14
- Henry VI Miracles *The Miracles of King Henry VI: Being an Account and Translation of Twenty-Three Miracles taken from the Manuscript in the British Museum (Royal 13 c. viii)*, ed. R. Knox and S. Leslie (Cambridge, 1923)
- HMA Hungerford Lands, Ministers' Accounts
- HorseRemI *Horse Remedies I* (Cambridge University Library MS Ll.I.18, ff.65v-72v), in *Of Hawks and Horses: Four Late Middle English Prose Treatises*, ed. W.L. Braekman, Scripta 16 (Brussels, 1986), 71-85
- HorseRemII *Horse Remedies II* (British Library MS Sloane 962, ff.133v-137v), in *Of Hawks and Horses: Four Late Middle English Prose Treatises*, ed. W.L. Braekman, Scripta 16 (Brussels, 1986), 87-104
- HRS *A Roll of the Household Expenses of Richard de Swinfield, Bishop of Hereford, During Part of the Years 1289 and 1290*, ed. J. Webb, 2 vols., Camden Society 59, 62 (London, 1854-55)
- Husbandry *Husbandry* (Anon.), in *Walter of Henley and Other Treatises on Estate Management and Accounting*, ed. D. Oschinsky (Oxford, 1971), 417-57
- Hyland, Warhorse A. Hyland, *The Warhorse 1250-1600* (Stroud, 1998)
- IMEP *The Index of Middle English Prose*
- IMEP VIII S.J. Ogilvie-Thomson, *The Index of Middle English Prose, Handlist VIII: A Handlist of Manuscripts Containing Middle English Prose in Oxford College Libraries* (Cambridge, 1991)
- IMEP XI L.R. Mooney, *The Index of Middle English Prose, Handlist XI: Manuscripts in the Library of Trinity College, Cambridge* (Cambridge, 1995)

- IMEP XIX M. Connolly, *The Index of Middle English Prose, Handlist XIX: Cambridge University Library MSS Dd-Oo* (Cambridge, forthcoming 2009)
- J.B.I First version of the *J.B. Treatise*, in *A Sporting Lexicon of the Fifteenth Century: The J.B. Treatise*, ed. D. Scott-Macnab, *Medium Ævum Monographs, New Series 23* (Oxford, 2003), 101-12
- J.B.II Second version of the *J.B. Treatise*, in *A Sporting Lexicon of the Fifteenth Century: The J.B. Treatise*, ed. D. Scott-Macnab, *Medium Ævum Monographs, New Series 23* (Oxford, 2003), 113-23
- J.B.III Third version of the *J.B. Treatise*, in *A Sporting Lexicon of the Fifteenth Century: The J.B. Treatise*, ed. D. Scott-Macnab, *Medium Ævum Monographs, New Series 23* (Oxford, 2003), 125-30
- J.B.IV Fourth version of the *J.B. Treatise*, in *A Sporting Lexicon of the Fifteenth Century: The J.B. Treatise*, ed. D. Scott-Macnab, *Medium Ævum Monographs, New Series 23* (Oxford, 2003), 131-41
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- Kerdeston 'The Kerdeston "Library of Hunting and Hawking Literature" (early 15<sup>th</sup> c. fragments)', ed. B. Danielsson, in S. Schwenk, *et al.* (eds.), *Et Multum et Multa: Beiträge zur Literatur, Geschichte und Kultur der Jagd. Festgabe für Kurt Lindner zum 27. November 1971* (Berlin, 1971)
- Knighton, *Chronicon* Henry Knighton, *Chronicon*, ed. J.R. Lumby, 2 vols., *Rolls Series 92.i-ii* (London, 1889-95)
- LHA 'Household Accounts at Lanherne', ed. H.L. Douch, *Journal of the Royal Institute of Cornwall, New Series 2:1* (1953), 25-32
- Lisle Letters *The Lisle Letters*, ed. M. St. Clare Byrne, 6 vols. (Chicago, 1981)

- LRE *Le Livere de Reis de Brittanie e le Livere de Reis de Engleterre*, ed. J. Glover, Rolls Series 42 (London, 1865)
- MacDonogh, *Reigning Cats and Dogs* K. MacDonogh, *Reigning Cats and Dogs: A History of Pets at Court Since the Renaissance* (London, 1999)
- MCR *The Early Rolls of Merton College Oxford with an Appendix of Thirteenth-Century Oxford Charters*, ed. J.R.L. Highfield, Oxford Historical Society, New Series 18 (Oxford, 1964)
- MED *Middle English Dictionary*, available online at *The Middle English Compendium*, <http://quod.lib.umich.edu/m/mec/>
- Memorials Ripon *Memorials of the Church of SS. Peter and Wilfred, Ripon*, ed. J.T. Fowler, 4 vols., Surtees Society 74, 78, 81, 115, (Durham, 1882-1908)
- METH *A Late Middle English Treatise on Horses, Edited from British Library MS. Sloane 2584, ff. 102-117b*, ed. A.C. Svinhufvud (Stockholm, 1978)
- MFA *Memorials of the Abbey of St. Mary of Fountains*, ed. J.R. Walbran and J.T. Fowler, 3 vols., Surtees Society 42, 67, 130 (Durham, 1863-1918)
- MG Edward, second duke of York, *The Master of Game: The Oldest English Book on Hunting*, ed. W.A. and F.N. Baillie-Grohman (London, 1904)
- MHE *Manners and Household Expenses of England in the Thirteenth and Fifteenth Centuries, Illustrated by Original Records*, ed. T.H. Turner, Roxburgh Club 57 (London, 1841)
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- MKSG *The Maner of Keping of Sparhauke and Goshauke*, in 'The Book of St Albans and the Origins of its Treatise on Hawking', ed. N.J. Shirley Leggatt, *Studia Neophilologica* 22 (1949-50), 135-45

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- NS      New Series
- OED      *The Oxford English Dictionary*, <http://dictionary.oed.com/entrance.dtl>
- Oggins, *Kings and Hawks*      R.S. Oggins, *The Kings and their Hawks: Falconry in Medieval England* (New Haven, 2004)
- Paston Letters*      *The Paston Letters*, ed. J. Gairdner, 4 vols. (Edinburgh, 1910)
- Payne, 'Agrarian Conditions'      R.C. Payne, 'Agrarian Conditions on the Wiltshire Estates of the Duchy of Lancaster, the Lords Hungerford and the Bishopric of Winchester in the 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> Centuries' (unpublished PhD thesis, University of London, 1939)
- PC      Cambridge, Clare College MS 15 (Kk.4.2), f.187r (*Practica Canum*, c.1280)
- PEB      'The Booke of Hawkyng after Prince Edwarde Kyng of Englande and its Relation to the Book of St Albans', ed. A.E.H. Swaen, *Studia Neophilologica* 16 (1943/44), 1-32
- PH      *The Proceis of Hawkyng*, in *English Hawking and Hunting in The Boke of St Albans: A Facsimile Edition of sigs. a2-f8 of The Boke of St Albans (1486)*, ed. R. Hands (Oxford, 1975), 3-53
- Poullé-Drieux, 'L'Hippiatrie'      Poullé-Drieux, Y., 'L'Hippiatrie dans l'Occident Latin du XIII<sup>e</sup> au XV<sup>e</sup> Siècle', in G. Beaujouan *et al.*, *Médecine Humaine et Vétérinaire à la Fin du Moyen Âge*, Hautes Études Médiévales et Modernes 2 (Paris, 1966), 9-167
- PP      'The Percy Poem on Falconry', ed. B. Danielsson, *Studier i Modern Språkvetenskap*, New Series 3 (1970), 5-60

- PR Bartholomeus Anglicus, *On the Properties of Things: John Trevisa's Translation of Bartholomæus Anglicus De Proprietatibus Rerum*, 3 vols. (Oxford, 1975-88)
- Practica Canum* *La Practica Canum – Le De Cane d'Albert le Grand: l'Art de Soigner les Chiens de Chasse au Moyen Age*, ed. J. Loncke, *Bibliotheca Cynegetica* 5 (Nogent-le-Roi, 2007)
- PRO The National Archives, London (formerly the Public Record Office)
- Rawcliffe, *Medicine and Society* C. Rawcliffe, *Medicine and Society in Later Medieval England* (London, 1999)
- Ryder, 'Animal Remains' M.L. Ryder, *et al.*, 'Animal Remains from Wharram Percy', *The Yorkshire Archaeological Journal* 47 (1975), 42-52
- RS Rolls Series
- RWH 1285-86 *Records of the Wardrobe and Household 1285-1286*, ed. B.F. Byerly and C.R. Byerly (London, 1977)
- RWH 1286-89 *Records of the Wardrobe and Household 1286-1289*, ed. B.F. Byerly and C.R. Byerly (London, 1986)
- Salvin and Brodrick, *Falconry* F.H. Salvin and W. Brodrick, *Falconry in the British Isles* (London, 1855; reprinted 1980)
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- Smith, *Veterinary Literature* F. Smith, *The Early History of Veterinary Literature and its British Development*, vol. I (London, 1976; reprinted from the *Journal of Comparative Pathology and Therapeutics*, 1912-18)
- Smithcors, *Veterinary Art* J.F. Smithcors, *Evolution of the Veterinary Art: A Narrative Account to 1850* (London, 1958)
- Sporting Lexicon* *A Sporting Lexicon of the Fifteenth Century: The J.B. Treatise*, ed. D. Scott-Macnab, *Medium Ævum Monographs, New Series* 23 (Oxford, 2003)



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For technical terms and descriptions of the ailments cited in this thesis, see Appendix A (Glossary of Terms, 202-08) and Appendix B (Glossary of Ailments, 209-18) respectively. For the properties of the herbs named in this thesis, see Appendix C (Medicinal Actions of Herbs, 219-23)

## Introduction

### I.

#### “olde wise clerckus”: current historiography and aims of thesis

When discussing the treatment of flying mange in hounds, the author of the fifteenth-century treatise *The Master of Game* noted that “This oynement is merueylous and good and trew not only for þis þing but also aʒenst þe canker and fistoles and farsyns and oþer quyk euelis þe which ben hard to hele in oþer beestes”.<sup>1</sup> Whilst on the surface this seems like an innocent remark, upon closer inspection it reveals some interesting suppositions: not only could different ailments be treated with the same remedy, but different animals could also suffer from the same ailments. Such suppositions raise interesting questions. What and how similar were the ailments suffered by animals? If different animals suffered from the same illness, were they treated by similar methods? Were similar methods used overall in the treatment of animals? Did other authors indicate that different ailments could be treated with the same remedy, or that other animals could be cured by the same means? Through an examination of the veterinary literature of late-mediaeval England I intend to answer such questions.

The study of mediaeval veterinary medicine has long been of interest to both historians and veterinarians. Between 1892 and 1922 the French veterinarian L. Moulé wrote his *Histoire de la Médecine Vétérinaire*, a work in five volumes, covering veterinary medicine from ancient times up until the seventeenth century.<sup>2</sup> Although his examination of the European literature in the third volume is very thorough (for not only does he discuss authors and their works, but also ailments and their remedies), the only work of English provenance which is discussed is Bartholomeus Anglicus’ (before 1203-1272) *De proprietatibus rerum*, for Moulé believed that “Aucune œuvre vétérinaire sérieuse...n’est apparue en Angleterre pendant la période médiévale”.<sup>3</sup> At the same time, F. Smith published his articles on *The Early History of Veterinary*

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<sup>1</sup> MG, 50.

<sup>2</sup> All five volumes can be found online at <http://web2.bium.univ-paris5.fr/livanc/?intro=alfort&statut=charge>, accessed, 06.06.09.

<sup>3</sup> Moulé, *Médecine Vétérinaire*, 5.

*Literature and its British Development*, yet although English sources are here mentioned, he held a very poor opinion of them; for instance, of the remedies found in British Library manuscript Sloane 3285, he remarked that the ailments were “all treated in a manner suited to the Dark Ages” and that “The instruction in treatment is deplorable”.<sup>4</sup> Indeed, Smith was rather disparaging of the state of veterinary medicine in Europe in the fourteenth and fifteenth centuries, noting that there was no evidence of progress.<sup>5</sup> Interest in the history of veterinary medicine remained,<sup>6</sup> but from the latter half of the twentieth century a different approach was taken by some scholars; rather than focusing solely upon the writers and their works, attention was now upon the ailments from which the animals suffered and the treatment of these illnesses.<sup>7</sup>

Although there is no dearth of material upon the veterinary treatment of animals in the Middle Ages, and the ailments from which they suffered, it is clear that there are gaps which can be filled. I intend to focus on animal ailments and their treatment in late-mediaeval England, an area which has geographically received little attention in the discussion of animal welfare. Thus it is my intention to discover from which ailments animals suffered, together with their causes and symptoms, what kinds of treatment were meted out, and which ingredients and instruments were used. Additionally, those who were responsible for the animals, not only when the animal was sick, but also on a day-to-day basis, will also be examined. Through this comprehensive examination, the state of veterinary medicine in late-mediaeval England may be assessed. Unlike existing scholarship, however, where discussion has focused upon one type of animal, be it horse, dog, or bird of prey, I intend to adopt a

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<sup>4</sup> Smith, *Veterinary Literature*, 108.

<sup>5</sup> *Ibid.*, 121.

<sup>6</sup> See E. Leclainche, *Histoire de la Médecine Vétérinaire* (Toulouse, 1936); Smithcors, *Veterinary Art*; R.H. Dunlop and D.J. Williams, *Veterinary Medicine: an Illustrated History* (USA, St Louis, 1996); K.-D. Fischer, “‘A Horse! A Horse! My Kingdom for a Horse’: Versions of Greek Horse Medicine in Medieval Italy”, *Medizin Historisches Journal* 34 (1999), 123-38. A different exploration of the evolution of veterinary literature is taken by J. Swabe, who examines the social context of this human-animal relationship, to show how not only transformation in social relations, but also the changing interdependencies between man and animals, were responsible for, or responses to, the development of veterinary medicine. J. Swabe, *Animals, Disease and Human Society: Human-Animal Relations and the Rise of Veterinary Medicine* (London, 1999).

<sup>7</sup> See Y. Poulle-Drieux, ‘L’Hippiatrie dans l’Occident Latin du XIII<sup>e</sup> au XV<sup>e</sup> Siècle’, in G. Beaujouan, *et al.*, *Médecine Humaine et Vétérinaire à la Fin du Moyen Âge* (Paris, 1966), 9-172; Van den Abeele, *Fauconnerie*; Boor-van der Putten, “Maladies de Chiens”. For an abbreviated discussion of this latter, see I. Boor-van der Putten, ‘The Canine Veterinary Medicine in the Middle Ages According to the *Livre de Chasse* by Gaston Phoebus’, *Historia Medicinae Veterinariae* 28:1 (2003), 1-11.

broader approach by looking at a cross-section of animals,<sup>8</sup> comparing and contrasting the nature of their ailments and the manner of their treatment.

An important facet of my aims, however, is to examine the reality of the care meted out to animals, an area which is understudied. Scholarship thus far has focused upon the veterinary sources, sources which are rich with regard to information about ailments and the ideal of treatment, but which do not generally indicate the actuality of care. When and how did illness strike? Who was responsible for caring for and treating the animal? Were the treatments advocated actually carried out? Were medicines purchased or made by the household? Answers to these questions can be supplied through an examination of other sources, such as household and manorial accounts, personal letters, and chronicles.<sup>9</sup> These sources in themselves are by no means understudied; for example, accounts have been used in the study of such matters as food and drink, living conditions, and hospitality.<sup>10</sup> Yet such sources, which reveal the actuality of mediaeval life, have not been used in order to examine the welfare of animals. By marrying the actuality of care with the theory and recommendations of the veterinary sources, not only will our understanding of animal welfare be greater, but it will also serve to place the animal more firmly in a social setting.

This study will not only contribute to the history of veterinary medicine, but will also enhance our understanding of animals in the Middle Ages, and complement the current broader interest taken in animals. One aspect in which scholars have taken an interest is that of the perceptions of and attitudes towards animals and nature.<sup>11</sup> As

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<sup>8</sup> For the animals under discussion, see below 4-23.

<sup>9</sup> Y. Poulle-Drieux, for example, has shown what French stable accounts of the later Middle Ages reveal about veterinary practices in France, Y. Poulle-Drieux, 'Pratique de l'Hippiatrie à la fin du Moyen Âge', in *Comprendre et Maîtriser la Nature au Moyen Âge: Mélanges d'Histoire des Sciences offerts à Guy Beaujouan*, preface M. Terrasse, introduction D. Jacquart (Geneva, 1994), 329-36.

<sup>10</sup> See *HAME*, I, 4.

<sup>11</sup> For example, J.E. Salisbury, in *The Beast Within: Animals in the Middle Ages* (London, 1994), argued the case for a shift in perception in the twelfth century, a shift which blurred the lines between what was animal and what was human. B. Resl, however, noted that in the Middle Ages there was a shift in the concept of the word 'animal' (which meant all living things, as used by Pliny and Isidore) to an emergence of the word 'beast', which allowed for a clearer distinction between humans and animals, B. Resl, 'Animals in Culture, ca. 1000-ca.1400', in L. Kalof and B. Resl (ed.), *A Cultural History of Animals*, 6 vols. (Oxford, 2007), II, 9-10. See also D. Salter, *Holy and Noble Beasts: Encounters with Animals in Medieval Literature* (Cambridge, 2001); R.S. Oggins, 'Falconry and Medieval Views of Nature', in J.E. Salisbury (ed.), *The Medieval World of Nature: A Book of Essays* (New York, 1993), 47-60; N.C. Flores, 'The Mirror of Nature Distorted: The Medieval Artist's Dilemma in Depicting Animals', in Salisbury,

N. Harris has argued, personal contact with animals affected the way in which mediaeval people wrote about and depicted them.<sup>12</sup> Interest has also been taken in what animals symbolically represent, be it in popular belief, literature, or art,<sup>13</sup> although B. Resl has recently challenged the ease with which it is accepted that a depiction of an animal must be symbolic.<sup>14</sup> Recent interest has also been taken in an examination of animals as material culture,<sup>15</sup> and also more broadly in the cultural history of animals themselves.<sup>16</sup>

## II.

### “bochere hovndis & dovnghyll currys”: the animals under discussion

One of the aims of this study is to compare and contrast the ailments and treatment of different animals in late-mediaeval England. The animals under discussion, however, are very much dependent upon those mentioned in the sources, namely horses, hounds, birds of prey, and livestock (cattle, sheep, and pigs). As much as I would have liked to include exotic animals such as lions, elephants, and parrots in this study, sadly, although some information survives as to their daily care – in 1534

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*Medieval World of Nature*, 3-45; K. Thomas, *Man and the Natural World: Changing Attitudes in England 1500-1800* (Harmondsworth, 1984).

<sup>12</sup> For his discussion of this, via a case study of the camel, see N. Harris, ‘The Camel in Medieval Literature: Perspectives and Meanings’, in S. Hartmann (ed.), *Fauna and Flora in the Middle Ages: Studies of the Medieval Environment and its Impact on the Human Mind. Papers Delivered at the International Medieval Congress, Leeds, in 2000, 2001 and 2002*, Beihefte zur Mediaevistik 8 (Frankfurt, 2007), 113-31. See also F. Klingender, *Animals in Art and Thought: to the End of the Middle Ages*, ed. E. Antal and J. Harthan (London, 1971).

<sup>13</sup> See S. Page, ‘Good Creation and Demonic Illusions: The Medieval Universe of Creatures’, in Kalof and Resl, *Cultural History of Animals*, II, 27-57; A. Classen, ‘The Dog in German Courtly Literature: The Mystical, the Magical, and the Loyal Animal’, in Hartmann, *Fauna and Flora*, 67-86; C. Fabre-Vassas, *The Singular Beast: Jews, Christians, and the Pig*, tr. C. Volk (New York, 1997); M.E. Robbins, ‘The Truculent Toad in the Middle Ages’, in N.C. Flores (ed), *Animals in the Middle Ages; A Book of Essays* (London, 1996), 25-47; E. Cohen, ‘Animals in Medieval Perceptions: The Image of the Ubiquitous Other’, in A. Manning and J. Serpell (eds.), *Animals and Human Society: Changing Perspectives* (London, 1994), 59-80; J.R. Benton, *The Medieval Menagerie: Animals in the Art of the Middle Ages* (New York, 1992); B. Van den Abeele, *La Fauconnerie dans les Lettres Français du XII<sup>e</sup> au XIV<sup>e</sup> Siècle*, *Mediaevalia Lovaniensi* 1:18 (Leuven, 1990); H.W. Janson, *Apes and Ape Lore in the Middle Ages and the Renaissance* (London, 1952).

<sup>14</sup> B. Resl, ‘Beyond the Ark: Animals in Medieval Art’, in Kalof and Resl, *Cultural History of Animals*, II, 179-201. See also J.R. Benton, ‘Gargoyles: Animal Imagery and Artistic Individuality in Medieval Art’, in Flores, *Animals in the Middle Ages*, 147-65, esp. 157-60.

<sup>15</sup> See A. Pluskowski (ed.), *Breaking and Shaping Bestly Bodies: Animals as Material Culture in the Middle Ages* (Oxford, 2007).

<sup>16</sup> See Kalof and Resl, *Cultural History of Animals*, a work which covers divers topics such as the sacred and symbolic, hunting, domestication, and philosophical beliefs.

Jehan de Moucheau instructed Honor Plantagenet, Lady Lisle (1493x5-1566), that the two marmosets and long-tailed monkey he sent her “eat only apples and little nuts, or almonds”, and that whilst they were to be kept warm by the fire at night, “during the day one may keep them caged out of doors”<sup>17</sup> – very little information survives about their ailments and any remedies meted out.<sup>18</sup> In order to put the animals here under discussion in context, the following is an overview of the different types of animals, together with their primary functions in mediaeval society.

### *Horses*

A variety of horses were to be found in late-mediaeval England, a variety aptly described by William Fitz Stephen as early as c.1173-74:

It is enjoyable to see the trotting amblers (*gradarii*) in good condition pleasantly walking, with feet raised and dropped laterally at the same time as if at opposite corners; from here are horses, more appropriate for squires, harsher in paces (*incedentes*), but nonetheless speedy, who lift up and put down their feet at the same time as if on opposite sides; from here are noble younger colts, who, not yet well accustomed to the bit, “advance loftily, and put tender legs back in place”. From here are sumpters with powerful and vigorous limbs; from here are expensive destriers, elegant of form, distinguished of height, with ears trembling, with necks erect, [and] with stout haunches...In another part, apart from the rest, the goods of the farmers stand...There stand the mares fit for the ploughs, sledges, and carts; the wombs of some swell before with young; the offspring of others have been born, playful foals, an inseparable follower.<sup>19</sup>

This was the scene at Smithfield horse fair, a scene which would be familiar in this part of London until the eighteenth hundreds. Gathered here was every type of horse, segregated according to status, an animal which played such a vital role in mediaeval society.<sup>20</sup> There were the great warhorses, the destriers, the largest of the horses,<sup>21</sup>

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<sup>17</sup> *Lisle Letters*, II, 317.

<sup>18</sup> Some ailments of exotic animals can be found in encyclopaedic works, although remedies are rarely mentioned. See *PR*, II, 1158, 1194, 1195, 1218, 1261; *De animalibus*, 1362, 1406.

<sup>19</sup> *Materials for the History of Thomas Becket, Archbishop of Canterbury*, ed. J.C. Robertson, 7 vols., RS 67.i-vii (London, 1875-85), III, 6-7.

<sup>20</sup> For an overview of the importance of the horse, see A. Hyland, *The Horse in the Middle Ages* (Stroud, 1999).

<sup>21</sup> The destrier had to be able to carry not only a fully armoured knight, but also its own armour, which, from the time of Edward III, became increasingly heavier. See A. Hyland, *The Warhorse 1250-1600* (Stroud, 1998), 9-10; M. Prestwich, *Armies and Warfare in the Middle Ages: the English Experience* (New Haven, 1996), 35-7; Hyland, *Horse in the Middle Ages*, 67-9.

which not only carried knights into battle,<sup>22</sup> but sometimes fought themselves; one illustration in a bestiary of c.1230 depicts two knights fighting, whilst their horses engage in combat next to them [fig. 1].<sup>23</sup> Indeed, according to Bartholomeus Anglicus horses rejoiced in battles: “[they] smylleþ batayles and beþ comforted wiþ noyse of a trompe to batayle and to fyghtyng...And som feleþ and knoweþ here enemyes in batayle so ferforþ þat þay areseþ on here enemyes wiþ bytyng and smytyng”.<sup>24</sup> The author of the fifteenth-century treatise *The Boke of Marchalsi*, however, noted that England, Ireland, and Scotland did not produce good warhorses because “þei ben fatte”.<sup>25</sup> Other horses, too, were used in warfare. The non-knightly man-at-arms rode a rouncey, whilst from 1296 until the 1330s the light infantry rode hobbies, horses which did not take part in the fighting, but which were used for transport and skirmishes.<sup>26</sup> Indeed, Jean le Bel’s (d.c.1370) description of the Scots invasion of England in 1327, as re-told by Jean Froissart (c.1337-c.1404), mentioned how “The knights and squires are mounted on fine, strong horses and the commoners on small ponies”, the horses of the knights and squires later described as “good rounceys and coursers”.<sup>27</sup> Overall the horse was of great importance in warfare, for it would have been impossible to have even fought a battle without horses as means of transport; not only did men themselves need to get to the battle,<sup>28</sup> but equipment and supplies also needed to be brought, courtesy of pack- and cart-horses.<sup>29</sup>

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<sup>22</sup> The king expected his men always to be ready with horse and harness; when with Edward IV (1461-83) at Stamford in 1462 John Paston the Elder (1442-79) informed his father of “the grete expens that I have dayly travelyng with the Kyng...and howe I am chargyd to have myn hors and harnys redy, and in hasty wyse”, *Paston Letters*, II, 92-3.

<sup>23</sup> It was not only in battles that horses fought. Gilbert, Abbot of Margam Abbey (1203-12), Wales, embarked on a policy of aggrandisement soon after his appointment as abbot against the poorer house of Neath, occupying its lands and pastures and endeavouring by every means to impoverish it and destroy it. In the bitter disputes which ensued the prize horses of the abbey studs were set to fight each other as their abbey champions, the lay brothers of Margam ensuring the victory of their horse by attaching sharp steel blades to its hoofs, F.G. Cowley, *The Monastic Order in South Wales, 1066-1349* (Cardiff, 1977), 124.

<sup>24</sup> PR, II, 1186. A discussion of the warhorse, via the inventories of Edward III’s reign (1327-77), can be found in A. Ayton, *Knights and Warhorses: Military Service and the English Aristocracy under Edward III* (Woodbridge, 1999; first printed 1994). For a wide geographical survey of the warhorse, see Hyland, *Warhorse*.

<sup>25</sup> BMO, 19.

<sup>26</sup> Davis, *Medieval Warhorse*, 67, 26; Hyland, *Warhorse*, 32-3.

<sup>27</sup> Jean Froissart, *Chronicles*, tr. and ed. G. Brereton (London, 1978), 46, 47.

<sup>28</sup> Knights would ride to battle on a horse such as a rouncey or courser, only mounting the destrier to engage in combat.

<sup>29</sup> They could also form a living defence, being tethered together by muzzle and tail, M. Strickland and R. Hardy, *From Hasting to the Mary Rose: The Great Warbow* (Stroud, 2005), 223. Indeed, in her

The horse was vital for transport in the Middle Ages. When Abbot Thomas de Malton of Whitby Abbey resigned in 1322, he received certain benefits for the remainder of his life in recognition of his faithful labours as abbot, one of which included “a competent equipage for riding to and from Whitby and Eskdale when he desired”.<sup>30</sup> In 1352-53 Durham Cathedral Priory even hired a horse for the barber to be able to do his rounds.<sup>31</sup> So vital was the horse to transport that in a letter to a monk at Hailes Abbey, Roger de Marlowe (late C15), rector of Harwell in Berkshire, wrote, “since having lost some of my horses I am hardly able to go about”.<sup>32</sup> It was not always easy to keep oneself suitably mounted, however. In 1492 William Paston (b.c.1459) wrote to Sir John Paston (1444-1504) from London, informing him that “I am as yet no bettyr horsyd than I was whan I was wythe you...for hors flesche is of suche a price here that my purce is schante able to bye one hors”.<sup>33</sup>

The palfrey was the horse of choice for riding, valued for its comfortable ambling stride, where both legs were moved on the same side at the same time,<sup>34</sup> as can be seen in the illustration of Geoffrey Chaucer’s (c.1340-1400) *Wife of Bath* [fig.

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vernacular military manual of c.1410, *Livre des fais d'armes et de chevalerie*, Christine de Pizan (1365-c.1430) noted that behind the rearguard should come “the yeomen on horseback...These are good men, holding the horses of their masters and forming an obstacle so that no one can attack the army from the rear”, Christine de Pizan, *The Book of Deeds of Arms and Chivalry*, tr. S. Willard, ed. C.C. Willard (Pennsylvania, 1999), 66. The work was printed in English by William Caxton in 1489; see *The Book of Fayttes of Armes and of Chyvalrye: Translated and Printed by William Caxton from the French Original by Christine de Pisan*, ed. A.T.P. Byles, EETS 189 (London, 1937); for the relevant passage, see 81.

<sup>30</sup> W. Page (ed.), *The Victoria History of the County of York*, 4 vols. (London, 1907-25), III, 103. At Ramsey Abbey it was the responsibility of the sacrist, almoner, chamberlain, and cellarer to provide horses for the monks who were travelling to see parents or friends, or who were going to and from St. Ives. By 1439, however, they were claiming the horses were their own, and refused to provide horses, “and this was the reason of his [William Alnwick, bishop of Lincoln] own late arrival to-day at Ramsey from St. Ives, because he had no horse appointed for this purpose”, *Visitations of Religious Houses in the Diocese of Lincoln*, ed. A. Hamilton Thompson, 3 vols. (London and Orford, 1915-27), I, 105; III, 305, 309, 316.

<sup>31</sup> *DAR*, II, 553.

<sup>32</sup> *The Voice of the Middle Ages in Personal Letters 1100-1500*, ed. C. Moriarty (Oxford, 1989), 127.

<sup>33</sup> *Paston Letters*, III, 376.

<sup>34</sup> Strictly speaking the palfrey has a four-beat gait, the hind leg striking the ground a split second before the fore, Hyland, *Warhorse*, 222. Different horses were trained in different gaits, depending upon what use they were to be put. Warhorses trotted, except in battle when they were expected to be able to move from the walk to the canter, and then on to a full gallop, Gladitz, *Horse Breeding*, 157-58. Some horses were born amblers, for selection in breeding could produce horses which ambled from birth. The Mongols believed that foals born to ambling sires would be amblers, whilst those born to ambling dams would not necessarily be so, *ibid.*, 293 n.161. Others, however, needed to be trained, and the length of time it took to do this could vary; in 1292 it took 21 days to teach some foals to amble, but only sixteen to teach others, at the Kettering manor of Peterborough Abbey, *ibid.*, 157. *The Sothebe Treatise* gives explicit details of how this was to be done: see *ST*, f.51r.

2].<sup>35</sup> Rounceys were also ridden, but their gait was a two-beat trot, with opposite fore and hind legs moving at the same time, which gave a rather bumpy ride.<sup>36</sup>

Whilst persons could either ride or travel in a carriage – in the early-fourteenth century both Queen Isabella (1295-1358), wife of Edward II (1307-27), and Margaret de Clare, countess of Gloucester (1291/2?-1342) used destriers to pull their carriages, probably done for show, as much as for strength<sup>37</sup> – goods were transported by cart- or pack-horse. In the household accounts of Queen Isabella for the year 1311-12 there are numerous references to horses pulling carts, with the number of horses to a cart ranging from two to four.<sup>38</sup> Often additional animals were hired for the purpose, as occurred in the household of Elizabeth Berkeley, Countess of Warwick; in 1420-21 three carters with twelve horses were hired for two carts for the household baggage when moving from Berkeley to Walthamstow.<sup>39</sup> It made much more sense economically to hire horses, as the household would not then be put to the expense of stabling horses during the winter months when they were not required.<sup>40</sup>

Those horses used as pack-horses were generally known as sumpters. They were capable of carrying heavy loads in the specifically designed sumpter-harness, which included a pack-saddle, coffers, bags, and baskets; their carrying capacity was limited only by the weight and size of the packages which could be loaded either side, taking into account the capabilities of the individual sumpter and the stability of the load.<sup>41</sup> Yet sumpters were not the only packhorses. In 1242 “three good strong rounceys” were used to carry £400 belonging to Henry III (1216-72) to Portsmouth,<sup>42</sup> whilst in January 1312 a hackney was hired at a cost of 9s 2d to carry venison and cheese from Westminster to Newsum, Yorkshire, a gift from Queen Isabella, to the lady Isabella de

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<sup>35</sup> Note that she is sitting astride the horse.

<sup>36</sup> The rouncey could, however, be used on the demesne as a harrowing animal, J. Langdon, *Horses, Oxen and Technological Innovation: The Use of Draught Animals in English Farming from 1066-1500* (Cambridge, 1986), 296.

<sup>37</sup> *HBI*, 150; C.M. Woolgar, *The Great Household in Late Medieval England*, (New Haven, 1999), 190.

<sup>38</sup> *HBI*, 24-6, 30, 36, 40, 130.

<sup>39</sup> C.D. Ross, ‘The Household Accounts of Elizabeth Berkeley, Countess of Warwick, 1420-1’, *Transactions of the Bristol and Gloucestershire Archaeological Society* 70 (1951), 90. When Elizabeth de Burgh (1294/5-1360) travelled from Wales in 1350, the convents of Tewkesbury, Evesham, Walsingham, Dereham, and Ely all supplied horses and servants to ease her trip, F.A. Underhill, *For Her Good Estate: The Life of Elizabeth de Burgh* (Basingstoke, 1999), 133.

<sup>40</sup> Ross, ‘Household Accounts’, 90.

<sup>41</sup> Gladitz, *Horse Breeding*, 155.

<sup>42</sup> *CLR*, III, 145.

Vesci.<sup>43</sup> In the accounts of Sir John Howard (d.1485) a new ‘tronke’ saddle was purchased in 1465-66, whilst in 1463 a ‘tronke’ horse is mentioned, terms which seem to suggest a horse employed to carry loads.<sup>44</sup>

Stots and affers were the lowest-status horses, used primarily in agriculture. At Tavistock Abbey in the later Middle Ages affers were used for harrowing,<sup>45</sup> although they were more usually employed as plough-horses.<sup>46</sup> As with other types of horses, however, their function was not set in stone, for they were also employed as cart- and pack-horses.<sup>47</sup> In some instances horses were even the driving-power of mills: on 1 June 1242 the constable of Windsor castle was instructed to “make a horse-mill and four hand-mills there”,<sup>48</sup> whilst when two laymen entered the service of the Abbot of Fountains Abbey at Warsill Grange in 1526, they undertook to provide a horse for the mill.<sup>49</sup> Although nothing is stated about what types of horses these were, they were likely to have been stots and affers.

### Dogs

A variety of dogs were also to be found in late-mediaeval England, as attested to by the list of dogs found in the fifteenth-century *J.B. Treatise*:<sup>50</sup> “There bythe

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<sup>43</sup> *HBI*, 132. Hackneys appear to have been all-purpose horses which were hired, whether for riding or to carry loads, for these accounts also record that they were hired for men carrying letters, *ibid.*, 214. They were also a horse used in warfare; in 1346 a mounted archer’s horse was a hackney, J.E. Morris, ‘Mounted Infantry in Mediaeval Warfare’, *Transactions of the Royal Historical Society*, Third Series 8 (1914), 92.

<sup>44</sup> *MHE*, 324, 232. It seems that sometimes horses carried both men and loads, for a list of horses and their riders when Sir John Howard (d.1485) was at Holt Castle with the Duke of Norfolk gives “Lytel Lewe a pon the geldenge wethe the troune”, *ibid.*, 455.

<sup>45</sup> Finberg, *Tavistock Abbey*, 132.

<sup>46</sup> Oxen were used in earlier times for ploughing, but from the end of the twelfth century there are references to the use of horses; see Trow-Smith, *Livestock Husbandry*, 92. For a discussion on how the horse gradually superseded the ox as a plough animal, see Langdon, *Technological Innovation*. See also below, 19-20.

<sup>47</sup> J. Langdon, ‘The Economics of Horses and Oxen in Medieval England’, *The Agricultural History Review* 30 (1982), 33.

<sup>48</sup> *Liberate Rolls*, II, 137.

<sup>49</sup> J. Bond, *Monastic Landscapes* (Stroud, 2004), 311.

<sup>50</sup> The treatise is so called after the colophon, which appears on three separate occasions as “Dam Iulyans Barnes”, “Iulyon Barne”, and “I.B.”, *Sporting Lexicon*, vii. The treatise itself is composed of some twenty elements relating to hunting, hawking, and miscellaneous matters, such as collective nouns, breeds of dogs, names of wines, properties of a good horse, and recipes for hawk diseases – for a list see *ibid.*, 7. D. Scott-Macnab has argued that “there is no single, authoritative text that can be pointed to as its pre-eminent representative”, and thus four versions are given by him, *ibid.*, vii. Due to the various nuances between the versions, I have followed him in referring to four versions. In *The Boke of St Albans* (1486) the name “Dam Iulyans Barnes” is erroneously attached to Sir Tristram’s *Boke of Huntyng*. See R.

grayhoundys, basterdes, mongrellys and mastyffys; and alanndys, lymmorous, spannellys and rachys; kennettes, bochere hovndis & dovnghyll currys; and smalle poppys for ladys chambureys”.<sup>51</sup> As with horses, dogs could perform a variety of functions, one of which was guarding, whether this was the home or personal property such as livestock.<sup>52</sup> Bartholomeus Anglicus praised “the mungrell cures, which serve to keep the bottles and bags, with vittell, of ditchers and hedgers”, for they would be “sooner killed of a straunger than beaten off from their masters apparell and victuall”.<sup>53</sup> Larger varieties of dog were preferred for guarding the home, with the favourite being the mastiff, dogs “of cherlich nature of foule shape” which were thought to “kepen and defended at her power al her maistere goodes”.<sup>54</sup> Circumstances, however, sometimes dictated the type of dog doing the guarding. In Jean Froissart’s poem *Le Debat dou Cheval et dou Levrier*, probably written shortly after his three-month tour of Scotland with King David II (1329-71) in 1365, the greyhound notes that whilst, on this journey, the horse will be well fed and a fresh bed prepared for his night’s rest, he, the dog, will be put behind a door or in an entrance way and told to guard the house.<sup>55</sup> Dogs were also used to guard livestock, primarily to protect flocks of sheep from attacks by thieves and wolves; illustrations often show them wearing spiked collars which would protect them from wolf attacks [fig. 3].<sup>56</sup>

Dogs could also be used in warfare, and it was for such a function that Henry VIII (1491-1547) sent 400 dogs to the Holy Roman Emperor, Charles V, king of Spain (1500-58), “each garnished with a good yron collar” – they proved such good warriors

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Hands, ‘Juliana Berners and “The Boke of St. Albans”’, *Review of English Studies* 18 (1967), 373-86; *Sporting Lexicon*, 1-4.

<sup>51</sup> J.B.I, 107. The version found in *The Boke of St Albans* omits the alaunt, but adds “Tryndeltayles and Prikherid curis”, BSA, 80.

<sup>52</sup> Guarding was an important function; the custumal of Waterford (c.1300) noted that if a man killed his neighbour’s dog, unless it was in self defence not only was an amercement of 20s owed, but the man had to answer to the owner of the dog for all the damage that might come to him through the lack of his dog, *Borough Customs*, ed. M. Bateson, 2 vols., Selden Society 18, 21 (London, 1904-06), 81.

<sup>53</sup> Cited in B. Johnston, ‘The Dogs of Yesteryear’, *History Today* 29 (1979), 115.

<sup>54</sup> MG, 68. Mediaeval instructions on how to train guard-dogs bear a great resemblance to the training of police dogs today, with a man clad in a thick hide being chased by the dog, allowing himself to be caught and well bitten. See *De animalibus*, 1364-65.

<sup>55</sup> Jean Froissart, *An Anthology of Narrative and Lyric Poetry*, ed. and tr. K.M. Figg and R.B. Palmer (New York, 2001), 15, 491.

<sup>56</sup> M.L. Ryder, *Sheep and Man* (London, 1983), 413. An attack from wolves could herald disaster in sheep farming, for a pack could devastate a flock in a single night, A. Dent, ‘The Last Wolves in Yorkshire: And in England?’, *Bulletin of the Cleveland and Teesside Local History Society* 43 (1982), 18. Sheep were not the only animals to be at risk from wolves; goats, pigs, cattle, and even horses, were at risk, *ibid.*

during the pacification of Valencia in 1521 that their valour was held up as an example to the imperial troops.<sup>57</sup> At the opposite end of the spectrum, dogs were often kept as pets;<sup>58</sup> noble ladies could be so attached to their lap-dogs that they would bring them to services, where they could cause much disruption.<sup>59</sup> Thus in the mid-fourteenth century, the dogs of Lady Audeley, who lodged at Langley Priory, made such a great uproar in church that the nuns were not only hindered in their psalmody but were also terrified,<sup>60</sup> whilst a fifteenth-century monastic regulation noted that dogs in church “oftentimes trouble the service by their barkings, and sometimes tear the church books”.<sup>61</sup>

By far the most relevant function to the sources here under discussion, however, was that of hunting. Whilst peasants would use whatever dogs and birds they had,<sup>62</sup> the aristocracy had a variety of hounds and birds of prey with which to hunt, dependent upon the type of game they were chasing. A variety of dogs were used for hunting, *The Master of Game* discussing running hounds, greyhounds, alaunts, spaniels, and mastiffs, although other dogs used for the hunt included bercelets, brachets, and lymers. Each had a defined function in the hunt, as can be seen in the *J.B. Treatise*: “Allondys bythe cast of, lemors drawith, kennettes rennythe, spannyelles reytornnyth,

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<sup>57</sup> MacDonogh, *Reigning Cats and Dogs*, 248. A mid fourteenth-century tract on warfare, *Tractatus de Re Militari et de Machinis Bellicis*, by Paul Savetinus Ducensis, depicts an alaunt equipped for battle; they were sent against cavalry bearing a brass pot of blazing pitch, ignited by means of alcohol, and were trained to fiercely bite the enemy’s horses. They were protected from the effects of fire or from kicks and blows by leather coats, A.S. Cook, ‘The Last Months of Chaucer’s Earliest Patron’, *Transactions of the Connecticut Academy of Arts and Science* 21 (1916), 135-36 n.32, with depiction opposite. When the Spanish used dogs in their attacks against the Incas, the dogs were a terrifying sight to the latter, who had never seen large specimens before, their own dogs being of a small variety. My thanks to C. Given-Wilson for this personal communication.

<sup>58</sup> For a social and cultural history of pet-keeping in mediaeval Europe, see K.F. Walker-Meikle, ‘Late Medieval Pet Keeping: Gender, Status, and Emotions’ (unpublished PhD thesis, University of London, 2007). For a history of pets at court, see MacDonogh, *Reigning Cats and Dogs*.

<sup>59</sup> E. Power, *Medieval English Nunneries c.1275 to 1535* (Cambridge, 1922), 306.

<sup>60</sup> *Visitations of Lincoln*, II, 175.

<sup>61</sup> Cited in Johnston, ‘Dogs of Yesteryear’, 115. Such damage was not always caused by dogs. In the mid-twelfth century the monks of La Grande Chartreuse wrote to Peter the Venerable requesting the larger volume of St Augustine’s Letters, for a bear had accidentally eaten a large part of their copy, *The Letters of Peter the Venerable*, ed. G. Constable, 2 vols., Harvard Historical Studies 78 (Cambridge, Mass., 1967), I, 47.

<sup>62</sup> When poaching, peasants commonly had only the one dog, usually described in the records by their colour – brown, white, black – although sometimes there were references to a type of dog: two brothers used a bercelet to take a buck in Cannock Forest in the 1270s; a gang of peasants who took a doe in Rockingham in the 1280s used a mastiff; and in Pickering Forest in 1311 a beagle was used to take a buck. In comparison, knightly or baronial poachers would use greyhounds or running dogs, J. Birrell, ‘Peasant Deer Poachers in the Medieval Forest’, in R. Britnell and J. Hatcher (eds.), *Progress and Problems in Medieval England: Essays in Honour of Edward Millar* (Cambridge, 1996), 76.

teeryovrs vndure þe ground fechyng þe fox or þe graye [badger]”.<sup>63</sup> The most frequently mentioned hound associated with hunting, certainly in descriptions of baronial and knightly hunting expeditions, were greyhounds.<sup>64</sup> Their suitability for the hunt was due to the fact that they could often be used alone in hunting, for they were both swift and strong enough to bring down red deer.<sup>65</sup> Although there are descriptions of the physical appearance of the greyhound,<sup>66</sup> the term *levrier* itself denoted such seemingly different dogs as the large Irish wolfhound, the Scotch deerhound, and the smaller smooth-coated Italian greyhound.<sup>67</sup> Thus *The Master of Game* advised men that “Naperlees he so may mayntyn hem it is good to haue booth of þe grete and of þe smale and of þe myddil”, although “The good greyhounde shuld be of middel asise, neiþer to moch neiþer to litel, and þan is he good for alle beestis”.<sup>68</sup> Some of the different types of greyhounds can be seen in an illustration in *Le Livre de Chasse*, where both rough-coated and smooth-coated varieties are depicted [fig. 4].<sup>69</sup>

The alaunt, the best of which were obtained from Spain,<sup>70</sup> came in three varieties, of which two were used in hunting.<sup>71</sup> The alaunt gentle was used in hunting to seize the game and bring it down. These aluants appear to have been somewhat excitable in their disposition, without the “good witte as many oþer houndes haue”,

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<sup>63</sup> *J.B.I*, 108.

<sup>64</sup> J. Birrell, ‘A Great Thirteenth-Century Hunter: John Giffard of Brimpsfield’, *Medieval Prosopography* 15 (1994), 59.

<sup>65</sup> *Ibid.* Henri IV of France (1553-1610) prohibited the use of large greyhounds in hunting because of the destruction of game, MacDonogh, *Reigning Cats and Dogs*, 73.

<sup>66</sup> See *MG*, 62-3; *J.B.III*, 129; *J.B.IV*, 135; *BSA*, 80; *TH*, 56. It is interesting that the descriptions compare the parts of the body of the greyhound to other animals; those that rhymed, as in the fourth version of the *J.B. Treatise* and *The Boke of St Albans* were possibly easier to remember. Similar comparative ‘properties’ are also found for the horse, with the points ranging in number from fifteen to twenty-five; that in *The Boke of St Albans* has fifteen, *BSA*, 81. For a discussion of the ‘properties’ of the horse, see R. Hands, ‘Horse-Dealing Lore, or a Fifteenth-Century “Help to Discourse”’, *Medium Ævum* 41 (1972), 230-39. The connection between such descriptions and bestiaries is discussed in J.I. McNelis III, ‘A Greyhound Should Have ‘Eres in þe Manere of a Serpent’: Bestiary Material in the Hunting Manuals *Livre de chasse* and *The Master of Game*’, in L.A.J.R. Houwen (ed.), *Animals and the Symbolic in Mediaeval Art and Literature* (Groningen, 1997), 67-76.

<sup>67</sup> *MG*, 142.

<sup>68</sup> *Ibid.*, 62.

<sup>69</sup> The two small greyhounds depicted in the bottom left of the illustration appear to be puppies rather than a smaller variety, for they are gambolling around a greyhound which is clearly depicted as a bitch.

<sup>70</sup> See *MG*, 116.

<sup>71</sup> The third type, the alaunt of the butcheries, was used by butchers to help herd cattle, rounding up straying cattle on the way from the country to the town. The advantage to having this dog was that it could be kept cheaply, “for þei etyn þe foule þinges in þe boochiers rowe”. This variety of alaunt could also be used as a guard-dog, for bull-baiting, and in hunting the wild boar with greyhounds or running hounds, *ibid.*, 65.

*The Master of Game* describing them as “more foolish and more sturdy [giddy] þan eny oþer maner of houndes”.<sup>72</sup> Hunting with these dogs might have been an exhausting experience, as they would “renne at oxen and at sheepe at swyne and to alle oþer beestis or to men or to oþer houndes”.<sup>73</sup> The alaunt veutreres, which resembled greyhounds, were not only used in bull baiting, but were also used to hunt the wild boar, for it was their nature to hold fast.<sup>74</sup> Indeed, so ugly were these dogs thought to be that if they “ben slayn wiþ wilde boor or wiþ þe bulle and it is not ful grete losse”.<sup>75</sup>

Spaniels were the dogs used when hawking, and had a large head and body with a rough coat.<sup>76</sup> As with the alaunt veutreres, it seems that hunting with a spaniel could be quite unsettling, for “ʒif he se geet, kyen or hors, oxen or oþer beestis he will renne anon, and bygynne to baffe [bark] at hem and bycause of hem þe greihoundes shall renne þerto for to take the beest þorgh his eggyng for he wil make al þe ryot and al þe harme”.<sup>77</sup> For this reason Edward, second duke of York (c.1373-1415), followed Gaston Phébus (1331-91) and claimed he would never have spaniels, unless hawking.<sup>78</sup> Other hunting dogs included bercelets, hounds trained to follow wounded game;<sup>79</sup> mastiffs, bred to hunt wild boar;<sup>80</sup> hart hounds, so called because they only hunted the hart;<sup>81</sup> buckhounds and staghounds, both of which could hunt game other than bucks and stags;<sup>82</sup> and harriers, which ‘harried’ all kinds of game.<sup>83</sup> There were also dogs which hunted by scent. A generic term was running hound, for the description given in *The Master of Game* indicates that a variety of dogs were used. For instance, some ran “lightly and fast”, whilst others “hunten somedele moor slowly and heuyli”;

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<sup>72</sup> *Ibid.*, 64.

<sup>73</sup> *Ibid.*

<sup>74</sup> *Ibid.*, 65.

<sup>75</sup> *Ibid.*

<sup>76</sup> *Ibid.*, 66.

<sup>77</sup> *Ibid.*, 66-7. The modern English translation adds hens to this list of animals, *ibid.*, 66.

<sup>78</sup> *Ibid.*, 67.

<sup>79</sup> *TH*, 64.

<sup>80</sup> *MG*, 68. W.A. and F.N. Baillie-Grohman note that mastiffs were often used in boar hunts when the boar had been chased by other hounds, in order to save the more valuable hound when the boar turned to bay, *ibid.*, 176.

<sup>81</sup> *Ibid.*, 60. The name appears to be a continental one, as it is added in *The Master of Game* that they are so called “byyonde the see”, *ibid.*

<sup>82</sup> In 1249 the staghounds of Henry III were used to take swine and sows in the forest of Dene, whilst buckhounds were used to take does, *Liberate Rolls*, III, 260. Henry also had hounds for wolves and hares, *Close Rolls of the Reign of Henry III Preserved in the Public Record Office*, 14 vols. (London, 1902-38), VI, 142.

<sup>83</sup> See *MG*, 149-51.

indeed, “*There ben also rennyng houndes, some lasse [small] and some moor [big]*”.<sup>84</sup> Other types of dogs to hunt by scent included raches and lymers, the latter taking their name from the long lead by which they were held.<sup>85</sup>

Just as the destrier was the most prized of the horses, so was the greyhound the most prized of dogs.<sup>86</sup> Not only was it valued for its prowess on the hunt, but also for its aristocratic appearance. They epitomised the chivalric ideal of noble actions and good blood, for they were constantly described as ‘gentil’, in the sense of well born and honourable,<sup>87</sup> and their nobleness was reflected in their appearance: “Gentylnesse and nobilite of houndes and of bicches is yknowe by lengþe of face and of þe snowte, and by brede of þe breste, and by smaleness of wombe and flanke”.<sup>88</sup>

### *Birds of Prey*

As with hounds, birds of prey were also employed in hunting,<sup>89</sup> and there were two main types – the long-winged falcons and the short-winged hawks; an early fifteenth-century translation of the twelfth-century Symmachus treatise stated that there were twelve manners and species of hawk, nine that flew above (i.e., falcons), and three that flew from the fist (i.e., hawks): “*Thei þat fleen on hye ben these: the Gerfaucion, Faucon Pyleryne, Faucon Florye, Faucon Ientyl, a Sacre, a Laner, a*

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<sup>84</sup> *Ibid.*, 58, 59, 61. Italicised quotes from *The Master of Game* are where the editors have indicated material added by Edward, second duke of York (c.1373-1415).

<sup>85</sup> See *ibid.*, 181-83, 172-74. According to William Twiti (d.1328) lymers and braches chased different game: “*Alle þo þat ben enchased sunt meüz de lymer and all þo þat bene atyslyd ben founded braches*”, William Twiti, *The Art of Hunting 1327*, ed. B. Danielsson, *Cynegetica Anglica I*, Stockholm Studies in English 37 (Uppsala, 1977), 42. The four beasts of venery which were ‘enchased’ were the hart, hare, wild boar, and wolf, roused by the lymer and pursued by the pack; the buck, roe, and fox were roused solely by the pack, *ibid.*, 87.

<sup>86</sup> Although I. Boor-van der Putten suggests that in cynegetics (the art of hunting) dogs had a relatively low value, as they were easily replaceable, Boor-van de Putten, ‘Canine Veterinary Medicine’, 1.

<sup>87</sup> MacDonogh, *Reigning Cats and Dogs*, 71.

<sup>88</sup> PR, II, 1168.

<sup>89</sup> According to Frederick II of Hohenstaufen (1194-1250), falconry was practised for different reasons:

The chief object of some is to use as food the avian and (occasionally) ground game which their falcons capture...Others think neither of their stomach nor of mere gain, but only of the enjoyment of securing a satisfactory flight for their birds. Others, again, boast and talk about the number of birds their falcons seize. Still others have no pleasure in such accomplishments and aspire to have only fine falcons, better trained than those of others, that have gained honor and pre-eminence in the chase.

Of these four categories, however, only the last was to be approved, for such a falconer secured the best birds, and did not abuse them or overwork them – “He is the one who realizes the essentials of a noble art”, AVCA, 151-52.

Twybelyng Foule, a Hobby, a Merlyon...And þei þat fleyen from the fyst be thes: þe Sparhauke, the Goshauke, þe Mylyon".<sup>90</sup> Due to the physical difference between falcons and hawks their manner of flight differed, for whilst the long-winged falcon took its prey by stooping from a considerable height, the short-winged hawk pursued its prey at low altitude, bringing it down with a quick burst of speed. Thus open ground was more suitable for flying falcons, whilst hawks were better suited to wooded areas.<sup>91</sup> It was also the female of the species which was commonly flown, as, being larger and stronger than the male, she could bring down larger, more active prey.<sup>92</sup>

A variety of quarry could be taken with birds of prey. Gyrfalcons were most frequently flown at cranes and herons, although they could also be used to hunt duck.<sup>93</sup> Similarly, peregrine falcons were used to hunt herons, cranes, duck, and rooks; lanner falcons, too, hunted similar prey – herons, cranes, partridges, rooks, crows, and magpies.<sup>94</sup> In contrast, sparrowhawks and goshawks were most often flown at partridges, pheasants, and mallards,<sup>95</sup> although they could also be flown at young cocks, woodcock, blackbirds, thrushes, magpies, larks and herons.<sup>96</sup> Although smaller birds of prey were generally used to hunt smaller birds – for instance, the hobby was good for taking larks<sup>97</sup> – they were sometimes trained to bring down larger birds, the author of *The Percy Poem* relating that two merlins could be trained to bring down a heron.<sup>98</sup>

Some birds of prey appear to have been valued above others. For instance, in December 1413 when Jaket Fauconer brought a falcon to Edmund Mortimer, earl of March (1391-1425), a gift of Robert Corbet, knight, he received 20s; in contrast, when

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<sup>90</sup> Kerdeston, 58. In comparison, Albertus Magnus (1193-1280) named 19 species of falcons (not including the hawk family), *De animalibus*, 1457-71, 1492. The twelfth-century Symmachus treatise is briefly discussed in Van den Abeele, *Fauconnerie*, 23.

<sup>91</sup> Oggins, *Kings and Hawks*, 10-11.

<sup>92</sup> *Ibid.*, 12.

<sup>93</sup> *Ibid.*, 13. For falcons to take such large birds was deemed quite a feat under tenth-century Welsh law; on whichever day the falconer killed a heron, bittern, or mountain curlew with his falcon the king was to hold the horse of the chief falconer whilst he dismounted, to hold his stirrup whilst he mounted, and to hold his horse whilst he relieved himself. Should the king not be present when the notable bird was taken, when the falconer returned to the court the king was to rise; should he fail to do so, "it is right for him to give the raiment he is wearing to the falconer", *The Law of Hywel Dda: Law Texts from Medieval Wales*, tr. and ed. D. Jenkins (Llandysul, 2000), 15.

<sup>94</sup> Oggins, *Kings and Hawks*, 14-15.

<sup>95</sup> PH, 21-2, 49; DT, 25, 26; Kerdeston, 57; MKSG, 142-43; PEB, 9, 12.

<sup>96</sup> PP, 20; PH, 49; PEB, 12.

<sup>97</sup> PP, 30.

<sup>98</sup> *Ibid.*

Robert Morton, falconer, brought a lanner on the same day, he received only 6s 8d, suggesting that the earl of March valued falcons above lanners.<sup>99</sup> Such a preference certainly fits with the hierarchy of hawks found in the *J.B. Treatise*:

There longythe iij havkys to a emparovre: a neygule, a watter [vulture] and a mellannd...

These havkes byynne of þe tovre:

A garfawkone and a tarsselet garfawkone for a kynge,

A favkone ientyl & a tarselet ientylle for a pryns,

A favkone of þe roche for a duke,

A favkone perygryne for a norle,

A basterd for euyrey lord,

A sakore & a sakorret for a knyȝte,

A lannyr and a lanneret for a squyer,

A marlyone for a lady,

An hobby for a yovnge squyere;

This byne havkys of þe toure þat fleythe frove þe lure.

There is a goshavke for a povre genttlymane,

A tersell for a good yomane,

A sparhavke for a pryste,

A musket for a hallywatter clarke.

Pey byne of anodyre kynde: thay flye to wyue, to þe quarraye and to þe fare iuttye.<sup>100</sup>

It is unlikely, however, that such a list, with the falcons and hawks listed in descending order of size, was intended to be taken seriously;<sup>101</sup> goshawks, for instance, here listed as being suitable for a poor man, were flown by kings. Henry III often requested both gyrfalcons and goshawks: in 1240 the sheriff of Lincoln was to purchase eight goshawks and three gyrfalcons for the king; similar orders were given to the sheriffs of Hereford (six goshawks), York (eight goshawks and four gyrfalcons), Norfolk (ten goshawks and four gyrfalcons), and London (four goshawks and two gyrfalcons).<sup>102</sup> As

<sup>99</sup> HAME, II, 598.

<sup>100</sup> *J.B.I*, 109. For variations, see *J.B.II*, 120; *J.B.III*, 129-30; *J.B.IV*, 136; *BSA*, 54-5. Falconry had once been a symbol of status, but this hierarchical list indicates that by the late Middle Ages the pastime was no longer monopolised by the nobility; anyone who had access to a bird could participate. See R.S. Oggins, 'Falconry and Medieval Social Status', *Mediaevalia: A Journal of Mediaeval Studies* 12 (1989 for 1986), 43-55.

<sup>101</sup> See R. Hands, "The Names of all Manner of Hawks, and to Whom They Belong", *Notes and Queries*, NS 18 (1971), 85-8.

<sup>102</sup> *Liberate Rolls*, II, 10.

the goshawk was very versatile, this hawk was probably very much in demand.<sup>103</sup> Indeed, as R. Hands points out, the type of bird chosen most likely depended upon the requirements of the prospective owner, namely the nature of the countryside, the type of game being taken, and the financial position of the purchaser.<sup>104</sup> There were, however, attempts to define which members of society could own birds of prey. A statute of Edward III from 1360-61 claimed that if a simple man found a hawk, and after four months the bird had not been claimed, the sheriff would keep the bird and compensate the finder; but if the finder was a gentleman of estate, the hawk would be returned to him, the sheriff claiming reasonable costs for the time the bird was in his possession.<sup>105</sup> Indeed, similar attempts were made to define who could own which dogs. In 1390 a petition was made to Parliament, later passed as a Statute, which declared that:

no Manner of Artificer, Labourer, nor any other Layman, which hath not Lands or Tenements to the Value of xl.s. by Year, nor any Priest nor other Clerk, if he be not advanced to the Value of x.l. by Year, shall have or keep from henceforth any Greyhound, Hound, nor other Dog to hunt.<sup>106</sup>

### *Livestock*

With regards to livestock, those animals most often mentioned are cattle, sheep, and pigs, animals which were important to the economy. For example, they were an important source of food. In the later Middle Ages cream and butter were produced from cows' milk, although that of sheep was sometimes used to make butter,<sup>107</sup> whilst cheese could be made from the milk of both animals.<sup>108</sup> Cattle, sheep,

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<sup>103</sup> BSA, 116.

<sup>104</sup> Hands, "Names of all Manner of Hawks", 88. J. Cummins adds that the season of the year may also have been a consideration, J. Cummins, *The Hound and the Hawk: The Art of Medieval Hunting* (London, 2001), 188. For a description of the principal birds of prey used in mediaeval falconry, see *ibid.*, 191-94.

<sup>105</sup> *The Statutes of the Realm: Printed by Command of His Majesty King George the Third. In Pursuance of an Address of the House of Commons of Great Britain; from Original Records and Authentic Manuscripts*, 5 vols. (London, 1810-22), I, 369. Those who found lost birds did not always want to return them; in 1482 when one of the hawks belonging to George Cely (c.1458-89) escaped after her creance broke, Robert Radclyff, the Porter of Calais, was loathe to part with her after he took her from the man who found her, *Cely Letters*, 184.

<sup>106</sup> *Statutes of the Realm*, II, 65.

<sup>107</sup> Although sheep were widely milked in the thirteenth century, in the fourteenth and fifteenth centuries this practice diminished, with the emphasis now being on the production of high-quality fleeces, C.M. Woolgar, 'Meat and Dairy Products in Late Medieval England', in C.M. Woolgar, *et al.*,

and pigs also supplied meat<sup>109</sup> – Peterborough Abbey developed something of a speciality in pig farming, although this seems to have been for consumption within the abbey rather than for sale at market.<sup>110</sup> Whilst some animals were kept specifically for their meat, meat did not always come from animals kept for this purpose; under the listings for the purchases for the larder in the Cellarer’s account (1334) from Durham Cathedral Priory, a wounded bull was received from Adam Cowhyrd.<sup>111</sup> Even after a life of work, animals could be slaughtered for their meat; some ox bones excavated at Kirkstall Abbey were from fairly old stock, perhaps draught oxen or dairy cows.<sup>112</sup> Indeed, Walter of Henley (fl. c.1260) remarked that “when the ox is old, 10*d* worth of grass will be required to fatten him up or to sell for as much as he cost”.<sup>113</sup>

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(eds.), *Food in Medieval England: Diet and Nutrition* (Oxford, 2006), 94; C. Dyer, ‘Sheepcotes: Evidence for Medieval Sheepfarming’, *Medieval Archaeology: Journal of the Society for Medieval Archaeology* 39 (1995), 154.

<sup>108</sup> Woolgar, ‘Meat and Dairy Products’, 95. Goats’ milk, too, could be used to make cheese; in 1311-13 on Berkeley Castle’s manor of Alkington, Gloucestershire, 28 stones of cheese were made from 7 May to 29 September, when the goats were milked, C. Dyer, ‘Alternative Agriculture: Goats in Medieval England’ in R.W. Hoyle (ed.), *People, Landscape and Alternative Agriculture: Essays for Joan Thirsk*, *The Agricultural History Review*, SS 3 (Exeter, 2004), 28. Goats have been omitted from this study due to the sparse references to them in written sources. As C. Dyer has shown, though, although goat keeping had declined by the late-sixteenth century, the keeping of goats was more numerous and widespread than the written documents suggests. See *ibid.*, 20-38.

<sup>109</sup> Although mutton featured in the thirteenth-century accounts of Eleanor, countess of Leicester (1215?-75), and pigs were fattened for eating at Farleigh in the fourteenth century, by this latter period mutton was very much ignored as a food supply, *MHE*, 16, 17, 19 *passim*; M. Saaler, ‘The Manor of Farleigh: The Evidence for Economic Changes During the 14<sup>th</sup> Century’, *Surrey Archaeological Collections* 83 (1996), 63; Salisbury, *Beast Within*, 26. This is supported by excavations at Kirkstall Abbey carried out in 1956, when a trench south-west of the meat kitchen revealed many oxen bones, but no sheep bones, D.E. Owen, *et al.*, *Kirkstall Abbey Excavations 1955-1959*, Thoresby Society 48 (Leeds, 1961), 44. For shifting trends in the meat consumed during the Middle Ages, see N. J. Sykes, ‘From *Cu* and *Sceap* to *Beffe* and *Motton*: The Management, Distribution, and Consumption of Cattle and Sheep in Medieval England’, in Woolgar, *et al.*, *Food in Medieval England*, 56-71; Woolgar, ‘Meat and Dairy Products’, 88-94.

<sup>110</sup> Bond, *Monastic Landscapes*, 66. J. Wiseman suggests that pig-keeping was one of the most important rural occupations until the twelfth century, for not only was their meat suited to preservation by salt, not going tough like mutton and beef, but they were also an important source of essential fat. In the later Middle Ages, however, restrictions on pannage and the rise of the importance of sheep, meant that large-scale pig-keeping declined, J. Wiseman, *The Pig: A British History* (London, 2000; first published 1986 as *A History of the British Pig*), 5-10. See also U. Albarella, ‘Pig Husbandry and Pork Consumption in Medieval England’, in Woolgar, *et al.*, *Food in Medieval England*, 72-87. Although the scale of pig-keeping declined, it seems that pig grease was still of importance in the later Middle Ages, this being the most common form used in the treatment of animals; it is highly probable that unspecified grease was also that of swine. See Tables IX.v-viii.

<sup>111</sup> *DAR*, I, 34.

<sup>112</sup> Owen, *et al.*, *Kirkstall 1955-59*, 48.

<sup>113</sup> *WH*, 318.

Oxen were valued in agriculture for haulage and ploughing,<sup>114</sup> although in the later Middle Ages both oxen and horses were important for ploughing the land.<sup>115</sup> Whether horses or oxen were used probably depended upon the type of soil; on light, easy-working soils, where the plough provided little friction, horses were the better choice, but on heavy soils, where a more cumbersome, heavy plough was needed, oxen had the advantage, with their strong and sustained pull.<sup>116</sup> This may explain why an ordinance of 1283, confirmed by the king for the stocking of various manors belonging to the see of York with animals for agricultural use, allotted nine oxen for each plough to nineteen manors, but gave the twentieth, Wetwang, on the Yorkshire Wolds, two ploughs and eight horses, but no oxen.<sup>117</sup> The soil on the Wolds was shallow and chalky, infinitely more suited to horses than oxen.<sup>118</sup> Although the use of horses or oxen for plough teams may have been determined by the geographical conditions, this was not always the case. The amount of pasture available might affect whether oxen or horses were used. John Fitzherbert (d.1531) believed that “in euery place where-as the husband hath seueral pastures to put his oxen in whan they come from theyr warke, there the oxen ploughe is better”, for oxen would not be able to work if they had been put in a fold all night without food; but if they had been put in a good pasture all night “he wyll labour moche of all the daye dayely”.<sup>119</sup> It is also possible that supply affected which animal was used. In the early-fourteenth century there were many outbreaks of murrain, reducing the numbers of oxen; indeed, the

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<sup>114</sup> The use of oxen in haulage was not restricted to agriculture, however; in 1371-72 at Huntingdon, Hertfordshire, the reeve recorded that more ploughing services than usual were required “because the lord’s oxen were occupied in hauling wood and stone for work at the castle”, cited in Langdon, *Technological Innovation*, 115.

<sup>115</sup> R. Trow-Smith offers three possible suggestions for the introduction of the horse to plough work: i) as a result of Norman importations from the continent a heavier, stronger type of horse may have become available; ii) an advance in plough design may have made it possible to use a faster draught animal; iii) an increase in the demand for beef from the growing number of non-producers in the army, garrison, court, town, and monastery may have made the ox more valuable for meat than for work, Trow-Smith, *Livestock Husbandry*, 92.

<sup>116</sup> Trow-Smith, *Livestock Husbandry*, 93. Thus Walter of Henley (fl.1260) noted that “on hard ground the horse plough shall stand still there where the ox plough will pass through”, a difference which was still noted in the sixteenth century, *WH*, 318; *FBH*, 15-16. Both horse and ox, however, were expected to do the same amount of work: “Many would be poor the horse or ox which is unable to go from morning easily three leagues of the way from his home and to return by mid-afternoon”, *WH*, 314.

<sup>117</sup> Ryder, ‘Animal Remains’, 51-2; *Calendar of the Charter Rolls Preserved in the Public Record Office*, 6 vols. (London, 1903-27), II, 268-69.

<sup>118</sup> Ryder, ‘Animal Remains’, 52. The use of horses as plough animals might also explain the unusual number of horse bones found at Wharram Percy, *ibid.*, 51.

<sup>119</sup> *FBH*, 15.

Lanercost chronicler reported that due to the loss of cattle to the pestilence (*pestis*) in 1319 it was necessary for men to plough with horses that year.<sup>120</sup> Financial considerations may also have played a part, for “the horse costs more than the ox”.<sup>121</sup> Not only did horses cost more to feed and shoe, but “when the horse is old and exhausted then he has nothing except his hide”;<sup>122</sup> as noted above, old oxen could be fattened for meat.

Cattle and sheep were valued for their manure; for instance, in 1269-70 the master shepherd at Beaulieu Abbey could pasture his sheep on all of the abbey’s manors and granges (except those in Cornwall and the Isle of Wight), in return for the dung they provided.<sup>123</sup> Indeed, horses too were valued for dung, their excrement being of value as a fertilizer for plots of land within burghs.<sup>124</sup> Lords not only had unrestricted right to the manure of their own herds, but also the right to fold the manorial sheep and cattle on their own land; even dung on the village streets was reserved for the lord’s use.<sup>125</sup> Thus in order to collect the dung, sheep were often penned in at night on arable fields.<sup>126</sup> Yet lords did not always enforce this right. Fountains Abbey was granted pasture rights for three-hundred sheep at Sawley, near Ripon, and as an added bonus the community was allowed to keep the sheep manure produced here to use as they wished; which would have been considered a great boon, given that manure was highly valued.<sup>127</sup>

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<sup>120</sup> *Chronicon Lanercost*, 240.

<sup>121</sup> *WH*, 318.

<sup>122</sup> *Ibid.*

<sup>123</sup> *ABBA*, 163.

<sup>124</sup> C. Smith, ‘Dogs, Cats and Horses in the Scottish Medieval Town’, *Proceedings of the Society of Antiquaries of Scotland* 128 (1998), 875.

<sup>125</sup> E. Pascua, ‘From Forest to Farm and Town: Domestic Animals from ca.1000 to ca.1450’, in Kalof and Resl, *Cultural History of Animals*, II, 89-90. Those shepherds belonging to the bishopric of Winchester estates Wyk, Walton, Knoyle, and Ebblesburn, however, could have the demesne fold on their own land to manure their customary acres for twelve days at Christmas, Payne, ‘Agrarian Conditions’, 198.

<sup>126</sup> *Ibid.*, 191. Manure was not always collected in this manner; Walter of Henley advised that the floor of the sheepcote be marled every fortnight, and strewn with straw, for then “you will have more dung from profit than if they lie in the fold”, *WH*, 338. The amount of dung produced could be significant; in the 1360s at Bourton-on-the-Hill, between twelve and twenty-four peasant labourers were employed on the estate in “cleaning dung from the sheepcote”, whilst twenty workmen were employed at Bishop’s Cleeve in 1393-94, Dyer, ‘Sheepcotes’, 155.

<sup>127</sup> Bond, *Monastic Landscapes*, 144; [http://cistercians.shef.ac.uk/cistercian\\_life/environment/farming/farming14.php](http://cistercians.shef.ac.uk/cistercian_life/environment/farming/farming14.php), accessed 06.06.09. The nutrients in the manure, when trodden into the ground by the sheep’s hooves, would turn poor sod and sand into rich soil, Eckenrode, ‘English Cistercians’, 253.

From the late-twelfth century the importance of sheep as a supplier of wool grew,<sup>128</sup> and by the end of the century there were already distinctions between fine- and coarse-woolled sheep; fine-woolled sheep could be bought for up to 10d each, but coarse-woolled for only 6d, thus indicating that the quality of the wool was already of importance with regards to the value of the sheep, rather than its meat-producing virtues and milk yield.<sup>129</sup> This boom in the wool market was largely due to the Cistercians of Yorkshire, who were particularly noted for their sheep farming, the uplands and moorlands of the north being well suited to this.<sup>130</sup>

Cattle and sheep were also valued for the materials they could provide. Their skins and hides could be put to use, being used for parchment and leather goods.<sup>131</sup> The *Memorandum Book* (1446-58) of Thomas Swynton, monk of Fountains Abbey and later Abbot, records that Robert Glover of Ripley, who sold leather goods and gloves, regularly bought skins from the abbey.<sup>132</sup> Yet it was not only the hides of these animals which were used. In 1302-03 horse hides were used to mend siege engines, and in 1399-1400 two horse hides were purchased to make a new pair of bellows for the organ at Ripon.<sup>133</sup> Charles IX of France (1560-74) was so attached to his greyhound

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<sup>128</sup> For the wool trade in England, see D. Hurst, *Sheep in the Cotswolds: The Medieval Wool Trade* (Stroud, 2005); B. Waits, 'Monasteries and the Wool Trade in North and East Yorkshire During the 13<sup>th</sup> and 14<sup>th</sup> Centuries', *The Yorkshire Archaeological Journal* 52 (1980), 111-21; T.H. Lloyd, *The English Wool Trade in the Middle Ages* (Cambridge, 1977); E. Power, *The Wool Trade in English Medieval History: Being the Ford Lectures* (London, 1955; first published 1941).

<sup>129</sup> Trow-Smith, *Livestock Husbandry*, 96.

<sup>130</sup> [http://cistercians.shef.ac.uk/cistercian\\_life/environment/index.php](http://cistercians.shef.ac.uk/cistercian_life/environment/index.php), accessed 06.06.09. The Cistercians, arriving in Britain in 1128, were the first of many monastic and lay establishments to develop large-scale sheep farming for the export of wool, Ryder, *Sheep and Man*, 449. Other large-scale sheep farmers included the bishop of Winchester (with 29,000 sheep on his estates in 1259), Fountains Abbey (with some 18,000 sheep in 1291), and Henry Lacy, earl of Lincoln (with 13,000 sheep on his lands in 1303), D.H. Williams, *The Cistercians in the Early Middle Ages* (Leominster, 1998), 356. For the wool-trade practices of the Cistercians see *ibid.*, 357-60.

<sup>131</sup> The term 'skin' is applied to the pelts of smaller animals such as calves, goats, sheep, and pigs; the larger pelts of horses and cattle are known as 'hides', R.J. Forbes, *Studies in Ancient Technology* (Leiden, 1957), 1.

<sup>132</sup> MFA, III 106, 108, 202, 224, 227, 229, 230; [http://cistercians.shef.ac.uk/cistercian\\_life/environment/farming/farming14.php](http://cistercians.shef.ac.uk/cistercian_life/environment/farming/farming14.php), accessed 06.06.09. Excavations carried out at Aberdeen (Queen Street and St Paul Street) revealed that the majority of slaughtered cattle were at least five years old, which at the beginning of the nineteenth century was the age at which cattle were considered to be fully mature, when their hides were in optimum condition, G.W.I Hodgson and A. Jones, 'The Animal Bone' in J.C. Murray (ed.), *Excavations in the Medieval Burgh of Aberdeen 1973-81*, Society of Antiquaries of Scotland, Monograph Series 2 (Edinburgh, 1982), 234-35; J. Clutton-Brock, 'George Garrard's Livestock Models', *The Agricultural History Review* 24 (1976), 21.

<sup>133</sup> *Calendar of Documents Relating to Scotland Preserved in Her Majesty's Public Record Office, London*, ed. J. Bain, et al. 5 vols. (Edinburgh, 1881-1986), II, 366; *Memorials Ripon*, III, 132. Other skins could also be used for organ bellows; in 1466-67 at Lanherne, 3½ sheepskins were used for this purpose, *LHA*, 30.

Courte that when it died he had its hide made into a pair of gloves, which he subsequently always wore when hunting.<sup>134</sup> The bones of animals could also be put to good use, being not only boiled for glue,<sup>135</sup> but also being made into trinkets or useful tools. The canon bones of horses were used in the manufacture of ice skates;<sup>136</sup> a canine humerus from a thirteenth- to fifteenth-century context at 106-10 Nethergate, Dundee, was used as a mortar mixer;<sup>137</sup> and pegs have been found made from the foot bone of a pig and an ox bone.<sup>138</sup>

Unlike the other animals here under discussion, information regarding the types of livestock in mediaeval England is much sparser. For instance, it seems that there were no distinct breeds of pigs in late mediaeval England, the only distinction being between the large wild boar, and the smaller domesticated pig; illustrations of domestic pigs show them to be long bodied, brown, black, or neutral coloured, with abundant bristles predominantly along the spine;<sup>139</sup> in contrast, the wild boar could be mottled [figs. 5 and 6] Indeed, a “red-coloured piglet” is mentioned in the court rolls of Elmley Castle, as is a “white-coloured piglet”.<sup>140</sup> Little information also survives about cattle, there being few references to colour, size, conformation, or type; one of the only references is to a red bull in 1366, a heriot left by a tenant of East Troswell to Tavistock Abbey.<sup>141</sup> Although H.P.R. Finberg is tempted to see in this “a forerunner of the famous Devon breed, the ‘Red Rubies of the West’”, R. Trow-Smith surmises that all that can be read into the reference “is the fact that a beast of Devon colour was in existence in Devon in the fourteenth century”.<sup>142</sup> Although most cattle were probably

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<sup>134</sup> MacDonogh, *Reigning Cats and Dogs*, 160.

<sup>135</sup> It seems that glue was made at Kirkstall Abbey, where there was a high proportion of feet and jaw bones, both of which are rich in gelatine, Owen, *et al.*, *Kirkstall 1955-59*, 47.

<sup>136</sup> Bone skates were common throughout mediaeval Europe, and British examples have been recovered from sites in Aberdeen and Perth, Smith, ‘Dogs, Cats and Horses’, 878; A. MacGregor, ‘Bone, Antler and Ivory Objects’, in Murray, *Excavations in Aberdeen*, 182.

<sup>137</sup> Such usage was uncommon, however, and it is most likely that this was just a stray bone picked up, as such tools could easily have been made from a long sheep bone, Smith, ‘Dogs, Cats and Horses’, 878.

<sup>138</sup> Ryder, ‘Animal Remains’, 44.

<sup>139</sup> Wiseman, *The Pig*, 14. At Dudley Castle, West Midlands, in the thirteenth and fourteenth centuries, an increase in the size of teeth and bones suggests that experimental breeding was occurring, with the aim of producing a larger pig, Albarella, ‘Pig Husbandry’, 85.

<sup>140</sup> CREC, 76, 111.

<sup>141</sup> Further references to red cattle can be found in the court rolls of Elmley Castle, fourteenth to sixteenth centuries, CREC, 41, 42, 45, 81, 96, *passim*. These references suggest that red cattle were common in this area. For the milk of a red cow as an ingredient, see *BMH*, f.35v.

<sup>142</sup> Finberg, *Tavistock Abbey*, 132; Trow-Smith, *Livestock Husbandry*, 112.

of unbroken colour – in 1376 two oxen left as heriots were described as brown<sup>143</sup> – not all were; in 1400 John Percy, of Haram, near Helmsley, Yorkshire, bequeathed to John Belby “a cow with a white leske [flank]” and to his son “a heifer with a white head”.<sup>144</sup> Indeed, C. Skeel notes that red cattle with white faces were found in Glamorgan in the fifteenth century, “representing no doubt what was the common breed of south-east Wales and the adjoining English counties”.<sup>145</sup> Although little can be determined about mediaeval cattle it is very likely that there were recognisable regional types.<sup>146</sup> With regard to sheep, however, there were two distinct types; the short-wool breeds and the long-wool breeds.<sup>147</sup> In the former category were the Ryelands, which took their name from the fact they liked rye; they were usually native to the very poor pastures, the downs, moors, fenlands, and rocky hillsides.<sup>148</sup> Of the long-haired types, whose habitats included marshes and fens, lush grasslands, and rolling hills with red limestone soil and sweet grass, the Cotswolds and Lincolns were the two most common, and were favoured by the Cistercians.<sup>149</sup> The sheep types primarily took their name from their region, such as Canterbury and the Cardy variety from Wales;<sup>150</sup> Trow-Smith, however, warns that it “is perhaps a little dangerous” to suggest that these were the distinct breeds known today.<sup>151</sup>

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<sup>143</sup> CREC, 26, 27.

<sup>144</sup> Cited in J. Wilson, *The Evolution of Cattle and the Fashioning of Breeds* (London, 1909), 74.

<sup>145</sup> C. Skeel, ‘The Cattle Trade Between Wales and England from the Fifteenth to the Nineteenth Centuries’, *Transactions of the Royal Historical Society*, Fourth Series 9 (1926), 136.

<sup>146</sup> Trow-Smith, *Livestock Husbandry*, 85.

<sup>147</sup> For a discussion of sheep breeds in the Middle Ages, see Ryder, *Sheep and Man*, 458-77.

<sup>148</sup> Eckenrode, ‘English Cistercians’, 252.

<sup>149</sup> *Ibid.*, 253. The Lindsay ram, a division of the Lincolnshire breed, was in much demand by the Cistercians, being imported by many monasteries in other parts of England for breeding purposes, *ibid.*

<sup>150</sup> In a list of wool prices from c.1475 the sheep are listed by regions. See *English Historical Documents 1327-1485*, ed. A.R. Myers (London, 1969), 1028-29.

<sup>151</sup> Trow-Smith, *Livestock Husbandry*, 162. T.R. Eckenrode also makes reference to the breeds of Devon, Cornwall, and Leicester, Eckenrode, ‘English Cistercians’, 253. D. Hurst, however, argues that the Cotswold existed as a distinct type in mediaeval England, Hurst, *Sheep in the Cotswolds*, 17-29.

### III. “this litel symple book”: sources

#### *Veterinary Treatises*

The main sources of knowledge for the ailments suffered by horses, and the treatment thereof, include veterinary treatises. Three of my sources fall into this category. The first is *The Boke of Marchalsi*,<sup>152</sup> dating to the fifteenth century.<sup>153</sup> It is the most comprehensive of the extant Middle English veterinary treatises, dealing with sixty-one ailments, and appears to have been popular, surviving in ten manuscripts.<sup>154</sup> An interesting feature of this treatise is its ‘question and answer’ format, a structure which is very rare in works concerned with the veterinary treatment of animals;<sup>155</sup> the only other works of which I am aware using it are Adelard of Bath’s (c.1080-c.1152) twelfth-century treatise, *De avibus tractatus*,<sup>156</sup> and an anonymous late thirteenth-century Anglo-Norman poem on falconry,<sup>157</sup> both of which are dialogues between a nephew and uncle. The ‘question and answer’ format was usually employed for didactic purposes, this being an easy way of both conveying and memorising information.<sup>158</sup> Although F. Smith argued that such a format indicated that the treatise was “evidently intended for instructional purposes”,<sup>159</sup> the irregularity of the appearance of questions in *The Boke of Marchalsi* makes this doubtful. B. Odenstedt believes their function was to serve as headings introducing new sections,<sup>160</sup> but the

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<sup>152</sup> A partial edition, comprising the section on horse management and some of the remedies, can be found in *BMO*. This is based upon BL MS Harley 6398, ff.1r-58v, the oldest copy to survive in almost complete form. I have therefore used this manuscript to supplement the edition, and I have also followed B. Odenstedt in supplying the omissions in Harley 6398 from Cambridge, Trinity College MS R.14.51.

<sup>153</sup> A fragment of the treatise found in BodL MS Ashmole 1437 has been dated to the first half of the fifteenth century, whilst the version found in BL MS Harley 6398 dates to the mid-fifteenth century, *BMO*, xviii, ix.

<sup>154</sup> Seven manuscripts are listed in *BMO*, iii, Odenstedt seemingly unaware of the versions found in CUL MS Dd.4.44, ff.1r-18v, BL MS Stowe 982, ff.13r-22v, and Wellcome Library MS 5650, f.1r-28v. L. Braswell, in *IMEP, Handlist IV: A Handlist of Douce Manuscripts Containing Middle English Prose in the Bodleian Library, Oxford* (Cambridge, 1987), 68, also notes that an extract of the treatise can be found in BL MS Lansdowne 762, but S.J. Ogilvie-Thomson remarks that this is doubtful, *IMEP VIII*, 9.

<sup>155</sup> The scribe of the version found in BodL MS Wood empt. 18, however, avoids the use of these questions, either by omitting them, or by substituting them with a statement, *BMO*, xxi.

<sup>156</sup> See AT, 239-67.

<sup>157</sup> See ‘Fragment d’un Traité’, 26-44.

<sup>158</sup> For the influence of question literature upon the progress of the natural sciences and medicine in mediaeval Europe, see B. Lawn, *The Salernitan Questions: An Introduction to the History of Medieval and Renaissance Problem Literature* (Oxford, 1963).

<sup>159</sup> Smith, *Veterinary Literature*, 113.

<sup>160</sup> *BMO*, xxv.

fact that the questions can sometimes come very close together, and within discussion of the same ailment,<sup>161</sup> suggests this is not wholly their purpose. They did introduce a variety of matters, such as a description of the ailments, another remedy, or a symptom, but I believe that the author also used them to highlight matters where he thought the reader might have a question. For example, in the remedy for glanders the fictitious pupil asks “Mayster why shal the seomis [setons] ben of canvas”,<sup>162</sup> whilst in a remedy for a horse lame on the knees or above, where the author warns not to anoint the horse too much, “for ellis þou mightest lese an hors”, the pupil asks why this is so.<sup>163</sup> Although it may never be known exactly why this format was chosen, it is possible that the author was merely highlighting matters which he believed to be of importance to a reader.

The second treatise is the *Late Middle English Treatise on Horses* (hereafter *Treatise on Horses*).<sup>164</sup> Found only in British Library manuscript Sloane 2584, ff.102r-117v, it is the oldest extant Middle English hippiatric work, dating to the first quarter of the fifteenth century, or possibly the late-fourteenth century.<sup>165</sup> Although it is incomplete at the end, and it is impossible to say how much has been lost, even so, twenty-eight ailments are discussed. Unlike the other veterinary treatises, it is considerably influenced by European works, A.C. Svinhufvud noting that there are conspicuous agreements between this treatise, the anonymous Spanish treatise *El libro de los caballos* (second half of the thirteenth century), Theodoric of Cervia’s *Mulomedicina* (perhaps after 1266), and Laurentius Rsius’ *Liber marescalcie* (before 1342).<sup>166</sup>

The third veterinary work, *The Sothebe Treatise*,<sup>167</sup> in which forty-eight ailments are discussed, also dates from the fifteenth century. Like *The Boke of Marchalsi*, it appears to have been a popular work, surviving in nine manuscripts,<sup>168</sup> and it has been

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<sup>161</sup> See, for example, *BMH*, f.48r.

<sup>162</sup> *BMH*, f.22r.

<sup>163</sup> *Ibid.*, f.45r.

<sup>164</sup> For an edition, see *METH*.

<sup>165</sup> *Ibid.*, 26.

<sup>166</sup> See *ibid.*, 15-20. For a list of hippiatric treatises, excluding those in Middle English, see Poulle-Drieux, ‘L’Hippiatrie’, 17-48.

<sup>167</sup> So called because the copy found in BodL MS Wood empt. 18 ends “*explicit per Sothebe*”.

<sup>168</sup> See Keiser, ‘Practical Books’, esp. 474-82. He omits mention of the incomplete version found in BL MS Sloane 1764. The best copy is found in BL MS Sloane 686, ff.49r-65v, and thus is the version used

suggested that a Welsh treatise on horses, found in National Library of Wales manuscript Peniarth 86 (sixteenth century), is a translation of *The Sothebe Treatise*.<sup>169</sup> Indeed, its popularity seems to have been greater than that of *The Boke of Marchalsi*, for it was printed under the title of *The propyrytees and medysynes for hors* by Wynkyn de Worde around 1497 and again in 1502, and by two other publishers in the mid-sixteenth century.<sup>170</sup> Its influence even endured into the seventeenth century, for large portions of the treatise, although not from any of the known printed editions, were incorporated into Gervase Markham's (1568?-1637) equine treatise, *Markham's maister-peece* (1609), a work which was still popular one-hundred years after his death.<sup>171</sup>

Veterinary treatises are works which contain significant information other than the ailments and their remedies, although the primary concern was always the treatment of ailments, which formed the bulk of the treatise. As these three works show, however, this supplementary information could vary in both length and content. Thus in *The Boke of Marchalsi*, ff.1-16r, a detailed description of general horse management is given. After an opening verse prologue, the anonymous author begins with a discussion on how to look after horses until the age of five, covering such matters as how to broaden their chest, the food to be given, how to train them to the halter, and the paces of the horse. After this year-by-year instructional, more general rules on horse management are given (their feeding, watering, and how to care for them when travelling), followed by caring for an old horse exhausted in warfare. Then the different colours of the horse are discussed, its conformation, and from where the best horses came.<sup>172</sup> Neither of the other two treatises go into such depth of detail. The longest discussion on non-medical matters in *The Sothebe Treatise* (ff.49r-52v) was regarding the best colours of horses, although other useful tips were provided; these were how to tell to what height the horse will grow, which features are to be looked for in a horse, how to tame a horse, how to teach him to amble, how to make a horse

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in this thesis. The version found in CUL MS Ll.I.18 (*Horse Remedies I*) will be referred to where differences occur between the two manuscripts.

<sup>169</sup> BMO, xvi n.1. For an edition of this treatise, see 'A Welsh Treatise on Horses', ed. C. O'Rahilly, *Celtica* 5 (1960), 145-60. The Welsh treatise, however, is somewhat shorter than *The Sothebe Treatise*, with some of the material being dealt with in a different order.

<sup>170</sup> Keiser, 'Practical Books', 489-90. As G.R. Keiser points out, further printed editions of the early-sixteenth century are possibly lost or still unknown, *ibid.*, 490.

<sup>171</sup> *Ibid.*; Smith, *Veterinary Literature*, 230.

<sup>172</sup> For a short discussion of this section of the treatise, see BMO, xxv-xxviii.

follow you, how to make an old horse seem young, what to do with a horse “dulle of be spore”, how to make a white speck on a horse, and how to make a horse refrain from neighing. Such matters are all at a basic level, with none of the depth found in *The Boke of Marchalsi*. The shortest discussion, however, is to be found in the *Treatise on Horses* (85-91), where the author prefaces the veterinary section with instructions on how to buy a good horse, namely by examining conformation, beauty, quality, and colour, and directions for knowing when to bleed a horse.

Aside from a discussion of non-veterinary matters, another distinguishing feature of veterinary treatises is that the discussion of the ailments contains extra information, such as symptoms, causes, and descriptions of the ailments and where they occur, information which is mostly lacking in recipe collections [table II.i].<sup>173</sup> Such information is very useful in understanding how ailments were thought about in late-mediaeval England. It is also noticeable that the treatment of the ailments is generally set out in an organised and structured manner. In *The Boke of Marchalsi* the anonymous author first lists the ailments, dividing these into those which occur naturally, and those which are caused by miskeeping, giving brief descriptions of the ailments. Yet although this useful summary of the ailments is given, the author does not discuss them in this order in the treatise, nor does he give remedies for all of them; similarly, remedies are given for ailments not mentioned in this list. Even though the author has failed to utilise this potentially helpful list, the discussion which follows does have structure. First ailments of the eyes are dealt with, then those around the jaw and mouth. This is followed by skin ailments, and then internal ailments. Lameness and foot ailments are jumbled together, but this is followed by ailments of the legs, after which the remedies appear to be given somewhat miscellaneously, almost as if they were an afterthought.<sup>174</sup> Thus it can be seen that overall the author of *The Boke of Marchalsi* has followed a head-to-toe structure, the usual structure in human medical treatises. A different structural approach was taken by the author of *The*

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<sup>173</sup> These aspects are discussed more fully in chapter 2.

<sup>174</sup> The style of these remedies is very different from the rest of the treatise, for, unlike previous ailments, aside from two mentions of symptoms, no additional information such as causes, or any detailed discussion, is given; it is merely the name of the ailment and the corresponding treatment. This suggests that the author was simply jotting down further remedies of which he knew. The suggestion that these ailments were added as an afterthought is borne out by the fact that two of the remedies are for ailments already mentioned – one for trenchelons and one for the eyes.

*Sothebe Treatise*. After a remedy for staunching blood, ailments of the skin are discussed, then tumours, abscesses, and hard excrescences. Remedies for swellings in different parts of the body, and for various sores and wounds, follow, although the structure is not as rigid here, there being a remedy for canker amongst these, and one for radunculus, which latter should surely have been discussed with other tumours. The author then discusses ailments of the eyes and head, and the treatise as it survives ends with remedies for paynes; perhaps further ailments of the legs were to follow. Again, a different order was taken by the author of the *Treatise on Horses*. First are discussed ailments of the feet and legs, then ailments of the eyes, mouth, and head region, followed by ailments of the genitals, respiratory ailments, and internal ailments, ending with ailments needing to be cured by charms, namely a forspoken horse, for the nightmare, and to staunch blood. These sections, however, are not stuck to rigidly. For example, remedies for a stoning in the shoulder and farcy are found amongst those of the legs and feet, whilst a remedy for a navel gall is found amongst those of the head and neck. Thus each of the authors has, in his own way, given an organised structure to his work, which not only suggests that these works had been well-thought out, but also that the author had been thinking of the needs of his reader – for an organised structure would be of aid to anyone wishing to use the treatise.

#### *Falconry and Hawking Treatises*

Like veterinary treatises, hawking treatises are one of the main sources for the ailments and treatment of birds of prey,<sup>175</sup> and six of my sources fall into this category. *The Booke of Hawking after Prince Edwarde Kinge of Englande* (hereafter *Prince Edwarde's Booke*), which discusses forty-two ailments, is perhaps the oldest of the Middle English hawking treatises, although it now only survives in manuscripts of the fifteenth century.<sup>176</sup> The date of the original, however, is difficult to determine. It has been suggested that the treatise is a copy of one referred to in the above-mentioned

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<sup>175</sup> For a list and discussion of the most important Latin treatises, see Van den Abeele, *Fauconnerie*, 15-37. See also B. Van den Abeele, *La Littérature Cynégétique*, *Typologie des Sources du Moyen Âge Occidental* 75 (Tournhout, 1996), 34-56, for Latin and vernacular cynegetic treatises.

<sup>176</sup> For an edition, see PEB. It is also printed in *Reliquiae Antiquae: Scraps from Ancient Manuscripts, Illustrating Chiefly Early English Literature and the English Language*, ed. T. Wright and J.O. Halliwell, vol. I (London, 1841; reprinted New York, 1966), 293-308. With regards to the identity of “Prince Edwarde kyng of Englande”, there is no conclusive evidence, see Hands, ‘*Prince Edward's Book*’, 40-2.

anonymous Anglo-Norman poem,<sup>177</sup> but G. Tilander argues that the “livere al bon rei Edward” has nothing in common with *Prince Edwarde’s Booke*, being merely a name chosen to augment the prestige and authority of the work.<sup>178</sup> Whether this was or was not the intention of the author, *Prince Edwarde’s Booke* was one of the most important and influential works on hawking in late-mediaeval England, being one of the sources for the hawking treatise found in *The Boke of St Albans*,<sup>179</sup> providing much of the information for the treatise *The Maner of Keping of Sparhauke and Goshauke*, as well as influencing a number of other fifteenth-century Middle English treatises on hawking.<sup>180</sup>

*The Proceis of Hawkyng* is found in *The Boke of St Albans*, a four-part manual of instruction in hawking, hunting, coat-armour, and blazing of arms.<sup>181</sup> The work was first published in 1486, being one of only two vernacular works produced by the provincial press at St Albans; thus the hawking treatise contained therein, where forty-six ailments are discussed, is the first to be printed in English.<sup>182</sup> The book as a whole was a popular work, being published again a mere ten years later,<sup>183</sup> and going through some twenty more reprints and revisions by the early seventeenth century; the worn and annotated condition of several extant copies of the first edition also attest to its popularity.<sup>184</sup> *The Proceis of Hawkyng* not only used *Prince Edwarde’s Booke* as a source, but also, like *Prince Edwarde’s Booke*, the twelfth-century treatise attributed to ‘Dancus Rex’, as well as material from other earlier Latin sources.<sup>185</sup>

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<sup>177</sup> *A Perfecte Booke for Keping of Sparhawkes or Goshawkes*, ed. J.E. Harting (London, 1886; facsimile Trowbridge, 1972), vi-vii; MKSG, 136.

<sup>178</sup> ‘Fragment d’un Traité’, 26-7.

<sup>179</sup> Although this hawking treatise is more generally known as *The Boke of St Albans*, I have taken the decision to refer to it as *The Proceis of Hawkyng*, after the colophon at the end, in order to avoid confusion between references to this treatise and other parts which make up *The Boke of St Albans*.

<sup>180</sup> See Hands, ‘*Prince Edward’s Book*’, 26-42.

<sup>181</sup> For a facsimile of the whole, see Dame Juliana Berners, *The Boke of Saint Albans Containing Treatises on Hawking, Hunting, and Cote Armour: Printed at Saint Albans by the Schoolmaster-Printer in 1486. Reproduced in Facsimile*. Introduction W. Blades (London, 1881). Those sections concerned with hawking and hunting have been printed in BSA.

<sup>182</sup> BSA, v.

<sup>183</sup> In this second edition Wynkyn de Worde added a treatise on fishing, *ibid.*, xxi.

<sup>184</sup> *Ibid.*, xiii. For publications of *The Boke of St Albans*, see J.E. Harting, *Bibliotheca Accipitraria: A Catalogue of Books Ancient and Modern Relating to Falconry* (London, 1963; reprint of 1891 edition), 1-5.

<sup>185</sup> See R. Hands, “‘Dancus Rex’ in English”, *Mediaeval Studies* 35 (1973), 354-69; G. Tilander, ‘Traduction Anglaise de Dancus’, *Studia Neophilologica* 22 (1949/50), 194-207. A. Smets and B. Van den Abeele suggest that the Latin sources in *Prince Edwarde’s Booke* are from their reworking by Albertus Magnus, A. Smets and B. Van den Abeele, ‘Medieval Hunting’, in Kalof and Resl, *Cultural History of Animals*, II, 70.

The third hawking treatise is that found only in Durham Record Office manuscript D/X 76/7 (hereafter *The Durham Treatise*).<sup>186</sup> Written on a fragment of parchment roll, it is incomplete at the beginning, and is somewhat shorter than both *Prince Edward's Booke* and *The Proceis of Hawkyng*, discussing only ten ailments. It dates from the first half of the fifteenth century, thus making it one of the earliest vernacular hawking treatises. The fourth treatise, *The Maner of Keping of Sparhauke and Goshauke*, dating from the late-fifteenth century, is likewise only found in one source, British Library manuscript Sloane 3488, ff.1r-3r.<sup>187</sup> It is unusual in that unlike the other hawking treatises, it does not devote a considerable space to the ailments of hawks; in all, only four ailments are discussed, two of which are varieties of frounce.

The above two short treatises bear some resemblances to *Prince Edward's Booke*, but the final two treatises here under discussion are of interest because they do not follow this tradition. The first is found in British Library manuscript Harley 2340, ff.23r-44r (hereafter *Hawk Remedies I*), dating from the mid-fifteenth century.<sup>188</sup> In all, thirty ailments are discussed, and although a small portion of it may be traced to the 'Dancus Rex' treatise, this is a rare example of an almost completely independent work.<sup>189</sup> The second, wherein sixteen ailments are named, is found in Yale University Library manuscript Beinecke 163, ff.125r-134r (*The Percy Poem*),<sup>190</sup> and no immediate prototype has been found.<sup>191</sup> The main part of the manuscript, to which the falconry treatise belongs, dates to 1425-50, and B. Danielsson postulates that the original of the poem was hardly much earlier.<sup>192</sup> This treatise is not only of interest because of its originality, but also for two other factors: firstly, unlike other treatises, which concentrate upon short-winged hawks, the author devotes the latter part of the treatise

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<sup>186</sup> For an edition, see *DT*. D. Scott-Macnab notes that it is analogous to a hawking treatise found in CUL LL.I.18, ff.55v-58v, *Sporting Lexicon*, 57 n.2. This Cambridge treatise is also very similar to *The Maner of Keping of Sparhauke and Goshauke*, but shorter, and with the material presented in a different order, Hands, 'Prince Edward's Book', 29.

<sup>187</sup> Edited in *MKSG*.

<sup>188</sup> The text occurs on ff.23r-34r, the scribe repeating this, with minor differences, on ff.34v-44r. The edition by W. L. Braekman collates these. See *HawkRemI*.

<sup>189</sup> Hands, 'Prince Edward's Book', 28.

<sup>190</sup> For an edition, see *PP*.

<sup>191</sup> *Ibid.*, 6.

<sup>192</sup> *Ibid.*, 10.

to long-winged falcons; and secondly, it is not written in the more usual prose form, but in verse.<sup>193</sup>

Like veterinary treatises, the hawking treatises are composed of information other than that concerned with the treatment of ailments. *Hawk Remedies I* is similar to the veterinary treatises in that the treatment of the ailments forms the basis of the treatise, with the non-veterinary information coming first. Thus the treatise opens with information on taming, how to make the hawk cast,<sup>194</sup> how to reclaim her, further instructions regarding casting, bathing, how to hunt with a spaniel, and the terms to be used when praising a hawk, after which the ailments and their remedies are discussed.<sup>195</sup> Whilst such information is common to all of the hawking treatises, other matters being discussed including mewing, equipment, seeling, the food to be given to hawks, and how to hunt various types of prey, such as pheasants and partridges, the structure of two distinct parts is not retained. Rather, the recipes are interspersed with other matters. For instance, in *Prince Edward's Booke* the treatment of ailments is given in two sections, the majority being dealt with in the second section. Similarly, recipes are found in two sections in *The Durham Treatise*, although a remedy for a salve is interspersed between directions for knowing when a hawk is fully enseamed and the collective nouns of animals.<sup>196</sup> In contrast, those ailments in *The Proceis of Hawkyng* are interspersed throughout the whole treatise, as is also found in *The Percy Poem*. Such structures suggest that in the hawking treatises the treatment of ailments was seen as integral to the practice of falconry, although this presentation lessens the usefulness of the remedies as a working tool.

Another feature of hawking treatises, as with veterinary treatises, was the inclusion of additional information such as the causes of ailments and symptoms, although, as can be seen from table II.ii, symptoms and descriptions of the ailments

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<sup>193</sup> I am aware of only three other falconry treatises in verse: the anonymous Anglo-Norman poem, the *Liber falconum* (thirteenth century) of Archibernardus, and Daude de Pradas' (1214-82), *Dels auzels cassadors*. See 'Fragment d'un Traité', 26-44; Van den Abeele, *Fauconnerie*, 31; Van den Abeele, *Littérature Cynégétique*, 45. *The Percy Poem* is the only Middle-English falconry work in verse listed in J. Boffey and A.S.G. Edwards, *A New Index of Middle English Verse* (London, 2005), 246, no.3693.

<sup>194</sup> There are some remedies given here, when the author discusses what the different casting denote. See *HawkRemI*, 21-2.

<sup>195</sup> The remedies for casting and the signs to look for are really veterinary matters, but other than this, the remainder of the medical matters are grouped together, unlike other hawking treatises.

<sup>196</sup> The collective nouns are reminiscent of those found in the *J.B. Treatise*. See *J.B.I*, 102-04; *J.B.II*, 122-23; *J.B.III*, 126. For a brief discussion, see *Sporting Lexicon*, 67-8.

also featured amongst recipe collections, more so than those concerned with horses.<sup>197</sup> Unlike the veterinary treatises, however, the ailments are not always discussed in a logical order. In *Prince Edward's Booke* the remedies are dealt with in no particular order, with remedies for frounce being found in both sections, and remedies for worms, maggots, and mites, all of which are of a similar nature, being scattered throughout. Likewise, there is no discernable order in *The Proceis of Hawkyng*. This is not the case, however, in the other treatises. In *The Durham Treatise* there is an overall impression of structure; in the first section remedies are given for frounce, rye, and cray, the three most common ailments in birds of prey, which are followed by the cause of each of the ailments. In the second section ailments of the head are discussed (rye and frounce), then peer, vermin, and anguilles, followed by ailments affecting the limbs (cramp, bruised, podagra), and finally a remedy for a hawk which holds its castings too long. Similarly, there appears to be some order to the remedies in *Hawk Remedies I*. First the author tells how to denote ailments from the hawk's castings. He next gives remedies for ailments of the head, then one for all sickness, two for vermin, followed by directions for knowing sickness from the bird's mutes. The author then lists ailments from which birds could suffer, and he begins to treat them in this order, but only for the first seven, whilst two of the remedies listed are not dealt with.<sup>198</sup> The structure collapses somewhat after this, with further remedies for frounce followed by remedies for other ailments in no particular order. Although the remedies in *The Percy Poem* are not discussed together, there does appear to be some sort of order. As in *The Durham Treatise*, rye, cray, and frounce are the first ailments for which the remedies are given.<sup>199</sup> Then remedies for anguilles, worms, and lice are given, followed by ailments of the feet. The last three ailments are for a broken tail, for a hawk too feeble to take tiring, and for a falcon which may not digest.

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<sup>197</sup> This is in part due to the fact that in two versions of the *J.B. Treatise* a list of the ailments and where they arise precedes the remedies.

<sup>198</sup> The omission of remedies from a given list of ailments recalls that of *The Boke of Marchalsi*. See above, 27.

<sup>199</sup> These are also the first ailments for which remedies are given in *Prince Edward's Booke* and *The Proceis of Hawkyng*.

### *Hunting Treatises*

Sources containing information on the treatment of ailments abounded for horses and birds of prey, yet this was not so for dogs.<sup>200</sup> Of the four Middle English hunting treatises to survive,<sup>201</sup> the only one to discuss the treatment of hounds is *The Master of Game*,<sup>202</sup> a translation of Gaston Phébus' *Le Livre de Chasse* (1387-89) by Edward, second duke of York, who completed his translation of the work between 1406 and 1413.<sup>203</sup> *The Master of Game* is the longest extant hunting manual in Middle English, and one of the earliest.<sup>204</sup> It was a popular work, being extant in twenty-seven manuscripts, the majority of which date to the fifteenth century.<sup>205</sup>

*The Master of Game* is the most comprehensive of the English hunting treatises, dealing with the various quarry, the nature, sicknesses, and types of hunting dogs, the responsibilities of the hunter, and the various methods of hunting. Although only one of the thirty-six chapters is devoted to the treatment of hounds' ailments, even so, thirty-five ailments are discussed. As with veterinary and hawking treatises, the

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<sup>200</sup> I.M.E. Boor-van der Putten explains this paucity by the relative fecundity of hounds, and the ease of their training and replacement – which was not the case with horses and birds of prey, Boor-van der Putten, “Maladies des Chiens”, 11.

<sup>201</sup> William Twiti's *The Art of Hunting* (1327); Edward, second duke of York's *The Master of Game* (1406-13); the anonymous *The Tretyse off Huntyng* (late-fifteenth century); and Sir Tristram's *Boke of Huntyng* (fifteenth century).

<sup>202</sup> This was not the case in Europe, where vernacular works such as the *Libro de la Montería* (1342-50) by Alfonso XI of Castile (1311-50), and Henri de Ferrière's *Les Livres du Roy Modus et de la Royne Ratio* (c.1376-77) dealt with the ailments of hounds. See Alfonso XI, *Libro de la Montería: Based on Escorial MS Y.II.19*, ed. D.P. Seniff (Madison, 1983), 25-49; *Le Livre du Roy Modus* (written before 1338), R. Hands, “Dancus Rex” in English’, *Mediaeval Studies* 35 (1973), 361-62; *Le Livre du Roy Modus: Des Jagdbuches des König Modus aus der Handschrift MS 10.218-19* (*Bibliothèque Royal Albert I<sup>er</sup>, Bruxelles*), codicology D. Thoss, tr. M. Haehn (Graz, 1989), 61-2.

<sup>203</sup> MG, vii. Edward did not, however, translate *Le Livre de Chasse* word for word, omitting some sections, adding other chapters, and sometimes changing the order of chapters, as he did with those dealing with the different types of hounds. A. Rooney notes that the additions by Edward are unlikely to be his own work, with some of the material bearing resemblance to Twiti's *The Art of Hunting*. See TH, 25. The earliest extant copy of the treatise can be found in BL MS Cotton Vespasian B XII, ff.9r-105r, dating to c.1420, and is the manuscript used for the edition in MG.

<sup>204</sup> A copy of Twiti's *The Art of Hunting* is also preserved in BL MS Cotton Vespasian B XII, ff.5r-9r; a Middle English version of this treatise existed in a fourteenth century rental, but this manuscript is now lost, TH, 22, n.1. A transcription of this manuscript, however, can be found in W.M. Bowman, *England in Ashton-under-Lyne: Being the History of the Whole Ancient Manor and Parish Including “Ashton Town”, Alt, Alt Edge, Audenshaw, Bardsley, Crossbank, Hooley Hill, Hurst, Limehurst (with Waterloo), Lees, Littlemoss, Luzley, Mossley, Smallshaw, Stalybridge (Lancashire side), Taunton, Waterhouses, Woodhouses and Wood Park* (Altrincham, 1960) 51-2.

<sup>205</sup> Twenty-six are listed in TH, 89-90, but R. Hanna III tentatively suggests that extracts are to be found in BL MS Lansdowne 285, f.221, R. Hanna III, *IMEP, Handlist I: A Handlist of Manuscripts Containing Middle English Prose in the Henry E. Huntington Library* (Cambridge, 1984), 50. Only nineteen manuscripts were known to Baillie-Grohman, MG, 239-43.

remedies are supplemented by discussion of symptoms and causes, although this is not done for every ailment, and, like *The Boke of Marchalsi* and *Hawk Remedies I*, remedies are not given for all ailments; in the case of the seven forms of madness it is explained that “in certayn I say neuer hounde þat had eny of all this woodnesse that euyr myght be hool”.<sup>206</sup> Some structure is given to the order in which the ailments are discussed. First are the various forms of madness, then the four types of mange. This is followed by a discussion of ailments in the head region, ailments of the feet and legs, a remedy for a chilled hound, ailments of the genitals, and finally remedies for wounds. Towards the end of the chapter on ailments, however, the structure is not as ordered, for after wounds are further ailments of the legs and one for the genitals; but the overall impression is one of structure, which would be accessible for practical use.

Due to the paucity of works concerned with treating the ailments of hounds, I have decided to include in my discussion the anonymous *Practica canum*, a work which circulated in England in the thirteenth and fourteenth centuries. The treatise, which was the first mediaeval Latin treatise dedicated to the care of hounds,<sup>207</sup> was popular in Europe, surviving in twelve manuscripts,<sup>208</sup> of which two are of English provenance: Cambridge, Clare College manuscript 15, f.187, and Bodleian Library manuscript, Ashmole 1427, ff.26v-27r. The former dates to c.1280, the latter to the late-thirteenth to early-fourteenth century.<sup>209</sup> Two versions of the treatise survive: that of the original anonymous author, as in the aforesaid manuscripts, and that containing additions by Simon Herbrant (thirteenth century), which version was utilised by Albertus Magnus (1193-1280) in the section upon dogs in his *De animalibus*.<sup>210</sup> Like *The Master of Game*, the treatise contains information of a non-veterinary nature, but it is clear that the remedies, found in the second part of the treatise, were the primary concern of the author. Thus the *Practica canum* opens with a list of qualities which the breeding dogs should possess, followed by the regimen to be taken when breeding and after the birth. Then follow some brief points on weaning, and the qualities which would be seen

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<sup>206</sup> *Ibid.*, 48.

<sup>207</sup> *Practica Canum*, 61. It is likely that the treatise was originally written in the twelfth century, *ibid.*, 60.

<sup>208</sup> Although one is now lost. See *ibid.*, 51-2.

<sup>209</sup> I have used the earlier manuscript for this study. For an edition, see *Practica Canum*.

<sup>210</sup> B. Van den Abeele and J. Loncke, ‘Les Traités Médiévaux sur le Soins des Chien: Une Littérature Technique’ in H. Kranz and L. Falkenstein (eds.), *Inquirens Subtilia Diversa: Dietrich Lohrmann zum 65. Geburtstag* (Aachen, 2002), 287; *Practica Canum*, 75; *De animalibus*, 1362-68.

after training. The remainder of the treatise is devoted to the ailments from which hounds could suffer, of which eleven are named, in no apparent order. Unlike other treatises, no causes or symptoms are given in this short work, a fact which makes the treatise more akin to the recipe collections.<sup>211</sup>

### *Husbandry Treatises*

Information regarding the veterinary treatment of livestock is also, like that for dogs, somewhat scant. The only English mediaeval treatise to contain such information is John Fitzherbert's *Husbandry*,<sup>212</sup> first printed in 1523, and having at least nine reprints between then and 1598, thus indicating its popularity in the sixteenth century.<sup>213</sup> Like the author of *The Proceis of Hawkyng*, Fitzherbert was certainly familiar with earlier works, namely Walter of Henley's *Husbandry*, as is evidenced by his discussion on the use of horses or oxen as plough animals.<sup>214</sup> Like *The Master of Game*, the treatment of animal ailments does not form the basis of the work, but is, rather, integral to the whole. A wide variety of husbandry matters are discussed, from ploughing, planting, and mating sheep, to keeping bees, making ditches and hedges, and caring for trees. The treatise ends on a moralistic note, covering such matters as "A lesson for the wyfe", "Prodygalytie in outragyouis and costelye araye", and "Howe a man shulde loue god and please hym". Ailments for sheep, cattle, and horses are discussed, although Fitzherbert does not give remedies for the latter, stating "I haue not the perfyte connyng, nor the experyence, to shewe medycynes and remedies for theym all".<sup>215</sup> In all, sixteen ailments are named for sheep and cattle, those for sheep

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<sup>211</sup> See below, 36-8.

<sup>212</sup> The husbandry treatises of the late-thirteenth century, such as the anonymous *Senechaucy* (c.1276), Walter of Henley's *Husbandry* (written c.1286, and translated into Middle English in the fifteenth century), and the anonymous *Husbandry* (c.1300), do not contain sections on the treatment of animal ailments, but do sometimes name ailments [table III.iv]. For a discussion, and editions, of these, see *Walter of Henley and Other Treatises on Estate Management and Accounting*, ed. D. Oschinsky (Oxford, 1971).

<sup>213</sup> See *FBH*, xxii-xxv. Although W.W. Skeat argues that Anthony Fitzherbert was the author, it is now believed that his brother John was the author. See *ibid.*, vii-xx; H.C.G. Matthew and B. Harrison (eds.), *Oxford Dictionary of National Biography: From the Earliest Times to the Year 2000*, 60 vols. (Oxford, 2004), XIX, 874. The edition used here dates from 1534.

<sup>214</sup> Keiser, 'Practical Books', 492. For the relevant passages, see *WH*, 318; *FBH*, 15-16.

<sup>215</sup> *Ibid.*, 74. He does, however, give remedies for both a haw in the eye, and interfere, but this is to simply state that they are to be cut out and resolved with good shoeing respectively, *ibid.*, 67, 71. Due to the fact that remedies are not given, this section of John Fitzherbert's (d.1531) *Husbandry* is only included in table III.i in Appendix C.

given first, those for cattle following, after instructions on how to choose good cattle. Whilst the ailments for sheep appear to be given in no particular order, there is some pattern to those for cattle. First murrain is discussed, the ailment which was perhaps most common amongst cattle, then internal complaints, those of the head, and finally those of the legs and feet. The high degree of observation is indicated by the fact that symptoms are given for fourteen (88%) of the ailments, much more than any of the veterinary, hawking, or hunting treatises. Indeed, only for one ailment (blindness) is no additional information supplied.

### *Recipe Collections*

Another main source of information regarding the treatment of animals is recipe collections, which differ in size from one or two remedies to over thirty.<sup>216</sup> The majority of the collections I have studied date to the fifteenth century, but some recipes date to the sixteenth century (see tables I.i-iv), such as those for horses found in Bodleian Library manuscript Ashmole 1444, pp.300-03,<sup>217</sup> or those for a horse and dog in Oxford, Balliol College 354.<sup>218</sup> Those fifteenth-century collections for horses found in British Library manuscripts Royal 17.A.XXXII, ff.128r-131r, Cotton Julius D.VIII, ff.113v-114r, and Sloane 962 (hereafter *Horse Remedies II*),<sup>219</sup> are of interest because they share many of the same remedies. This not only gives insight into which remedies were popular, but also into the selectivity of the individual scribes. Conversely, the late fifteenth-century hawk remedies found in Cambridge University Library manuscript LL.I.18, ff.59r-61v (hereafter *Hawk Remedies II*),<sup>220</sup> are for the most part not found anywhere else,<sup>221</sup> thus giving an insight into a native English approach to the cure of

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<sup>216</sup> See tables I.i-iv.

<sup>217</sup> Personal communication B. Barker-Benfield, senior assistant librarian, Department of Special Collections and Western Manuscripts, Bodleian Library. The manuscript also contains another recipe collection on p.270, which Barker-Benfield believes may be as late as the seventeenth century; it is thus omitted from this study.

<sup>218</sup> See *IMEP VIII*, 10-11.

<sup>219</sup> For an edition, see *HorseRemII*. W.L. Braekman notes that the remedies found in BL MS Arundel 272, ff.63r-64r, are extracts from this recipe collection, *Hawks and Horses*, 69. As such, I have not used this version as a source, but have referenced it where it differs from the version found in *Horse Remedies II*.

<sup>220</sup> For an edition, see *HawkRemII*. The collection is incomplete; f.62 is missing from the manuscript, whilst only a fragment of f.63 is preserved, *ibid.*, 39.

<sup>221</sup> Hands notes that the remedies are not found anywhere else, but one remedy for rye, two for cray, and one for filanders are also found in the fourth version of the *J.B. Treatise*, Hands, 'Prince Edward's Book', 29; *HawkRemII*, 45, 46, 47; *J.B.IV*, 137-38, 139.

birds of prey. Although recipes are found for all of the animals here under discussion, those for horses are by far the commonest, followed by those for birds of prey. Interestingly, recipes for dogs and livestock tend to be individual recipes in a manuscript, rather than a collection.

Recipe collections are distinguished by the fact that the matters dealt with are purely veterinary – although sometimes material of a different nature was included, as in *Hawk Remedies II*, where two items of a non-veterinary nature can be found, namely which meats are good and evil, and how to make a hawk mute,<sup>222</sup> or in the second *J.B. Treatise*, where casting and enseaming are discussed.<sup>223</sup> Such insertions, however, are not lengthy enough to suggest that a treatise was intended rather than a recipe collection. Whilst the recipe collections for horses, dogs, and livestock are also distinguished by the fact that in the majority of instances only the name of the ailment and the treatment is given, without further description of the ailment in any way, this is not so with recipes for birds of prey. For instance, in *Hawk Remedies II* symptoms are given for seven (37%) of the nineteen ailments, and descriptions for three (16%). Likewise, symptoms and descriptions are also found in the second version of the *J.B. Treatise*, whilst descriptions are given for nearly all of the ailments in both the first and fourth version of the *J.B. Treatise* [tables II.i-iv].<sup>224</sup>

Unlike the majority of treatises, where some order is given to the presentation of the remedies, a distinguishing feature of recipe collections for horses is that the ailments are dealt with in no discernible order. Thus in the recipe collection in *Horse Remedies II* remedies for the same ailment are found throughout. Whilst there is also no apparent order to the remedies in *Hawk Remedies II*, this is not the case with those of the *J.B. Treatise*. Both the first and fourth versions open with a head-to-toe list of ailments and where they are found, which are then dealt with in this order;<sup>225</sup> there is no such list in the second version, yet the ailments are still dealt with in this head-to-toe manner, although the orderly manner disintegrates a little towards the end.

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<sup>222</sup> *HawkRemII*, 42.

<sup>223</sup> *J.B.II*, 116-17.

<sup>224</sup> In the first and fourth versions, however, the recipe collections are prefaced by a list of ailments and where they occur on the bird. If this was omitted, both of these recipe collections would consist merely of the ailments and remedies, bringing them in line with other recipe collections.

<sup>225</sup> *J.B.I*, 110; *J.B.IV*, 137. In the first version, however, remedies for pin and polione are given in the opposite order to how they are listed, whilst in the fourth version no remedy is given for cramp. Such a list is also found in the third version, but no remedies accompany it, *J.B.III*, 130.

Interestingly, the recipe collection found in British Library manuscript Sloane 686, ff.66r-68v, follows on directly from *The Sothebe Treatise*, suggesting that the recipes were intended as additional material, perhaps to supply alternative remedies.

#### *Other Sources*

The above sources are rich in information regarding the treatment of ailments in animals; from them the causes of ailments can be learned, their symptoms, and the various methods of curing such sicknesses. Such information, however, represents the ideal of animal care. It does not necessarily show us that such methods were actually used; the fact that people went to the bother of copying treatises or writing down recipes suggests intent to use them, but their actions are not recorded. Thus in order to complement this information and build up the best picture of animal welfare, other sources need to be consulted, sources which record the daily happenings of mediaeval life. One such source is personal letters, such as those of the gentry Pastons (second half of the fifteenth century),<sup>226</sup> those of the merchant Cely family (late-fifteenth century),<sup>227</sup> and those of the aristocratic Lisle family (first half of the sixteenth century).<sup>228</sup> Although references to sick animals are not numerous, we can learn something about the ailments suffered and who was responsible for the animals. Another source to be turned to is household accounts,<sup>229</sup> whether knightly,<sup>230</sup> aristocratic,<sup>231</sup> ecclesiastical,<sup>232</sup> or royal.<sup>233</sup> In addition to the information provided in letters, these sources also provide information about medicines and ingredients purchased. Whilst the animals referred to in letters and household accounts are primarily high-status horses, birds of prey, and dogs, manorial accounts, such as those from Bolton Priory, Yorkshire (1286-1325),<sup>234</sup> and Cuxham manor, Oxfordshire

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<sup>226</sup> *Paston Letters*.

<sup>227</sup> *Cely Letters*.

<sup>228</sup> *Lisle Letters*.

<sup>229</sup> C.M. Woolgar notes that the term 'household accounts' encompassed several forms of document, including the diet (day-by-day) account, wardrobe account, and cash, corn, and stock accounts, *HAME*, I, 7-8. For the development of the household account in England, see *ibid.*, 10-65.

<sup>230</sup> For example, *HAME*; *HBA*.

<sup>231</sup> For example, PRO E101/505/17; *HBNS*.

<sup>232</sup> For example, PRO E101/510/27; *HRS*.

<sup>233</sup> For example, *RWH 1285-86*; *CHEC*.

<sup>234</sup> *BPC*.

(c.1200-1359),<sup>235</sup> give an insight into different animals, namely livestock, and affers and cart-horses, those horses of lower status. Again, manorial accounts provide information about the ailments from which animals suffered, as well as information about those in charge of the animals. Another valuable source for animal ailments is hagiographical works.<sup>236</sup> Although these works were composed for the purpose of stressing the power of God through the saint, that His power was infinitely greater than that of any human, even so, I believe that *Vitae* are a useful source for the study of animal cures. They might have been written from a biased view, with the intention of showing the uselessness of man in curing ailments, but nonetheless they reveal not only an alternative method of cure, but often provide a context for how an animal became ill.

#### IV.

##### **“Thu that art a gentilman”: audience and evidence for use**

Before moving on to the discussion of animal ailments and their treatment it is first important to consider the evidence for the use of the treatises and recipe collections, and the audience at which they were directed. As noted above, in some of these works the ailments and their remedies were set out in an ordered manner, with either similar ailments grouped together, as in *The Master of Game*, or from head-to-toe, as in *The Boke of Marchalsi* and the *J.B. Treatise*. Such organisation would help to facilitate use. Additionally, sometimes lists of ailments were supplied, which may have been intended to act as an index within the text. Whilst in the first and fourth versions of the *J.B. Treatise* the remedies followed this order, this was not always the case, as has been shown above regarding *The Boke of Marchalsi*. Such lists were also lacking numbering systems, such as folio references; although G.R. Keiser argues that this made them not genuinely useful finding devices,<sup>237</sup> nonetheless they did provide the reader with a summary of the contents, surely helpful when seeking a remedy. Not all lists, however, were without numbering systems; the index found in Fitzherbert’s *Husbandry*, placed at the end of the treatise in the first edition, and at the beginning in

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<sup>235</sup> CMR.

<sup>236</sup> For example, *Montfort Miracles*; *Henry VI Miracles*.

<sup>237</sup> Keiser, ‘Practical Books’, 476.

later editions,<sup>238</sup> was equipped with folio references to aid readers in finding their desired topic.

Other finding aids are also to be found in the texts. *The Boke of Marchalsi*, for example, as found in British Library manuscript Harley 6398, has both headings and questions which are rubricated, whilst other sections of the text are highlighted by blue pilcrows ( ).<sup>239</sup> Similarly, in the *Treatise on Horses*, ailments were introduced by their first letter being an over-sized capital in red ink, whilst remedies or important points within the text were marked by a red pilcrow. Such a practice makes the headings stand out, and would thus aid someone searching for information about a particular cure. This method of highlighting ailments could also be used in works where no ordered structure had been attempted, as in *Horse Remedies II*; the scribe has written the headings of the ailment in red ink, and the headings (or last word when there is more than one word) are written in the margin, which would help someone scanning the collection for a remedy.<sup>240</sup> Additionally, some manuscripts show evidence of much use, such as *The Boke of St Albans*, where several copies are worn.<sup>241</sup> Yale University Library manuscript Beinecke 163, in which *The Percy Poem* is found, also has signs of regular use, but only by its owner-compiler, John Whittocksmead (1410-82), in the form of annotation and finding devices.<sup>242</sup> Indeed, a version of *The Boke of Marchalsi* found in Wellcome Library manuscript 5650, has a list of ailments at the end, added by John Marshall (fl.1460-80), vicar of St Michael, Appleby, Westmorland, when he copied the treatise, an addition which suggests he wanted the list to act as a finding tool for the treatise.<sup>243</sup>

Not all of the treatises, however, may have been intended for practical use. For example, the verse format of *The Percy Poem* suggests that it was intended as a didactic piece, a use which is supported by the opening verse:

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<sup>238</sup> *Ibid.*, 494.

<sup>239</sup> Although one in red is found on f.11v.

<sup>240</sup> *HorseRemII*, 87. In the recipe collection in BL MS Sloane 3285 the ailments have been underlined in red to help a reader locate the desired remedy.

<sup>241</sup> See above, 29.

<sup>242</sup> C. Griffin, 'The "Wagstaff Miscellany": Compilation, Organization and Identity in the Book of John Whittocksmead', in K. Cawsey and J. Harris (eds.), *Transmission and Transformation in the Middle Ages: Texts and Contexts* (Dublin, 2007), 185.

<sup>243</sup> Wellcome Library MS 5650, f.28v.

Thu that art a gentilman,  
 And gentilmanys game wyll lere,  
 Sertayne poyntes of gentilmanys game  
 I can the tell fulle seere.<sup>244</sup>

Thus it seems that the treatise was intended to teach gentlemen the rudiments of hawking and falconry, rather than being intended for practical use when treating ailments. Similarly, *The Durham Treatise* is written on a parchment roll, beautifully illuminated down the left margin, and with gold initials throughout. The illumination, together with the fact that the treatise is written on a roll, suggests that it was intended as a presentation piece, rather than as a working manual.

As can be seen from the above, *The Percy Poem* was addressed to gentlemen, whilst *The Durham Treatise* was probably from a high-status household. Other treatises, too, were intended for a variety of readers. Fitzherbert intended his *Husbandry* to be used by “a yonge gentyll-man, that entendeth to thryue”; not only was the young gentleman to read the treatise “frome the begynnyng to the endyng”, reading it so often as to “waxe perfyte”, but he was to instruct his servants from it by reading aloud “what chapyter he wyll”.<sup>245</sup> Thus although the reader was to be the gentleman, the knowledge contained therein was also intended for servants, or for those who could not read. Internal evidence suggests that *The Boke of Marchalsi* may have been intended for the nobility, for references are made to “stedfolys” and horses exhausted from tourneying or warfare, horses which were inextricably linked to this class.<sup>246</sup> A wider readership may have been intended for the *Treatise on Horses*, for reference is made to corns which arose from carrying heavy loads.<sup>247</sup> In contrast, Edward, second duke of York, dedicated *The Master of Game* to Prince Henry, eldest son of King Henry IV (1399-1413), “which I recomaund and submytte to yowre noble and wise correccioun”.<sup>248</sup> It was not merely intended to be read by the prince, however, but was primarily intended for his huntsmen and those of his father, for Edward “ne wold þat his hunters ne yours

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<sup>244</sup> PP, 11. Verse form was beneficial to learning by rote, the rhythm and rhyme aiding the memorisation of the content.

<sup>245</sup> FBH, 90-1. *The Master of Game* was also intended to be read aloud, for in the concluding passage in John Shirley’s (c.1366-1456) version (BL MS Additional 16165) those “þat haþe herde or redde þis lytell tretys what euer he bee of estate or condicyoun” are addressed, MG, 113.

<sup>246</sup> BMO, 1, 10.

<sup>247</sup> METH, 117.

<sup>248</sup> MG, 3.

þat now be or shuld come here aftir weren vnknowe in þe profitenesse of þis art".<sup>249</sup> Yet the scope of the content, coupled with the expansion of learning in the fifteenth century, meant that it would have appealed to a larger audience within both the aristocracy and the gentry, although modern scholars are divided over the intended use of the treatise. For instance, H.S. Bennett suggests that the Duke of York wrote this work due to a demand for an authoritative vernacular work on the subject,<sup>250</sup> whilst R. Hands suggests that *The Master of Game* was intended as a 'library' piece, rather than a working manual like William Twiti's (d.1328) *The Art of Hunting*.<sup>251</sup> Yet Edward's prologue to the work fully suggests that it was intended as a working treatise. Other works may also have had a noble connection. Keiser suggests that the 1496 printing of *The Boke of St Albans* may have been undertaken under royal, or courtly, patronage; at least two copies of this edition were printed on vellum, probably for wealthy patrons.<sup>252</sup>

Sometimes it is not only the treatise itself which suggests the intended audience, but also the other works with which it is bound in a manuscript. For instance, in addition to containing *The Percy Poem*, Yale University manuscript Beinecke 163 also contains *The Sothebe Treatise* and *The Master of Game*, in addition to other practical, devotional, scientific and legal texts, works "suitable for and of interest to a reasonably well-educated country gentleman".<sup>253</sup> Indeed, as noted above, the manuscript was once owned by John Whittocksmead, a landowner and prominent member of the West Country gentry.<sup>254</sup> British Library manuscript Royal 17.A.XXXII, in which can be found recipes for horses, is likewise composed of such tracts.<sup>255</sup> In contrast *Horse Remedies II* is found with items of a mainly medical nature, such as alphabetical lists of herbs, books of medicines, a treatise on the virtues of herbs, and various charms and spells; all are written in the same hand, indicating that the texts were deliberately chosen as a composite, perhaps for use in a gentleman's

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<sup>249</sup> *Ibid.*

<sup>250</sup> H.S. Bennett, 'Science and Information in English Writings of the Fifteenth Century', *Modern Language Review* 39 (1944), 1.

<sup>251</sup> BSA, xxxviii.

<sup>252</sup> Keiser, 'Practical Books', 488.

<sup>253</sup> Griffin, "'Wagstaff Miscellany'", 180.

<sup>254</sup> *Ibid.*

<sup>255</sup> See British Library Catalogue online, <http://www.bl.uk/catalogues/manuscripts/HITS0001.ASP?VPath=html/39431.htm&Search=17.A.XXXII&Highlight=F>, accessed 06/06/09.

household.<sup>256</sup> Indeed, most recipe collections are to be found in miscellanies dealing with a variety of subjects. This not only reflects the differing interests of various households, but also, given that the information in miscellanies was of practical use to a household, indicates that they were intended to be used. The copy of *Prince Edward's Book* in British Library manuscript Harley 2340 is found with other hawking treatises, namely *Hawk Remedies I*, and a version of the *J.B. Treatise*.<sup>257</sup> Tracts on hawking would appeal to a wide range of readers, from the gentry to the aristocracy. Indeed, as Keiser surmises, although such miscellanies were owned by members of the country gentry, "it would be a serious mistake to exclude Londoners and aristocratic readers from the readership".<sup>258</sup>

As can be seen, there is a wide range of sources available for the study of animal ailments and their treatment in late-mediaeval England, sources which were available to a variety of people in the Middle Ages, from the gentry to royalty. Before moving on to a discussion of such ailments, however, it is first important to consider who was in charge of the animal and responsible for its treatment when unwell, which matter is discussed in the following chapter.

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<sup>256</sup> See *Hawks and Horses*, 68. For an examination of the compilation of such miscellanies, see Griffin, "Wagstaff Miscellany", 175-88.

<sup>257</sup> *Prince Edward's Booke* can not only be found with hawking treatises, but also with miscellaneous tracts. See Hands, 'Prince Edward's Book', 27-30.

<sup>258</sup> Keiser, 'Practical Books', 482, 484.

## Chapter 1

### Responsibility for Animal Welfare

Those in charge of mediaeval animals had an important role to play, for without them there would be no-one to diagnose and treat the animal when it became ill. This chapter therefore examines who was responsible for each type of animal, together with the qualities it was thought necessary for such persons to have, and the source of their learning of veterinary matters.

#### I.

#### **“The wif that kepis the kingis halkes”: persons in charge of the animals**

Horses kept for riding and transport were under the jurisdiction of members of the department of marshalsea, the office concerned with a household’s transport, horses, and their associated equipment, carts, and coaches.<sup>1</sup> On the most basic level those responsible for the care of horses consisted of marshals, grooms and pages, although this set-up could vary from household to household. For example, in 1452-53 Humphrey Stafford (1402-60), first duke of Buckingham, employed valets, grooms, and pages to care for his horses, whilst in 1468 the household of George, Duke of Clarence (1449-78), had a yeoman of the horse under the marshal who looked after the daily needs of the horses and supervised the grooms<sup>2</sup> – suggesting that in this household the marshal had little to do with the day-to-day care of the horses, having a more administrative role. Indeed, a woodcut on the title page of *Master Albrecht’s Little Book of Horse Remedies*, c.1520 (the original work was composed c.1250) depicts a horse being handled by an assistant, whilst Master Albrecht (thirteenth century), dressed in academic robes and scholar’s hat, appears to direct matters [fig. 7]. Thus the image seems to represent a division of labour; the educated scholar directs the course of

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<sup>1</sup> C.M. Woolgar, *The Great Household in Late Mediaeval England*, (New Haven, 1999), 181. The department also included people not involved in animal welfare. For instance, in the household of George, Duke of Clarence (1449-78), there was also a clerk of the stable who recorded the comings and goings of the horses and grooms, and a clerk of the avenary who took care of the provisioning of oats, *ibid.*

<sup>2</sup> *The Account of the Great Household of Humphrey, First Duke of Buckingham, for the Year 1452-3*, ed. M. Harris, *Camden Miscellany* 28, Camden Fourth Series 29 (London, 1984), 18-19, 24-5; Woolgar, *Great Household*, 181.

action, whilst the socially inferior assistant does the actual work.<sup>3</sup> Although P.F. Cuneo suggests this was probably in contradiction to the training and status of the thirteenth, and sixteenth century, farrier, it is representative of the fact that there was a division of labour within the stables (and, indeed, mews and kennels). Thus in the household of Henry III (1216-72) Ellis de Roffa was marshal of the king's horses, c.1257-72, having as his subordinates William Atteforde, keeper of the King's destriers, and Thomas de Tytelington, keeper of the King's palfreys.<sup>4</sup> By the fourteenth century there were obviously many more horses in the royal household, kept in various parts of the country, which necessitated a larger staff to care for them.<sup>5</sup> For example, in the reign of Edward III (1327-77) Arnald Garcy had the horses in the south from 1330-33, William le Mareschal was keeper of the king's horses at Newnham (near Bedford) from 1331-34, John de Neusom was keeper of those in the counties of Northampton, Lincoln, York, Lancaster, and Chester from 1331-35, and William Fremelesworth was keeper of the king's horse at Risborough from 1331-35.<sup>6</sup> Overseeing the whole was the keeper of the king's horses north of the Trent, and the keeper of those south of the Trent, to which latter post William de Fremelesworth succeeded in 1343.<sup>7</sup> Indeed, the care of horses in the royal household was further subdivided. On the one hand there were those in charge of the king's horses and those in charge of the queen's; between 1399 and 1401 Thomas Abberbury was master of the queen's horses, whilst Robert de Waterton was master of Henry IV's.<sup>8</sup> On the other hand, grooms cared for a particular type of horse. Thomas, Adam le Scot, William de Galewaye, and Robert Cornwaleys, were Henry III's sumptermen, in charge of the sumpter horses.<sup>9</sup> A payment of 8 marks [£5 6s 8d] was made to John Hardele in 1272-73 "for the expenses and keep of five of the king's palfreys, and for the wages of five grooms to look after the same palfreys"

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<sup>3</sup> P.F. Cuneo, 'Beauty and the Beast: Art and Science in Early Modern European Equine Imagery', *Journal of Early Modern History* 4:3-4 (2000), 310-11. My thanks to Paul Hammer for bringing this article to my attention.

<sup>4</sup> CPR: *Henry III A.D. 1247-1272*, 4 vols. (London, 1906-13), IV, 179; III, 135.

<sup>5</sup> The increase in the number of horse was no doubt down to the breeding plans of the three Edwards, to supply warhorses. See Davis, *Medieval Warhorse*, 86-91.

<sup>6</sup> *List of Various Accounts and Documents Connected therewith Formerly Preserved in the Exchequer and now in the Public Record Office*, Public Record Office Lists and Indexes 35 (London, 1912), 89.

<sup>7</sup> CPR: *Edward III A.D. 1327-1377*, 16 vols. (London, 1891-1916), VI, 10.

<sup>8</sup> *List of Various Accounts*, 94. As a further subdivision, Walter Moreton was master of the horse of Philippa, the king's daughter, *ibid.*

<sup>9</sup> CPR: *Henry III*, II, 155, 283; III, 134, 135.

from 25 December to 2 February.<sup>10</sup> It is therefore possible that John Hardele may not have been directly involved with the care of the horses, given that there was a groom for each of the palfreys. Certainly in the reign of King John (1199-1216) each horse had its own groom; in August 1212 Thomas de Landa, one of the keepers of King John's horses, was in Worcestershire with twenty-eight horses and twenty-seven grooms; the following year in September he was in Yorkshire with seven horses and six grooms.<sup>11</sup> In smaller households, however, all horses would be under the care of the same groom – during a stay in London in 1338 six grooms and one page were responsible for the horses in the household of Ralph of Shrewsbury (c.1286-1363), Bishop of Bath and Wells,<sup>12</sup> whilst amongst the Cely papers is a memorandum of 1480 which mentions the lad who looked after all of the horses.<sup>13</sup>

Hunting dogs, too, had a number of people in charge of their welfare, which primarily consisted of huntsmen, grooms, and pages. In 1311 a groom received 2s 10½d for looking after eight greyhounds of Queen Isabella (1295-1358), wife of Edward II (1307-27), for 23 days.<sup>14</sup> In the royal household additional servants were to be in charge of the different types of hounds – for instance, fewterers (*veltrarii*) to look after greyhounds, berners (*bernarii*) to care for brachets,<sup>15</sup> berceletters (*bercelettarii*) for bercelets, and lymers for the lymers. Thus when hunting in August and September 1316 Edward II employed six fewterers and berner helpers (*bernarii auxiliancii*),<sup>16</sup> whilst in 1407-08 King Henry IV's (1399-1413) establishment included a master of harthounds (Edward, second duke of York [c.1373-1415], the author of *The Master of Game*), two yeoman berners at horse and four yeoman berners on foot, two yeomen

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<sup>10</sup> *Issues of the Exchequer; being a Collection of Payments made out of His Majesty's Revenue from King Henry III to King Henry VI Inclusive*, ed. F. Devon (London, 1837), 87.

<sup>11</sup> *Rotuli Litterarum Clausarum in Turri Londinensi Asservati*, ed. T.D. Hardy, 2 vols. (London, 1833-44), I 121, 150.

<sup>12</sup> *Household Roll of Bishop Ralph of Shrewsbury (1337-8)*, ed. J.A. Robinson, *Collectanea I*, Somerset Record Society 39 (London, 1924), 134-51.

<sup>13</sup> *Cely Letters*, 93.

<sup>14</sup> *HBI*, 114.

<sup>15</sup> Berner, however, was also a term used to indicate someone in charge of hounds generally. Thus in 1312 the *Close Rolls* refer to berners of harriers (*haericii*) and berners of buckhounds (*daemicii*), *Calendar of the Close Rolls Preserved in the Public Record Office: Edward II A.D. 1307-1313*, 4 vols. (London, 1892-98), I, 464, 487, 507.

<sup>16</sup> PRO E101/377/4, f.1r.

fewterers, and four grooms.<sup>17</sup> Interestingly, *The Master of Game* mentions “þe gromys þat kepyn þe kynes dogges and chastised greihoundes”, suggesting that the king employed someone else to be responsible for hounds before they were trained.<sup>18</sup> Larger noble households followed the royal model of employing specialised hunting servants; in the thirteenth century the bishop of Winchester employed fewterers and berners to care for his greyhounds and brachets.<sup>19</sup> In contrast, more modest households, such as those of barons and knights, might employ just a huntsman, rather than many specialised hunting servants.<sup>20</sup> For example, the wardrobe account of Sir John Mauduyt (d.1347) for September 1312 to c. May 1314 records the payment of 5s to John the Hunter (*le Venour*) for his expenses and those of his dogs, with no suggestion of there being any other hunting servants.<sup>21</sup>

With regards to non-hunting dogs, such as those kept as pets, there is little evidence for who was responsible for their welfare. It seems probable that their welfare was undertaken either by the owner, or by a servant of the household. For instance, the author of *Le Menagier de Paris*, a book of practical advice written in 1393 by an aged husband to his young wife, stressed that it was the duty of a good wife to take good care of her chamber animals, such as little dogs and birds; in this particular instance the young wife was to be aided by Dame Agnes la Beguine, her housekeeper and companion.<sup>22</sup> Likewise, Agnès Sorel, the mistress of Charles VII of France (1422-61), entrusted her greyhound, Tapis, to the care of her maid of honour, Mademoiselle de Bonneville, bidding her to “nourish him close beside you, not permitting him to go coursing with anyone; for he obeys neither whistle nor call, and would therefore be lost, the which would grieve me much”.<sup>23</sup>

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<sup>17</sup> PRO E101/405/18, cited in MG, 170. These people did not always accompany the dogs when hunting; in 1313 William de Balliolo, huntsman to Edward II (1307-27), was accompanied by two berners and two fewterers, with twenty-four running hounds (brachets), twelve greyhounds, and one bercelet, *Close Rolls Edward II*, I, 514.

<sup>18</sup> MG, 107.

<sup>19</sup> E. Roberts, ‘The Bishop of Winchester’s Deer Parks in Hampshire, 1200-1400’, *Proceedings of the Hampshire Field Club and Archaeological Society* 44 (1988), 72.

<sup>20</sup> J. Birrell, ‘A Great Thirteenth-Century Hunter: John Giffard of Brimpsfield’, *Medieval Prosopography* 15 (1994), 58.

<sup>21</sup> HAME, II, 587.

<sup>22</sup> *Le Menagier de Paris*, ed. G.E. Brereton and J.M. Ferrier (Oxford, 1981), 130. Both women were also to supervise the care of the farm animals.

<sup>23</sup> Cited in MacDonogh, *Reigning Cats and Dogs*, 138.

According to *The Proceis of Hawkyng*, there were three different people in charge of birds of prey: austringers cared for goshawks and tercel; sparviteres cared for sparrowhawks and muskets; and falconers cared for all other hawks and falcons.<sup>24</sup> It was more common, however, for there only to be a distinction made between falconers and austringers. As with horses and hunting dogs, these persons were also assisted by grooms and pages. Whilst smaller households more commonly employed falconers or austringers – the Cely family employed William Fawkenere until his death in 1479, when he was replaced by Whatkyn Fawkenere, who was hired again for the year in 1482<sup>25</sup> – larger households had a more extensive staff of falconers, austringers, grooms, and pages. Indeed, it was Richard I (1189-99) who had instigated a significant change in the organisation of the royal falconers, placing a number of small groups of falconers under the supervision of a chief falconer, which, as R.S. Oggins suggests, indicates that the royal falconry establishment had become too large, or too diversified, to be supervised by a single man.<sup>26</sup> In the royal household there was also a keeper of the mews. In 1310 John Colne, king's yeoman, was granted for life the custody of the king's mews at Westminster "receiving for wages and robes and provisions for the king's falcons...which he will have in his custody, the usual fee of the keeper of the mews, according to the custom of the king's household".<sup>27</sup>

Sometimes the widow of a falconer could undertake the care of a bird of prey. After Edward I's (1272-1307) falconer John de Merk died in 1304 the king wrote to his widow thanking her for the care she had taken of the royal falcon in John's custody,<sup>28</sup> whilst in the late-fifteenth century the widow of John Cowtis, falconer, received a payment.<sup>29</sup> Women may also have been more generally employed in the care of birds of prey, for in 1496 a Scottish woman was paid for keeping the hawks of James

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<sup>24</sup> PH, 26. The text itself, however, is concerned with austringers and the care of goshawks, although a sparrowhawk is mentioned in the discussion of mewing, *ibid.*, 33. For a detailed discussion of royal falconers and hawkers from the reign of Richard I (1189-99) to Edward I (1272-1307) see Oggins, *Kings and Hawks*, 64-108.

<sup>25</sup> *Cely Letters*, 63, 66-7, 71, 122, 125-26, 156, 161.

<sup>26</sup> Oggins, *Kings and Hawks*, 65.

<sup>27</sup> CPR: *Edward II A.D. 1307-1327*, 5 vols. (London, 1894-1904), I, 271. It was not only the king's birds which were mewed here; in 1314-15 the birds of Aymer de Valence (d.1324), earl of Pembroke, amongst others, were also being mewed at Westminster, PRO E101/99/15.

<sup>28</sup> Oggins, *Kings and Hawks*, 118.

<sup>29</sup> ERS, X, 20.

IV: 5s 4d to “the wif that kepis the kingis halkes”.<sup>30</sup> Indeed, it may not have been unusual for women to have knowledge on how to look after birds of prey. In *Le Menagier de Paris* the young bride is instructed on how to train, care for, and treat the illness of her sparrowhawk.<sup>31</sup> Women healing birds also appeared in literature. In Chaucer’s *Squieres Tale*, Canacee, who had a ring which enabled her to understand the language of birds, healed a falcon of her self-inflicted wounds; she carried the wounded falcon home in her lap,

And softely in plastres gan hir wrappe,  
 Ther as she with hir beek had hurt hirselve.  
 Now can nat Canacee but herbes delve  
 Out of the grounde, and make salves newe  
 Of herbes precious, and fyne of hewe,  
 To helen with this hauk.<sup>32</sup>

Just as there was a multiplicity of people caring for ‘noble’ animals, so too were there many people responsible for livestock.<sup>33</sup> Manorial horses were outside the purview of the department of marshalsea, and according to the *Seneschaucy*, a treatise on estate management written c.1276, those horses used for carting were to be cared for by the carter, who was to ensure that the horses were not overworked, sleeping with them, and taking such care as necessary to avoid loss.<sup>34</sup> At Beaulieu Abbey in 1269-70, however, the cart-horses were to be cared for by the marshal, who was also responsible for the horses of the stable and those of guests.<sup>35</sup>

Sheep were under the care of shepherds, who could be assisted in their duties by grooms; at Beaulieu Abbey in 1269-70 the master shepherd (*magister bercarius*) was

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<sup>30</sup> J. Cummins, *The Hound and the Hawk: The Art of Medieval Hunting* (London, 2001), 222.

<sup>31</sup> *Menagier de Paris*, 143-69.

<sup>32</sup> Geoffrey Chaucer, *The Complete Works*, ed. W.W. Skeat (Oxford, 1949), 635.

<sup>33</sup> The duties of those in charge of livestock were overseen by various people. According to the *Seneschaucy* (c.1276) the bailiff was responsible for ensuring stock was generally well looked after, and that other cattle (*avers*) belonging to someone else did not graze upon or use their pasture; the reeve had similar duties to the bailiff, but he was more directly responsible for ensuring the horses and other animals were fed properly; overseeing everyone was the steward, who upon his arrival at the manor was to inquire into how the animals were kept, and whether the best use was made of them, *Seneschaucy*, 270, 278, 266.

<sup>34</sup> *Ibid.*, 280, 282.

<sup>35</sup> ABBA, 259.

assisted by two grooms.<sup>36</sup> Indeed, just as the different horses in the royal household were looked after by different grooms, so too were the sheep. Thus Beaulieu Abbey employed people to care for the ewes, wethers, hurtards, hoggasters, and lambs.<sup>37</sup> Shepherds were also assisted in their duties by sheepdogs; at Fountains Abbey the management of the sheep on un-enclosed ground was based upon 'hoofing', the practice of herding sheep with dogs on to a stretch of ground which became so familiar that the flock would not easily stray.<sup>38</sup> The number of sheep in the care of the shepherd depended upon two things: the amount of pasture, for more grass meant more animals could be pastured; and the type of sheep – on abundant pasture a shepherd could watch 400 or more wethers, over 300 ewes, or over 200 hoggasters.<sup>39</sup>

The number of shepherds employed on an estate varied with the number of sheep. For instance, at the beginning of the thirteenth century, Ebblesburn, one of the Wiltshire estates of the bishopric of Winchester, had one full-time and one part-time shepherd, but by 1298 had two permanent shepherds and an extra man to help with the lambs; during the next few years additional help was hired from Michaelmas to May to give special attention to the hoggasters.<sup>40</sup> Similarly, in 1314-15 at Crowland Abbey's manor of Wellingborough an extra shepherd was employed for the autumn, whilst in 1322-23 a second shepherd was hired for the winter term, although it is not specified what their duties were to be.<sup>41</sup> Conversely, during the fourteenth century Oxford's Merton College manor of Farleigh had a falling number of sheep, and thus the workers employed fell from one full-time shepherd helped by a boy at lambing in 1322 to just one shepherd by 1375.<sup>42</sup> Interestingly, it was not always the sheep of the

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<sup>36</sup> *Ibid.*, 166. On monastic estates in the early Middle Ages each flock of sheep had its own shepherd, who answered to the reeve, but during the twelfth century changes in the composition of flocks took place as wool became a more important product, and thus monastic houses increasingly reduced costs by placing all their sheep under the care of a master shepherd or sheepreree, J. Bond, *Monastic Landscapes* (Stroud, 2004), 60.

<sup>37</sup> *ABBA*, 317-18.

<sup>38</sup> B. Jennings, *Yorkshire Monasteries: Cloister, Land and People* (Otley, 1999), 108. As well as dogs, shepherds also had staffs or crooks to help control the sheep. In the eleventh century the staff or club acquired a hook at one end to become a crook, and in the fifteenth century the base of the crook acquired a small metal spade (said to have originated in Flanders) which was used to throw earth beyond straying sheep, thus frightening them into rejoining the flock, M.L., Ryder, *Sheep and Man* (London, 1983), 390.

<sup>39</sup> *Seneschaucy*, 276.

<sup>40</sup> Payne, 'Agrarian Conditions', 197-98.

<sup>41</sup> *WMA*, 118, 126.

<sup>42</sup> M. Saaler, 'The Manor of Farleigh: The Evidence for Economic Changes During the 14<sup>th</sup> Century', *Surrey Archaeological Collections* 83 (1996), 61 table 2, 64.

estate which were being cared for by the shepherd. On Cistercian estates much wool was contracted out to merchants, and thus some of the sheep actually belonged to these merchants, the abbey having to look after them as if they were their own, at their own cost.<sup>43</sup>

Oxen and cows were the responsibility of different people. Just as the carter was to care for his horses, so was the ploughman to care for his oxen, coupling and leading them without striking or hurting them, feeding them well, and keeping them safe in the meadows and pastures.<sup>44</sup> Cows and their calves were to be looked after by the cowherd (*vaccarius*), who was to ensure they were well fed and kept in both the winter and the summer.<sup>45</sup> On the Beaulieu Abbey manor of Hartford in 1269-70 the cowherds were assisted by pages.<sup>46</sup> At Durham Cathedral Priory the care of bovines was further subdivided: bovetters (*bovettarii*) were in charge of bullocks in their first year (*bovetti*); sticketters (*stirkettarii*) looked after stirks (*stirketti*); and at Wascropehead manor Robert Jonson was the *stottarius*, looking after stots.<sup>47</sup>

Swineherds (*porcharii*) were only to be employed on those manors where pigs could forage for themselves in woods, marsh, or waste; if they had to be fully supported on food from the manor, no swineherd was to be employed.<sup>48</sup> In 1269-70 Beaulieu Abbey employed three swineherds and a page to oversee the smooth-running of the piggery, suggesting this was a large department.<sup>49</sup> In contrast, Beaulieu's grange of Wyke only employed one swineherd, who was assisted in his duties by three grooms,<sup>50</sup> whilst one swineherd only was employed at Crowland Abbey's manor of Wellingborough between 1267 and 1322, except for 1305-06, when an extra swineherd was brought in.<sup>51</sup>

As with birds of prey, women could also help with livestock welfare. In her *Le Livre du Trésor de la Cité des Dames* (1405), Christine de Pizan (1365-c.1430) noted that in the winter time the lady of the household "will employ her women and her

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<sup>43</sup> Eckenrode, 'English Cistercians', 259.

<sup>44</sup> *Seneschaucy*, 282.

<sup>45</sup> *Ibid.*, 284.

<sup>46</sup> *ABBA*, 153.

<sup>47</sup> *DAR*, II, 314-16.

<sup>48</sup> *Seneschaucy*, 284.

<sup>49</sup> *ABBA*, 183.

<sup>50</sup> *Ibid.*, 78.

<sup>51</sup> *WMA*, 95.

chambermaids to attend to the livestock”;<sup>52</sup> similarly, at Tavistock Abbey in the late-fourteenth and early-fifteenth centuries it was the dairywoman who was expected to look after the cows and calves during the winter months.<sup>53</sup>

Although persons were employed to care for animals, this was not always the case. For instance, it seems that the Cely merchant family sometimes looked after their birds of prey themselves; in 1481 Richard Cely (d.1493) informed his brother George (c.1458-89) that business was so great he could no longer keep his hawk, and so had sold her for 7 nobles [£2 6s 8d].<sup>54</sup> Indeed, it may not have been unusual for members of the gentry to look after the birds themselves, for the author of *Prince Edward's Book* added a personal note to a William Waters, advising him to keep goshawks and sparrowhawks, and to leave falcons and lanners to those who had the time to train them.<sup>55</sup> Other animals were also cared for by their owner. Indeed, John Fitzherbert (d.1531) recommended looking after animals oneself, arguing that it was more profitable for the farmer to quickset, ditch, and hedge cattle in, for

The herdeman wyll haue for euery beast .ii.d. a quarter, or there aboute: And the swyneherde wyll haue for euery swyne .i.d. at the leaste. Than he must haue a shepeherde of his owne, or elles he shal neuer thryue. Than reken meate, drinke, and wages for his shepherde, the herdman's hyre, and the swyneherde's hyre, these charges wyll double his rent or nyghe it.<sup>56</sup>

It was not only in health that animals needed caring for, but also in sickness, and usually the person in charge of their daily welfare took responsibility for this. In the household of Queen Isabella, the keepers of the destriers and the palfreymen undertook the care of sick horses; in July 1311 Robert de Baggeschute received 3s for looking after a sick destrier at Morpeth, whilst the following November Roger de Wycoumbe was paid 2s for looking after an ill destrier at Eltham.<sup>57</sup> On 19 April 1312 Raymond Dugthy and Wilbern de Watforde received 4s 8d for remaining with two of

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<sup>52</sup> Christine de Pizan, *The Treasure of the City of Ladies or the Book of the Three Virtues*, tr. S. Lawson (London, 1985), 132.

<sup>53</sup> Finberg, *Tavistock Abbey*, 136.

<sup>54</sup> *Cely Letters*, 125.

<sup>55</sup> *PEB*, 10-11. In contrast, the author of *The Percy Poem* believed that falcons such as the hobby, gyrfalcon, and lanner were easier to keep than the goshawk and sparrowhawk (although they were more prone to disease when travelling), *PP*, 25.

<sup>56</sup> *FBH*, 77.

<sup>57</sup> *HBI*, 46, 48. Both men are listed in this regnal year under ‘*palefridii et custodes dextrariorum regine*’ when receiving winter robes, winter shoe money, and summer shoe money, *ibid.*, 172, 188, 190, 198, 200.

the Queen's sick palfreys at York.<sup>58</sup> The same situation prevailed in other households. At Durham Cathedral Priory in c.1365-66 Hugo Palfreyman was paid 8s 8d "for the cure and marshalsea of the Prior's grey palfrey at Newcastle", whilst in 1380-81 William Urde, a shepherd of the priory, received a payment of 2s for remaining with infirm lambs for one week.<sup>59</sup> The household accounts of Sir Hugh Luttrell (d.1428) for 1415-16 record a payment of 15½d to one groom, going to Taunton from Dunster three times for the cure of an infirm horse,<sup>60</sup> and when George Cely's (c.1458-89) falcon, Meg, was sick with the cray and cramp in early November 1479, Richard Cely, who had charge of his brother's bird in London, informed George that he longed for William Fawkener, who at the time was ill in Bruges.<sup>61</sup> Whether Richard was looking after the falcon himself, or if a junior, less-experienced falconer was in charge is unknown, but any efforts taken to cure the bird were in vain, for three days later Richard informed George that his falcon had died of her sickness.<sup>62</sup> Thus it can be seen how important it was to have an experienced keeper in charge of the animal, especially in times of sickness.

Even when no specific person was mentioned caring for a sick animal, the purchase of ingredients for their cure, recorded in household and manorial accounts, is highly suggestive that treatment was undertaken by a member of the household. The horses of Elizabeth de Burgh (1294/5-1360) were treated with honey, vinegar, ginger, salve, and onions,<sup>63</sup> whilst grease was purchased "for curing sick oxen" at Battle Abbey in 1512-13.<sup>64</sup> In 1546-47 the apothecary Thomas Alsop (d.1558) supplied liquorice and sugar candy for the hounds of Henry VIII (1509-47), and horehound water for his hawks.<sup>65</sup> [See also tables X.i-iii] Yet the purchase of ingredients for medicines is not

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<sup>58</sup> *Ibid.*, 54, 56. Whilst Raymund is also listed under the title of palfreyman and keepers of the Queen's destriers, Wilbern is not further mentioned in the accounts.

<sup>59</sup> *DAR*, II, 568; III, 591.

<sup>60</sup> *DHA*, 121. A groom also looked after sick horses in the household of Eleanor, Countess of Leicester (1215?-75), in 1265, *MHE*, 32, 40, 45.

<sup>61</sup> *Cely Letters*, 63, 66. On 30 November 1479 George Cely (c.1458-89) was informed of William's death; the author of the letter, John Goldson, clearly wanted to assure George that his hawks were in good hands, writing that they were in the care of man who had "good skylle of askys [hawks], and theye lyek wyll", *ibid.*, 66-7.

<sup>62</sup> *Ibid.*, 65.

<sup>63</sup> F.A. Underhill, *For Her Good Estate: The Life of Elizabeth de Burgh* (Basingstoke, 1999), 77.

<sup>64</sup> *BAA*, 159.

<sup>65</sup> H.C.G. Matthew and B. Harrison (eds.), *Oxford Dictionary of National Biography: From the Earliest Times to the Year 2000*, 60 vols. (Oxford, 2004), I, 898.

absolute proof that the animal was treated by a member of the household. The accounts for Durham Cathedral Priory during the fourteenth and fifteenth centuries record many purchases of ingredients, such as verdigris, honey, vitriol, and gum, yet sometimes these were purchased at the same time as payments were made to a marshal<sup>66</sup> for curing the horse; in 1344 gum and blue vitriol were purchased for a sick horse, together with paying the salary of “a certain marshal”.<sup>67</sup> The fact that the marshal is referred to in the Latin as *quidam* suggests he was not a member of the household, and was brought in especially to cure the sick horse.<sup>68</sup>

Although an animal might be primarily under the care of its keeper, in times of illness others were sometimes turned to for aid.<sup>69</sup> In 1302-03 a horse from Durham Cathedral Priory was ill whilst at Haverford; although there was a groom in attendance, 3s were spent on the wages of a marshal for curing the horse.<sup>70</sup> The following century, in 1480, a horse belonging to George Cely was given a drink for a cough by a smith in London, and two years later Richard spoke with the best horse-dealers and smiths at Smithfield about a young horse of George’s which would eat nothing of hard foods, only grass and green tares.<sup>71</sup> A smith was also applied to at Peterborough Abbey; Nicholas the smith (*faber*) of Barnard Cross is recorded twice in *The Book of William Morton* for curing a horse of vives (*vivysse*), once in 1449-50, and again in 1450-1.<sup>72</sup> That year he also received 20d for the cure and medicines of a filly named Sorelle.<sup>73</sup> Interestingly, for one ailment at least, smiths could also treat hounds:

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<sup>66</sup> Although the term was used for the head of the department of marshalsea, it could also denote someone who cured horses. To further complicate matters, though, it was a term which could be applied to the farrier or smith, Davis, *Medieval Warhorse*, 84. As all three (marshals, farriers, and smiths) could treat horses, I have translated the Latin *marescallus* as marshal, and not farrier, as some editors have done.

<sup>67</sup> *DAR*, I, 40.

<sup>68</sup> If this marshal was itinerant, the fact that ingredients were purchased suggests that he did not carry a supply of medicines with him, as a modern veterinarian would do today.

<sup>69</sup> When Hanno, the elephant of Pope Leo X (1513-21), became seriously ill in June 1516, the pope immediately summoned the finest physicians in Rome, including his own, to treat the animal. Having no experience of animals they treated the elephant as though it was human, testing its urine, letting its blood, and eventually giving it a purgative, S.A. Bedini, *The Pope’s Elephant* (Manchester, 1997), 142-43.

<sup>70</sup> *DAR*, II, 504.

<sup>71</sup> *Cely Letters*, 73, 165. They advised “to lette hym ron in a parke tyll Hallontyd, and then take hym wpe and ser hym, and lette hym stand in the dede of whyntter, and let ren the next somar”, *ibid*, 177. Thus the following week Richard advised his brother that the horse was in Thondyrlay Park, where “he has pastyr inow”, *ibid.*, 179.

<sup>72</sup> *BWM*, 34, 37-8.

<sup>73</sup> *Ibid.*, 46. As Sorelle had suffered from glanders this year, this entry may refer to treatment for the same.

a hound suffering from a web [naile] in the eye was to have this removed with a needle and razor, and “Thise þingges can wel done þe smytthes for as þe nayle is drawe out of þe hors eye in þe same wise he must be drawe out of þe houndis ye”.<sup>74</sup> Interestingly, in 1493-94 at Ripon Collegiate Church, a man named John Horseleach received a payment of 7d for curing a horse.<sup>75</sup> His name certainly suggests that he was an empiric who did not hold a position within the church or another household; indeed, John Fitzherbert described the horseleach as someone “that takethe vppon hym to cure and mende all maner of diseases and soraunce that horses haue”, although he seems not to have had much faith in them, for together with the horse-master, the corser, and the apothecary, he remarks “that it were harde to truste the best of them”.<sup>76</sup> Yet the accounts of Sir John Howard mention Watkyn, the king’s horseleach, who dieted Sir John’s horses in 1464,<sup>77</sup> which suggests that Watkyn was either attached to the royal household, or the favoured practitioner of the king. P. Edwards makes the interesting point that in the early modern period, when gentlemen found a competent farrier or leech, they would return to them on a regular basis for the treatment of their horses.<sup>78</sup> Perhaps this is evidence of a similar situation developing here.

One of the most interesting references regarding those treating animals is to be found in a court roll of Heacham Manor, Norfolk. In 1360 murrained sheep were sold after they were seen by a veterinarian (*vendebantur per visum veterinarii*).<sup>79</sup> This seems to be the only instance of the Latin term *veterinarius*, designating someone who treats animals, to be used in the Middle Ages, and T.H. Lloyd believes its context strongly

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<sup>74</sup> MG, 52.

<sup>75</sup> *Memorials Ripon*, III, 165.

<sup>76</sup> *FBH*, 74. J.F. Smithcors remarks that Fitzherbert’s work was “the first to definitely establish the horseleech as a professional entity”, Smithcors, *Veterinary Art*, 159.

<sup>77</sup> *MHE*, 246.

<sup>78</sup> P. Edwards, *Horse and Man in Early Modern England* (London, 2007), 64. In Italy and the Iberian Peninsula in the fourteenth and fifteenth centuries, towns engaged the services of the *alvetarius* for one to five years; marshals were also based in French towns, E. Pascua, ‘From Forest to Farm and Town: Domestic Animals from ca. 1000 to ca. 1450’, in L. Kalof and B. Resl (eds.), *A Cultural History of Animals*, 6 vols. (Oxford, 2007), II, 100; M. Cordero del Campillo, ‘Veterinary Medicine in the Medieval Period: The Christian Kingdoms in Spain’, *Historia Medicinae Veterinariae* 22:4 (1997), 76-77; Y. Poulle-Drieux, ‘Practique de l’Hippiatrie à la fin du Moyen Âge’, in *Comprendre et Maitriser la Nature au Moyen Âge: Mélanges d’Histoire des Sciences offerts à Guy Beaujouan*, preface M. Terrasse, introduction D. Jacquart (Geneva, 1994), 335.

<sup>79</sup> *HCR*, 11.

suggests the existence of a profession of specialist animal doctors, “though practitioners were probably very few in number”.<sup>80</sup>

Sometimes there is little information regarding those who treated sick animals. An account of 1380-81 from Durham Cathedral Priory elusively refers to “a man” (*unum hominum*), who cured the bursar’s horse of farcy.<sup>81</sup> Similarly, the *Book of William Morton* from Peterborough Abbey refers to “a certain knowledgeable person” (*quidam scientium*) who cured a sick horse of spavin in the shin-bone of its hind legs in 1455-56.<sup>82</sup> In a similar manner, when hounds were suffering from out of place joints in their feet, these were to be put back “of soche a man þat can wel don it”.<sup>83</sup> Indeed, it is possible that certain aspects of treating a sick animal were undertaken by those trained in such matters. For example, part of the remedy for a horse lame in the knees in *The Boke of Marchalsi* was to let blood on both sides of the pastern; however, “if þat þou haue non good mayster þat can lat hym blod”, then the foot was to be pared, and blood let there “and no whar ellis”.<sup>84</sup> This certainly suggests that bleeding a horse in some areas needed more skill than in other areas, and thus those practised in the art should be the ones to undertake this. Similarly, another remark in the same treatise suggests that some ailments could be more difficult to treat, needing professional help, for the author talks about a liquid which, amongst other things, was good for reducing vives “til þou come to a mayster þat can hele hym”.<sup>85</sup>

Of course, those treating sick animals were not necessarily caring for them throughout their illness. For instance, in 1292-93 when two horses of John of Brabant (d.1312) were wounded in a tournament, the services of a marshal were called upon, but it was grooms who cared for the horse whilst they were delayed at Northampton for twenty days.<sup>86</sup>

When people took their animals to someone else to be cured, they were placing great trust in this person, yet it is clear that sometimes this trust was misplaced. For instance, the anonymous author of the fifteenth-century treatise *The Boke of*

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<sup>80</sup> T.H. Lloyd, ‘Husbandry Practices and Disease in Medieval Sheep Flocks’, *Veterinary History* 10 (1977-78), 13.

<sup>81</sup> *DAR*, III, 590.

<sup>82</sup> *BWM*, 87.

<sup>83</sup> *MG*, 53.

<sup>84</sup> *BMH*, f.44r.

<sup>85</sup> *Ibid.*, f.49v.

<sup>86</sup> *Expenses Brabant*, 5.

*Marchalsi* was scornful of people who maimed horses through mis-diagnosis, in one instance writing that sorews should be burned “as it is ordeynid be craft of marchausyze”.<sup>87</sup> Indeed, in the fourteenth century the marshals of London took exception to those they thought were charlatans. Thus an Ordinance of the Farriers of 1356 berated those men “who kept forges in the said city, and intermeddled with works of farriery, which they did not understand how to bring to good end; by reason whereof, many horses had been lost, to the great damage of the people”.<sup>88</sup> In the same Ordinance rules were laid down for marshals themselves, stating that they were not to attempt any cure if they could not reasonably see that the cure would be brought to a good end; for if they let any horse perish through their negligence they would have to make restitution to the owner of the horse.<sup>89</sup> Thus a growing recognition of the need to maintain standards can be seen.<sup>90</sup> Indeed, action against negligence in the treating of horses was taken seriously; in 1369 a marshal was sued for negligence when a horse he treated died, and in 1441 a writ was brought against one R. Mareshall who had taken it upon himself to cure a horse of a certain malady, yet he had so heedlessly and improvidently inflicted his medicines upon the horse that he killed it.<sup>91</sup> In comparison, some practitioners were both competent and confident of curing sick animals. In 1450-51 Nicholas the smith of Barnard Cross warranted, under penalty of one noble (6s 8d), that a horse he had treated for vives would never again suffer from this ailment.<sup>92</sup> Certainly by the fifteenth century marshals were seen as important and integral figures in society, for in 1431 a precept was issued by the Mayor and Aldermen of London advising the sheriffs only to summon any *marescalli equorum* for jury service in cases of urgent necessity.<sup>93</sup>

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<sup>87</sup> *BMH*, ff.23v, 41v, 47r-v.

<sup>88</sup> *Memorials of London and London Life in the XIIIth, XIVth and XVth Centuries*, ed. H.T. Riley (London, 1868), 292. The Ordinance indicates that there was a distinction between marshals and smiths, with the latter being deemed incapable of treating horses, *ibid.*, 293-94. Both could make the same products, however; this was the case in York by the late fourteenth century, but marshals and smiths were mutually hostile and unco-operative until they were forced into a union as one craft by the city council the following century, H. Swanson, ‘The Illusion of Economic Structure: Craft Guilds in Late Medieval English Towns’, *Past and Present* 121 (1988), 42.

<sup>89</sup> *London Memorials*, 293.

<sup>90</sup> See also below, 63.

<sup>91</sup> Year Book 43 Edward III and Year Book 10 Henry VI, cited in F. Bullock, ‘Notes on the Early History of the Veterinary Surgeon in England’, *Proceedings of the Royal Society of Medicine* 22:1 (1929), 628.

<sup>92</sup> *BWM*, 37-8.

<sup>93</sup> Cited in Bullock, ‘Veterinary Surgeon in England’, 629.

## II.

### “Loke that thu be not drunkeLOWE”: qualities sought in those caring for animals, and the source of their learning

Being in charge of animals was clearly a position of responsibility. In 1251 the sheriff of Northampton was ordered to pay 5 marks to Gilbert de Hauvill for mewing and training the king’s gyrfalcons, “knowing for certain that the king will take severe measures if they perish by his default”,<sup>94</sup> whilst in 1357-58 Sir John Brocas, master of the king’s horse, listed the deaths of twelve mares, four colts, and eleven fillies from murrain in order to exonerate their keeper of carelessness.<sup>95</sup> Indeed, in the court rolls of Elmley Castle, Worcestershire, it was stated that the loss of animals through murrain was “not through lack of keeping, or by anyone’s fault”.<sup>96</sup> Similarly, shepherds were held accountable for any sheep which went missing. In 1440 John Trublet, shepherd of Upton Scudamore, an estate of the Lords Hungerford, was charged with 18 sheep missing from the previous year’s shearing, and thirteen in the current year, for which he had to pay 39s 4d with the value of their fleeces. Three years later he was again in trouble, his lord seizing twelve of his own sheep, valued at 20s, in part satisfaction of a debt of 43s 4d owed for divers animals of the lord’s in his custody which were not forthcoming.<sup>97</sup> Given the responsibilities that keepers had, pains were taken to ensure that those employed to care for animals were suited to the job. The *Seneschaucy* stated that “Each shepherd ought to find good pledges to answer for his behaviour and his good service”.<sup>98</sup> Similarly, when Alan the farrier joined the household of Bishop Swinfield in 1291, Henry Marshal, Alan Marshal, and others, stood as guarantors for his diligent and faithful service while he remained in

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<sup>94</sup> *Calendar of Liberate Rolls*, ed. H.C. Maxwell Lyte, 6 vols. (London, 1916-64), IV, 4.

<sup>95</sup> Davis, *Medieval Warhorse*, 93.

<sup>96</sup> CREC, 12, 15, 17, 19, 24 *passim*. A similar practice was carried out at Lewes Priory’s manor of Heacham, H. Harrod, ‘Some Details of a Murrain of the 14<sup>th</sup> Century, from the Court Rolls of a Norfolk Manor’, *Archaeologia* 41 (1867), 2. Yet at Cuxham manor, Oxfordshire, in 1294-95 one pig died from murrain through carelessness (*in morina incuria*), CMR, 261.

<sup>97</sup> Payne, ‘Agrarian Conditions’, 199. He also found himself deposed from the position of shepherd, *ibid.* Christine de Pizan (1365-c.1430) believed that the lady of the household should watch over the shepherd, for this would make him more careful in his actions, Christine de Pizan, *Treasure of the City of Ladies*, 132.

<sup>98</sup> Neither was the shepherd to leave his sheep to go to fairs, markets, wrestling contests, parties, or the tavern, without the leave of his lord, and without ensuring that a good keeper was in his place to take care of the animals, *Seneschaucy*, 286. There were similar injunctions on those caring for horses, oxen, and affers, *ibid.*, 278.

Swinfield's employ.<sup>99</sup> Yet those in charge of animals could still prove wanting. Although Thomas Shepherd entered the service of John Southern "by an agreement made to keep his sheep well and completely", in 1398 John charged Thomas with losing, through his own fault, one sheep worth 2s.<sup>100</sup>

It was not only good behaviour which was desired, but also being physically suited to the job; according to the author of the Durham treatise "A man þat will kepe a gosse-hawk weyll, it behovis hym have an esy hand".<sup>101</sup> Indeed, Frederick II of Hohenstaufen (1194-1250) went into great detail regarding the physical build suitable for a falconer:

The falconer should be of medium size; if he is too tall he is likely to be easily tired and not nimble; on the other hand, if he is too small his movements, either on horseback or on foot, may be too quick and too sudden. He ought to be moderately fleshy, so that he is not handicapped by emaciation and thus be unable to do hard work or to withstand the cold; nor should he be so fat that he is likely to shun exertion and suffer from heat.<sup>102</sup>

It also seems that in their manner persons in charge of animals were not to be uncouth. Ploughmen were to be "men of understanding" (*gent de commisance*), whilst the hunter in charge of hounds was to be "*wel eyed and wel avised of his speche and of his terms...and þat he be no boostour ne jangelere*".<sup>103</sup> They were also to be in charge of their emotions. Thus the shepherd was not to be too angry, for through this anger some of the sheep could become harassed, and therefore die.<sup>104</sup> Indeed, it was possible to tell if the shepherd was cruel in any way towards his charges, for the sheep would shun him

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<sup>99</sup> HRS, II, 195.

<sup>100</sup> CREC, 62.

<sup>101</sup> DT, 28.

<sup>102</sup> AVCA, 150. Such stipulations are evocative of the qualities expected of physicians and surgeons which can be found in some medical texts for humans. For example, Lanfranc of Milan (d.1306) believed that a surgeon needed to be physically suited to his job, as he would have to perform many delicate operations: "A surgian must haue handis weel schape, longe smale fyngries, and his body not quakyng", Lanfranc of Milan, *Lanfrank's "Science of Chirurgie"*, ed. R. von Fleischhacker, EETS, 102 (London, 1894), 8.

<sup>103</sup> *Seneschaucy*, 282; MG, 69.

<sup>104</sup> WH, 336.

when he walked among them at feeding time.<sup>105</sup> Frederick II also remarked that anger could be injurious to falcons:

A bad temper is a grave failing. A falcon may frequently commit acts that provoke the anger of her keeper, and unless he has his temper strictly under control he may indulge in improper acts toward a sensitive bird so that she will very soon be ruined.<sup>106</sup>

Drunkenness was also to be avoided, being “one of those minor forms of insanity that soon ends in destroying the usefulness of a bird”.<sup>107</sup> Indeed, in the twelfth century Adelard of Bath (c.1080-c.1152) noted that these two vices were to be avoided, “for drunkenness is the mother of forgetfulness, anger causes injuries”.<sup>108</sup> Interestingly, the author of *Prince Edward's Booke* suggested that some vices could result in illness being passed on to the hawk: “Loke that thu be not drunkelowe ne lecherous daylyng with wommen, for if thu handell thy hawke afterwardes with thi handes Vnwasch, forsoth þu sleyst thyn hawke, because thei hate filthede aboue all thyng”.<sup>109</sup> Sometimes it was deemed necessary for the person caring for an animal to be without sin. In his agricultural treatise, *Le Bon Berger* (1379), Jehan de Brie specified that a shepherd castrating sheep “must then be without sin, it is good that he is confessed”.<sup>110</sup> Similarly, in order for a charm for farcy to work, the author of *The Boke of Marchalsi* stipulated that the marshal “be oute of dedly sin”.<sup>111</sup>

In addition to being well-behaved and suited to the job, it was also necessary to be suitably equipped in order to be able to carry out the job. Thus, for instance, the

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<sup>105</sup> *Ibid.* Jehan de Brie (fourteenth century) wrote that the first rule of the shepherd was to treat the lambs amicably and without violence, Jehan de Brie, *Le Bon Berger: Le Vrai Règlement at Gouvernement des Bergers et Bergères*, tr. M. Clévenot (Paris, 1979), 41.

<sup>106</sup> AVCA, 151.

<sup>107</sup> *Ibid.*

<sup>108</sup> AT, 240. See also ‘Fragment d’un Traité’, 33. Drunkenness had long been abhorred. Although under tenth-century Welsh law the chief falconer was entitled to take a vessel to court to put his liquor in, he was restricted to merely quenching his thirst “lest he should neglect his birds”, *The Law of Hywel Dda: Law Texts from Medieval Wales*, tr. and ed. D. Jenkins (Llandysul, 2000), 14.

<sup>109</sup> PEB, 11. Adelard of Bath (c.1080-c.1152) also shared the same notions of transference, writing that “the frequenting of prostitutes makes hawks full of worms when touched, in fact a foul-smelling breath renders them haters of men and it fills them with unsound air, from which they suffer rheum”, AT, 240. In contrast, Albertus Magnus (1193-1280) believed that falconers needed to protect themselves from bites and scratches by raptors, because their feathers, feet, and breath were poisonous, *De animalibus*, 1489.

<sup>110</sup> De Brie, *Le Bon Berger*, 163. It was also thought to be good if he did not eat garlic that day, for then he would have better breath, *ibid.*

<sup>111</sup> BMO, 32.

shepherd “shoulde not go without his dogge, his shepehoke, a payre of sheres, and his terre-boxe, eyther with hym, or redye at his shepe-folde”.<sup>112</sup>

The fact that people were expected to be well-versed in animal health – it was bemoaned in *The Master of Game* that hounds and bitches could die of canker in the genital areas because not all hunters knew the remedies<sup>113</sup> – raises the interesting question of where they gained their knowledge. The evidence certainly suggests that this was most often ‘on the job’, as it were, with boys learning the trade from a young age, whether this was in the mews, stables, kennels, or in the field. For instance, Frederick II advocated that the novice “must begin his education under an experienced teacher”,<sup>114</sup> and whilst household accounts contain references to children of the stable,<sup>115</sup> *The Master of Game* is explicit in saying that boys as young as seven are to be trained as hunters; indeed, he was to love his master, ensuring that his heart and business was with the hounds, and was to be “ever glad to lerne”.<sup>116</sup> Should he fail to do what his master commanded, he was to be beaten “in to þe time þat þe child be a drad for to faile”.<sup>117</sup> Similarly, the author of *Prince Edward’s Booke*, when discussing which meats were best for birds of prey, noted that this information was “as my master hath taught me”,<sup>118</sup> whilst one manuscript contains charms for horses taught by the farrier Hugh Bromfeld, and another has remedies taught by Master John de Gloucester.<sup>119</sup> The author of *The Proceis of Hawkyng* wrote in one remedy “as I herde my maystris say”,<sup>120</sup> and the author of the *Treatise on Horses* added some remedies for eye ailments which he had “herde of proued maysterus”.<sup>121</sup> Such information suggests that information was passed on between professionals. Indeed, as Gaston Phébus (1331-91) noted, the advancement from *page de chiens* to *veneur* was a natural progression: the *page de chiens* would begin his training at the age of seven; by fourteen he would be ready to become a *varlet des chiens*, being promoted to *aide de la vénerie*, which position

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<sup>112</sup> FBH, 45.

<sup>113</sup> MG, 54.

<sup>114</sup> AVCA, 105.

<sup>115</sup> See LHA, 27; MHE, 236, 263; HBNS, 442.

<sup>116</sup> MG, 69.

<sup>117</sup> *Ibid.*

<sup>118</sup> PEB, 8. He again refers to his master when discussing a remedy for a bird with an unknown sickness, *ibid.*, 17.

<sup>119</sup> BL MSS Royal 17.A.XXXII, f.120r; Royal 17.A.VIII, ff.81v-83v.

<sup>120</sup> PH, 39.

<sup>121</sup> METH, 143.

included a couple of horses, at the age of twenty. There was no set age for becoming a *veneuer*, which suggests that this was achieved when a suitable post became available, and when enough experience had been gained.<sup>122</sup> In contrast, in his translation of *Le livre de chasse*, Edward, second duke of York, omitted these distinctions, simply describing what should be taught to the child who was training to become a hunter, thus indicating that in England progression was achieved through the gaining of experience and knowledge.<sup>123</sup> Certainly it seems that John de Neusom, one of the keepers of King Edward III's horses, may have been given additional responsibilities as he became more experienced, for in the first two years of Edward III's reign he was keeper of the horses in the county of Lincoln, this being extended to include Northampton and York in the second and third year, whilst by 1331-32 Lancaster and Chester had been added.<sup>124</sup>

Expertise could also be passed down from father to son, for the act of caring for animals could be a family tradition. Between the years 1296 and 1300 both John de Ryston and Adam de Ryston, who were possibly related, had horses of King Edward I in their custody, and in 1314-15 William de Tholosa and his brother Poncius were given their expenses for the purchase and keeping of horses; perhaps they were the sons of Giles de Tholosa, who had custody of the king's horses from 1314-1320.<sup>125</sup> It was amongst those in charge of the royal birds of prey, however, that the family tradition was strongest. R.S. and V.D. Oggins note that because of the taming, extensive and time-consuming training, and regular exercise in hunting needed by birds of prey if they were to perform well, men were needed who would provide care and training on a steady basis; thus from an early date the royal falconers and hawkers became a sub-department of the king's household, and a core of families developed for whom falconry or hawking was the primary occupation.<sup>126</sup> For example, the Hauville family provided falconers for English kings from Henry II (1154-89) to Edward III.<sup>127</sup>

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<sup>122</sup> Gaston Phébus, *Livre de Chasse*, ed. G. Tilander, *Cynegetica* 18 (Karlshamn, 1971), 138, 149, 189, 193; Cummins, *Hound and Hawk*, 174-77.

<sup>123</sup> MG, 69.

<sup>124</sup> *List of Various Accounts*, 89.

<sup>125</sup> *Ibid.*, 86-8.

<sup>126</sup> R.S. Oggins and V.D. Oggins, 'Hawkers and Falconers: The Prosopography of a Branch of the English Royal Household', *Medieval Prosopography* 3:1 (1982), 64.

<sup>127</sup> Oggins, *Kings and Hawks*, 57.

As far as horses were concerned, training could also be had through a craft guild, which was certainly in existence for farriers by 1356, as evidenced by the Ordinance of the Farriers mentioned above.<sup>128</sup> In this year two Masters were chosen, Richard de Hertele and John de Oxenford, “most sufficient men, and the best knowing”, who were given full power “to oversee and govern the said trade, and to espy into the defaults thereof, if any such they should find”.<sup>129</sup> Indeed, it was stated that from henceforth “no one...shall take any forge in the said city, until he shall have been admitted by the Masters of the said trade, so as to be known as able and skilled in his trade, to the profit of the commonalty of the said city, and of all the realm”.<sup>130</sup> Clearly, high standards were to be maintained, which would be achieved through a sharing of common knowledge, whether through apprenticeship or informal discussion. It certainly seems that as far as horses were concerned there was a notion of growing professionalism.

A number of treatises upon falconry, hawking, hunting, and marshalsea are extant in manuscripts,<sup>131</sup> suggesting that texts were widely available – certainly by the latter half of the fifteenth century these could have been consulted in a society which had become more literate.<sup>132</sup> H.S. Bennett notes that a considerable ‘reading public’ was created during the fifteenth century, and that a demand for vernacular literature

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<sup>128</sup> Between 1307 and 1312 there does not appear to have been a large craft guild of farriers. In order to practice a craft within the City of London it was necessary to be a freeman; between these dates no apprentice farriers were admitted as citizens, and only one purchased his freedom; where numbers of those enfranchised were small, A.H. Thomas has suggested this is because the trade was too small to be organised, *Calendar of Plea and Memoranda Rolls Preserved Among the Archives of the Corporation of the City of London at the Guildhall A.D. 1364-1381*, ed. A.H. Thomas (Cambridge, 1929), 1; *Calendar of Letter-Books Preserved Among the Archives of the Corporation of the City of London at the Guildhall: Letter-Book D. Circa A.D. 1309-1314*, ed. R.R. Sharpe (London, 1902), 59. Once an apprentice had served his term, should he want to set up his own business, he would usually be dependent upon someone’s patronage, for it was unlikely that he would have been able to earn enough to establish himself as an independent craftsman during the years of his apprenticeship, Swanson, ‘Illusion of Economic Structure’, 46. For the development of guilds and companies within the mediaeval city of London, see C.M. Barron, *London in the Later Middle Ages: Government and People 1200-1500* (Oxford, 2004), 199-234.

<sup>129</sup> *London Memorials*, 292. A similar guild existed in Spain. See Cordero del Campillo, ‘Veterinary Medicine’, 78-82.

<sup>130</sup> *London Memorials*, 292-93.

<sup>131</sup> See above 24-35.

<sup>132</sup> Even as early as the beginning of the fifteenth century it is indicated in *The Master of Game* that boys could read: “and first I shal teche hym for to take hym by writt al þe names of þe houndes and of þe hewis of þe houndes, in to þe tyme þat þe childe knowith hem both by hewe and bi name”, MG, 69. For a discussion of the intended audience of the treatises, see above, 39-43.

was spreading rapidly.<sup>133</sup> It could be argued that the treatise, *The Maner of Keping of Sparhawk and Goshauke*, concerned with sparrowhawks and goshawks, supposedly those birds easier to look after (see above), was therefore intended for gentry who might be looking after birds themselves. Although the proliferation of extant vernacular treatises in manuscripts is not an indication that they were intended for those professionally involved with animals, G.R. Keiser points out that many Middle English writings, especially medical, astrological, and prognosticatory treatises, were being used by professionally trained practitioners.<sup>134</sup> Thus whilst those treatises upon falconry, hawking, and hunting would all have been of interest to the gentry and aristocracy, being sports associated with the nobleman,<sup>135</sup> it is not impossible that they were also being used by professional huntsmen and falconers. Indeed, veterinary treatises may have been directed specifically at marshals. For instance, in the *Treatise on Horses* the author addressed marshals directly when discussing farcy (“Take hede þou marchal to þis euel and in what stede it is”<sup>136</sup>), suggesting that it was intended to be read by marshals or others in charge of horses. Yet even if some of these works were consulted for the care of animals, experience was still the best teacher. Adelard of Bath noted that learning to fly a hawk after it had been captured was done “better by seeing than by reading”.<sup>137</sup> Indeed, the author of *Prince Edward's Booke*, when discussing how to mend a broken feather, wrote “The which thu schalt do better by experience þen thorgh the techynge of this boke, and in all poyntes of hawkyng experience is chef”.<sup>138</sup>

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<sup>133</sup> H.S. Bennett, ‘Science and Information in English Writings of the Fifteenth Century’, *Modern Language Review* 39 (1944), 1.

<sup>134</sup> G.R. Keiser, *A Manual of the Writings in Middle English 1050-1500: Vol. X. Works of Science and Information* (New Haven, 1998), 3597.

<sup>135</sup> H.S. Bennet notes that smaller treatises on hunting, such as *The Tretyse off Hunting*, may have been intended for those whose purses would not allow them to buy the large manuscripts, Bennet, ‘Science and Information’, 1-2.

<sup>136</sup> *METH*, 93. P.F. Cuneo points out that most books of the sixteenth and seventeenth centuries dealing with the care of horses contained information based upon the practical experience of non-university educated stable-masters, experience which had been passed on from generation to generation without significant alteration, Cuneo, ‘Beauty and the Beast’, 294.

<sup>137</sup> *AT*, 244.

<sup>138</sup> *PEB*, 17. Compare to *De animalibus*, 1483. Such advice is reminiscent of surgical texts, where it was advocated that surgical procedures could best be learned by watching: “It behooves practitioners of surgery, as Haly Abbas says in his commentary, to frequent the places where skilled surgeons operate, and to attend their operations diligently, and to commit them to memory”, Theodoric of Cervia, *The Surgery of Theodoric, ca. A.D. 1267*, tr. E. Campbell and J. Colton, vol. I, (New York, 1955), 5.

## Conclusion

There were many people responsible for animal welfare, including falconers, huntsmen, marshals, carters, shepherds, and cowherds, most of whom were assisted by grooms, and pages. Some keepers were very specialised, such as the grooms caring for destriers or palfreys, the fewterers, berners, berceletters, and lymers who cared for the different types of hunting dogs, and the bovetters, stirketter, and *stottarii* who cared for cattle. Although the majority of those in charge of animals were keepers especially employed, this was not always the case; sometimes the owners themselves might take responsibility, as the Celys did for their birds of prey. Interestingly, women also formed part of the network of people who cared for animals, looking after birds of prey, and taking an active part in the care of livestock.

The level of responsibility a keeper had for an animal could vary from household to household depending upon the number of staff employed. Whilst the falconer, huntsman, or marshal might be actively involved in animal welfare in a small household, perhaps assisted by a page or groom, in larger households, if he held the chief position, his role might be more supervisory. For instance, in households where berners and fewterers were employed to take care of the greyhounds and brachets, the chief huntsman was probably not so directly involved with their day to day care. Yet this is not to say that those of the highest rank were ignorant about such matters. It was usual to progress through the ranks of page and groom to become a huntsman, shepherd, or falconer, for example. Thus by the time the chief position had been reached, a thorough knowledge of all aspects of care would have been gained.

Caring for animals was a position of responsibility, and as such keepers needed to be suitable for the job. They were expected to be physically capable, diligent, of good understanding, keen to learn, and to give loyal service. Once in charge of animals certain standards had to be adhered to – drunkenness and lechery were certainly two vices frowned upon. Animal welfare was taken seriously, and there could be serious consequences for those who failed to take proper care of the animal, whether in the form of a fine or a writ for negligence. Although there were manuals from which knowledge of animal welfare could be gained, most keepers learned their trade practically, beginning at a young age – experience was certainly thought to be the best

teacher. Training could be had either through a formal apprenticeship, or through knowledge passed down by the family; certainly in the royal household there was a tradition of families caring for animals, especially where birds of prey were concerned. Caring for animals involved a great variety of tasks, for not only did they have to be looked after in health, but also in sickness, and the purchase of ingredients for medicines is suggestive that sick animals were treated by a member of the household. Yet this was not always the case, for sometimes external help could be sought. Certainly by the end of the fifteenth century it seems to have become more usual to approach a smith, farrier, or marshal who was not of the household when seeking a cure for a sick horse. Indeed, by this time there may have been greater specialisation in this area of animal welfare, with the acts of farriers being watched over by a craft guild, thus ensuring the maintenance of high standards.

Overall, a large number of people were involved in the care of animals, in both health and sickness, from those at the top of their profession, such as marshals, falconers, and head cowherds and shepherds, down to grooms and pages. They were expected to act to certain standards, being capable at all times of caring for their animals. Yet no matter how much care was taken, sometimes animals could become ill. The following chapter therefore examines the ailments from which animals could suffer, their causes, and the symptoms by which they were detected.

## Chapter 2

### Mediaeval Animal Ailments

Having indicated in the previous chapter who was responsible for caring for animals, it is now pertinent to turn to the ailments from which animals could suffer, the causes behind the ailments, and how it was recognised that animals were ill. Ultimately, this chapter will indicate if animals suffered from manifestly the same ailments, and if they were indicated in the same manner.

#### I.

#### **“a noyous sekenes”: ailments from which mediaeval animals could suffer**

Mediaeval animals suffered from a variety of ailments, from headaches, skin diseases, and eye complaints, to respiratory ailments, swellings, and problems with their feet [tables III.i-iv-IV.i-iii].<sup>1</sup> The commonest types of ailments suffered varied from animal to animal. For instance, horses suffered from many foot ailments, and also swellings, eye complaints, and mouth complaints. In contrast, whilst birds of prey were also afflicted with many foot problems, they suffered equally as much from worms, and dogs were primarily afflicted by madness and mange.<sup>2</sup> Due to the nature of the sources it is somewhat more difficult to suggest what types of ailments were common amongst livestock, as very few are named; however, murrain amongst cattle, sheep, and pigs was a common complaint,<sup>3</sup> as was scab amongst sheep [table IV.iii].<sup>4</sup>

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<sup>1</sup> For a discussion of the ailments found in mediaeval Latin treatises, although the main focus is upon the horse, see Moulé, *Médecine Vétérinaire*, 76-147. For a discussion of the ailments found in mediaeval Latin falconry treatises, together with a complete list of ailments, see Van den Abeele, *Fauconnerie*, 183-209, 289-91. A discussion of those ailments afflicting dogs, as given in the thirteenth-century treatise *Practica canum* and Albertus Magnus' (1193-1280) *De animalibus*, can be found in *Practica Canum*, 146-55.

<sup>2</sup> According to Albertus Magnus dogs were frequently beset by nine ailments: scab or impetigo (which ailments Albertus suggests could be brought under the heading 'leprosy'); worms in ulcers; swelling; thorns in some limbs; rabies; irregular leanness; sluggishness; fleas; and constipation of the stomach, *De animalibus*, 1365.

<sup>3</sup> For a discussion of murrain, see below, 70-3.

<sup>4</sup> The earliest reference to scab amongst sheep appears to be in 1272, in the accounts for the Bishopric of Winchester estate of East Knoyle, Payne, 'Agrarian Conditions', 201-02. Payne notes that this predates the first general notice of this ailment in 1274 by a monk of St Albans, yet the passage referred to nowhere mentions scab, only plague and pestilence (*lues, pestis*), *ibid.*, 201; *Chronica Albani*, III, 37-8. R. Trow-Smith remarks that scab was one of the "individual diseases and infestations which came under the mediaeval umbrella of 'murrain'", and it is therefore possible that Payne believed the same, Trow-

The plethora of information which survives upon ailments suffered by horses and birds of prey, however, means that it is possible to suggest not only what types of ailments were common, but also which specific ailments. For example, frounce, rye, and cray were clearly common ailments in birds of prey, appearing in the majority of the sources here under discussion.<sup>5</sup> Indeed, these three ailments are the only ones to be discussed in *The Maner of Keping of Sparhauke and Goshauke*, suggesting that the author believed these to be the most important and common ailments birds of prey suffered.<sup>6</sup> Similarly, farcy and paynes appear to have been common ailments in horses, appearing in sixteen and thirteen of the sources respectively [tables III.i-iii].<sup>7</sup> Evidence of animals suffering from such ailments can be seen in other sources. For example, the accounts from Durham Cathedral Priory record that in 1380-81 the horse of the Bursar was treated at Richmond for farcy,<sup>8</sup> whilst in 1479 George Cely's (c.1458-89) falcon, Meg, was suffering from both cray and cramp, dying of these sicknesses three days later.<sup>9</sup> [See also tables IV.i-iii]

Although animals suffered from a large number of ailments, sometimes these were further broken down into various forms. For example, both *Prince Edward's Booke* and *The Proceis of Hawkyng* recognised a dry frounce,<sup>10</sup> whilst the author of *Hawk Remedies I* noted three forms of frounce: frounce like corn, frounce like drifts of snow, and raised frounce.<sup>11</sup> Interestingly, this author also divided cray into two forms, noting a dry form and wet form.<sup>12</sup> Similarly, in *The Master of Game* it is stated that hounds suffered from nine forms of madness (although only seven types are distinguished),<sup>13</sup>

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Smith, *Livestock Husbandry*, 155. Yet the fact that mention is made of scabby sheep in various sources indicates that mediaeval people were aware of scab being a particular ailment; thus specific diseases cannot be implied where a mediaeval author has chosen to refer to plague or pestilence.

<sup>5</sup> Albertus Magnus, however, believed that the chief (*prima*) sickness of falcons was the headache, "which in humans is called *soda*", *De animalibus*, 1474.

<sup>6</sup> MKSG, 140-41.

<sup>7</sup> In BL MS Additional 33996 a collection of remedies for farcy in Old French can be found, again suggesting that this was a common ailment. See 'Horses and Courses', ed. T. Hunt, *French Studies Bulletin* 22 (1987), 2.

<sup>8</sup> DAR, III, 590. According to *The Boke of Marchalsi* there were three forms of farcy, although remedies are only given for two forms - the little farcy and the second farcy. See BMO, 31-5; BMT, ff.62v-63r; BMH, 29r-30r.

<sup>9</sup> *Cely Letters*, 63, 65.

<sup>10</sup> PEB, 10; PH, 46. Both treatises also have remedies for frounce as large as a nut, PEB, 7; PH 6.

<sup>11</sup> *HawkRemI*, 35-6.

<sup>12</sup> *Ibid*, 31-2.

<sup>13</sup> MG, 47-9. It seems likely that these forms of madness were based upon different stages of the disease, rather than actually being separate ailments.

and four types of mange,<sup>14</sup> whilst the author of *The Boke of Marchalsi* gave remedies for the little farcy, farcy when botches rise, or when swelling dwells, and the second farcy.<sup>15</sup> Such breakdowns of the ailments indicate the great degree of observation which the authors had. Indeed, most authors of veterinary treatises referred to pursesey (broken wind), but John Fitzherbert (d.1531) distinguished between pursesey and broken wind; the fact that he says the former may be cured, and the latter not, suggests that he was distinguishing between different strengths of the ailment, seeing them as two separate diseases.<sup>16</sup>

The majority of ailments dealt with are external, yet those which afflicted the internal organs were recognised.<sup>17</sup> For instance, the intestinal complaint rate was dealt with by *The Boke of Marchalsi*, whilst wood-evil, which affected the large intestine, was an ailment dealt with by Fitzherbert in his *Husbandry*.<sup>18</sup> Another organ afflicted by illness was the liver; horses could suffer from the wasting of this organ, whilst cattle could suffer from liver rot.<sup>19</sup> The lungs, too, could also be afflicted by illness, Walter of Henley (fl. c.1260) referring to an illness of the lungs (*maladie del pomun*),<sup>20</sup> whilst Fitzherbert mentioned the cattle ailment lung-sought, an ailment which afflicted cattle at Durham Cathedral Priory in c.1430-31.<sup>21</sup> Indeed, as mentioned above, animals could suffer from various respiratory ailments. Horses could suffer from pursesey and strangullion,<sup>22</sup> whilst birds of prey suffered from the asthmatic ailment teyne.<sup>23</sup> Sometimes it was recognised that an animal was suffering from an internal ailment, but not what the ailment was. For instance, hawks could suffer from a sickness within the body which gave no external signs, the author of *The Proceis of Hawkyng* remarking

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<sup>14</sup> *Ibid.*, 49-51.

<sup>15</sup> BMO, 32-5; BMT, ff.62v-63r; BMH, ff. 29r-30r.

<sup>16</sup> FBH, 66.

<sup>17</sup> Although internal organs are named, there is no precise information regarding their position, suggesting that the authors had limited anatomical knowledge. Whilst Frederick II of Hohenstaufen (1194-1250) had an interest in anatomy, and Leonardo da Vinci (1452-1519) made many anatomical drawings of animals, the first great textbook on veterinary anatomy was the *Dell Anatomia et dell' Infirmita del Cavallo* of Carlo Ruini Jr. (1530-98), published in 1598, AVCA, 60-79; R.H. Dunlop and D.J. Williams, *Veterinary Medicine: An Illustrated History* (St Louis, 1996), 237-38, 242.

<sup>18</sup> BMH, f.17v, BMO, 35-7; FBH, 49.

<sup>19</sup> ST, f.64r; *Husbandry*, 424.

<sup>20</sup> WH, 332.

<sup>21</sup> FBH, 54; DUL MS CCB B/81/1.

<sup>22</sup> W.L. Braekman incorrectly identifies this ailment as strangury, a disease in which the urine is passed painfully and in drops, *Hawks and Horses*, 115.

<sup>23</sup> See tables III.i-ii for sources mentioning these ailments.

“bot yit it is straunge to knawe: thyngys that an man may not se: in what sekene and what maner thay be greuyde, and speciali whan a man whote not wherof it commyth”.<sup>24</sup>

Although it is possible for the majority of ailments to be identified and given a modern equivalent, this is sometimes unclear, and at other times unknown.<sup>25</sup> For example, the horse ailments scale and malbesanes have yet to be identified; the former seems to be some form of skin disease,<sup>26</sup> whilst the latter seems to be some sort of ailment affecting the horse’s hoof.<sup>27</sup> Similarly, records of the fourteenth century from the Bishop of Winchester’s estates in Wiltshire record that sheep suffered from an ailment called red death (*rubeus morbus*), which appears to have attacked sheep after shearing.<sup>28</sup> As no surviving records describe its symptoms it is therefore impossible to identify the ailment, but R. Trow-Smith suggests that it may have been a form of red water, a disease now rarely found among sheep.<sup>29</sup>

Perhaps the most common unidentifiable ailment was that known as murrain, which affected all types of animals, from cattle, sheep, and pigs, to horses, geese, and chickens.<sup>30</sup> Murrain was not a specific ailment, but rather a term used to describe an infectious disease, plague, or pestilence,<sup>31</sup> and was used in the Middle Ages when an unknown ailment of this nature struck – although the term could be used in conjunction with a named ailment.<sup>32</sup> For instance, accounts from Durham Cathedral

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<sup>24</sup> PH, 39. In contrast, the author of *Prince Edward’s Booke* gives only the remedy, PEB, 15.

<sup>25</sup> It is not always possible to give a modern equivalent of a mediaeval ailment. Not only may the mediaeval description provide insufficient details to enable identification, but it is also possible that some mediaeval ailments no longer survive today, and vice versa. B. Van den Abeele notes that an attempt to identify ailments of birds of prey only from symptoms given in Latin treatises was not very conclusive, for the information was insufficiently detailed, Van den Abeele, *Fauconnerie*, 181.

<sup>26</sup> METH, 89, 222.

<sup>27</sup> *HorseRemII*, 99. It may be a variant spelling of mendesanes.

<sup>28</sup> Payne, ‘Agrarian Conditions’, 203.

<sup>29</sup> Trow-Smith, *Livestock Husbandry*, 157.

<sup>30</sup> I. Kershaw, however, claims that murrain did not affect horses, pigs, and sheep, I. Kershaw, *Bolton Priory: The Economy of a Northern Monastery 1286-1325* (London, 1973), 98. Perhaps this reflects the nature of his sources. Certainly in the *Bolton Priory Comptus*, all but one of the instances of murrain refer to bovines; in 1321-2 six horses died *in morina*, BPC, 496. In contrast, a variety of animals were affected by murrain on Crowland Abbey’s Wellingborough manor in the late thirteenth century and fourteenth century, and also at Lewes Priory’s manor of Heacham in the fourteenth century. See WMA, 3, 4, 8 *passim*; HCR, 10-14.

<sup>31</sup> The term murrain seems to have been popular in manorial accounts; chroniclers preferred to use the terms *lues* or *pestis*, an exception being the author of the Lanercost chronicle, who referred to a mortality and murrain of animals in 1201, *Chronicon Lanercost*, 1.

<sup>32</sup> Trow-Smith, however, argues that the term “covered every source of loss except theft and deliberate slaughter”, Trow-Smith, *Livestock Husbandry*, 129.

Priory record sheep dying from murrain due to the pox (*in morina per pokes/in le pokkys/in les pokkes*) in 1383-84 and 1416-17;<sup>33</sup> of dying of murrain, which disease was called 'redeyll' (*De quibus in morina lxij, in quodam morbo vocat le redeyll*) in 1417;<sup>34</sup> and dying due to rottenness (*in morina de putridine*) in 1497-80.<sup>35</sup> Perhaps in these instances the authors were stressing the infectious nature of the ailment.

Cases of murrain could be isolated – in the early-fourteenth century the executors of Dean Andrew Kilkenny spent 60s on a palfrey which was suffering from this ailment<sup>36</sup> – or attack whole herds and flocks of animals.<sup>37</sup> Thus in 1269-70 at Beaulieu Abbey's grange of Bergerie (Hampshire), 414 wethers (*multones*) before shearing, 281 ewes (*oves matrices*) before lambing (*agniculaciones*), 62 ewes before shearing, 152 hogs, and 690 lambs were all lost *in morina*.<sup>38</sup> Indeed, in 1349 Henry Knighton (d. c.1396), an Augustinian canon, recorded that "there was a great plague [*magna lues*] of sheep throughout the kingdom, to such an extent that in one place more than 5000 sheep died in one pasture, and they were so putrid that neither beast nor bird wished to touch them".<sup>39</sup> Even in the sixteenth century losses from murrain could be great, Tavistock Abbey losing one seventh of its sheep flock to the disease in 1538.<sup>40</sup> Sometimes the disease could be persistent. Between 1314 and 1321 flocks of sheep and herds of cattle were affected by outbreaks of plague and pestilence

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<sup>33</sup> DCM MS GB-0033-DCD-Enr.lstk.acs (1383-84); *DAR*, II, 317. Indeed, pox also afflicted other animals; in 1306-07 at Combe, an English manor belonging to the Abbey of Bec, eight pigs were recorded as being "*In morina in morbo vocato Pockes*", whilst in 1324-25 at Berkeley Castle's manor of Alkington, Gloucestershire, no kids were born to the flock of goats because of an outbreak of 'pokkes', *DAB*, 155; C. Dyer, 'Alternative Agriculture: Goats in Medieval England' in R.W. Hoyle (ed.), *People, Landscape and Alternative Agriculture: Essays for Joan Thirsk*, *The Agricultural History Review*, SS 3 (Exeter, 2004), 28.

<sup>34</sup> *DAR*, II, 318.

<sup>35</sup> DUL MS CCB B/81/9.

<sup>36</sup> *Death and Memory*, 187.

<sup>37</sup> For a list of epizootic outbreaks in Europe between the sixth to fifteenth centuries see Moulé, *Médecine Vétérinaire*, 142-47.

<sup>38</sup> *ABBA*, 168. Murrain was not the only ailment to drastically reduce flock numbers; in 1281 scab wiped out nearly the whole sheep population of Glamorgan, F.G. Cowley, *The Monastic Order in South Wales, 1066-1349* (Cardiff, 1977), 8.

<sup>39</sup> Knighton, *Chronicon*, II, 61. An annalist of Margam Abbey reported how in 1131 pestilence suddenly left pigsties empty and cattle stalls destitute, whilst chroniclers of St Albans Abbey recorded how outbreaks of plague and pestilence in 1254 and 1274 left sheepfolds empty. See *Annales Monastici*, I, 13; *Flores Historiarum*, II, 395; *Chronica Albani*, II, 84; III, 37.

<sup>40</sup> Finberg, *Tavistock Abbey*, 145.

throughout England,<sup>41</sup> whilst late in his reign Edward III (1327-77) reduced the overall size of the royal studs north of the Trent partly because of persistent murrain.<sup>42</sup> The time taken for stock to recover could vary. Merton College, Oxford, replaced its livestock at Cheddington and Cuxham within two years of the 1319-20 outbreak,<sup>43</sup> but on the manors of Ramsey Abbey stock totals approximated those of the first decade of the fourteenth century only after twenty years.<sup>44</sup>

Losing animals to the murrain could result in far-reaching consequences; in 1285 the abbot of Kirkstead was granted a licence for three years “to buy wool throughout the county of Lincoln, in order to satisfy certain merchants to whom he is bound in certain sacks of wool, his own sheep having failed through murrain”,<sup>45</sup> whilst in 1314-21 the Cistercian abbey of Pipewell was plummeted into debt due to the heavy losses it suffered from this ailment.<sup>46</sup> Similarly, in 1336 the abbot of Margam Abbey, in his report to the general chapter, listed, amongst other things, a terrible mortality among the animals upon which he relied mostly for support, as one of the reasons for the pressing debts of the abbey.<sup>47</sup> Yet sometimes money could be gained from selling the flesh and skins of murrained animals – the accounts from Durham Cathedral Priory record that in 1339-40 11*d* was received from the sale of the flesh and skins of animals dead of the murrain, whilst in 1400-01 the hides of cows dead from the ailment fetched 17*s* 6*d*.<sup>48</sup> At other times, however, the murrain affected the flesh and skins so that they were of no value. At Durham in 1416-17 the flesh of two hurtards

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<sup>41</sup> I. Kershaw, ‘The Great Famine and Agrarian Crisis in England 1315-1322’, *Past and Present* 59 (1973), 20-9. Horses, too, were affected during this period, one chronicler recording how in 1319 there was a great dearth of horses, which began in Scotland, then came into England, before finally reaching the Welsh Marches around the feast of All Saints (1 November), *Flores Historiarum*, III, 343.

<sup>42</sup> A. Hyland, *The Warhorse 1250-1600* (Stroud, 1998), 17. Murrain also affected the king’s horses south of the Trent; see PRO E101/104/13 and E101/105/12.

<sup>43</sup> Kershaw, ‘Great Famine’, 34-5.

<sup>44</sup> J.A. Raftis, *The Estates of Ramsey Abbey: A Study in Economic Growth and Organisation*, Studies and Texts (Pontifical Institute of Mediaeval Studies) 3 (Toronto, 1957), 137.

<sup>45</sup> *CPR: Edward I*, II, 160. In 1181 the Cistercian Order permitted monasteries to raise money by selling the following year’s crop of wool to merchants; but as is so aptly illustrated here, should disease deplete a flock so that the wool could not be delivered, the monastery would become indebted to the merchants, D.H. Williams, *The Cistercians in the Early Middle Ages* (Leominster, 1998), 149.

<sup>46</sup> Eckenrode, ‘English Cistercians’, 258. It was not only murrain which was a threat to the monastic economy; from c.1276 outbreaks of sheep scab caused problems to the wool production of monasteries, B. Jennings, *Yorkshire Monasteries: Cloister, Land and People* (Otley, 1999), 101.

<sup>47</sup> W. de G. Birch, *A History of Margam Abbey: Derived from the Original Documents in the British Museum, H.M. Record Office, the Margam Muniments, etc.* (London, 1897), 305

<sup>48</sup> *DAR*, I, 202; III, 602-03. In 1344-45 the hides of seven horses and stirks which died of the murrain at Bearpark were purified for harnesses for the carts, *ibid.*, II, 544.

killed by the murrain was putrid,<sup>49</sup> and when two ewes died in the household of Dame Alice de Bryene (d.1435) in 1412-13, no money was received from their pelts because they were not tanned since they were of no value.<sup>50</sup> Indeed, when people wanted to steal a beast for its meat (for those in charge of animals were required to produce skins for animals which died<sup>51</sup>), they would treat its skin to make it look as though the animals had died of murrain, a practice described by Robert Carpenter (thirteenth century), who acted as bailiff for William de Lisle: “place the hide in chalky water as soon as it has been stripped and then dry it immediately and it will look as though the sheep has died of murrain”.<sup>52</sup> Diseased meat was usually not eaten, but there were occasions when this occurred. Thus during the famine of 1315-16 the starving populations of Bohemia and part of the Low Countries ate the flesh of animals which had died of the pest.<sup>53</sup> Interestingly, Fitzherbert recommended killing a sheep suffering from the blood if they failed to bleed well (a sign that the sheep would die), for then the flesh could be eaten; “for if he dye by hym-self, the flesshe is loste, and the skyn wyll be ferre ruddyer, lyke blode, more than an other skynne shall be”.<sup>54</sup>

Of the many ailments suffered by mediaeval animals there were some which were the same, some which were of a similar nature, and others which were specific to one particular animal. It is not always easy to tell when animals were suffering from the same illness, for they could be called by different names.<sup>55</sup> Thus birds of prey, dogs, and cattle could suffer from gout, but when the former two animals were afflicted it was commonly called podagra.<sup>56</sup> Similarly, both hounds and birds of prey suffered with

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<sup>49</sup> *Ibid*, 316.

<sup>50</sup> *HBA*, 130, 131.

<sup>51</sup> C. Dyer, ‘Sheepcotes: Evidence for Medieval Sheepfarming’, *Medieval Archaeology: Journal of the Society for Medieval Archaeology* 39 (1995), 154. According to the *Seneschaucy* (c.1276), the bailiff was to ensure that in his bailiwick no horse, affer, ox, cow, young draught animal, sheep, ewe, or hoggaster was flayed before he himself had inspected it to determine the cause of death, *Seneschaucy*, 272.

<sup>52</sup> Cited in *Walter of Henley and Other Treatises on Estate Management and Accounting*, ed. D. Oschinsky (Oxford, 1971), 184 n.2. Walter of Henley (f. c.1260) too described such a practice, but he was very disapproving, *WH*, 336.

<sup>53</sup> H.S. Lucas, ‘The Great European Famine of 1315, 1316, and 1317’, *Speculum* 5 (1930), 370, 362.

<sup>54</sup> *FBH*, 48.

<sup>55</sup> Even amongst treatises dealing with the same animal, ailments could be called by different names, and thus close attention has to be paid to the description of the ailment (when there is one) and its corresponding treatment. For example, some treatises (BL MSS Royal 17.A.XXXII, ff.128v-129r; Cotton Julius D.VIII, f.114r; *Horse Remedies II*, 95-6; *FBH*, 71) refer to cloying, whereby the horse has been pricked in the foot with a nail, whilst *The Sothebe Treatise* (ff.52v-53r) refers to retrete, in which a nail has been hammered into the quick of the foot. It seems that both refer to the same ailment.

<sup>56</sup> See *AT*, 262; *PH*, 38; *DT*, 32; *PR*, II, 1170-71; *FBH*, 57.

constipation; when hounds were suffering from this *The Master of Game* tells us that hounds “mowe not scombire”,<sup>57</sup> whilst this ailment had various forms in birds of prey – cray, peer, and “combred in the bowillis”.<sup>58</sup> Yet regardless of such pitfalls, the fact remains that animals did suffer from the same ailments. Both horses and sheep suffered from blindness; a blind horse was mentioned in the inventory and accounts of the executors of Dean Andrew Kilkenny,<sup>59</sup> and in 1480 Richard Cely the Younger (d.1493) asked his brother George to sell the blind horse for “what someuer ze gehyt for hym”.<sup>60</sup> Whilst none of the treatises offer a cure for this ailment in horses,<sup>61</sup> a cure is offered for blind sheep, whereby a little tar was to be put in the eye; even though there were “dyuers waters, & other medicyns”, this was the remedy most commonly used by shepherds.<sup>62</sup> Dogs, too, could suffer from blindness, but this was as a result of having a web upon the eye,<sup>63</sup> an ailment which also affected horses.<sup>64</sup> Both dogs and sheep suffered maggots, but whereas these were to be found in the tail of sheep, no doubt due to dung, these were found in wounds in dogs.<sup>65</sup> Broken bones were also a possibility; although any animal could suffer from this, cures were only mentioned in English sources for dogs and birds of prey,<sup>66</sup> perhaps due to the fact that in larger animals some breaks are difficult to treat, whilst others are impossible.<sup>67</sup> On the continent, however, some veterinary treatises did deal with broken bones. For example, Juan Alvarez’s late fourteenth-century treatise *Libro de menescalia*, commissioned by Jean de Béarn, seneschal of Bigorre and captain of Lourdes for “Our

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<sup>57</sup> MG, 54.

<sup>58</sup> For sources naming these ailments, see table III.ii.

<sup>59</sup> *Death and Memory*, 177.

<sup>60</sup> *Cely Letters*, 100. Blind horses were not useless. In 1337 the Coroners’ Rolls of the City of London record that of three horses pulling a cart, the second was “blind of both eyes”, CCR, 181. See also CMR, 585.

<sup>61</sup> John Fitzherbert’s (d.1531) *Husbandry* is the only treatise to mention this ailment, and even he does not give details of the cure, only that it “maye be cured betyme”, FBH, 67.

<sup>62</sup> *Ibid.*, 47.

<sup>63</sup> MG, 51.

<sup>64</sup> BL MSS Sloane 686, f.67v; Sloane 3285, f.92r; *HorseRemII*, 98; *METH*, 145; BodL MS Ashmole 1444, p.301.

<sup>65</sup> *FBH*, 47; *PC*, f.187r. *The Master of Game* refers to worms in wounds, possibly meaning maggots, MG, 56.

<sup>66</sup> *Ibid.*, 53; *PEB*, 18-19.

<sup>67</sup> See Thompson, *Veterinary Science*, 77-85. A horse could, however, be cured of a bruise caused by the strike of another horse in a night, “if þere be noo bone broken”, BL MS Sloane 686, f.67r.

Lord the King of England and France”,<sup>68</sup> dealt with a fractured metacarpus, the treatment of which is depicted in a miniature in a fifteenth-century copy of the treatise [fig. 8] – the horse is suspended in order to facilitate treatment, which appears to be by means of a splint tied to the leg, rather than the plaster-casts advocated for other animals.<sup>69</sup> Mange was another ailment suffered by a variety of animals, but whereas the sources only report sheep being affected by scab (psoroptic mange),<sup>70</sup> both horses and dogs are recorded as suffering from scab and other forms of mange.<sup>71</sup> As indicated above, hounds suffered from four types of mange, and it seems that horses too suffered different forms of this ailment. For instance, the author of the *Treatise on Horses* noted that scab came in the neck and in the tail, the last remedy being for “schabbe in þe dok of þe taile”.<sup>72</sup> This latter may refer to chorioptic mange, which is usually confined to the legs or dock of the tail, whereas mange in the neck was probably sarcoptic mange.<sup>73</sup> Similarly, although horses, birds of prey, and dogs all suffered from canker, whilst in horses and birds of prey this ailment affected the mouth, in dogs it affected the genitals.<sup>74</sup>

Animals also suffered from ailments of a similar nature. For instance, both dogs and horses had urinary problems, dogs sometimes being unable to urinate and horses suffering from passing blood or hot urine.<sup>75</sup> Most animals also suffered from swellings, tumours, and ulcers. For example, amongst the late-mediaeval bones excavated at Wharram Percy was a metapodial bone of a pig which had a small localised area of new growth on the bottom side, probably caused by an inflammation

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<sup>68</sup> Davis, *Medieval Warhorse*, 104. R.H.C. Davis believes the king was Edward III (1327-77), but it has also been suggested that the king was Richard II (1377-99) – see J.J.G. Alexander, review of F. Avril, *et al.*, *Manuscrits Enluminés de la Péninsule Ibérique* (Paris, 1983) in *The Burlington Magazine* 128:997 (1986), 292.

<sup>69</sup> See below, 162.

<sup>70</sup> See *Chronica Albani*, II, 86; *Annales Monastici*, II, 388-89; III, 306; IV, 473; BL MS Royal 17.A.VIII, f.81r. The author of *Prince Edward's Booke* reported that an ointment for a sickness within the body of a hawk was “goode therto ffor a scabbyd hawke”, *PEB*, 15. This is the only reference to birds of prey suffering from this ailment in the Middle English sources, although Albertus Magnus referred to birds of prey with mangy feathers, see below, 78.

<sup>71</sup> *METH*, 99-109; *ST*, f.62; BL MS Royal 17.A.XXXII, f.128r; *HorseRemII*, 94; BodL MS Ashmole 1444, p.303; *MG*, 49-51.

<sup>72</sup> *METH*, 103, 109.

<sup>73</sup> *Black's Veterinary Dictionary*, ed. E. Bowden (London, 2005), online: <http://www.credoreference.com/entry/7881600>, accessed 11.11.08.

<sup>74</sup> *METH*, 131-32; *BMO*, 27-9; *HawkRemII*, 43; *MG*, 54. Canker could also come in other places on the horse, for *The Sothebe Treatise* contains a remedy for “canker in the wethersounde”, *ST*, ff.60v-61r.

<sup>75</sup> *MG*, 54; *BMH*, f.57r, 56r; *HorseRemII*, 100.

behind the ankle.<sup>76</sup> Whilst the treatises dealing with birds of prey and dogs refer simply to swellings and tumours,<sup>77</sup> in contrast, although veterinary treatises refer to swellings of various parts of the body, often the ailment is named, such as curbs for swellings in the joints of the knee,<sup>78</sup> felon for an abscess or inflamed sore,<sup>79</sup> and windgalls for soft tumours.<sup>80</sup> Similarly, cattle suffered from an ulcer or eruption called warrybrede.<sup>81</sup> Certainly, as far as horses were concerned, this suggests a developed nomenclature.

Some ailments, however, were specific to a particular animal, such as horses suffering from founder or lampas, sheep from rot, or birds of prey suffering from rye. In some instances this was due to the physiognomy of the animal – for instance, only a horse would suffer from retrete or cloying, which was caused by a nail being hammered into the quick of the hoof,<sup>82</sup> and as birds of prey were the only animals to regurgitate undigested parts of their food in the form of pellets – known as castings – only they could suffer from rye which prevented them from doing this. In other instances, however, the nature of the sources suggests that some ailments were specific to only one animal. Thus whilst horses suffered from lameness,<sup>83</sup> this is not an ailment given for other animals in treatises or recipe collections. Although Fitzherbert noted that sheep and cattle would limp, this was as a symptom to another ailment, rather than lameness as an ailment itself.<sup>84</sup> Yet lameness was clearly an ailment which could afflict animals other than the horse, John Paston (1444-1504) writing of a hawk which was “as good as lame in boothe hyr leggys”.<sup>85</sup> Indeed, some treatises only give information of a general nature; for instance, *The Master of Game* simply refers to hounds suffering hurts or bruises in their feet.<sup>86</sup> In contrast, veterinary treatises name a variety of ailments of the feet, such as graveling, founder, loose hoof, and retrete.<sup>87</sup>

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<sup>76</sup> Ryder, ‘Animal Remains’, 45.

<sup>77</sup> See, for example, *PC*, f.187r; *PEB*, 14; *HawkRemI*, 36.

<sup>78</sup> *HorseRemII*, 101; *ST*, ff.56v-57r.

<sup>79</sup> *HorseRemII*, 103-04.

<sup>80</sup> *BMH*, f.49r-v; *ST*, f.54v.

<sup>81</sup> *FBH*, 56-7.

<sup>82</sup> See above, 73 n.55.

<sup>83</sup> See *BMH*, ff.41r-v, 43v-45v.

<sup>84</sup> *FBH*, 57.

<sup>85</sup> See below, 81-2.

<sup>86</sup> *MG*, 53.

<sup>87</sup> For graveling, loose hoof, and retrete, see *ST*, ff.52v-53r, 54r. For founder, see BL MS Sloane 3285, ff.90v-91r; *HorseRemII*, 94, 100-01; *BMH*, f.56v-57r.

Thus the survival of more detailed information for some animals makes it seem as though they suffered more specific ailments, when this may not have been the case.

## II.

### “þese euelus þat oon...may cacche of an oþer”: causes of sickness in animals

Mediaeval thought about the composition of the human body centred around humoral theory. It was thought that the body was composed of the four humours, blood, phlegm, yellow bile, and black bile, each of which was associated with two of the four qualities; thus blood was hot and wet, phlegm cold and wet, yellow bile hot and dry, and black bile cold and dry. The same theory also applied to animals. According to Bartholomeus Anglicus (before 1203-1273) the hawk was “an hoot foul and drye and poure of charge of fleische”.<sup>88</sup> Dogs appear to have had a similar humoral make-up, for in addition to the constitution of the dog being characterised by heat, they were also thought to have a dry constitution, and thus the dog was to be fed with moist foods, “for then the complexion of the dog is more tempered”.<sup>89</sup> Indeed, due to its dry constitution it was thought that if it was fed upon naturally dry and stringent foods it could become constipated, from which ailment the dog frequently died.<sup>90</sup> The composition of the humours within the body affected the physical make-up of the animal. With regards to birds of prey Albertus Magnus (1193-1280) noted that “the length of the tail always bears witness to the humour of the descending spinal cord”,<sup>91</sup> whilst Frederick II of Hohenstaufen (1194-1250) believed that goshawks were “in fine form because their humours are so perfectly mingled and balanced that all parts of the body are uniformly developed”.<sup>92</sup> The different colours of the feathers of falcons were attributed to their humoral make-up: thus black-feathered falcons had the sign of melancholy; white-feathered birds were phlegmatic, cold, moist, and had bad chyle;

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<sup>88</sup> PR, I, 607.

<sup>89</sup> *De animalibus*, 1365. Edward, second duke of York (c.1373-1415), seems to have believed that dogs were cold and dry, writing that mange came to hounds “for cause þat þei be malencolious”, MG, 49. If hounds were hot and dry, their temperament would then be choleric.

<sup>90</sup> *De animalibus*, 1367.

<sup>91</sup> *Ibid.*, 1454.

<sup>92</sup> AVCA, 112.

and red-feathered birds had inflamed blood.<sup>93</sup> In dogs a sign of good purgation was having little hair, which was not too long, for purgation was achieved through hairiness.<sup>94</sup> Thus dogs with long, thick hair were likely to suffer from scab (*scabies*), because then the skin was contaminated beneath the hair, which turned foul and brought about the ailment.<sup>95</sup> In contrast, mangy (*bisticosus*) feathers in birds of prey arose from a corrupted interior, a corruption especially in the base of the feathers.<sup>96</sup>

Yet sometimes the humours and their qualities became imbalanced or contaminated, and this caused the animal to become ill. For example, in his only reference to the humours, Adelard of Bath (c.1080-c.1152) remarked that

felleria is named from gall-bladder [*fel*], because red bile [*colera rubea*] which has its seat in the gall-bladder then overflows and spreads out through the body, to such a degree that it discolours the beak and feet. Then truly it happens that the usual mood [of the bird] becomes bolder, because the quality [*vis*] of boldness subsists in the red bile of all living things.<sup>97</sup>

Black bile which came of black blood was thought to be a cause of canker,<sup>98</sup> whilst Fitzherbert believed that murrain in cattle was caused “of a ranknes of bloudde”.<sup>99</sup> Indeed, horses were predisposed to a rawness of blood, and thus it was important to bleed them in time to rid them of the evil blood which would develop, for otherwise they could suffer many evils, “þat is to say þe farcion, þat in his skyn boreþ many an hole, scale & mangew, & turtes & many oþer euellis”.<sup>100</sup> Heat of blood could cause

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<sup>93</sup> *De animalibus*, 1473. This was a long-held belief, being found in the twelfth-century treatise attributed to Dancus Rex, although here birds with white feathers were thought to be phlegmatic and dry, *Dancus Rex*, 86-8. P.F. Cuneo remarks that in early modern European treatises a horse's colour, conformation, attitude and breeding all offered clues to its own particular and individual imbalance of the humours, yet no links between the humours and these aspects are made in the Middle English treatises, P.F. Cuneo, 'Beauty and the Beast: Art and Science in Early Modern European Equine Imagery', *Journal of Early Modern History* 4:3-4 (2000), 295.

<sup>94</sup> *De animalibus*, 1365.

<sup>95</sup> *Ibid.*

<sup>96</sup> *Ibid.*, 1481. Interestingly, the use of the term *bisticosus* in other falconry treatises appears to have designated a type of diarrhoea. See Van den Abeele, *Fauconnerie*, 190-91.

<sup>97</sup> *AT*, 256. Red bile is equivalent to yellow bile, and this led some mediaeval authors to equate the illness with jaundice, a disease which does not occur in birds, *ibid.*, 271 n.47. According to Van den Abeele, felleria was “un concept étiologique, recourant à la théorie humorale pour expliquer un comportement et un symptôme”, Van den Abeele, *Fauconnerie*, 203. Albertus, too, refers to felleria, but the only details of the ailment he gives is to state that it is “the same as a repletion of corrupt humour”, *De animalibus*, 1485.

<sup>98</sup> *METH*, 131.

<sup>99</sup> *FBH*, 53.

<sup>100</sup> *METH*, 87, 89.

“eschawfing of þe nekke”, and should the horse rub himself so much that the humours began to burst, “þan wil þer beginne a foule mague [mange]”.<sup>101</sup> The fact that many ailments of the horse are ascribed to blood (whether this was black, rotten, or superfluous<sup>102</sup>) was perhaps due to the fact that the horse was thought to be the “best of all þe world þat most blod hauith”.<sup>103</sup>

The qualities, too, could cause illness. Cold brought about frounce in birds of prey, which did the hawk much harm “and makyth flewm fall owte of the brayne”.<sup>104</sup> Similarly, lampas commonly came to horses which grazed outside for a long time in the winter, for they swallowed the cold.<sup>105</sup> Indeed, the horse was thought to be naturally cold in its constitution, and thus one treatise advised, “3yf þat þou loue hym”, to ensure that he was not fed to the extent that he became fat, for in such a condition he would become even colder, and thus more susceptible to illness.<sup>106</sup> In contrast, a dog’s constitution was thought to be characterised by great heat, which was especially intense in the digestive organs. Prolonged sleep predisposed the heat to attract bad humours to the stomach, causing the dog to become ill. Thus excessive sleep was to be prevented; a short period of sleep after eating was preferable, “merely until such food is digested”.<sup>107</sup> Great heat, however, was a cause of both purse and a swelling (gorge) in the leg in horses.<sup>108</sup> Sometimes the humours could make an ailment worse. When treating a horse for farcy, one author advised reducing the amount the horse drank “for þe maladi is hot and desyrit mekyl drynk and þerfor he may drinkyn more þan hys nature may ouer come and þat turnyth hym to fleume and to encresyng of hys maladie”.<sup>109</sup> Interestingly, Albertus Magnus noted that the ailment radunculus differed according to the difference of the quality and nature of the humour which was dominant in the body.<sup>110</sup> Specific humours or their qualities were not always

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<sup>101</sup> *BMH*, ff.39r, 39v.

<sup>102</sup> The author of the *Treatise on Horses* ascribed farcy to black blood, mange to burned and rotten blood, tortes to an excess of rotten blood, and scab to a superfluity of blood, *METH*, 93, 99, 115, 103.

<sup>103</sup> *BMO*, 8. In Continental veterinary treatises blood was the humour responsible for almost all diseases, see Y. Poulle-Drieux, ‘L’Hippiatrie dans l’Occident Latin du XIII<sup>e</sup> au XV<sup>e</sup> Siècle’, in G. Beaujouan, et al., *Médecine Humaine et Vétérinaire à la Fin du Moyen Age* (Paris, 1966), 61, 63.

<sup>104</sup> *PH*, 44. See also *PEB*, 14-15.

<sup>105</sup> *BMO*, 26.

<sup>106</sup> *Ibid.*, 7-8.

<sup>107</sup> *De animalibus*, 1365.

<sup>108</sup> *BMO*, 29; *ST*, f.55r.

<sup>109</sup> *BMH*, f.29v.

<sup>110</sup> *De animalibus*, 1385.

mentioned by name. In *The Boke of Marchalsi*, for example, windgalls grew on a horse's leg "of diuers humors wyth gret trauayle".<sup>111</sup>

For all that it was recognised that the humours could cause illness, there is comparatively little mention of them in the Middle English treatises; most references are to be found in *The Boke of Marchalsi* and the *Treatise on Horses*. In the version of *The Sothebe Treatise* found in Cambridge University Library manuscript Ll.I.18, blood is the only humour mentioned, being the cause of maressownde, farcy, and paynes.<sup>112</sup> Interestingly, in the version found in Sloane 686, any mention of blood being a cause of paynes has been omitted, whilst the only other ailment to be caused by humoral imbalance was mourning of the chine, "a maladye þ<sup>t</sup> cometh of a colde, afre a grete hete".<sup>113</sup> Likewise, the ailments of rye and cramp being caused by cold are the only reference to humours in *Prince Edward's Booke*.<sup>114</sup> The fact that there is little mention of the humours, either as an explanation of humoral theory, or as a cause of an ailment, suggests that the treatises were intended for popular use, where those using them would have little need of, or, indeed, knowledge of, theoretical information. Far more often the cause of ailments was due to influences of a more practical nature.

Some ailments were thought to be caused through ill-keeping of the animal. For instance, the author of *The Boke of Marchalsi* remarked that the horse "is many tyme greuyd with maladijs with myskepyng", although the only ailments which are specifically linked to this are founder (enfoundure) and refreidure.<sup>115</sup> Fitzherbert, however, associated cratches, scab, and lice with miskeeping, the latter two also arising from poverty.<sup>116</sup> Similarly, birds of prey always caught cray from miskeeping and the giving of improper food.<sup>117</sup> Miskeeping could be responsible for recurrent illness; as Fitzherbert remarked, malanders "may wel be cured for a tyme, but with yl keping it wyl comme agayne".<sup>118</sup> Indeed, when John Husee (d.1548) informed Arthur Plantagenet, Lord Lisle (before 1472-1542), in 1534 that he could not deliver some

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<sup>111</sup> *BMH*, f.49r.

<sup>112</sup> *HorseRemI*, 78-79, 81.

<sup>113</sup> *ST*, ff.56r, 58v.

<sup>114</sup> *PEB*, 8, 11.

<sup>115</sup> *BMO*, 8; *BMH*, f.18v.

<sup>116</sup> *FBH*, 72. Lice were most common amongst young horses, *ibid.*, 72-3.

<sup>117</sup> *DT*, 22.

<sup>118</sup> *FBH*, 68.

letters because his horse died at Stony Stratford, he was keen to stress that “he died not by my misordering or negligence”.<sup>119</sup>

Although mention of generic ‘ill-keeping’ is more common, sometimes specifics are given. For instance, part of the daily regimen of birds of prey was to give them tiring, but if a hawk received insufficient tiring, rye could occur,<sup>120</sup> and should a hound be rained upon and not well-attended afterwards, then mange might develop.<sup>121</sup> When first teaching a horse to be ridden at the age of three and a half (when he had begun to cast his teeth) this was to be done at a slow pace, with no running, because “his iontys ben tendre and softe”.<sup>122</sup> Only once he had cast all of his teeth (usually by the time he was 4¼, but certainly by 5 years of age), could he be put through all his paces, and do whatever work was intended.<sup>123</sup> It was not only due to the unformed joints that horses should not be ridden before casting all of their teeth. Casting teeth caused the horse a great deal of pain in the head, which often led to “gowte in the izen” (cataracts) which blinded the horse, and so for this reason “non hors shold be trauaylid til þat he had ful cast”.<sup>124</sup> Yet it seems that some men were impatient to ride their horse, for galls could arise “of tendirnesse of joyntis þat ben to sone trauayld”, as could fourmys.<sup>125</sup>

Travelling also seems to have been a period when animals were not taken care of as they should have been. In 1472 John Paston wrote to his elder brother, thanking him for the hawk he had sent, but expressing his disappointment, for “as ferforthe as the most conyng estragers...that ever I spak with can imagyn, she shall never serve but to ley eggys, for she is bothe a mwer de haye, and also she hathe ben so brooseid with cariage of fewle that she is as good as lame in boothe hyr leggys, as every man may se at

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<sup>119</sup> *Lisle Letters*, II, 268.

<sup>120</sup> *PEB*, 8.

<sup>121</sup> *MG*, 51.

<sup>122</sup> *BMO*, 5. When the Marquis of Mantua sent Polydore Vergil to England in 1511 to procure some hobbies, Vergil informed the Marquis that he was sending eight with the Marquis’ servant Simon, but that they had been difficult to come by, “good horses being scarce in England, as they are not well treated when young, being trained under age, and too hard worked”, *Calendar of State Papers and Manuscripts Relating to English Affairs Existing in the Archives and Collections of Venice and in other Libraries of Northern Italy. Volume 2: 1509-1519*, ed. R. Brown (London, 1867), 51.

<sup>123</sup> *BMO*, 5.

<sup>124</sup> *Ibid.*, 5-6. In everyday riding the horse was to be ridden slowly at first, to allow his sinews to warm up; afterwards, “þu may ryde hym swythe j-now”, *ibid.*, 8-9.

<sup>125</sup> *BMH*, f.49r.

iee".<sup>126</sup> Should someone ride a horse and not give it the chance to urinate, then the horse could suffer from *chaudpiss*.<sup>127</sup> Indeed, sometimes the consequences of mistreating an animal could have dire results. In 1387 William Spicer of Hungerford sued his servant Peter for damages "because, when he had delivered a certain horse to Peter to ride from London to Hungerford and back, Peter had ridden the horse so fast and excessively that the horse was killed, etc., to the said William's great damage".<sup>128</sup>

Poor supervision could also contribute to illness. For example, if sheep were allowed to pasture in forbidden moors, ditches, and bogs they could contract illness and rot,<sup>129</sup> and unless they were well watched between 15 August and 8 September, they would eat "the web of the rime, and the small white snails, wherefore they rot and die".<sup>130</sup> Interestingly, this description highlights the fact that the mediaeval author was observant. Although the reference to the "web of the rime" indicates the erroneous belief that one of the causative agents of the ailment was the rime-frost on the sward, the reference to "the small white snails" shows that the author correctly identified the connection between the ailment and the fresh-water snail.<sup>131</sup> The author of the *Seneschaucy* listed many accidents which could occur through poor supervision: horses and affers might fall into a ditch or water and be drowned, a burdened cart might overturn and kill the horse, or the carter might put out the eye or break the leg or thigh of a horse or an affer, whereby the animal would be lost; sheep, on the other hand, could be killed by dogs, be drowned or stolen, or even fight or get strangled.<sup>132</sup> Indeed, marauding dogs could often be a problem. In 1380-81 payment of 4s 6d was pending from John de Chivyngton to Durham Cathedral Priory for two sheep devoured by dogs, whilst in 1489-90 dogs belonging to Henry Feltwell of Mileham killed twenty-four lambs belonging to Roger Townshend's (c.1430-1493) flock at Litcham.<sup>133</sup> Sometimes, however, accidents were unavoidable. For instance, in 1288 the miracles of Thomas Cantilupe record that the horse of brother Gilbert, master of

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<sup>126</sup> *Paston Letters*, III, 67-8.

<sup>127</sup> *ST*, ff.61v-62r. No cause is given for this ailment in *HorseRemII*, 100.

<sup>128</sup> *Chaucer's World*, compiled E. Rickert, ed. C.C. Olson and M.M. Crow (London, 1949), 253-54.

<sup>129</sup> *Seneschaucy*, 286.

<sup>130</sup> *Ibid.*, 274. It appears that the anonymous author was referring to liver-rot.

<sup>131</sup> Trow-Smith, *Livestock Husbandry*, 157.

<sup>132</sup> *Seneschaucy*, 272.

<sup>133</sup> *DAR*, II, 313; "Beware of Grazing on Foul Mornings": A Gentleman's Husbandry Notes', ed. C.E. Moreton and C. Richmond, *Norfolk Archaeology: A Journal of Archaeology and Local History* 43:3 (2000), 502 n.19.

St John's hospital, Bridgwater, wrapped his tongue in his bit; when the groom struggled to free the bit, he dragged out a great part of the tongue, with the result that the horse could neither eat nor drink.<sup>134</sup> A rather unusual case is recorded in the almonry accounts of Edward I (1272-1307), where a man received 12s when his horse was blown off the bridge over the Medway at Rochester.<sup>135</sup> Accidents could sometimes have terrible consequences; in December 1534 Queen Anne Boleyn's (c.1500-1536) dog Purkoy, requested from Honor Plantagenet (1493x5-1566), Lady Lisle, in January of that year, died of a fall.<sup>136</sup> Indeed, such was the queen's attachment to the dog that none of the courtiers dared to inform her of the death, and it was left to Henry VIII (1509-47) to do so.<sup>137</sup>

Sometimes ailments could be caused by the animal's equipment. Swollen or hurt flanks in horses could be caused by the pricking of spurs or by being too tightly girthed whilst working,<sup>138</sup> whilst barbs could be caused by "þe streytynesse of a wekyd brydyl þat he hath vsyd and also with þe binding of hys halter in hys mowthe þat men clepyng gauleyd or ryngyd".<sup>139</sup> Similarly, canker on the horse's tongue was thought to be caused by the bridle, if it had lain on the ground and a toad had defecated on it, or if a spider was attached to it and it got into his mouth.<sup>140</sup> Indeed, great care had to be taken when saddling up horses, to ensure that the harness was not too tight; Fitzherbert remarked that a navel-gall could develop from a "hurte with a saddle, or with a buckle of a croper, or suche other, in the myddes of the backe".<sup>141</sup> There were times, however, when care could not be taken. Jean Froissart (c.1337-c.1404), repeating Jean le Bel (d.c.1370), reported that when the English were waiting for the Scots near Newcastle in 1327, "it never stopped raining the whole week and consequently their saddles, saddle-clothes and girths became sodden and most of the

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<sup>134</sup> AASS, October I, 668.

<sup>135</sup> M. Prestwich, *Edward I* (London, 1988), 113.

<sup>136</sup> *Lisle Letters*, II, 21, 331.

<sup>137</sup> *Ibid.*, 331.

<sup>138</sup> *METH*, 127, 129

<sup>139</sup> *BMH*, ff.23r-v.

<sup>140</sup> *BMO*, 27. B. Odenstedt suggests that this indicates that spiders and toads were thought to be venomous, *ibid.*, xxxii. Toad flesh was thought to swell inside anyone unfortunate enough to swallow it, causing the victim to swell up too, Finucane, *Miracles and Pilgrims*, 73. Thus it is not inconceivable that toad faeces, too, were thought to be poisonous in some manner.

<sup>141</sup> *FBH*, 70.

horses developed sores on their backs. They had nothing to cover them with, except their own surcoats, and no means of re-shoeing the horses which needed it".<sup>142</sup>

Similar care also had to be taken with the equipment of birds of prey. In mediaeval times lures, a pair of short leather straps, were attached to the jesses and twisted loosely around the hand when the bird was being carried.<sup>143</sup> The lures were attached to the jesses by means of a tyret, a turning ring or swivel. As the lures were detached when the bird was flown but the jesses left on, *The Proceis of Hawkyng* declared that the "tyrettis shuld rest upon the lewnes, and not upon the gesses, for hyngyng and fastyning upon trees when she flyeth".<sup>144</sup> Similarly, when being trained to catch partridge, the lure was to be tied to the jesse, and then fastened to the ground. The hawk could then fly at the partridge without escaping. Should she slay the bird herself, once the hawk had landed, the falconer was to "gedyr away all þat mayst (harne) hyr tayle and hyr wyngis".<sup>145</sup> Even something as innocuous as a hood could cause problems if incorrectly made. When being carried on the fist, falcons generally wore hoods to keep them quiet (although the author of *The Percy Poem* wrote that they "be nat vsed now-a-dayes"<sup>146</sup>). These needed to be correctly made, with small holes for ventilation punched into the segment which covered the crown, in order to prevent the falcon's head from overheating. This helped to preserve the health of the falcon; if no such provision was made, "when the hood was removed, the head, suddenly exposed to the cold air, was chilled and birds thus imprisoned were more liable to catch cold and to acquire diseases of the head".<sup>147</sup> It is interesting that the sources make no reference to dogs and hounds being injured by their equipment, yet this must have been the case. It is not inconceivable that a hound could have become entangled in its leash, causing an injury, yet the sources are silent upon such matters.

The function of an animal could also affect its susceptibility to illness and injury. Destriers lived a very hazardous lifestyle, for they were used in tourneys and warfare, both of which activities carried a significant risk of injury. For instance, the

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<sup>142</sup> Jean Froissart, *Chronicles*, tr. and ed. G. Brereton (London, 1978), 51.

<sup>143</sup> *BSA*, 104.

<sup>144</sup> *PH*, 26.

<sup>145</sup> *HawkRemI*, 23-4. Similarly, Frederick II warned that when training a hawk to come to the lure one had to be careful not to entangle the lure with the line of the creance, as this might cause injury to the bird, *AVCA*, 240.

<sup>146</sup> *PP*, 21.

<sup>147</sup> *AVCA*, 206. Frederick himself invented this form of the hood, *ibid.*

accounts for the year 1292-93 of John of Brabant (d.1312), son-in-law to Edward I, record the expenses of looking after two horses which were wounded in a tournament.<sup>148</sup> Taking part in warfare, though, held a great risk of horses being killed.<sup>149</sup> For instance, at the siege of Stirling in 1304 Edward I's horse was felled by a stone from a siege engine when Edward rode unarmed close to the castle walls in order to inspire his men.<sup>150</sup> This was a freak accident, but as William the Breton (c.1180-1225) indicated in his *Philippiad*, the sight of horses dying was all too common:

You could see horses here and there lying in the meadow and letting out their last breath; others, wounded in the stomach, were vomiting their entrails while others were lying down with their hocks severed...there was scarce a spot where one did not find corpses or dying horses stretched out.<sup>151</sup>

Losses of horses in warfare, however, were not always as a result of injury; the rigours of the march could also be perilous. During the Scots invasion of England in 1327, the English had to navigate “great marshes and bogs...[and]...a large number of banners with the horses, as well as many pack animals, did get left in them, never to be seen again”.<sup>152</sup> It is interesting that although warfare must have accounted for many of the injuries to horses, the treatises do not specify this as a cause; only *The Book of Marchalsi* has a remedy for those exhausted through war or tourneying, which was to ensure they had a drink.<sup>153</sup> The sources are also silent upon any injuries caused to those dogs used in warfare.

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<sup>148</sup> *Expenses Brabant*, 5.

<sup>149</sup> Although horses were provided with armour, it is uncertain how much some of the fuller coverings were purely heraldic or intended for genuine protection, M. Prestwich, *Armies and Warfare in the Middle Ages: the English Experience* (New Haven, 1996), 35. Lists of horses could be drawn up before battles in order to easily compensate those whose animals were killed, Prestwich, *Edward I*, 484-85. See *CPR: Edward I*, I, 353; III, 193, 489; IV, 514, for payments for lost horses. In a similar manner in November 1316 Edward II (1307-27) appointed Hugh de Audele, his kinsman, and Stephen le Blound, clerk, “to value all the horses of those who are staying in garrison in the king’s towns and castles in the Marches of Scotland, which ought to be appraised”, *CPR: Edward II A.D. 1307-1327*, 5 vols. (London, 1894-1904), II, 565.

<sup>150</sup> *Flores Historiarum*, III, 318.

<sup>151</sup> William the Breton, *Philippiad*, cited in G. Duby, *The Legend of Bouvines: War, Religion and Culture in the Middle Ages*, tr. C. Tihanyi (Berkeley, 1990; first published 1973 as *Le Dimanche de Bouvines*), 200.

<sup>152</sup> Froissart, *Chronicles*, 48. See also A. Ayton, *Knights and Warhorses: Military Service and the English Aristocracy under Edward III* (Woodbridge, 1999; first printed 1994), 72-3. Losses were also incurred by the transportation of horses by sea, *ibid.*, 73-4.

<sup>153</sup> *BMO*, 10. Should the horse be so young as to still have colt’s teeth he was to be given two to three gallons of milk to drink, which should be given in a darkened room, otherwise he would refuse it due to the whiteness, *ibid.*, 10-11.

Care also needed to be taken with animals used for manual labour. For example, if a horse carried burdens which were too heavy, corns could develop,<sup>154</sup> yet it was possible to prevent this. The horse's saddle was to be removed and the horse checked for any hurt or swelling. Should any be found it was to be washed with cold water and salt, and then well rubbed. The saddle was to be put on again and the horse allowed to cool, which process was to be done two or three times, which would make the swelling go down.<sup>155</sup> It seems that it was best for horses carrying loads to be constantly moving, for stopping and starting could be exhausting; their pace was therefore regulated to the speed of the wheeled transport, this being achieved by placing them in the centre of the travelling column.<sup>156</sup> Standing still under a load was also fatiguing, more so than travelling,<sup>157</sup> and Peter of Blois (1125x30-1212) told how the sumpters of Henry II's (1154-1189) household suffered in this manner, being kept waiting under their loads because the king failed to keep to the morning departure, sleeping until noon.<sup>158</sup> Other ailments, too, could result from strenuous labour. Hard work could make a horse blind, and could also cause windgalls.<sup>159</sup> Harvest time was a particularly busy period for horses, and thus it was important to keep the horse well watered and fed, otherwise through overworking on too little nourishment he might develop mange.<sup>160</sup> *The Sothebe Treatise*, however, advised that the horse should not be allowed to drink whilst still hot from labour, as this would cause the horse to develop a cough.<sup>161</sup> Perhaps in an effort to keep animals in health, the *Seneschaucy* stipulated that the carter ought to be able to load the horse and cart without risk to the horse by overloading, and that they should be neither overworked nor injured by too much toil.<sup>162</sup> Indeed, the rule of the Gilbertines stipulated that no-one was to hurt an ox, ass, horse or foals through too great a burden or riding them indiscriminately; neither were they to be hurt in carts or ploughs so that they died or were useless for work.<sup>163</sup>

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<sup>154</sup> See *METH*, 117. They could also develop from many other causes, “of þe whiche me nedeþ not telle of nowþe”, *ibid*.

<sup>155</sup> *METH*, 117.

<sup>156</sup> Gladitz, *Horse Breeding*, 156.

<sup>157</sup> *Ibid*.

<sup>158</sup> Peter of Blois, *Opera Omnia*, ed. J.-P. Migne, *Patrologiae Latina* 207 (Paris, 1855), 49.

<sup>159</sup> *FBH*, 67, 69.

<sup>160</sup> *METH*, 99.

<sup>161</sup> *ST*, f.62v.

<sup>162</sup> *Seneschaucy*, 280.

<sup>163</sup> W. Dugdale, *Monasticon Anglicanum*, ed. J. Caley, *et al.*, 6 vols. in 8 (London, 1846), VI.ii, xlii.

Such advice not to overwork animals was not to be ignored lightly, for in 1453 the accounts from Fountains Abbey record the death of a bullock whilst working,<sup>164</sup> whilst accounts from Durham Cathedral Priory record that a horse hired from John Coken died of too much work in 1456-57.<sup>165</sup>

Both hounds and birds of prey were employed in hunting, which pastime had its hazards. For instance, it was thought that great travel and long hunting could bring about all types of mange in hounds, “as whan þei ben hoote þei drynken of foule water and vnclene, whiche currupeth here bodies”.<sup>166</sup> In addition, bruised feet could be caused by running in hard country or amongst stones, whilst running amongst thorns and briars could hurt the legs and feet;<sup>167</sup> indeed, thorns could even become lodged in the legs and limbs of hounds, the *Practica canum* giving two remedies for their removal.<sup>168</sup> Similarly, just as many ailments could afflict hounds when they were hunting, so too were birds of prey at risk of accidents when they were being flown, which might result in a broken tail or leg, or wounds and bruises. For instance, falcons could suffer accidents from their prey, and there are many examples in Saints’ *Vitae* of birds of prey which had been injured when hunting. The miracles of Thomas Becket (1120?-1170) report how Wiscard, a prized falcon of Henry II, was successfully cured after being pierced in the eye by a crane,<sup>169</sup> whilst in the thirteenth century both Robert de Keynis and a Cornish knight turned to St Thomas Cantilupe (c.1220-1282) when their hawks were trampled on by a dog and horse respectively.<sup>170</sup>

The environment in which animals were kept could also play a part in the cause of illness. For instance, should birds of prey be allowed to become cold, then they were in danger of getting frounce;<sup>171</sup> conversely, if the nest was too hot, this could engender the rye.<sup>172</sup> Horses kept in a dark stable were in danger of developing a wrote

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<sup>164</sup> MFA, III, 129.

<sup>165</sup> DAR, I, 92.

<sup>166</sup> MG, 51. Likewise, running for too long and long journeys could cause problems to their testicles, *ibid.*, 56.

<sup>167</sup> *Ibid.*, 53. It was also thought that the pricklings of thorns and briars could cause mange, *ibid.*, 51.

<sup>168</sup> PC, f.187r.

<sup>169</sup> *Materials for the History of Thomas Becket, Archbishop of Canterbury*, ed. J.C. Robertson, 7 vols., RS 67.i-vii (London, 1875-85), I, 528-29.

<sup>170</sup> AASS, October I, 674; R.C. Finucane, ‘Cantilupe as Thaumaturge: Pilgrims and Their “Miracles”’, in M. Jancey (ed.), *St Thomas Cantilupe, Bishop of Hereford: Essays in his Honour* (Hereford, 1982), 143.

<sup>171</sup> PEB, 14.

<sup>172</sup> *Ibid.*, 7. This must relate to young birds which have been taken; in *The Proceis of Hawkyng* it was noted that birds taken from the eyrie were to be kept “wele from colde”, PH, 29. Birds which are hand reared

in the eye, which “maketh him poreblynde”.<sup>173</sup> Scab was not only thought to arise from unhealthy pasture ground – a memorandum of the thirteenth century from Bridlington Priory claimed that the pasture at Whitaside was “so clean and healthy that sheep there will always be free from scab”<sup>174</sup> – but also from unclean housing. For instance, hounds kept in kennels where the litter and couch were not kept clean and the water not refreshed were in danger of catching this ailment.<sup>175</sup> Similarly, the falconer also had to be careful where he set down his birds, for frounce could be caused “of standyng nye a preuy or ony oþer onsauery place þat stynkes”.<sup>176</sup> Even the act of changing an animal’s environment could have severe consequences. For instance, Thomas Burton (d.1437), chronicler and abbot of Meaux, recorded that in the late-fourteenth century over 400 sheep died at Meaux, due to a change of pasture.<sup>177</sup>

Many ailments could be caused by the weather. For example, rainy weather could be harmful to birds of prey, for carrying the bird in rain was thought to bring about lice.<sup>178</sup> The torrential summer rains of 1315 and 1316 not only ruined crops but also caused heavy losses amongst the sheep;<sup>179</sup> at Bolton Priory the flock of sheep dropped from 3027 in 1314-15 to only 1005 in 1315-16 due to sodden pastures and near starvation.<sup>180</sup> Although the source is silent upon the ailment, it is possible that it was liver-rot, for this ailment is encouraged by perpetual rains, and is also closely related to the amount of rainfall between May and October.<sup>181</sup> Cold weather was

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today are to be kept warm in their nest, but care is to be taken that they do not become too hot, A. Oswald, *The History and Practice of Falconry* (St Helier, 1982), 103. In the Middle Ages there were three means of acquiring birds of prey: to take young birds from the eyrie, to capture adult birds, or to acquire birds by purchase or gift – for reproduction in captivity did not exist, Van den Abeele, *Fauconnerie*, 93-100. See also R.L. Meredith, ‘Methods, Ancient, Medieval, and Modern, for the Capture of Falcons and other Birds of Prey’, in *AVCA*, 433-49.

<sup>173</sup> *ST*, f.57v.

<sup>174</sup> *CBP*, 254.

<sup>175</sup> *MG*, 51.

<sup>176</sup> *HawkRemI*, 27.

<sup>177</sup> Thomas Burton, *Chronica Monasterii de Melsa*, ed. E.A. Bond, 3 vols., RS 43.i-iii (London, 1868), III, 182.

<sup>178</sup> *PH*, 26. Although the author refers to lice, R. Hands thinks the description of their cause refers to internal parasites, *BSA*, 104.

<sup>179</sup> In 1201 the annalist of Margam Abbey noted how frequent rain from Pentecost to the Nativity of St Mary (8 September) meant that crops failed to mature and bear fruit, resulting in a mortality of animals, which was greatest amongst sheep, *Annales Monastici*, I, 25.

<sup>180</sup> Kershaw, *Bolton Priory*, 14, 83-4.

<sup>181</sup> *Ibid.*, 84; W.M. Jordan, *The Great Famine: Northern Europe in the Early Fourteenth Century* (New Jersey, 1996), 37.

especially problematical for sheep; indeed, modern observations have shown that “temperatures during the first three months of the year are closely related to mortality in sheep flocks”.<sup>182</sup> It was at lambing time, however, that the cold could cause mortality to rise and affect the success of lambing; for example, the hard winter of 1480-81 meant that lambing in the flocks of Roger Townshend was badly affected.<sup>183</sup>

Some ailments spread between animals by means of infection.<sup>184</sup> For instance, scab was thought to pass between horses either by standing next to each other, by being groomed with a comb which a scabbed horse had been groomed with, by eating corn or hay which a scabbed horse had chewed on, or by breathing in the breath of a scabbed horse.<sup>185</sup> Similarly, tortes could be caught by standing next to another horse which was affected,<sup>186</sup> whilst farcy could be caught “be smelling þer an hors had ben beforn hym þat had þe malady, or be þe wynd of an hors þat standit ny hym þat hath þe malady, or be the smellyng of a sowe that goth of bremmyng [is in heat], or by the savour of a bore”.<sup>187</sup> Of the seven types of madness described in *The Master of Game*, only two (furious and running madness) were thought to be communicable to other dogs.<sup>188</sup> Indeed, sometimes disease could be introduced from abroad; in 1274 two chroniclers of St Albans Abbey reported how sickness was communicated to flocks of

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<sup>182</sup> *Ibid.*

<sup>183</sup> *Ibid.*; ‘Gentleman’s Husbandry Notes’, 502 n.18.

<sup>184</sup> Infection not only occurred between animal and animal, but also between human and animal; Giovanni Boccaccio (1313-75), in his *Decameron* (mid-fourteenth century), records how the Black Death was communicated to two pigs after they mauled the rags of a pauper who had died of the disease, Giovanni Boccaccio, *The Decameron*, tr. G.H. McWilliam (2<sup>nd</sup> Edition, London, 1995), 6-7.

<sup>185</sup> *METH*, 103-05. See also *De animalibus*, 1393. Albertus Magnus noted that infection could spread by three methods between horses: by being infected by the saliva and breath of an infected horse which nipped another horse with its teeth; by a horse rubbing itself on a spot where an infected horse had rubbed itself; and by the breathing of an infected horse, which corrupted the air in the stable, *ibid.*, 1379.

<sup>186</sup> *METH*, 115.

<sup>187</sup> *BMO*, 31-2. In *The Sothebe Treatise* farcy was ascribed to a great abundance of blood, *ST*, f.55v. Farcy, however, could actually be caused by a variety of things:

And also ofte-tymes hit comeþ of blak blod & of humors þat renneþ with-in þe veynus. & oþer-while with-oute. And oþer-while it comeþ of grete strokes or of a wonde þat with-inne too monþes is not heled. Also it comeþ oþer-while bi-twixt þe schuldres or in þe sides. & þat may oone horse take of an-oþer

*METH*, 93.

<sup>188</sup> *MG*, 47. I.M.E. Boor-van der Putten notes that the suggestion that the form of madness called ragemuet is not contagious is excusable, as in this phase of madness the dog would be incapable of biting another dog or person, Boor-van der Putten, “Maladies de Chiens”, 43.

English sheep when diseased Spanish sheep were imported into Northumberland.<sup>189</sup> The actuality of the spread of infectious ailments can sometimes be charted in other sources. For instance, the infectious nature of glanders can be tracked through the stable accounts of Robert II d'Artois in the year 1298.<sup>190</sup>

When ailments were thought to be communicable between animals sometimes it was recommended to keep them separated. For instance, the author of the *Treatise on Horses*, after giving a list of treatments for scab, advised “þat þe schabbede hors stonde noȝt a monge oþer þar þei ne take þe same”.<sup>191</sup> Fitzherbert not only recommended keeping a horse with farcy apart from others, otherwise they would catch the ailment within one month, but also recommended that cattle suffering from lung-sought were to be kept in sundry places, “and as many as were in companye with that beast that fyrst fell sycke, to let them a lyttel bloude”.<sup>192</sup> Interestingly, *The Master of Game* does not mention isolating dogs which have madness, yet this is precisely what Albertus Magnus recommended, “lest he turns others to rabies by biting them”.<sup>193</sup> Indeed, in order to alert people to the fact that cattle were suffering from murrain Fitzherbert advised “to take the bare heed of the...beaste and put vpon a longe pole, and set it in a hedge, faste bounded to stake, by the hyghe-waye syde, that euerye man, that rydeth or goeth that waye, maye se and knowe by that signe, that there is a sycknes of cattell in the towneshyp”.<sup>194</sup>

Some ailments were thought to arise because the animal was already sick. Sheep suffering from May sickness (*chaline de May*) could develop rot,<sup>195</sup> whilst birds of prey, dogs, and horses could become ill from having a cold. For instance, string-halt in horses “cometh ofte with a colde”,<sup>196</sup> whilst a hawk which caught a cold before all of its new feathers had come through after moulting could develop cramp.<sup>197</sup> Cramp in the

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<sup>189</sup> *Chronica Albani*, II, 84; III, 38.

<sup>190</sup> See Y. Poulle-Drieux, ‘Practique de l’Hippiatrie à la fin du Moyen Âge’, in *Comprendre et Maîtriser la Nature au Moyen Âge: Mélanges d’Histoire des Sciences offerts à Guy Beaujouan*, preface M. Terrasse, introduction D. Jacquart (Geneva, 1994), 332.

<sup>191</sup> *METH*, 109.

<sup>192</sup> *FBH*, 68, 54.

<sup>193</sup> *De animalibus*, 1366.

<sup>194</sup> *FBH*, 53.4.

<sup>195</sup> *Seneschaucy*, 274. Sheep were to be inspected for this ailment after Easter, with diseased sheep being sold.

<sup>196</sup> *FBH*, 71.

<sup>197</sup> *PEB*, 11.

wings came of catching cold in youth – thus it was advocated to keep the hawk warm whether she was young or old.<sup>198</sup> Similarly, dogs which had cold of the head could develop sickness in their ears, and hounds which went hunting in the snow could catch a cold, which in turn could develop into malemort in the nostrils, a disease from which some hounds could die.<sup>199</sup>

Certain foods could also cause an animal to become ill. Sometimes this was due to a food being hot, cold, hard, or soft. If horses ate of hard food whilst young this encouraged the haw to develop in the eye,<sup>200</sup> whilst eating hard foods might cause tooth loss in dogs: from the archaeological site at High Street, Perth, one dog jawbone, dating from the twelfth to fourteenth century, had lost the first lower premolar before death, whilst a sixteenth-century example from the well deposit at Lazarus Lane, Elgin, had lost the lower fourth premolar; such tooth loss may have been caused by hard food, or through periodontal disease caused by food impaction around the teeth.<sup>201</sup> Eating moist foods could also cause problems. For instance, should a horse eat moist hay which cats or other vermin “haue pyssed on”, then he would develop kmory.<sup>202</sup> Indeed, eating mouldy bread or hay, or musty corn encouraged the breeding of worms in the gut which caused trenchelons.<sup>203</sup> When feeding birds of prey it seems that a fine balance between the giving of hot and cold foods had to be sought. For example, the giving of cold food could cause the bird to catch a cold so that she suffered from “þe grete hede”.<sup>204</sup> Lack of hot meat, however, could be dangerous, causing the rye.<sup>205</sup> Yet this was not to be remedied by washing raw meat in hot water, for this was one of the causes of cray.<sup>206</sup>

The giving of unsuitable food also caused sickness. Just as trenchelons could develop from mouldy foods, so too could it be caused by “unkende metis”, for nothing caused the worms to grow “mor þan bred while þat þe hors is 3ong and also bren and

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<sup>198</sup> PH, 31.

<sup>199</sup> MG, 52.

<sup>200</sup> BMH, ff.16r, 17r.

<sup>201</sup> C. Smith, ‘Dogs, Cats and Horses in the Scottish Medieval Town’, *Proceedings of the Society of Antiquaries of Scotland* 128 (1998), 879.

<sup>202</sup> ST, f.59v.

<sup>203</sup> *Ibid.*, f.63v.

<sup>204</sup> *HawkRemI*, 26.

<sup>205</sup> See, DT, 24; MKSG, 141; PEB, 7; PH, 9.

<sup>206</sup> See, DT, 22; MKSG, 141; PEB, 7; PH, 7-8.

otys”;<sup>207</sup> indeed, the author of *The Boke of Marchalsi* made it clear that this latter ailment was very much an illness suffered by domesticated horses, “for oure keeping is cause of here waxing”.<sup>208</sup> Similarly, feeding raptors upon pork, cat, or kid meat for three or four meals in a row would engender the frounce.<sup>209</sup> Perhaps these meats were not easily digested, for in *Hawk Remedies I* the cause of this ailment is put down to badly digested food.<sup>210</sup> Indeed, should sheep eat fine hay without chewing it, this would not come to the cud, but would remain in the body, where it rotted unnaturally, causing the sheep to die.<sup>211</sup>

It was not only the food itself which could cause illness, but also the amount consumed. If hungry cattle ate too much rich grass they would contract dewbolne, whilst a horse eating and drinking too much would catch purse.<sup>212</sup> Lack of food, however, could cause an animal to become weak from malnutrition, and thus weaken its natural defences. Indeed, it was probably under such circumstances that many sheep and cattle died from the pestilence in the years 1315 to 1318; if crops were not destroyed by the bad weather, the dampness made it difficult to dry the hay, making food supplies very low, and thus strong animals with the pestilence were weakened and subsequently died.<sup>213</sup> Poor nutrition could also cause other problems, such as shortness of the jaw. This was probably the cause of the upside-down molar in a pig’s lower jaw found at the excavations at Wharram Percy; it is thought that the tooth had turned over as a result of unusual pressures, probably from the angle of the jaw adjacent to it.<sup>214</sup>

Conformation could also affect an animal’s susceptibility to sickness. For example, it was thought that foals born in leap years or moist years, who thus had

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<sup>207</sup> *BMH*, ff.33v-34r. Albertus Magnus noted rye (*siligo*) was the least appropriate food for horses on account of the flatulence it caused, *De animalibus*, 1379.

<sup>208</sup> *BMH*, f.34r. A horse in the wild cured himself “with his owne wyt wyth vertu of herbis þat growyn in wildernes upon þe roches and on þis maner he sleth þe wormys whan þat he felit his ferst waxing”, *ibid.*, 33v.

<sup>209</sup> See, *DT*, 22, 24; *MKSG*, 144; *PEB*, 8; *PH*, 7. Feeding the hawk continually with pork, jays, or magpies was a cause of lice, probably an internal parasite here, *ibid.*, 26; *BSA*, 104.

<sup>210</sup> *HawkRemI*, 27.

<sup>211</sup> *WH*, 338.

<sup>212</sup> *FBH*, 55, *BMO*, 29. Albertus Magnus noted that horses could overfill themselves if they were given barley grain, some other grain, or bean (*legumen*) grain, and did not chew it thoroughly, or chewed it too little, *De animalibus*, 1390.

<sup>213</sup> Jordan, *Great Famine*, 37.

<sup>214</sup> Ryder, ‘Animal Remains’, 45.

narrow flanks and would never be fat, were the most susceptible to the lowe.<sup>215</sup> In contrast, fat horses were most likely to be affected by ventayle,<sup>216</sup> and the fatter a horse was the worse the malady of purseys would be.<sup>217</sup> Interestingly, it appears that this ailment did not attack those horses of poor quality: “for þer was neuere wyk hors pursyf”.<sup>218</sup> Conversely, galls did not attack weak horses, “but þei be comen wyk for defaut of medicine”; young horses were likely to recover more quickly from this ailment.<sup>219</sup> Indeed, the age of a horse could affect its susceptibility to some ailments. Fitzherbert remarked that scab was found commonly among old horses.<sup>220</sup> In contrast, lousy horses were most likely to be young.<sup>221</sup> Indeed, the author of *The Boke of Marchalsi* believed that horses could be born with an ailment, such as lampas, which lasted as long as the horse had his milk teeth.<sup>222</sup> Place of birth could also affect the ailments from which animals might suffer. The author of *The Boke of Marchalsi* believed those horses foaled in lowlands needed veterinary treatment when out of their own country, “for þei haue brod, plat fete, and for þei be gret-wombyd and heuie”.<sup>223</sup> He even specified that the horses of Lombardy, which were foaled in the low country, were thus more liable to weakness and injury when they came to a hard country because they were pampered too much in their youth.<sup>224</sup> With such horses it was necessary to bleed them when they changed their air, for otherwise they would develop farcy due to their excess of blood.<sup>225</sup>

Knowledge of causes was a useful tool to those caring for animals, for in theory it would help to identify how the animal became ill, thus ensuring that precautions could be taken in the future to prevent the illness arising again, or, indeed, in the first place. Yet for all the potential importance of such information, this is not given in any great proportion in the treatises; in the *Treatise on Horses* 50% of the ailments are given

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<sup>215</sup> BMO, 39.

<sup>216</sup> BMH, f.17v.

<sup>217</sup> BMO, 29.

<sup>218</sup> *Ibid.*, 31.

<sup>219</sup> BMH, f.47v, f.49r.

<sup>220</sup> FBH, 72.

<sup>221</sup> *Ibid.*, 72-3.

<sup>222</sup> BMH, f.17r. In fact, the horse was not born with this ailment, the mediaeval author seemingly not noticing that it was the casting of the front teeth which caused the gums and bars behind the upper teeth to become swollen, Thompson, *Veterinary Science*, 157.

<sup>223</sup> BMO, 19.

<sup>224</sup> *Ibid.*

<sup>225</sup> *Ibid.*, 20.

a cause, but this is the highest percentage from amongst the sources, except for *The Maner of Keping of Sparhauke and Goshauke*, where 75% of ailments have causes.<sup>226</sup> Indeed, the causes of ailments do not form any part of the recipe collections [tables II.i-iv].<sup>227</sup> The lack of such information suggests that determining the causes of ailments was not an overriding consideration of the authors of the treatises; treatment, based upon an understanding of symptoms, was the important factor. Yet ignorance of specific causes should not be assumed, for it is possible that such information was passed on orally by those caring for animals.

### III.

#### “waggyng and rolyng as a dronken beste”: symptoms of illness in animals

Unlike human patients animals could not tell someone when they felt unwell.<sup>228</sup> Thus it was the responsibility of those caring for them to be able to determine if something ailed them, which they would have to do by observation; indeed, one author remarked, “I wol schewe 3ou as j haue jlerned sum curus for hors þat al men knowe no3t. And also wherof þe euel comeþ on an hors And also þe tokenus þerof, where-bi þat men schul hem knowe”.<sup>229</sup> Those caring for animals worked closely with them on a daily basis, and as such, they would be familiar with how their animal acted when in health; anything contrary to this would surely indicate illness.<sup>230</sup>

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<sup>226</sup> Only four ailments in total are discussed, however. It may even be that the author intended the cause of frounce to cover both forms of this ailment discussed.

<sup>227</sup> The one exception is the recipe collection in BL MS Sloane 686, f.67r, where a cause was given for one of the eighteen ailments; a horse could be bruised “of a strike of an other horse”.

<sup>228</sup> Although they could certainly make sounds to indicate illness – a hawk suffering from aggeleons would “scremyth sodenly” so that the austringer would hear “no chyrmyng of no byrde”, *J.B.II*, 114.

<sup>229</sup> *METH*, 85. Even though the author stated his intention to describe the ailments, 54% were without symptom or description.

<sup>230</sup> Frederick II clearly believed that it was also important to recognise signs of health:

In health the falcon’s movements are rapid, her voice is clear, not raucous, when she screams. She preens herself, including all her feathers and her claws on both sides, whether she has bathed or not, and bends her head well back to the useful oil gland over her tail. She eats with a good appetite, digests her food well, and mutes copiously and with no sibilant noise.

AVCA, 157. Additional signs of health were smooth feathers, bringing up castings without effort, bathing willingly, sleeping erect with head tucked in the feathers of the shoulders, and not being

Many ailments manifested themselves physically on the animal. For example, dogs suffering from quick mange would not only lose their hair, but their skin would crack in many places and it would “wexeth grete and þik”.<sup>231</sup> Indeed, mange in other animals also affected the appearance of the coat; sheep with scab had a broken fleece, causing them to cast their wool.<sup>232</sup> Other ailments, too, were indicated throughout the whole body; thus sheep suffering from pox would have pocks on the skin, “lyke reed pyples, as brode as a farthyng”.<sup>233</sup> In some instances, however, the symptoms were confined to a particular area of the body. For example, should a falcon’s feet be swollen, then she was suffering from podagra,<sup>234</sup> whilst mourning of the chine caused the flesh along the horse’s chin to rot, together with matter coming out of the nostrils.<sup>235</sup> Cattle with murrain would suffer from a swollen head, their eyes would grow great and run with water, and they would froth at the mouth – although by the time these symptoms showed themselves the beast would be “paste remedy, and wyl dye shortely”.<sup>236</sup> Sometimes closer attention had to be paid, for symptoms were not always overt. Thus if the leg or wing of a hawk looked out of joint, she was probably suffering from cold cramp in them.<sup>237</sup> It was not only external complaints which showed outward symptoms, for internal ailments too often manifested themselves outwardly. Thus a horse suffering from rate would have ruffled hair and he would not moult in the right season;<sup>238</sup> cattle suffering from dewbolne would have swollen sides;<sup>239</sup> and the feet of a bird suffering from fellera would become white.<sup>240</sup>

At other times the animal’s behaviour would indicate that it was ill. For instance, not eating could be a sign of sickness; dogs suffering from ragemuet would

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painfully breathless after baiting, *ibid.* The closest equivalent in the English sources are the signs to look for when choosing an animal. See, for example, *METH*, 85-7; *Kerdeston*, 58; *HawkRemI*, 24-5; *MG*, 62-3.

<sup>231</sup> *MG*, 49-50.

<sup>232</sup> Trow-Smith, *Livestock Husbandry*, 155.

<sup>233</sup> *FBH*, 49.

<sup>234</sup> *PH*, 38.

<sup>235</sup> *ST*, f.58v.

<sup>236</sup> *FBH*, 53. Except for the foaming of the mouth, the symptoms were the same for an ailment called risen upon, where the running of the eyes would make them close; any beast with these symptoms would die within an hour or two, *ibid.*, 55.

<sup>237</sup> *HawkRemI*, 30.

<sup>238</sup> *BMO*, 35. The horse would also refuse to eat, and pant fast with a throbbing flank.

<sup>239</sup> *FBH*, 55.

<sup>240</sup> *PH*, 37. Compare to *De animalibus*, 1475. Adelard of Bath (c.1080-c.1152) noted that both the beak and feet would become discoloured if a bird was suffering from this ailment, *AT*, 256.

not eat, for their mouth would gape as if they were enosed in their throat.<sup>241</sup> Problems with balance were another indication that an animal was unwell. Dogs suffering from falling madness were unable to walk straight, falling “nowe in oon syde and nowe in anoþer side”,<sup>242</sup> whilst sheep and cattle suffering from the turn suffered from similar symptoms, for they would turn about, being in danger of falling into pits, ditches, or water.<sup>243</sup> Should a hawk be suffering from pies, she would “fallyth downe sodenly of on þi hande or of þe perke”.<sup>244</sup> Other actions were also an indication of illness. A horse which carried his head low and looked as if he was about to fall was suffering from *vives*.<sup>245</sup> Hanging the head appears to have been a fairly common symptom. Thus, should a sheep stand still, hang its head, and quake it was suffering from the blood, whilst one which one halted and hung its neck awry was suffering from the wood-evil;<sup>246</sup> a hawk whose head hung down, with her wings hanging at her sides, and feet hot to the touch, was suffering from fever and heat.<sup>247</sup> Scratching was another indication of illness. If a hawk clawed her head with her foot she was suffering from vermin, and scratching with her beak under her belly was a sign of worms known as *anguilles* (*aiguilles*).<sup>248</sup> Indeed, when a hawk “hurte his fete with his Beke, and pullyth her tayll, then she hath the aggresteyne”.<sup>249</sup> Similar actions could be seen in dogs suffering from common mange, for they would “clawe hem wiþ here fete and gnappe withe her teeth”,<sup>250</sup> whilst sheep suffering from maggots would bite, frisk, or shake their tale.<sup>251</sup> Problems of the feet were often indicated by limping. For example, a horse which was lame in the foot would “forberit his fot and settith his fot to þe earthe up

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<sup>241</sup> MG, 47. This is a classical description, I. Boor-van der Putten, ‘The Canine Veterinary Medicine in the Middle Ages According to the *Livre de Chasse* by Gaston Phoebus’, *Historia Medicinae Veterinariae* 28:1 (2003), 4. Not eating was a symptom of most forms of madness. See MG, 47-8.

<sup>242</sup> *Ibid.*, 48. Striking descriptions of the symptoms of dogs suffering from rabies can be found in PR, II, 1169, and *Fasciculus Morum: A Fourteenth-Century Preacher’s Handbook*, ed. and tr. S. Wenzel (Pennsylvania, 1989), 162.

<sup>243</sup> FBH, 56.

<sup>244</sup> J.B.II, 116.

<sup>245</sup> BMH, f.16v.

<sup>246</sup> FBH, 48, 49.

<sup>247</sup> PEB, 18.

<sup>248</sup> DT, 32.

<sup>249</sup> PH, 31. Compare to *De animalibus*, 1477; *Dancus Rex*, 94. G. Tilander has shown that Albertus Magnus used much of the *Dancus* treatise, *ibid.*, 22-4; Hands suggests that the *Dancus* treatise was probably known in England through a French version of Albertus Magnus’ *De animalibus*, R. Hands, ‘“Dancus Rex” in English’, *Mediaeval Studies* 35 (1973), 354-69.

<sup>250</sup> MG, 50.

<sup>251</sup> FBH, 47. The tail would also be moist and wet.

on the poynt of his fot and makyth semblant as þou he wold falle”.<sup>252</sup> Similarly, the foul made cattle limp, whilst gout caused them “to halt, and go starkaly”.<sup>253</sup> Interestingly, this latter symptom contrasts to that when birds of prey were suffering from the same ailment, for as seen above their feet became swollen.

Certain symptoms were not always specific to an ailment. For instance, a careful examination of the horse was to be undertaken if it was suspected that he could be lame due to a tendon in the shoulder, for many other things could cause the appearance of lameness, such as having a nail or thorn in his foot.<sup>254</sup> The need for careful examination can also be seen in the discussion on lameness in the shoulder in *The Boke of Marchalsi*; as the symptoms could be the same as those when the horse was lame due to splints in the knees, it was important to have the groom lead the horse in order to establish where the fault lay.<sup>255</sup> Clearly the author was concerned that the horse received the correct treatment.

Sometimes it was necessary to touch the animal in order to feel the symptoms; one of the means of recognising dead flesh was by touching it, for “if þou it touche it wol gladli blede”.<sup>256</sup> Indeed, when mendesanes was first perceived in a horse, the means of confirming it was by touching the coronet of the hoof, “for whan þat þou tastist [touch] it with rising jt wil destendyn doun”.<sup>257</sup> Checking sheep for rot also involved examining them closely; according to Fitzherbert signs of this illness were a white eye, with dark coloured strings in it, pale-coloured and watery skin, and wool which came away lightly when rubbed between finger and thumb.<sup>258</sup> Interestingly, Fitzherbert also described the internal signs of this ailment, detected after killing the sheep; his belly would be full of water, the fat of the flesh would be yellow, and his liver would have flukes in it.<sup>259</sup>

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<sup>252</sup> *BMH*, f.41r.

<sup>253</sup> *FBH*, 57.

<sup>254</sup> *BMH*, f.42r.

<sup>255</sup> *Ibid.*, f.41r.

<sup>256</sup> *METH*, 123.

<sup>257</sup> *BMH*, f.53v.

<sup>258</sup> *FBH*, 51-2. These instructions are very similar to those given in the *Seneschaucy* when examining sheep for May sickness, where the sheep’s eye was to be examined, and also the wool, which would separate from the skin, *Seneschaucy*, 274. Perhaps the ailments are related; after all, the author of the *Seneschaucy* remarked that sheep later died of rotteness from this disease, *ibid.*

<sup>259</sup> *FBH*, 52.

With regards to birds of prey their mutes could also be checked for symptoms of illness.<sup>260</sup> White and thick excrements were a sign of peer;<sup>261</sup> green mutes were an indication of ramageness and that the panell was not clean; watery mutes were a sign of stopping; worst of all, however, were black and stinking mutes, for unless good care was taken of her the bird would die in a short time.<sup>262</sup> Examining castings was another method of checking the state of health of birds of prey, which *The Proceis of Hawkyng* recommended doing on a daily basis.<sup>263</sup> Thus the three main ailments of frounce, rye, and cray were all determined by the colour of the castings; yellow indicated frounce, green the rye, and slimey and stringey castings were an indication of cray.<sup>264</sup> Red water in the castings would indicate that the bird was suffering from a bruise or wound.<sup>265</sup> Filanders was also diagnosed by examining the castings, for one or two of the worms would be seen about.<sup>266</sup> The castings could even be smelled. For instance, should the bird cast meat, and it stank, this was an indication that she either had food in her bowel when last fed, or had been given too much at her last meal, whilst those that smelled sour betokened “grete sekenes, or ellys...euyll fedynge”.<sup>267</sup>

The practices of checking the mutes and castings of birds of prey for signs of illness recalls the practice in human medicine of checking the urine, and less often the

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<sup>260</sup> The mutes are still examined today; for birds fed a proportion of rabbit and other wild food their mutes should be checked about every six month for worms, Oswald, *History and Practice of Falconry*, 108. A. Oswald is very critical of those who just regularly worm their falcons, as this could lead to a resistance to the treatment, “storing up trouble for the future”, *ibid.*

<sup>261</sup> DT, 30. Another symptom was being unable to mute, *J.B.II*, 115.

<sup>262</sup> *HawkRemI*, 28-29. This latter ailment was perhaps avian coccidiosis. Indications of this ailment are flecks of red in the mutes (caused by inflammation of the intestines); a few days later the mutes will become watery and black and the castings will be a slimy dark brown and foul-smelling, Oswald, *History and Practice of Falconry*, 109.

<sup>263</sup> PH, 6. Examining the castings for an indication of the falcon’s state of health is a practice which continues today: “if firm and dry, all is right; when, on the contrary, the ball is covered with mucus, and mixed up with undigested meat, it is a sure sign that the Hawk is not well and requires looking to”, Salvin and Brodrick, *Falconry*, 44.

<sup>264</sup> Sometimes other symptoms could denote these ailments. For instance, in *Hawk Remedies I* frounce was indicated by a swollen jaw rather than yellow castings, whilst in *The Maner of Keping of Sparhauke and Goshauke, Prince Edwarde’s Booke*, and *The Proceis of Hawkyng*, rye was also indicated by a swelling of the head, *HawkRemI*, 27; MKSG, 141; PEB, 7; PH, 9. According to the author of *Hawk Remedies I* green castings indicated the pannel was not clean, that the grease was not wasted from there, and also that the bird was suffering from ramageness; yellow castings indicated the bird was stopped in the head, *HawkRemI*, 21.

<sup>265</sup> *Ibid.*, 22.

<sup>266</sup> PH, 30.

<sup>267</sup> *HawkRemI*, 21.

faeces, for symptoms of illness.<sup>268</sup> Whilst this practice does not seem to have been as common amongst other animals as it was in birds of prey, it was, nevertheless, sometimes employed. For instance, one would know that a horse was suffering from wasting of the liver because “he wyl pysse as reed as blode & his pys wilbe very thycke”.<sup>269</sup> Confusingly, however, red and thick urine was also one of the indications, along with stinking dung, that the horse had too much blood, and thus was in need of bleeding.<sup>270</sup>

In some cases symptoms were used to diagnose whether or not the animals should be treated. For example, should a horse be taken ill with purse after the octave of St Hilary or after the 15<sup>th</sup> day,

“3yf þat þe hors be takyn with þe maladi so mekyl þat he blowe so mekyl þat þe wynd come out bothe be-hynde and be-forn, whan þat he cowyt [cough] loke up-on hys crowpe riȝt aboue þe haunchys. And yf þer be tweyne smale pittis of þe larges of þe palme of þin hand þat betin upward and donward as þei it war smale belis, þe hors þat hath þat syne, ne tak hym noȝt on hande, for he may not ben holpyn wyth non medicyne”.<sup>271</sup>

Similarly, cattle suffering from the turn where the bladder was under the horn were thought to be past cure,<sup>272</sup> and likewise, a horse which had botts and was foaming at the mouth was also incurable.<sup>273</sup>

For all that symptoms were used to diagnose illness sometimes it was still not known from which ailment the animal was suffering. Thus sometimes there was uncertainty as to whether or not a hound was suffering from madness, in which case he was to be separated from the other hounds for three whole days; if he would not eat anything within this time, this was an indication that he had madness and should be killed.<sup>274</sup>

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<sup>268</sup> Although uroscopy was one of the principal forms of diagnosis in the Middle Ages, John of Arderne (1307/8-c.1377), who specialised in treating disorders of the lower bowel, advised inspecting faecal matter after the administration of clysters, John Arderne, *Treatises of Fistula in Ano, Haemorrhoids, and Clysters*, ed. D. Power, EETS 139 (London, 1910), 77. For further details on uroscopy, see, Rawcliffe, *Medicine and Society in Later Medieval England* (London, 1999), 46-50.

<sup>269</sup> ST, f.64r.

<sup>270</sup> METH, 89. See also *De animalibus*, 1378.

<sup>271</sup> BMO, 30-1.

<sup>272</sup> FBH, 56.

<sup>273</sup> ST, ff.63r-v.

<sup>274</sup> MG, 48-9.

It was important to be able to diagnose the ailment from which an animal was suffering, and it is interesting that in *The Master of Game* the majority of symptoms are for mange and madness, the two ailments of which there was great variety, suggesting that there was a need to be able to distinguish the variety from which the dog was suffering. Yet given the importance of being able to diagnose from which ailment an animal was suffering, the treatises give comparatively little information about symptoms, with rarely over 50% of ailments having such information [tables II.i-iv]. For example, of the forty-nine ailments named in *The Sothebe Treatise*, only thirteen of them have symptoms (27%); similarly, only ten of the forty-two ailments in *Prince Edward's Booke* are given symptoms (24%). In some treatises, however, proportionally more are to be found; thus in *The Proceis of Hawkyng* 46% of the ailments have symptoms. Indeed, of the sixteen ailments for sheep and cattle in Fitzherbert's *Husbandry*, fourteen of them have symptoms (88%). Although symptoms were not provided for all ailments, sometimes other information about the ailment was given, which may have helped to identify what it was. Thus an ailment might be physically described. For instance, filanders were "longe smale wormys w<sup>t</sup> rede hedes an ynch long",<sup>275</sup> whilst Fitzherbert informs us that lampas, which comes in the mouth, "is a thycke skyn full of bloude, hangynge ouer his tethe aboue, that he may not eate".<sup>276</sup> Similes could be used to help describe the appearance of an ailment; vives were described by Fitzherbert as "rounde knottes bytwene the skyn and the fleshe lyke tennes-balles".<sup>277</sup> Likewise, a sorew in the leg was "in þe manere of a greystil, it is as grete as an almonde and it growith vpon þe fore legge on þe innerside and in þe midle of þe legge".<sup>278</sup> In order to identify canker in birds of prey, one author advised to take the bird "and þu shall fynde hit in her mouthe in the syde off the cheke swart rede, as yt were a sacche".<sup>279</sup> Indeed, both *The Boke of Marchalsi* and *The Sothebe Treatise* relied more upon this method of description than on the giving of symptoms. Although further help was provided for those treating sick animals through the giving of

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<sup>275</sup> *HawkRemI*, 36.

<sup>276</sup> *FBH*, 65.

<sup>277</sup> *Ibid.*, 67. Such similes were also used to describe human ailments. For instance, when Boccaccio was describing the plague he noted that "its earliest symptom, in men and women alike, was the appearance of certain swellings in the groin or the armpit, some of which were egg-shaped whilst others were roughly the size of the common apple", Boccaccio, *Decameron*, 5.

<sup>278</sup> *ST*, ff.54r-v.

<sup>279</sup> *HawkRemII*, 43.

symptoms and descriptions, a large proportion of the ailments still remained without any further information: 100% in many recipe collections, 76% in the case of *Prince Edward's Booke*, 60% in *The Master of Game*, and 54% in the *Treatise on Horses*.<sup>280</sup> This indicates that on the whole prognostic skills were needed in those treating animals.

## Conclusion

Animals suffered from a variety of ailments in the Middle Ages, and although some only affected one particular animal, such as horses suffering from lampas or birds of prey from rye, many ailments were common to a variety of animals; swellings affected horses, birds of prey, dogs, and pigs, whilst foot ailments were problems recorded for horses, birds, dogs, cattle, and sheep. Murrain was another ailment which crossed the species barrier, although outbreaks were most commonly recorded amongst cattle, sheep, and pigs. The fact that various degrees of some ailments were shown, such as the seven types of madness, or various forms of frounce, indicates the meticulous observation of the authors and their ability to differentiate between conditions. The vast majority of ailments discussed in the treatises were external; although internal ailments were known, mention of these was far less frequent, and some were only mentioned in one treatise.

The nature of the sources means that more information survives for horses and birds of prey than for other animals. For example, an extensive vocabulary existed for horses, with different ailments of the foot being named, such as graveling, founder, loose hoof, and retrete; in contrast, more generic terms were employed for foot ailments of the dog, *The Master of Game* referring to hurt or bruised feet, and the *Practica canum* advising how to remove thorns. Whilst this may make it seem that many more ailments were suffered by horses and birds of prey, this was probably not the case. The fact that veterinary information upon horses and birds of prey was of

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<sup>280</sup> Veterinary treatises on the continent also differed in the amount of additional information provided. For instance, in his *Mulomedicina*, Theodoric of Cervia (thirteenth century) often prefaced his remedies with descriptions and symptoms, yet in the anonymous fourteenth-century treatise *Cirurgie des chevaux*, only remedies are given. See *Cirurgie des chevaux*; Theodoric of Cervia, *Pferdeheilkunde*, I; Theodoric of Cervia, *Die Pferdeheilkunde des Bischofs Theoderich von Cervia, Abhandlung II*, ed. G. Klütz (Berlin, 1936; inaugural veterinary dissertation, 1722); Theodoric of Cervia, *Die Pferdeheilkunde des Bischofs Theoderich von Cervia, Abhandlung III*, ed. W. Heinemeyer (Berlin, 1936; inaugural veterinary dissertation, 1743).

long-standing tradition, meant that a more extensive vocabulary could be built up. Nothing of such great proportions existed for other animals, and thus when ailments were discussed, as in Fitzherbert's *Husbandry*, these were more likely to be commonly seen ailments. The terminology used was also likely to be more general; a thorn in the foot was just that, without a name for this sort of injury. Yet just because an ailment was not named in a treatise this did not mean that an animal never suffered from it. For instance, lameness is not mentioned for any animal other than the horse, and yet it is inconceivable that this did not affect other animals; draught and plough oxen were surely equally as likely to suffer from lameness as a horse. Of course, evidence for ailments suffered by animals can be sought from sources other than veterinary treatises and hunting manuals, sources which can name ailments otherwise not mentioned, such as horses suffering from blindness or sheep from redeyll. The naming of such ailments, however, is infrequent, with the commonest being murrain. Indeed, references to sick animals out-with the treatises are overall somewhat sparse, and named illnesses sparser still.

Sickness could be brought about by a number of things. Although mediaeval thought about the composition of the animal's body centred around humoral theory, and that therefore an imbalance or corruption of the humours and their qualities could cause illness, far more often the cause of sickness was due to more practical influences. For instance, failing to take sufficient care of an animal could cause illness, whether through miskeeping, poor supervision, or not ensuring that equipment was put on properly. The giving of improper food was also problematical, whether this was too hot or cold, or something unsuitable for the animal which could not be properly digested. The function which an animal had in society could also be a factor in causing illness. For instance, working animals were at risk from accidents from the plough or cart, whilst carrying heavy loads could cause ailments such as corns. Yet it was not only manual labour which could harm an animal, for those horses and dogs employed in warfare were at greater risk of serious injury, if not, indeed, of being killed – although the sources are silent upon such matters regarding dogs. Other factors, too, could cause illness; infectious ailments could easily spread between animals, whilst constitution, conformation, and the age of an animal could affect its susceptibility to succumb to sickness. Interestingly, some ailments could be caused by a number of

different factors (thus farcy could arise from evil blood, being struck, or having a wound which had not healed), whilst conversely different ailments could arise from the same cause – in addition to evil blood causing farcy it could also cause scale, mange, and tortes.

It was the responsibility of those in charge of animals to determine when their animal was ill, which was done by means of observation; for any ill animal would have symptoms indicating it was unwell. Whilst most ailments manifested themselves physically upon the animal, through such things as hair loss or swellings, or through the behaviour of the animal, sickness could also be determined by examining the mutes and castings of birds of prey, or, less commonly, the urine and faeces of other animals. Although many symptoms were the same, such as scratching or loss of balance, this did not indicate that animals were all suffering from the same ailment; indeed, often different ailments were being indicated. For example, if a horse hung its head, and looked as though it was about to fall, this was a symptom of vives; yet a sheep which hung its head and quaked was suffering from the blood. Indeed, even in the same species symptoms could be very similar, for a sheep which hung its neck awry and limped was suffering from the wood-evil. Thus it can be seen that close observation had to be paid in order not to misdiagnose an ailment. Indeed, given that animals, unlike human patients, could not voice the fact that they were unwell, observing symptoms to determine the health of the animal was very important. Yet interestingly symptoms did not generally form a large part of the treatises. Although other information was sometimes supplied which would help with diagnosis, such as a physical description of the ailment, the lack of symptoms suggests that such treatises were intended for use by people who already had a working knowledge of the signs of illness, through experience with working closely with animals, and who therefore only needed suggestions for a remedy. In contrast, Fitzherbert's *Husbandry* gives symptoms for fourteen of the sixteen ailments for sheep and cattle. On the one hand this could suggest that his intended audience were gentleman-farmers, who were unlikely to have intimate knowledge of animal behaviour, but who might benefit from a more detailed self-help manual. On the other hand, the fact that it contains more detailed observation could be indicative that this was becoming more a feature of later works.

Overall, a variety of ailments were suffered, some of which were common between different animals. Although internal ailments were recognised, the majority of those dealt with were external. Many factors could cause illness, from the humours to accidents, and it was the responsibility of those in charge to determine when their animals were ill. Once an ailment had been identified, the appropriate treatment needed to be undertaken, which is discussed in the following chapter.

## Chapter 3

### The Treatment and Cure of Sick Animals

Once illness had been diagnosed, treatment could commence; for as was noted in *The Master of Game*, hounds suffering from web in the eye would “wexen blynde, but if a man take kepe þerto”.<sup>1</sup> This chapter therefore gives an overview of the nature of the remedies, and explores the types of cures available to animals (both surgical and non-surgical), the degree of concern shown for the animal, the efficacy of the treatments, the preparations and administration of medicines, the types of instruments available, and the *materia medica* used.

#### I.

#### “ffor þe bi-houeth to knowe what þou schalt do”: remedies and factors influencing treatment

For animals such as horses and birds of prey the large number of treatises and recipe collections meant that many remedies were available for the treatment of their numerous ailments. As such, it is not surprising that many of the sources contain the same remedy. For instance, a remedy for strangullion, where bread made from laurel berries was to be mixed with May butter and given to the horse, is to be found in three recipe collections.<sup>2</sup> Likewise, three different remedies for frounce can be found in various treatises and recipe collections.<sup>3</sup> Although some remedies were clearly taken from a common source, sometimes changes were made. For instance, the recipe collections in both British Library manuscripts Royal 17.A.XXXII and Arundel 272 have a remedy for malanders, which involved binding a plaster of honey and the ashes of an elder tree to the sore for a day and night, and then laying red dock root, which had been boiled in fresh grease, on the horse for two days and two nights, not allowing

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<sup>1</sup> MG, 51.

<sup>2</sup> *HorseRemII*, 93; BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>3</sup> One remedy, in which the frounce is cauterised and anointed with goose marrow can be found in *PEB*, 7; *PH*, 6-7; *MKSG*, 140; *HawkRem II*, 41. The second, where the sore was slit and the matter removed, before being anointed with balm (*bawme*) and populeon, is found in *PEB*, 7; *PH*, 7; *MKSG*, 141; *DT*, 22. The third remedy, where herbs, butter, honey, sugar, and spices were mixed together and given to the hawk to eat is found in *HawkRemII*, 45; *J.B.IV*, 138. The latter remedy is interesting because it stated that frounce grows in the stomach and not in the mouth. Perhaps the author believed this to be the origin of the ailment.

the horse to come near water.<sup>4</sup> The author of the treatise in *Horse Remedies II* also had access to this remedy, but decided to give it as two separate remedies, one a plaster of honey and ashes, the other a plaster of red dock.<sup>5</sup> Some changes were in the form of additions. A remedy for rye found in both *The Proceis of Hawkyng* and *The Percy Poem* recommended putting the juice of daisy into the nares of the bird;<sup>6</sup> yet two variations can be found. The author of *The Maner of Keping of Sparhauke and Goshauke* added that the juice of parsley roots could be used instead,<sup>7</sup> whilst in *Prince Edward's Booke* daisy juice was to be put into the nares of a goshawk suffering from rye, but parsley roots were to be used upon a sparrowhawk.<sup>8</sup> Similarly, one method of treating cray, as found in *The Durham Treatise*, was to anoint the bird's meat with powder of saxifrage mixed with butter.<sup>9</sup> Three other treatises gave the addition that powder of rue could be used instead,<sup>10</sup> whilst two also added honey to the mixture.<sup>11</sup> All five agreed that the ointment was to be kept in a box; only in *The Proceis of Hawkyng* was it not stipulated that the box was to be round.<sup>12</sup> Sometimes the changes made to a recipe involved performing it in a different order. A remedy for malanders, where parings of cheese were mixed with honey and laid as hot as possible to the sore, is found in both *Horse Remedies II* and British Library manuscript Cotton Julius D.VIII.<sup>13</sup> It is also found in *The Boke of Marchalsi*, but here the cheese was to be laid as hot as possible to the malander, which was then to be moistened with honey.<sup>14</sup> Variations such as these suggest not only that some remedies were in common circulation, but also that authors were adapting them to their own use, as they saw fit from their own experience.

It is clear, however, that sometimes changes in instructions were not deliberate, but rather a result of scribal error, resulting in very different treatment. For example,

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<sup>4</sup> BL MSS Royal 17.A.XXXII, f.129r; Arundel 272, f.63r.

<sup>5</sup> *HorseRemII*, 91.

<sup>6</sup> *PH*, 9; *PP*, 15. A similar remedy can be found in the *J.B. Treatise*, where daisy and honey were to be stamped together and put into the bird's palate, *J.B.I*, 110; *J.B.II*, 114; that in another version also included rue, *J.B.IV*, 137.

<sup>7</sup> *MKSG*, 141.

<sup>8</sup> *PEB*, 7.

<sup>9</sup> *DT*, 22.

<sup>10</sup> *PEB*, 7; *MKSG*, 141; *PH*, 10.

<sup>11</sup> *MKSG*, 141; *HawkRemII*, 41. The latter also included powder of spurge.

<sup>12</sup> *PH*, 10.

<sup>13</sup> *HorseRemII*, 103; BL MS Cotton Julius D.VIII, f.114r.

<sup>14</sup> *BMH*, f.54r. Although the directions indicate the cheese is to be laid to the malander, the rubric for the remedy reads "For the soreus [sorews]".

in the first and second versions of the *J.B. Treatise* the remedy for filanders involved washing the hawk's meat in mare's milk and the juice of southernwood, giving much saffron with the meat.<sup>15</sup> In the fourth version, however, the scribe has omitted the instruction to wash the meat, so that now it is the bird itself which is to be washed.<sup>16</sup>

The multiplicity of remedies available for ailments not only meant that many remedies were repeated in various treatises and recipe collections, but also that sometimes the remedies prescribed for the same ailment were very different. For instance, two remedies for eyes running with water in *The Boke of Marchalsi* advocated bleeding the horse, which in one remedy was to be followed by putting a juice in the eye;<sup>17</sup> in comparison, two of the remedies for tears in a horse's eye in the *Treatise on Horses* advocated compresses, one to be bound over the eyes in the evening, the other to be placed on the horse's shaven forehead.<sup>18</sup> Similarly, whilst cray could be treated by anointing the hawk's meat,<sup>19</sup> it could also be treated by means of a suppository.<sup>20</sup>

Although there were obviously many different remedies, it is noticeable that in the sources the majority of ailments have only one remedy [tables I.i-iv].<sup>21</sup> Given that there were more remedies available, this seems to suggest that the author was giving the remedy which he thought would best cure the ailment. Indeed, the method of treatment could be a very personal matter, for as Albertus Magnus (1193-1280) remarked, "Some men, however, following differently the words of the falconers of the Emperor Frederick concerning the cures of falcons, have defined [them] thus".<sup>22</sup> Similarly, after giving his remedy for pox in sheep, John Fitzherbert (d.1531) noted that "some sheperdes haue other medycines".<sup>23</sup> Yet sometimes multiple remedies were offered by the author. This may have been in order to provide an alternative should one remedy fail to work; thus the author of *The Boke of Marchalsi* advised washing fy with a herbal infusion should washing with milk fail, advice which may

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<sup>15</sup> *J.B.I*, 111; *J.B.II*, 114.

<sup>16</sup> *J.B.IV*, 138.

<sup>17</sup> *BMH*, ff.19r-v.

<sup>18</sup> *METH*, 141, 143.

<sup>19</sup> *PH*, 10; *PEB*, 7; *DT*, 22; *HawkRemII*, 41-2; *MKSG*, 141.

<sup>20</sup> *HawkRemI*, 32; *PP*, 15.

<sup>21</sup> *The Sothebe Treatise* is somewhat unusual for a veterinary treatise in consistently giving only one remedy for each ailment.

<sup>22</sup> *De animalibus*, 1478.

<sup>23</sup> *FBH*, 49.

have arisen from personal experience.<sup>24</sup> In some instances, however, the giving of an alternative remedy was a deliberate act of providing an alternative means of curing the ailment. For example, the author of the *Treatise on Horses*, when discussing dead flesh, stated that “ȝif þou wilt haue out þe wicked flesche with-oute keruyng or brennyng þen schalt þou make such a poudur”, which was followed by remedies for various powders.<sup>25</sup> Likewise, *The Boke of Marchalsi* also contained a remedy for a powder so that “men may do away ded flesch wythout keruyng”.<sup>26</sup> Powder was probably recommended as an alternative because it was less intrusive than surgical intervention, and was therefore less risky.

Interestingly, some ailments were not cured simply by one method of treatment, but by a combination of treatments. For example, one manner of curing cray in birds of prey was to first rub their fundament, and then give them meat to eat which had been anointed with herbs and butter.<sup>27</sup> Likewise, hounds suffering from exertion after the hunt were to have all the soil shaken off them, before their feet were washed in cold water and then anointed with soap.<sup>28</sup> [See fig. 9, where a hound is having his feet bathed.] Using a combination of treatments, however, was most common upon horses. Thus a horse suffering from a combe was first to have it garsed with a knife or razor, before pork, powdered with salt, was laid to it at night,<sup>29</sup> whilst one suffering from lacerated sinews was first to be bathed in a mixture of wood ashes and warm water, before some of the best of it was bound to the sore; in addition the sore was also to be anointed and rubbed well.<sup>30</sup> Most often, though, combinations of treatments were to be found when surgical intervention was involved.<sup>31</sup> As Y. Poulle-Drieux points out, the act of using combined methods probably had one of two effects; it either obtained a cumulative effect in order to help cure the ailment, or it

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<sup>24</sup> *BMH*, f.35v.

<sup>25</sup> *METH*, 123-27. One remedy which is referred to as a powder, however, was probably more like a paste, for egg-white and old soap (“blak is þe bettere”) were to be mixed together until all one colour, before unslaked lime was added until “it be sumdel þicke”, the ‘powder’ then being laid upon the dead flesh, *ibid.*, 123.

<sup>26</sup> *BMH*, f.57v. This remedy is also found in *METH*, 125. Compare to *De animalibus*, 1389.

<sup>27</sup> *PH*, 9-10; *PEB*, 7; *DT*, 22; *MKSG*, 141. Rubbing the fundament is omitted in *HawkRem II*, 41-2.

<sup>28</sup> *PC*, f.187r.

<sup>29</sup> BL MS Sloane 3285, f.88v.

<sup>30</sup> *METH*, 135.

<sup>31</sup> See below, 115.

allowed the body of the animal to choose the most appropriate therapeutic treatment.<sup>32</sup>

Although remedies for the same ailment could be different, sometimes common themes united them. For instance, of the twenty remedies for paynes only two were not plasters to be laid to the sore.<sup>33</sup> Likewise, a remedy for mange found in three recipe collections recommended making a great fire about the horse, and then applying the ointment;<sup>34</sup> in another treatise, although the ointment is composed of different ingredients (and the horse is to be groomed beforehand with a horse comb), it was to be applied either in the sun or by a fire.<sup>35</sup> Thus authors recognised that warmth was beneficial in the cure of mange, and not just when curing horses; a hound suffering from quick mange was also to be anointed “bi þe fire or at þe sone”.<sup>36</sup> The heat from the fire caused the animal to sweat, opening the pores of the skin, and allowing the ointment easy access to the parasites causing the mange.<sup>37</sup>

Some remedies were thought to be effective against more than one ailment. For example, a plaster (entrete) for sorews made of eisel, verdegris, and arnement was “good for þe ryngbon & for þe spaweyn”.<sup>38</sup> Indeed, this may also have been effective against farcy, for a plaster composed of these ingredients is given in British Library manuscript Arundel 272 “For all maner of farcens”.<sup>39</sup> Likewise, the author of *The Percy Poem* noted that his remedies for rye, cray, and founce were also good for farcy and aggeleons,<sup>40</sup> whilst according to *The Master of Game* the ointment for flying mange was not only “merueylous and good and trew” for this ailment, but was also effective against “þe canker and fistoles and farsyns and oþer quyk euelis þe which ben hard to

<sup>32</sup> Y. Poulle-Drieux, ‘L’Hippiatrie dans l’Occident Latin du XIII<sup>e</sup> au XV<sup>e</sup> Siècle’, in G. Beaujouan *et al.*, *Médecine Humaine et Vétérinaire à la Fin du Moyen Âge* (Paris, 1966), 68.

<sup>33</sup> One recommended washing, the other an ointment. See BL MS Royal 17.A.XXXII, f.128r; BodL MS Digby 29, f.6v.

<sup>34</sup> BL MSS Royal 17.A.XXXII, f.128r; Cotton Julius D.VIII, f.114r; *HorseRemII*, 94.

<sup>35</sup> *METH*, 101.

<sup>36</sup> *MG*, 50.

<sup>37</sup> See Miller and West, *Veterinary Dictionary*, 93.

<sup>38</sup> BL MS Cotton Julius D.VIII, f.113v. The same remedy can be found twice in *Horse Remedies II*, first under the rubric “For ye sorews”, and then “For ryngbon”. The first entry gives no indication that the remedy was good for other ailments, *HorseRemII*, 102-03. In BL MS Royal 17.A.XXXII, f.129v, although the ingredients differed, the plaster was still good for ringbone and spavin; a plaster for sorews found in *The Boke of Marchalsi* was also good for the ringbone, *BMH*, f.53v-54r.

<sup>39</sup> BL MS Arundel 272, f.63r.

<sup>40</sup> *PP*, 24. An ointment found in both *Prince Edwardes Booke* and *The Proceis of Hawkyng* for the cray, which was to be applied to the bird’s meat, would also keep the bird from other sicknesses, *PEB*, 7; *PH*, 10.

hele in oþer beestes".<sup>41</sup> Similarly, *The Boke of Marchalsi* claimed that the liquid prescribed for galls should be used for windgalls; indeed,

þou mayst sauē eueri spaueyn whan þat it is ferst wexende and eueri carbe and eueri ringbon in þe beginnyng and also þou mayst abatin þe viues wyth þe same licour til þat þou come to a mayster þat can hele hym and also wyth þe same licour þou mayst abatyn þe soros of an 3ong hors whan þat it is ferst wexende.<sup>42</sup>

Interestingly, a remedy recommended for both rye and to break the panell was to be prepared in the same manner, but administered differently. Thus whilst a bird of prey suffering from rye was to be held over the herb-infused water so that she could breath in the fumes, a bird suffering from the panell was to be given meat which had lain in the water.<sup>43</sup>

Although in the above examples it was clearly stated that the remedy was effective against other ailments, this was not always the case. For example, *The Sothebe Treatise* gave essentially the same remedy for ringbone, a sorew in the leg, and for a splint. The remedy for ringbone ran as follows: "take a grete onyon pyle away þe core. Put þerto a sponefull of vnslekyd lyme [and] iiij peny weight of vertgrece. Put it into þe onyon and couere it. Set it in þe hote emerys tyll þe onyon wexe softe and braye all this togidire. Ley it al hote to þe sore".<sup>44</sup> The only difference in the other remedies was the ingredients to be added to the onion; thus that for the sorew was to have one spoonful of honey, four pennyweight of verdigris, and one quarter of a pound of unslaked lime,<sup>45</sup> whilst the remedy for a splint contained one spoonful of unslaked lime, four pennyweight of verdigris, and a spoonful of lavender seeds.<sup>46</sup> As all three ailments were some form of hardness on the horse's leg, it is thus not surprising that virtually the same remedy was suggested for each.

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<sup>41</sup> MG, 50.

<sup>42</sup> BMH, ff.49r, 49v.

<sup>43</sup> *HawkRemII*, 47.

<sup>44</sup> ST, f.53v. The version found in *HorseRemI*, 77, added half a spoonful of honey, and stipulated that only one quarter of a spoonful of unslaked lime was to be used.

<sup>45</sup> ST, f.54v. The version in *HorseRemI*, 78, whilst listing the same ingredients, stated that only half a spoonful of honey was to be used, and only one quarter of a spoonful of quick lime (unslaked lime).

<sup>46</sup> ST, f.54v. Again, the amounts of the ingredients in the *HorseRemI*, 79, differed, whilst half a spoonful of honey was to be added.

Remedies were not always restricted to one animal, but could sometimes cross the boundaries of animal species. For example, if frounce swelled into a tumour, it was to be cut out and the hole filled with sheep salve.<sup>47</sup> Dogs which were suffering from malemort were to be cured by means of fumigation, which was “good for an hors, whan he haþ glaundres strongly commyng out þe nose”.<sup>48</sup> Indeed, some remedies could be used on both animals and humans. Thus a hound suffering from constipation was to have the root of a cabbage covered in olive oil inserted into his rectum; should this fail, he should be made a clyster “as men doon to a man”.<sup>49</sup> Not only was the cabbage root of a shape to fit the rectum, and thus distend it,<sup>50</sup> but the olive oil was a lubricating agency, thus helping the faeces to be passed. Just as this remedy could be used on both hound and man, so too was the remedy for ailments to the testicles “a wel goode þing for a man or for an hors that haþ þis sekenesse”.<sup>51</sup>

When treating an animal for illness, certain factors had to be taken into account. For instance, just as the humoral make-up of an animal affected the ailments from which it suffered,<sup>52</sup> so too did it influence the kind of treatment which the animal received. Thus Albertus Magnus wrote that those birds which had a melancholic complexion were to be medicated with hot substances, “such as pepper, aloe, *paulinum*, and of this sort”;<sup>53</sup> phlegmatic birds should be given warm and dry things like “pepper, cinnamon, galingale, and the like”, whilst hot-blooded birds were to be given cold, moist medicine, such as cassia and the pith of tamarind, both of which should be given in vinegar.<sup>54</sup> Such a diet was based upon the notions of opposites, an idea which was also found in human medicine – the Hippocratic *Regimen for Health* stated that moist people should be on a dry diet, whilst dry people should eat a moist diet.<sup>55</sup> As already noted, English treatises make comparatively little

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<sup>47</sup> *HawkRemI*, 27. For further discussion on sheep salve, see below, 186-87.

<sup>48</sup> *MG*, 53.

<sup>49</sup> *Ibid.*, 54-5. The compilation version of the *Practica canum* also advised that a suppository would help, if the excrement was not hardened too much, *Practica Canum*, 84.

<sup>50</sup> Boor-van der Putten, “Maladies de Chiens”, 69.

<sup>51</sup> *MG*, 57. For the remedy, see below, 168-69.

<sup>52</sup> See above, 77-80.

<sup>53</sup> For the problems of translating this list of words, see Albertus Magnus, *On Animals*, 1596 n.202.

<sup>54</sup> *De animalibus*, 1473. The notion of medicating birds of prey according to their humoral make-up was long-standing, having been advocated in the twelfth-century treatise attributed to Dancus Rex, *Dancus Rex*, 86-8.

<sup>55</sup> *Hippocratic Writings*, ed. G.E.R. Lloyd, tr. J. Chadwick, *et al.* (London, 1983), 273.

mention of the humours compared to their European counterparts,<sup>56</sup> and thus the effect of humoral make-up upon treatments is nowhere overtly stated. Yet there is evidence to suggest that English authors were aware of such factors. The author of *Prince Edward's Booke*, for instance, in the remedy for rye, distinguished between the sparrowhawk and goshawk, the former being cured with parsley roots, the latter with daisy.<sup>57</sup> Such a distinction may have been influenced by the humoral make-up of the birds, even though this is not stated.<sup>58</sup>

Other factors, too, played a part in the treatment of animals. Sometimes the sex of an animal meant that the treatment was to be varied. For instance, should a stallion be afflicted by farcy, one remedy was to bind a charm, addressed to St Nicasius, in the horse's right ear; should a mare be suffering from the ailment, however, the charm was to bound in the left ear.<sup>59</sup> Likewise, a remedy for curing dim eyes in a horse used the milk of a woman which had a male child when curing a stallion, but milk of a woman with a female child when treating a mare, thus showing notions of sympathetic correlations.<sup>60</sup> The age of an animal also had an effect. For instance, a horse could be cured of galls in three weeks, but this could be sooner “3yf þat þe hors be 3ong”.<sup>61</sup>

The physical condition of an animal also had an effect on illness and what treatment could be given. For example, lice and vermin in birds of prey were commonly treated with powdered orpiment, which was blown onto the bird via a feather,<sup>62</sup> but one treatise stipulated that if the bird was in poor condition powdered

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<sup>56</sup> See above, 80.

<sup>57</sup> *PEB*, 7.

<sup>58</sup> The birds, however, were very similar in appearance, F.H. Salvin and W. Brodrick remarking that the sparrowhawk “might be fairly called its [the goshawk's] miniature portrait”, and thus any difference in humoral make-up would not be evidenced by their feathers, as noted by Albertus Magnus, Salvin and Brodrick, *Falconry*, 111; see above 77-8.

<sup>59</sup> CUL MS Dd.4.44, f.28v, cited in *IMEP XIX*, [9]. I am grateful to M. Connolly for providing me with a draft copy of the entry for this manuscript. Numbers in square brackets refer to the item number regarding the manuscript cited. The charm was to be bound in the ear from “the Saturday afore sonne goynge downe” until “þe mounday afore sonne risynge”, a three-day period reminiscent of Christ's death and resurrection, M. Connolly, ‘Practical Reading for Body and Soul in Some Later Medieval Manuscript Miscellanies’, *Journal of the Early Book Society for the Study of Manuscripts and Printing History* 10 (2007), 153. My thanks to M. Connolly for drawing my attention to this article.

<sup>60</sup> *METH*, 143.

<sup>61</sup> *BMH*, f.49r.

<sup>62</sup> *DT*, 32; *HawkRemI*, 27; *PH*, 25. According to *The Percy Poem* the orpiment was to be applied with paper laid under the bird's feathers, *PP*, 16. No such directions are given in the *J.B. Treatise*, *J.B.I*, 110; *J.B.II*, 114; *J.B.IV*, 138.

pepper should be used instead, for this was less dangerous than orpiment, which could maim the bird.<sup>63</sup> Indeed, the author of the treatise found in *Hawk Remedies I* claimed that those birds in poor condition would “neuyr recefe no maner of medycyn wele”.<sup>64</sup>

Some remedies had a seasonal element. In *The Boke of Marchalsi* the remedy for glanders involved putting a sheepskin around the horse’s throat if it was winter,<sup>65</sup> whilst the remedy for pox in sheep in John Fitzherbert’s (d.1531) *Husbandry* advised washing the sheep if it was summer, as there was no frost.<sup>66</sup> Indeed, the frequency of bathing birds of prey was also affected by the seasons; washing was to be undertaken every third day in the summer, but only once a week in winter, “if it be fayre wether”.<sup>67</sup>

Interestingly, the author of the *Treatise on Horses* believed that it was important to have knowledge about the cause and development of sores:

For þe bi-houep to knowe what þou schalt do in þi bigynnyng, & what in þe mydward þat is þe standyng & whar in þe fallyng. And of euereche cause whereþrouz a sore gendreþ. And nameliche of swellynges for þei wol gendre in dyuerse lymes for dyuerse enchesonus [reasons]. And þerfore but þat þe be holpe with resonable helpes many periles & ofte-syþes incurabeles may falle þer-of.<sup>68</sup>

Such knowledge was important because a cure had to be performed accordingly. For example, in the beginning of a horse suffering from radunculus, if this was due to a great abundance of blood, the horse was to be bled on the opposite side: if the sore was in the lower side of the right half, then blood was to be let on the upper half of the right side; if the sore was on the upper half, then the horse was to be bled in the lower half. Should the sore “be in standyng or ellus in fallinge”, then blood was to be let in the next limb of the same half.<sup>69</sup>

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<sup>63</sup> *HawkRemI*, 28. According to Adelard of Bath (c.1080-c.1152), “If [the bird] has lice and is fat, there is no harm”; only if the bird was thin did she need treatment, *AT*, 254. A thin bird was probably in a weakened state, to which the lice were contributing, and thus it was imperative to get rid of them.

<sup>64</sup> *HawkRemI*, 26.

<sup>65</sup> *BMH*, f.22v.

<sup>66</sup> *FBH*, 49.

<sup>67</sup> *PH*, 8. *The Durham Treatise* also recommended every third day in summer, but only specified that in winter it was not to be as often as summer, *DT*, 26.

<sup>68</sup> *METH*, 137-39.

<sup>69</sup> *Ibid.*, 139.

## II.

### “And þou shalt keruyn þe veynis”: the treatment of ailments by surgical intervention

The treatment of some ailments was done by means of surgical intervention, yet it is noticeable that such procedures were in a minority; for example, of the seventy remedies in *The Proceis of Hawkyng*, only six (9%) involved surgical procedures, whilst only one (6%) is found amongst the seventeen remedies given in the *Practica canum*.<sup>70</sup> Indeed, none are found in the second version of the *J.B. Treatise*, whilst the other two versions have only one each – picking out frounce from the mouth.<sup>71</sup> More instances of surgical treatment are to be found in those treatises dealing with the horse, but even so, they occur in less than half of the remedies [tables V.i-iv]. The overall paucity of surgical procedures in the sources is perhaps not only reflective of the fact that many ailments could be treated without means of surgical intervention, but also of the fact that surgery carried with it greater risks, and was therefore to be avoided if possible. Indeed, invasive surgery required delicacy in the performance of procedures, whilst there was a danger of errors occurring, and thus it carried far more risks than practices such as cauterization, garsing, or cupping; the only surgical procedures of an invasive nature to be employed on animals were the applications of setons, rowels, and stylots, which were themselves used infrequently [tables VI.i-iv].

The main surgical procedures carried out on animals in late-mediaeval England were phlebotomy and cauterization,<sup>72</sup> although other procedures involving cutting were also common. Surgical procedures were more common in horses than other animals, although even for the horse it was rare to find surgery as the sole remedy for an ailment. For example, of the ninety-seven remedies in the *Treatise on Horses*, only fifteen (15%) were purely surgical, whilst of the sixty-five remedies in *Horse Remedies II*, only one (2%) was so [tables V.i-iv.] Indeed, of the five sources dealing with birds of prey to contain purely surgical remedies, only one was over 3%. In contrast, four (22%) of the sixteen remedies in Fitzherbert’s *Husbandry* were purely surgical. Whilst

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<sup>70</sup> The compilation version of the *Practica canum*, however, contains an additional instance of surgical treatment, namely bloodletting for those dogs suffering from impetigo or mange. See *Practica Canum*, 86. This is also recommended in *De animalibus*, 1365.

<sup>71</sup> *J.B.I*, 110; *J.B.IV*, 138.

<sup>72</sup> The primary principles behind phlebotomy were to either purge excess or noxious humours from the blood, or to redress the balance of the humours; cauterization was employed to either burn or to provoke a reaction.

some of the ailments, such as dewbolne and turn, were in need of surgical intervention, this may also be indicative of surgical practices becoming more common by the sixteenth century. It was more common to find surgery as part of the overall treatment. For example, a horse suffering from swelling of the testicles was not only to be bled between the hips, but was also to have a plaster applied to his testicles,<sup>73</sup> whilst a hawk suffering from rheum called agrum was to have its nostrils cauterised, which were then to be anointed with olive oil.<sup>74</sup> Although there was a general lack of surgical procedures, some treatises had a higher proportion than others. For instance, 50% of the remedies in both *The Boke of Marchalsi* and Fitzherbert's *Husbandry* included surgery, whilst 47% of those in *The Sothebe Treatise* did. In contrast, only 14% of those in *Horse Remedies II* included surgery, whilst hawking treatises generally had a lower proportion of surgical remedies; for example, 12% in *Hawk Remedies I*, and only 10% in *Prince Edward's Booke*. The general paucity of surgical treatment in birds of prey compared to other animals is perhaps related to their smaller size.

Of all the surgical procedures, that of phlebotomy was the most commonly used, and most often upon horses [tables VI.i-iv]. The popularity of phlebotomy as part of the remedy for horses may reflect the belief that horses were prone to an excess of blood.<sup>75</sup> Indeed, when ailments were thought to be caused by an excess of blood, bleeding was recommended: "The farcyon cometh of a grete habundance of blode. Perfor take & let him blode an handfull from þe hed in þe necke, & on bothe sides".<sup>76</sup> Similarly, a horse suffering from a rotten torte was only to be let blood for a third time if it was necessary, "þat is to say, þat blod be enchesoun [the cause], or ellus oþer humours, whereþroȝ þe torte schold al-wei gendre".<sup>77</sup> J. Brand noted the superstition in England, on St Stephen's day (26 December), of exercising horses until they sweated, and then taking them to smiths (*fabri*) to be bled, which was thought to

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<sup>73</sup> *HorseRemII*, 92-93; BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r. The horse was also to assail a mare and be given no provender.

<sup>74</sup> *PH*, 44.

<sup>75</sup> The author of *The Boke of Marchalsi* believed that the horse was the animal which had most blood. See *BMO*, 8.

<sup>76</sup> *ST*, f.55v.

<sup>77</sup> *METH*, 117.

protect them from dying in the forthcoming year.<sup>78</sup> Indeed, amongst the receipts and disbursements of the canons of St Mary, Huntingdon, for 1517 was an entry detailing the expense of 4d “for letting our horses blede in Chrystmasse weke”.<sup>79</sup> The veterinary sources here under discussion have little evidence that preventative blood-letting was carried out; the only indication of such a procedure was the bleeding of horses in a remedy for caring for horses in old age.<sup>80</sup> On the continent, however, this practice was certainly undertaken. For example, the thirteenth-century Italian surgeon Theodoric of Cervia recommended bleeding the horse on the palate every month when the moon waned,<sup>81</sup> whilst Guillaume de Villiers recommended in his untitled treatise (dated 1456) bleeding the horse on the neck vein every month, as this would protect his eyes from the wind.<sup>82</sup>

Phlebotomy was not only a popular remedy for horses, but also appears to have been commonly used on livestock; of the sixteen remedies given in Fitzherbert’s *Husbandry*, four remedies advocated the use of phlebotomy.<sup>83</sup> Interestingly, at Tavistock Abbey in the late-fourteenth to early-fifteenth centuries the cattle, once their working life was over, were fattened, bled in the same way calves were bled for veal, and finally killed.<sup>84</sup>

There were various parts of the body from which animals could be bled, including the temples, under the eye, in the nostrils, in the neck, under the wing, on the thigh or legs, and on the feet.<sup>85</sup> The site of the bloodletting could often be dependent upon the location of the ailment. Thus a horse suffering from watery eyes was to be bled from a vein beneath the eye, whilst those suffering from lameness were to be “let blood on the flat of the leg above the knees”.<sup>86</sup> Similarly, birds of prey were

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<sup>78</sup> J. Brand, *Observations on the Popular Antiquities of Great Britain*, revised H. Ellis, 3 vols. (London, 1849), I, 532-33. St Stephen was commonly considered to be the patron saint of horses, *Studies on Alchemy*, 123-24.

<sup>79</sup> Cited in Brand, *Popular Antiquities*, 534. Perhaps the expenses of bleeding horses at Durham Cathedral Priory in 1509-10 and 1511-12 are representative of preventative bleeding, *DAR*, II, 661, 662.

<sup>80</sup> *BMO*, 12.

<sup>81</sup> Theodoric of Cervia, *Pferdeheilkunde*, I, 46.

<sup>82</sup> Guillaume de Villiers, cited in Poulle-Drieux, ‘L’Hippiatrie’, 135.

<sup>83</sup> *FBH*, 47, 49, 53, 54.

<sup>84</sup> Finberg, *Tavistock Abbey*, 133.

<sup>85</sup> Y. Poulle-Drieux notes that in Latin and French veterinary treatises the jugular vein was the one of preference, from which the volume and situation facilitated the operation, Poulle-Drieux, ‘L’Hippiatrie’, 100. Although horses, and other animals, were bled in the neck, there does not appear to have been a preference for this vein in England.

<sup>86</sup> *BMH*, ff.19r, 44r.

also to be bled near the site of the ailment; a hawk with cold cramp in the wing was to be bled beneath the wing, whilst those suffering from hot cramp in the feet were to be bled in the ball of the foot.<sup>87</sup> Murrain in cattle was thought to be caused by “a ranknes of bloudde, and appereth most commonly fyrste in the heed”, and thus in order to protect them from the disease Fitzherbert recommended bleeding them in the neck.<sup>88</sup> Sometimes, however, bleeding was to be done on the opposite side of the body to the ailment, as upon a horse suffering from radunculus.<sup>89</sup> Indeed, although there are no examples in the mediaeval English sources, some continental treatises contained images of horses showing the points from which they could be bled [fig. 10]. *The Sothebe Treatise*, however, does contain a list of places from which horses were to be bled:

To lete blood, þe furst place is on þe ij vaynes vnder þe hors jyen, and bitween his nostrellis, and in þe mouth and in þe neck an handebrede from þe hede, and in þe ij schakyll veynes and on bothe grete veynes vnder both sides, and on þe ij braunche veynes vnder bothe sides, and on bothe grete veynes vnder bothe sides. And on þe ij braunche veynes þ<sup>t</sup> cometh from the membrys. And on þe ij grete veynes þ<sup>t</sup> cometh from þe membres. And in þe ij grete veynes vnder þe tayll.<sup>90</sup>

There were often detailed instructions on locating the vein to be bled. For example, when bleeding a horse for canker on the tongue, upon lifting the tongue three veins lying together over a space the size of a thumb would be seen, a very visual description; those two veins next to the sides were to be bled, but should no blood come from them, then the vein in the middle was to be cut. Care was to be taken, however, that the middle vein was cut lengthwise, and not sideways as the other two veins, “For 3yf þat þou do, peraenture þou sholdist not staunche it whan þat þou woldist”.<sup>91</sup> Similarly detailed instructions are found in *Hawk Remedies I* for a hawk suffering from cold cramp in the wing: upon lifting up the wing a great vein going out of the wing into the body would be seen, which was to be pricked, but not too far in,

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<sup>87</sup> *HawkRemI*, 30-1. A bird suffering from cramp in the leg or foot was to have blood taken from both legs, *PH*, 38.

<sup>88</sup> *FBH*, 53-4.

<sup>89</sup> See above, 113.

<sup>90</sup> *ST*, f.65r.

<sup>91</sup> *BMO*, 28.

and bled a good while half an egg-shell full.<sup>92</sup> *The Master of Game* stated that hounds suffering from a chill were to be let

blood on the iiij legges of þe forlegges in þe joyntis withinne the legge, of þe hynder legges men shuld lat hem blood in þe voynes þat gon ouerwete abouyn þe hokkes in þat oþer side, and in þe hynder legges men may wel see cleerly þe veynes þat I speke of an also in þe for leggis.<sup>93</sup>

Indeed, Albertus Magnus told how to make the vein stand out. Should a bird be suffering from a fever, the falconer was to bind tightly the right leg of the bird, “and then in the middle of the leg a vein will appear”, a description which is again very visual.<sup>94</sup> In a similar manner cattle suffering from murrain were to have a “curteyne-corde” bound tight about their neck, which would “cause the bloudd to come in-to the necke”; the animal could then be bled in a vein on either side of the neck “that a man may fele with his fynger”.<sup>95</sup> Such instructions suggest detailed observation in the process of application, almost like a step-by-step guide. This degree of detail, however, was necessary, being testimony to the delicacy of these procedures, where a false move or cut could have serious consequences. Yet bleeding was not always done by means of cutting the vein; in the *Treatise on Horses* one method of bleeding a horse suffering from radunculus was to use a ventose, a form of bleeding which was also recommended in *The Master of Game*, for the bite of a mad hound.<sup>96</sup>

Sometimes the vein to be bled was named. Thus a hawk suffering from artetik was to be bled in the “origynal vyne” (the jugular vein),<sup>97</sup> whilst “þe hoote crampe veyne” was named in a remedy for hot cramp in hawk – although in the preceding remedy for cold cramp, where the bird was bled in the same manner, the directions were simply to bleed the bird from the “grete vein” which went “owte of þ<sup>e</sup> wyng in to þ<sup>e</sup> body”.<sup>98</sup> Indeed, the vein to be bled was often simply called the great vein: a horse suffering from swelling of the testicles was to be bled on the great vein between the

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<sup>92</sup> *HawkRemI*, 30-1.

<sup>93</sup> *MG*, 54.

<sup>94</sup> *De animalibus*, 1490.

<sup>95</sup> *FBH*, 54.

<sup>96</sup> *METH*, 139; *MG*, 49.

<sup>97</sup> *PH*, 40.

<sup>98</sup> *HawkRemI*, 30-1. It is probable that the author was calling the same vein by two different names.

hips;<sup>99</sup> the great vein of the breast was to be bled for horses suffering from brest or founder;<sup>100</sup> and a horse suffering from kmory was to be bled “in þe ij grete veynes vndre the tonge”.<sup>101</sup> The simplicity of calling most veins the ‘great vein’ suggests that the veins referred to were common knowledge, or that they were the most visible or pronounced on the animal’s body. After all, the treatises were intended not only for practical use by professionals such as falconers, hunters, and marshals, but also by the gentry with an interest in such matters. Although such persons may have had some anatomical knowledge, the main concern was treating the animal, not correctly being able to identify the body parts by their proper name, and thus simple, but visually detailed, descriptions were of much better use.

The amount of blood to be let could vary. In *The Boke of Marchalsi* a horse suffering from low was to be bled a pottle in the tail, whilst a quart was the amount recommended for those suffering from vives and lameness in the knees or above.<sup>102</sup> Cattle suffering from murrain were only to be bled half the amount: “and let hym blede the mountenance of a pynte or nyghe it”.<sup>103</sup> Measurements were not always of an exact nature. For instance, a hawk suffering from cold cramp was to be bled “halfe a negge schell full”.<sup>104</sup> Sometimes, however, the amount to be bled was more imprecise. A horse suffering from mange was to be bled on the neck “waye myche”,<sup>105</sup> whilst one author advised bleeding a horse for malanders “as longe as þe blode wyl ryn”.<sup>106</sup> The author of the *Treatise on Horses* noted that a horse suffering from many fikes was to be bled as his age and strength would allow.<sup>107</sup> Although no further details are given as to what these might be, Theodoric of Cervia (thirteenth century) did supply more information, when discussing an abundance of blood: strong horses or those aged five years or more were to be bled three or four pounds in weight, whilst weak horses or

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<sup>99</sup> *HorseRemII*, 92; BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>100</sup> BL MSS Cotton Julius D.VIII., f.114r; Royal 17.A.XXXII; f.128v; *BMH*, f.56v.

<sup>101</sup> *ST*, ff. 59v-60r.

<sup>102</sup> *BMO*, 38; *BMH*, ff.21v; 44r. *The Boke of Marchalsi* is the only veterinary treatise to give exact measurements for the bleeding of horses.

<sup>103</sup> *FBH*, 54.

<sup>104</sup> *HawkRemI*, 31. Although not exact, the measurement was very domestic.

<sup>105</sup> BodL MS Ashmole 1444, p.300.

<sup>106</sup> BodL MS Digby 29, f.298v.

<sup>107</sup> *METH*, 113.

foals were only to be bled one pound and a half, or two pounds.<sup>108</sup> Often, however, no fixed amount was given, the instructions merely saying that the animal was to be bled, thus indicating that those undertaking the operation were expected to be familiar with the correct amount to bleed their animals, or were to use their own judgement in the process.

As indicated above, another popular surgical treatment was cauterisation. Whilst this method of treatment was not as popular as phlebotomy for horses and livestock, it was used slightly more often than phlebotomy on both birds of prey and dogs [tables VI.i-iv]. Just as the site of phlebotomy was dictated by the ailments, so too were the sites of cauterisation. Thus a horse with a hurt shoulder was to be cauterised on the shoulder,<sup>109</sup> whilst one suffering from sores was to be cauterised on the vein of the leg, above the knee.<sup>110</sup> A hawk suffering from the rheum called agrum was to have its nostrils cauterised,<sup>111</sup> and cattle suffering from the early stages of warrybreds, where the ulcers were flat, were to have a hot iron applied, searing them to the bare skin.<sup>112</sup> Unlike phlebotomy, however, none of the English treatises or recipe collections give descriptions of the beneficial sites for cauterisation. Yet Albertus Magnus wrote of four sites of cauterisation which the ancient Greeks recommended for birds of prey:

the first cauterisation should be made beneath the tear duct of the eye: for this profits its vision. The second is made on the top of the eye, and profits the head. The third is made above the joint of the wing, and is powerful against gout. The fourth is made on the sole of the foot, similarly against gout of the legs.<sup>113</sup>

Cauterisation could be used for different reasons. Sometimes it was the means of getting rid of the ailment itself. For instance, fikes could be cauterised with hot balls of

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<sup>108</sup> Theodoric of Cervia, *Die Pferdeheilkunde des Bischofs Theodorich von Cervia, Abhandlung III*, ed. W. Heinemeyer (Berlin, 1936; inaugural veterinary dissertation, 1743), 26. These amounts are given by Albertus Magnus when discussing bleeding horses which have lost their desire to eat, *De animalibus*, 1379.

<sup>109</sup> *METH*, 131.

<sup>110</sup> *BMH*, f.47r. The sores themselves were also to be burned, *ibid*, f.47v.

<sup>111</sup> *PH*, 44.

<sup>112</sup> *FBH*, 57.

<sup>113</sup> *De animalibus*, 1478. Compare to *Dancus Rex*, 104. The listing of beneficial sites for cauterisation is comparable to some surgical texts for humans. See Lanfranc of Milan, *Lanfrank's "Science of Chirurgie"*, ed. R. von Fleischhacker, EETS 102 (London, 1894), 308-12.

ground horehound,<sup>114</sup> whilst the botches made by farcy could be burned in the middle with a hot iron.<sup>115</sup> Cautery could also be employed prior to the application of a plaster. For example, a horse suffering from farcy in fleshy sites was to have the area shaved and cauterised before the plaster was laid to it,<sup>116</sup> whilst a remedy for sorews advised burning the hair of the horse, but not the skin, so that a plaster could be laid to the bared skin.<sup>117</sup> Indeed, the hot cautery iron was not always to touch the infected area, as in a remedy for curbs, where it was to be held as near to the sore as possible without touching it; this heated the sore so that it could then be cut with a lancet.<sup>118</sup> Although cautery was usually applied directly to the wound, this was not always the case. If a hound was bitten by another mad hound, the *Master of Game* claimed that “it is a good þing for to halowe it alle aboute þe bityng with an hoott iren”.<sup>119</sup> As I.M.E. Boor-van der Putten remarks, cauterising the wound itself would coagulate the tissue, locking the virus within, but burning the area around the wound provoked a local inflammation which would transport the virus.<sup>120</sup> Similarly, when a horse suffered from a navel-gall, a hole was to be burned four inches lower than the sore, after which a rowel was inserted and powder applied to the hole.<sup>121</sup> By placing the site of cauterisation away from the sore, it seems that the intention was again to draw away the humours through a local reaction, and thus cure the ailment. Cautery was also employed to keep wounds open, as in a remedy for galls in a horse; after a fleam had been struck into the galls, the wound was to be cauterised “for non oþer þing but for to holdin it þe lenger opin”, after which the wound was to be washed with a juice.<sup>122</sup>

Just as there were instructions regarding the places to perform phlebotomy, so too were there instructions for cautery. For instance, a swelling in the leg of a horse

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<sup>114</sup> *METH*, 111.

<sup>115</sup> BL MS Sloane 3285, f.89v. The author of the *Practica canum* advised using cautery on any other illness not mentioned in the treatise, *PC*, f.187r. J. Loncke suggests the author made this remark because he was conscious of the brevity and gaps of the treatise, *Practica Canum*, 155.

<sup>116</sup> *METH*, 95.

<sup>117</sup> *BMH*, ff.53v-54r.

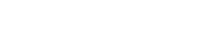
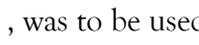
<sup>118</sup> *ST*, ff.56v-57r.

<sup>119</sup> *MG*, 49.

<sup>120</sup> Boor-van der Putten, “Maladies des Chiens”, 57. The need for urgency in treating the bites of mad dogs was recognised, “for 3if it were passed an hoole day it were hard to vndertake to hele hym of þe frest to woundes [madnesses]”, *MG*, 49.

<sup>121</sup> *ST*, f.59v. In this particular remedy the rowel was to be made of the horse’s own hair, *ibid.*

<sup>122</sup> *BMH*, ff.48v-49r. For other methods of keeping wounds open, see below, 124-25.

was to be cauterised a handbreadth above the knee,<sup>123</sup> whilst a bird of prey suffering from head ailments was to be cauterised “above the nostrils where the veins are joined”.<sup>124</sup> There were, however, sites where it was inadvisable to use cautery, such as places where the veins and sinews lay.<sup>125</sup> Interestingly, two fragments of Irish treatises on horses include depictions of the shapes to be burned on the horse; for example, a horse suffering from frenzy (*sibus*) was to be burned thus , whilst the following pattern, , was to be used on a horse suffering from lameness of the back-tendon.<sup>126</sup> Such illustrations again highlight the visual nature of some of the information contained in the treatises and recipe collections.

Of course, phlebotomy and cautery were not the only surgical procedures to be used. Some remedies, for instance, also involved cutting; if a horse suffering from farcy developed botches, one author recommended cutting them to release the quitter,<sup>127</sup> whilst frounce which “wex as grete as a note” in hawks, and which therefore had a grub in it, was to be cut and the matter which looked like a pigeon’s maw removed<sup>128</sup> – a very interesting naturalistic analogy of what to look for. A similar procedure was undertaken in horses suffering from vives, where the skin was to be cut two finger lengths, and the corns within removed with a crochet of horn.<sup>129</sup> In one treatise garsing was recommended for a horse which had suffered radunculus for a long time, so that the blood could be squeezed out.<sup>130</sup> Similarly, the wound made by the bite of a rabid dog was to be “closed or garsed” in order to draw out the venom so that it did not reach the heart.<sup>131</sup> Garsing, however, was more often recommended before applying a medicine, as for horses suffering from combes,<sup>132</sup> or malanders.<sup>133</sup> Indeed, cutting the animal was often a means of ensuring that the medicine could enter the wound; in a remedy for a splint the author of *The Sothebe Treatise* advised cutting the

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<sup>123</sup> *ST*, f.55r.

<sup>124</sup> *AT*, 252. This conflicts with the advice given by Albertus Magnus. See above, 120.

<sup>125</sup> *METH*, 123. See also below, 153.

<sup>126</sup> ‘Fragments of Two Mediæval Treatises on Horses’, ed. B. Ó Cuív, *Celtica* 2 (1954), 33, 49. See also 37, 47, 51, 53, 55.

<sup>127</sup> *BMH*, ff.30r-v.

<sup>128</sup> *PH*, 7. See also *PEB*, 7; *MKSG*, 140-41.

<sup>129</sup> *BMH*, ff.20v-21r.

<sup>130</sup> *METH*, 139.

<sup>131</sup> *MG*, 49.

<sup>132</sup> BL MS Sloane 3285, f.88v; *HorseRemII*, 98.

<sup>133</sup> BL MS Royal 17.A.VIII, ff.81v-82r.

skin a little, so that “þe medicyn may entre þerto”.<sup>134</sup> Sometimes the wound needed to be made larger in order that the medicine could enter; if a horse was suffering from farcy in the thigh or legs, a plaster was to be laid to the holes, but “3if þe holes be to strayte make hem wyddur with a rasur”.<sup>135</sup> At other times the infection was to be pared so that poultices and plasters could be applied to the healthy skin, as was recommended for a horse with dead flesh.<sup>136</sup> Similarly, should a horse be suffering from malbesanes, the foot was to be pared to the quick, before a powder of alum-glass was applied; any scabs growing thereafter were to be pared with a knife.<sup>137</sup> Likewise, when treating hawks for wounds, a tent of bacon lard could be made, with any drying flesh being cut away as it grew.<sup>138</sup>

Whilst such procedures appeared relatively straight forward to carry out, some were recognised as more complicated. Should a hound be suffering from a web upon the eye and both the herbal remedy<sup>139</sup> and the application of souse had failed, then surgical intervention was needed. In such a case a needle was to be bowed in the middle so that it was crooked, and then used to draw up the flesh on the eye; this could then be cut with a razor, with care being taken not to touch the eye.<sup>140</sup> Interestingly, it was noted in *The Master of Game* that smiths could perform this operation, “for as þe nayle [web] is drawe out of þe hors eye in þe same wise he must be drawe out of þe houndes ye”,<sup>141</sup> and in *The Boke of Marchalsi* this very treatment was recommended for horses suffering from a haw in the eye; yet here more detailed instructions were given – not only was the eyelid to be drawn up with a thread so that the marshal could see what he was doing, but when the haw was raised up on the

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<sup>134</sup> ST, f.54v.

<sup>135</sup> METH, 95.

<sup>136</sup> Ibid., 123.

<sup>137</sup> HorseRemII, 99.

<sup>138</sup> HawkRemII, 43.

<sup>139</sup> This involved putting celandine juice, and the powder of ginger and pepper into the eye three times a day, MG, 51. Celandine has been used since ancient times to remove films or spots from the cornea of the eye; indeed, the juice was recommended for eye ailments in a late fourteenth-century herbal, M.L. Cameron, *Anglo-Saxon Medicine*, Cambridge Studies in Anglo-Saxon England 7 (Cambridge, 1993), 121; *A Middle English Translation of Macer Floridus de Viribus Herbarum*, ed. G. Frisk, *Essays and Studies on English Language and Literature* 3 (Upsala, 1949), 164. Although it might be thought that ginger and pepper were not particularly suited to healing the eyes, they contain essential oils which, when in the eye, cause a live irritation and an acute inflammation, activating the defence mechanism of the eye; this would presumably act in an allopathic manner to cure the ailment, Boor-van der Putten, “Maladies des Chiens”, 69.

<sup>140</sup> MG, 51-2.

<sup>141</sup> Ibid., 52.

needle a thread was to be drawn around it, “& þan may þou tastin þe hardness of þe hawe.<sup>142</sup> Indeed, the brain surgery advocated by Fitzherbert for cattle suffering from the turn would also have taken great precision,<sup>143</sup> and although the procedure to relieve cattle of the dewbolne, where a knife was to be “thruste...thorowe the skynne and the flesshe two inches depe, or more, vi. inches or more from the ridge-bone, that the wynde maye come out”, was probably technically easy to perform, great care would have to be taken with the placing of the knife in order not to kill the animal.<sup>144</sup>

Sometimes it was necessary to keep wounds open, and as shown above, this could be done by means of cauterization. Wounds could also be kept open surgically by means of a rowel, a practice which was used upon horses when it was uncertain if they were lame in the shoulder:

And 3if þat þou be in serteyn þat he halte up on þe sholder loke þat þou mak a roele be neþin þe brest a parti on þat iche side þat þe sor is and loke þat þou make þe wounde so large þat þe roele mon entre well and þat þou may pitte þin hand in betwene þe skyn and þe flesche.<sup>145</sup>

Although it seems that the rowel was only used upon horses, another means of keeping wounds open was by means of the seton, which was used upon both horses and dogs. This involved drawing a thread, usually of canvas or horsehair, through a fold of skin in order to maintain an opening, and for both animals was used for similar ailments – those which involved swelling.<sup>146</sup> For the horse it was used for swollen shoulders and flanks, and swellings caused by the prickings of spurs which had been long without help,<sup>147</sup> whilst they were employed for inflammation of the stifle joint in dogs.<sup>148</sup> Placing a seton under the skin would cause a local reaction followed by suppuration.<sup>149</sup> Indeed, when a seton was being used on the shoulder of a horse hurt “with styrtynge or with eny oþer chaunsse” a ‘styllot’, perhaps a drainage pipe, was

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<sup>142</sup> *BMH*, ff.20r-v. A simpler version can be found in *The Sothebe Treatise*, but here ale was to be spouted into the horse’s eye at the end of the operation, presumably to act as a disinfectant, *ST*, f.57v.

<sup>143</sup> See *FBH*, 56. This is perhaps the earliest description of animal brain surgery, Smithcors, *Veterinary Art*, 160.

<sup>144</sup> *FBH*, 55.

<sup>145</sup> *BMH*, ff.45v-46r.

<sup>146</sup> *The Boke of Marchalsi* gave detailed instructions on how to insert a seton, *ibid.*, ff.45r-v.

<sup>147</sup> *METH*, 127-29.

<sup>148</sup> *MG*, 56.

<sup>149</sup> Boor-van der Putten, “Maladies des Chiens”, 57.

used in conjunction, being moved to and fro two or three times a day so that quitters could run out.<sup>150</sup> Wounds could also be kept open non-surgically with green copperas. In the remedy for mules, the mules were to be cut away and the wound cauterised; the wound was then to be held open for as long as possible, and “ȝyf þat it be so þat þe wounde wyl closyn to sone take poudir of grene coprose and do it in þe wounde and þat shal holden þe wounde opyn”.<sup>151</sup> Sometimes, however, the method of keeping a wound open was not specified; in treating the pricking of spurs one author simply stated “And loke þat þou hold þe hole of þe prychnge sumdel open”,<sup>152</sup> indicating the knowledge expected of those caring for animals.

Surgical intervention was also needed for the castrating and spaying of animals. Interestingly, the reasons for carrying out this procedure varied. Sometime this was to improve performance, for *The Master of Game* noted that a spayed bitch “lesteth lengere in hure bounte þan oþer ii þat byn not spaied”.<sup>153</sup> Animals such as cattle and horses were rendered placid by castration, thus making them easier to handle when working them in haulage and ploughing.<sup>154</sup> It was probably to this end that stirks were castrated at Durham Cathedral Priory in 1403-04.<sup>155</sup> In 1322-23 at Crowland Abbey’s Wellingborough manor two sows were castrated. It seems that this was undertaken to prevent them from breeding again, for it was stated that “they devoured the piglets”.<sup>156</sup> At other times castration was carried out to improve the profit to be made from the animal. Walter of Henley (fl. c.1260) claimed that by spaying those sows which were not the best animals, “then their bacon will be worth as much as that of a male”, and that gelded piglets “will grow the better”.<sup>157</sup> If animals are castrated before growth has ceased they grow larger and become fat, which was good for both meat and for

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<sup>150</sup> *METH*, 131.

<sup>151</sup> *BMH*, f.50r. In human medicine there was a debate as to whether or not wounds should be left open to heal from the depth of the wound to the surface, or whether they should be covered, and thus heal from the surface to the depth of the wound, N.G. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago, 1990), 169-70.

<sup>152</sup> *METH*, 127.

<sup>153</sup> *MG*, 46. I.M.E. Boor-van der Putten surmises a castrator may have been called in to sterilise bitches, as was advocated by Jacques de Fouilloux (1521?-1580), Boor-van der Putten, “Maladies des Chiens”, 53.

<sup>154</sup> J. Clutton-Brock, ‘The Unnatural World: Behavioural Aspects of Humans and Animals in the Process of Domestication’, in A. Manning and J. Serpell (eds.), *Animals and Human Society: Changing Perspectives* (London, 1994), 32.

<sup>155</sup> *DAR*, II, 394.

<sup>156</sup> *WMA*, 133.

<sup>157</sup> *WH*, 334, 336.

tallow.<sup>158</sup> Indeed, the accounts from Battle Abbey, Bolton Priory, and Durham Cathedral Priory record the castrating of pigs in the thirteenth, fourteenth, and fifteenth centuries respectively.<sup>159</sup> No indication is given as to the age of these pigs, but at other times it was specified that piglets (*porcelli*) were being castrated, as in 1377-78 at Bolton Priory, or in 1381-82 at Durham.<sup>160</sup> Interestingly, at Bromholm Priory, Norfolk, John Fylby was employed as castrator of the Prior's pigs, receiving wages of 5s for the year 1415-16.<sup>161</sup> Although there is evidence for the castration and spaying of animals, there are no descriptions of how the procedure was carried out.<sup>162</sup> There is, however, information regarding when the procedure should be undertaken. Walter of Henley noted that piglets were to be gelded when they were still suckling,<sup>163</sup> whilst according to Fitzherbert, calves were to be gelded in the old of the moon, when they were ten or twenty days old, "for than it is leaste ieoperdye, and the oxe shall be the more hyer, and the lenger of body, and the lenger horned"; should the calf be gelded at the age of one, this resulted in a beast "lesse of bodye, and shorte-horned".<sup>164</sup>

### III.

#### "make a plaster, and lei yer to": the therapeutic treatment of animals

By far the most common remedies for animals in the Middle Ages, however, were of a non-surgical nature, ranging from drinks, plasters, and ointments, to fumigation, suppositories, and charms. As might be expected, different methods were favoured for different animals. For both horses and dogs, plasters were the most prominent method of treating ailments, whilst ointments and washing were also

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<sup>158</sup> Clutton-Brock, 'The Unnatural World', 32.

<sup>159</sup> BAA, 45; BPC, 320, 370; DAR, I, 58, 60.

<sup>160</sup> BPC, 568-69; DCM MS GB-0033-DCD-Ket.acs (1381-1382). See also, DAB, 149.

<sup>161</sup> *The Cellarer's Account for Bromholm Priory, Norfolk 1415-1416*, ed. L.J. Redstone, *A Miscellany Comprising: Post-Reformation Royal Arms in Norfolk Churches; Cellarer's Roll, Bromholm Priory, 1416-1416; Lay Subsidy, 1581: Assessors' Certificates for Certain Norfolk Hundreds*, Norfolk Record Society 17 (Norwich, 1944), 86.

<sup>162</sup> This was not the case with continental treatises. In both Jordanus Ruffus' (d. after February 1256) *Hippiatria* and the anonymous *Cirurgie des chevaux* (fourteenth century), the removal of the testicles was done by cautery, Jordanus Ruffus, *Hippiatria*, 38; *Cirurgie des chevaux*, 378. Laurentius Ruisius (fourteenth century), rejected the method of torsion, best at most for foals and oxen, recommending instead the procedure of crushing; he also noted the dangers of castration if one did not proceed with caution, and if one did not have recourse to a diligent marshal, Moulé, *Médecine Vétérinaire*, 156.

<sup>163</sup> WH, 336.

<sup>164</sup> FBH, 59.

commonly used on both animals.<sup>165</sup> For birds of prey, however, the giving of food was the most utilised method of treating illness, whether this was meat on its own, meat to which medication had been added, or meat which had been washed in some form of liquid. It is also interesting that drinks and charms were popular when treating horses, but not so for other animals. Thus whilst of the sources here examined drinks are prescribed sixty-nine times for horses, they were only once prescribed for dogs, and only nine times for birds of prey. Similarly, whereas sixty-one of the remedies for horses utilised charms, only three are recorded for birds of prey and only one each for hounds and livestock [tables VII.i-iv].

As noted above, the treatment of ailments by means of a plaster was popular for horses and dogs. For horses plasters were primarily used to treat ailments visible on the skin, such as sorews, malanders, and paynes. In other animals, however, plasters were used to treat very different ailments, such as broken bones and vermin. For instance, if a hound was unable to urinate, then a herbal plaster was to be applied to “þe houndes yeerd and along be his bely”.<sup>166</sup> Sometimes plasters were applied by spreading them upon a dressing of some description. For example, should a bird of prey be suffering from vermin, one method of eliminating them was to make a mixture of quicksilver, fastyng spodyll, and egg yolk, which was spread upon a strip of woollen cloth and allowed to dry. This was then cut up and sown “abovte þe hawkes wyngys nexte to þe body, and abowte þe neke, and abowte þe taylor nexte þe body, and abowte þe legges”.<sup>167</sup> Similarly, in a remedy for farcy, the root of poppy and the grease of a boar were to be wound in flax and bound to the front of the horse.<sup>168</sup> Other plasters, however, were simply mixed together and applied to the animals, although many contained ingredients which were adhesive. For example, pig dung was used in a

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<sup>165</sup> It is not always clear what is a plaster and what is an ointment, for the sources do not always specifically refer to a ‘plaster’ or an ‘ointment’. For example, one remedy for paynes involved binding on the grease of the spleen of a boar, and then boiling or frying together beans, sheep tallow, salt, garlic, and arnement, which were then laid to the sore. Only the version found in BL MS Arundel 272, however, specified that this was a plaster. See BL MSS Arundel 272, f.64r; Cotton Julius D.VIII, f.114r; Royal 17.A.XXXII, f.128r; *HorseRemII*, 95. Thus when the directions are to ‘lay to’ or ‘bind to’ the ailment, I have counted this as a plaster; where the instructions are ‘to anoint’, I have classed such a remedy as an ointment.

<sup>166</sup> MG, 55.

<sup>167</sup> *HawkRemI*, 28.

<sup>168</sup> BL MS Royal 17.A.XXXII, f.129v.

plaster to staunch blood,<sup>169</sup> tar, rosin, and wax were used in a plaster for a loose hoof,<sup>170</sup> and a plaster for swollen testicles and legs was to contain “als miche flour of whete as make it thyk standyng”.<sup>171</sup> Interestingly, the plaster given in *The Boke of Marchalsi* for mendesanes was to be kept moist by having bacon rind, shaped like the foot, laid upon it.<sup>172</sup> The temperature at which plasters were applied could vary. Thus one for mules was to be applied “all cold”,<sup>173</sup> one for mendesanes somewhat lukewarm,<sup>174</sup> whilst one to staunch blood was to be made hot.<sup>175</sup> Interestingly, in a remedy for malanders, the plaster which was applied was to have a hot iron held over it until it boiled.<sup>176</sup> It is worth noting that no indications are given as to the technique of bandaging animals, although this process is visually represented in *Le Livre de Chasse* [fig. 11].

Although the treatises and recipe collections suggest that the majority of plasters were made from scratch, evidence from other sources indicates that for horses, at least, they were sometimes purchased ready made. Thus in the accounts of queen Eleanor of Castile (1241-1290), wife of Edward I (1272-1307), when Garsio the Spaniard was delayed in London in 1290 with ten horses, the items he purchased included one plaster (*unum emplastrum*), costing 5½*d.*<sup>177</sup> [See also table X.i]

Remedies similar to plasters were also used. One remedy for podagra found in *The Proceis of Hawking*, where a cutting of a vine was boiled and then wrapped around the swelling, may have acted like a plaster.<sup>178</sup> If a horse was suffering from watery eyes, a strictory was to be made of frankincense, mastic, and egg-white laid on a cloth.<sup>179</sup> Likewise, tents were another method of healing ailments. Thus if a bird of prey was wounded or had a bruised foot, a salve was to be applied to the hurt with tents of lint

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<sup>169</sup> METH, 91.

<sup>170</sup> ST, f.54r.

<sup>171</sup> *HorseRemII*, 101-02.

<sup>172</sup> This would also “enfors the houe þat brak befor hand for febilnesse for þat it was to þenne & to dreize”, BMH, f.53r.

<sup>173</sup> *Ibid.*, f.50v.

<sup>174</sup> *Ibid.*, f.53r.

<sup>175</sup> METH, 91.

<sup>176</sup> BL MS Sloane 3285, f.92r. Compare to a remedy for the same in *The Boke of Marchalsi*, where a hot iron was used to heat brimstone so that it would stick to the malander, BMH, ff.54r-v.

<sup>177</sup> CHEC, 106-07.

<sup>178</sup> PH, 38.

<sup>179</sup> METH, 141.

flax,<sup>180</sup> whilst wounds on a horse could be cured by a mixture of wheat and wine layed on a tent and applied to the wound.<sup>181</sup>

As with plasters, ointments were another popular method of treating animals, but, unlike plasters, they were popular for horses, dogs, birds of prey, and livestock (namely sheep). Unsurprisingly, ointments were primarily used for sores and skin complaints, although they were also used to anoint ailments of the mouth. For instance, a remedy for lampas in *The Sothebe Treatise* recommended anointing the wound with butter after it had been cauterised,<sup>182</sup> whilst a remedy for frounce recommended the application of balm (bawme) and populeon.<sup>183</sup> A common skin complaint for which ointment was part of the cure in both horses and dogs was mange. Although the ingredients of the ointment varied for the two animals,<sup>184</sup> the instructions for applying the ointment agreed in both *The Master of Game* and the *Treatise on Horses*; the animal was to be anointed in the sun or by the fire.<sup>185</sup> Indeed, a similar notion can be found in *The Durham Treatise* when a hawk was suffering from cramp. An ointment of red nettles, alexanders, red fennel, rosemary, and May butter was given to the bird to eat and also smeared upon her joints, before she was set on a warm hearth until she began to sweat.<sup>186</sup> Presumably the heat would not only help the ointment to be absorbed, but would also relax the muscles, thus relieving the cramp. Indeed, sometimes the ointment itself was to be applied warm. For instance, sheep which had just been clipped were to have a salve for scab applied lukewarm.<sup>187</sup> Interestingly, *The Boke of Marchalsi* warned against bathing or anointing a horse too often as a remedy, otherwise the joints would receive too much moisture and become feeble.<sup>188</sup> Thus, when applying an ointment to a horse which was lame in the knee,

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<sup>180</sup> *PP*, 23.

<sup>181</sup> BL MS Sloane 3285, f.91r.

<sup>182</sup> *ST*, f.58v.

<sup>183</sup> *MKSG*, 141; *PEB*, 7; *DT*, 22; *PH*, 7.

<sup>184</sup> Many, however, contained the active ingredient verdigris, a corrosive and irritant, which appears to have been acting in an allopathic way to cure the disease. See BL MSS Royal 17.A.XXXII, f.128r; Cotton Julius D.VIII, f.114r; *HorseRemII*, 94; *MG*, 50. A liquid for washing a horse with mange also contained verdigris, *METH*, 103.

<sup>185</sup> See above, 109.

<sup>186</sup> *DT*, 32.

<sup>187</sup> *FBH*, 46.

<sup>188</sup> *BMH*, f.45r.

one had to be careful not to apply it too often “for ellis þou mightest lese an hors wyth to mekyle oyntoure”.<sup>189</sup>

The number of ingredients in ointments and salves could vary. Some contained a large number of ingredients, such as a salve for hawks in *Hawk Remedies II*, which contained some fifteen herbs, together with sugar, ginger, cinnamon, and May butter;<sup>190</sup> one in *The Durham Treatise* contained twenty-six herbs, five spices, May butter and sugar.<sup>191</sup> Others, however, might only contain one or two ingredients. For instance, a hawk suffering from stone was to have its rectum anointed with oil,<sup>192</sup> whilst hounds suffering from rankles and tumours could have a mixture of groundsel and fresh lard applied.<sup>193</sup> Similarly, at Durham Cathedral Priory in 1376-77 lard (*exungia*) was purchased for the necks of oxen.<sup>194</sup> The majority of ointments, however, were composed of between three and five ingredients, and it is noticeable that many were based around grease, honey (which has antiseptic properties), or butter, ingredients which would not only have given the ointment a thick consistency, suitable for spreading, but would also, in the case of grease and butter, be a means of softening and hydrating the skin, and of adding warmth. The ointments were clearly, however, of different viscosities, for in c.1299 at Durham Cathedral Priory it was specified that a soft ointment (*molle unctum*) was purchased for an infirm horse.<sup>195</sup>

Sometimes, however, no ingredients were given for the salve or ointment. For example, for dogs which were suffering from botches *The Master of Game* recommended making them rise by the application of a poultice of mallow, onions, and white lilies, after which they were to be slit with a knife, and a “good drawyng salue” applied to draw out the noxious matter from the wound.<sup>196</sup> The fact that no ingredients are given suggests that it may have been common knowledge how to make,

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<sup>189</sup> *Ibid.*

<sup>190</sup> *HawkRemII*, 41.

<sup>191</sup> *DT*, 34-6.

<sup>192</sup> *PH*, 41.

<sup>193</sup> *PC*, f.187r; *De animalibus*, 1366.

<sup>194</sup> *DAR*, II, 386.

<sup>195</sup> *Ibid.*, 496.

<sup>196</sup> *MG*, 55. Both white lilies and mallows are demulcent, whilst onion is antiseptic, Grieve, *Modern Herbal*, 483, 508, 599. According to a late fourteenth-century version of the Macer Floridus herbal the juice of lilies “is gode to mature bocchis and to clense hem”, *Macer Floridus*, 95.

as was the case with sheep salve, for which ingredients were regularly purchased.<sup>197</sup> Yet it was also possible that such salves and ointments were readily available for purchase. For example, in 1416-17 an unguent was purchased at a cost of 2*d* for the feet of a horse in the household of Sir Hugh Luttrell.<sup>198</sup> Although in this instance details are given about the ailment to be treated, this was not always the case. When ointment (*unctum*) and a salve (*entractum*) were purchased for the horse of the Prior of Durham Cathedral Priory in 1356-57, no information is given about the ailment [tables X.i-iii].<sup>199</sup>

Powders were another means of curing an ailment. As noted above, they could be used to remove dead flesh in horses, and this method was also used for birds of prey; *Prince Edward's Booke* contains the only remedies for this ailment, one a powder of aloe and saxifrage, the other a powder of letigres.<sup>200</sup> Powders could be used in a variety of ailments, including botches, healing wounds, and extracting thorns. Amongst birds of prey, powders were commonly used for ridding them of maggots, vermin, and lice.<sup>201</sup> Somewhat unexpectedly, powders were often used to cure eye ailments in horses; in the *Treatise on Horses* five of the fifteen remedies for eyes are powders,<sup>202</sup> whilst three of the seven remedies in *The Boke of Marchalsi* are powders.<sup>203</sup>

Most powders were composed of just one ingredient, but a few contained more. For example, one powder for removing dead flesh contained five ingredients,<sup>204</sup> whilst one for fire contained no less than ten.<sup>205</sup> It is interesting that the nature of the ingredients varied widely, from sage, pepper, and garlic, to orpiment, realgar, moles, and, in one instance, a dog head. Indeed, the method of application also varied; generally it was cast upon the wound or sore, or, in the case of birds of prey, blown between the feathers, but it could also be eaten, as was recommended for hawks

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<sup>197</sup> See below, 186-87. In the *De avibus tractatus* the nephew asked about the making of salves, to which Adelard replied "One salve is comforting, which amongst the old English is called 'mild', another is purgative, which amongst the same is named 'strong'"; he then informs the nephew how to make each, AT, 264-66.

<sup>198</sup> DHA, 122.

<sup>199</sup> DAR, III, 719.

<sup>200</sup> PEB, 16, 18.

<sup>201</sup> *Ibid.*, 15; PH, 25; DT, 32; *HawkRemI*, 27, 28; J.B.I, 110; J.B.II, 114; J.B.IV, 138.

<sup>202</sup> METH, 141-45.

<sup>203</sup> BMH, ff.19v-20r, 20v, 56v.

<sup>204</sup> METH, 125.

<sup>205</sup> BMH, f.32v-33v.

suffering from bresour.<sup>206</sup> Interestingly, in two remedies for removing dead flesh, the powders were to be applied whilst hot, which, no doubt, would have helped to burn away the dead flesh.<sup>207</sup>

Fumigation was another method of curing ailments, although rarely employed. Thus in a remedy for cold cramp frankincense was to be cast into a charcoal fire and the hawk held over it until she panted,<sup>208</sup> whilst the author of one version of the *J.B. Treatise* recommended putting hot aromatic herbs and stones in a pan, and setting the bird on a low perch so that “þe flawyre [fragrance] and þe wappure [vapour] may smyte into here hede”.<sup>209</sup> Indeed, fumigation could be used for ailments of a similar nature in different animals. For instance, when dogs suffered from blocked nostrils (malemort) and birds of prey suffered from stopped nares (rye) fumigation was recommended. The remedy for dogs found in *The Master of Game* included the herbs mint and sage, both of which have been used against colds, and many of the other ingredients, such as mastic and incense, were aromatic, all of which would have helped to clear the nasal passages.<sup>210</sup> The remedy for rye found in *Hawk Remedies II*, however, where the feeding hawk was to be held over a pot containing a boiling infusion so that the heat could strike into her head, utilised daisies, radish root, and parsley root, ingredients which were not aromatic.<sup>211</sup> Thus it can be seen that although the same method was employed, in *The Master of Game* it was the aromatic vapour which was thought to help, whilst in *Hawk Remedies II* it seems to have been the heat of the steam which was of primary importance.

As has been indicated, the remedy for malemort in hounds was recommended for horses suffering from glanders, yet although the continental treatises clearly offered fumigation as a form of cure [fig. 12], of the English treatises which deal with this ailment none offered this. Thus in one recipe collection the horse was to be given food

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<sup>206</sup> *HawkRemII*, 43.

<sup>207</sup> *BMH*, f.57v; *METH*, 125.

<sup>208</sup> *HawkRemI*, 30.

<sup>209</sup> *J.B.I*, 111. The author of the falconry treatise *Tractatus de sperveriis* (thirteenth to fourteenth century), stipulated that the falconer should take care not to expose his birds to smoke, or the odour of cheap wine or must, because they would easily contract an incurable asthma, *Tractatus de sperveriis*, cited in Van den Abeele, *Fauconnerie*, 243.

<sup>210</sup> *MG*, 52. The hound’s nose was to be held “vpon þe pottis mouth, wher in þe þinges shuld boile so þat he may receyue within his nose thrilles þe smoke þat comeþ out of þo pott”, *ibid*. For modern methods of steaming animals, see Miller and West, *Veterinary Dictionary*, 953-54.

<sup>211</sup> *HawkRemII*, 46.

and drink, and to have his nose cleansed with a hazel stick wrapped in linen and wetted in vinegar and salt, whilst in another treatise incisions were to be made into the swellings on the neck and setons applied.<sup>212</sup> Fumigation, however, was employed to cure horses of other ailments. For instance, when a horse suffered from the prickings of spurs, herbs were to be seethed in a pot, and the pot placed under the belly of the horse, with the horse being covered in order that the sore would drain well. Afterwards, a poultice was to be applied to the sore.<sup>213</sup>

Another method of treating an animal was to wash or bathe it, although this was a practice not often recommended for birds of prey or livestock.<sup>214</sup> Sometimes the whole animal was washed. Cattle suffering from lice were washed with ‘kydsoap’, ‘kyd’ being another name for lice, particularly those found on sheep,<sup>215</sup> one pound of which was purchased at Durham Cathedral Priory in 1377-78.<sup>216</sup> Birds of prey which were suffering from lice could also receive similar treatment; stavesacre was to be boiled in water, which the hawk was to bathe in, once the water was cold.<sup>217</sup> Similarly, horses suffering from mange were to have their whole body washed in bean broth before being anointed with an ointment.<sup>218</sup> At other times the ailment was more localised, and could be targeted accordingly. For instance, in 1285-86 vinegar (*vinum acrum*), white wine (*vinum album*), and sand (*pulvis*) were purchased for bathing the feet of Edward I’s gyrfalcon,<sup>219</sup> whilst a hawk suffering from frounce was to have her head bathed.<sup>220</sup> Likewise, hounds which were suffering from a sickness in the ears were to have their ears washed with lukewarm wine, before oil and camomile milk were cast

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<sup>212</sup> BL MS Royal 17.A.VIII, ff.82r-v; *BMH*, ff.21v-22r. From this it seems clear that two elements of the ailment are being treated – the discharge from the nostrils in the former, and the swelling of the lymph glands in the latter.

<sup>213</sup> *METH*, 129. Compare to *De animalibus*, 1384.

<sup>214</sup> Washing was recommended fourteen times for birds of prey, yet eight of these were directions to wash the hawk’s mouth after frounce had been removed. See *HawkRemII*, 45, 46; *DT*, 30; *PP*, 12, 15; *J.B.I*, 110; *J.B.II*, 114; *J.B.IV*, 138.

<sup>215</sup> *DAR*, III, 929.

<sup>216</sup> *Ibid.*, 587.

<sup>217</sup> *PEB*, 13.

<sup>218</sup> *METH*, 103; BL MS Cotton Julius D.VIII, f.114r. One author advised washing the horse in “lene brothe”, whilst another recommended beef (bef) broth, BL MS Royal 17.A.XXXII, f.128r; *HorseRemII*, 94. No doubt this is evidence of scribal errors. In BL MS Arundel 272, f.64r, the remedy is for a horse suffering from scab.

<sup>219</sup> *RWH 1285-86*, 214.

<sup>220</sup> *PH*, 44; *PEB*, 15.

in,<sup>221</sup> whilst horses suffering from galls were to have them bathed “as oftyn time as he dreyn”.<sup>222</sup>

A variety of liquids could be used for washing ailments. Sometimes a herbal infusion was recommended, such as the crops or seed of horehound, or hemlock, recommended as a cure for mange,<sup>223</sup> or the mixture of vinegar and the juices of morel, houseleek, mullein, and vervain applied to the lowe.<sup>224</sup> Salt water was used on a horse suffering from corns,<sup>225</sup> and also to bathe the bruised soles of hounds.<sup>226</sup> Courtys, too, were to be washed with sea or salt water, “for wyth outyn salt water may he nocht ben sauf”.<sup>227</sup> Indeed, sea-bathing itself was sometimes recommended as a remedy, for in 1277 Edward I paid John the Berner 3s 6d “for his expenses going to Dover to bathe six sick braches by the King’s order and for staying there twenty-one days”.<sup>228</sup> Sometimes the liquid was much more unusual, such as the blood recommended for horses suffering from mange or scab,<sup>229</sup> or the urine with which jedos was washed.<sup>230</sup> Interestingly, a remedy for fy advised that the horse should be washed everyday with the milk of a red cow.<sup>231</sup>

As with other remedies, washing an animal was sometimes to be done with a hot substance. Thus in one remedy, a horse suffering from paynes was to have them washed with a mixture of brimstone, alum, gall of a rother, and sheep’s tallow, “as hot as he may suffer hit”,<sup>232</sup> whilst part of one remedy for mange was to wash the horse with oil and tar “scaldyng hot”.<sup>233</sup>

Some remedies were administered orally, by means of food and drink. Often the ailments treated by such methods were of an internal nature, to which there would be nothing to apply a plaster or ointment, such as sickness in the throat, purseys, and

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<sup>221</sup> MG, 52.

<sup>222</sup> BMH, f.48v.

<sup>223</sup> METH, 101.

<sup>224</sup> BMH, f.39r.

<sup>225</sup> METH, 117.

<sup>226</sup> MG, 53.

<sup>227</sup> BMH, f.32r.

<sup>228</sup> T. McLean, *The English at Play in the Middle Ages* (Kensal, 1983), 47. Sea-bathing was also recommended for those suffering from the bite of a mad hound. See below, 158.

<sup>229</sup> BodL MS Ashmole 1444, p.300; METH, 101, 103, 105.

<sup>230</sup> BL MS Sloane 3285, f.91r. Urine, however, appears to have sometimes been used as a substitute for lye, as in a remedy for a horse with a sore back, BodL MS Ashmole 1444, p.302.

<sup>231</sup> BMH, f.35v.

<sup>232</sup> BL MS Royal 17.A.XXXII, f.128r.

<sup>233</sup> BodL MS Ashmole 1444, p.300.

coughs. Thus of the eleven remedies for trenchelons, only one did not contain a drink as part of the cure; rather, the ingredients were to be strained through a cloth and strewn on the horse.<sup>234</sup> Similarly, if a hawk was suffering from a stopped rectum, the bird was to be given powder of black flint mixed with her meat, which “wyll frete y<sup>e</sup> ston and wast hym away”.<sup>235</sup> Yet those ailments which could be treated externally were also medicated by food and drink. For example, a hawk suffering from bresour was to be given powder of burned oak to eat, in addition to having her meat washed in milk,<sup>236</sup> whilst horses suffering from a swelling could be given a drink consisting of wine, vernage, incense, cream of milk, the grease of the spleen of a boar, and morel.<sup>237</sup> In 1466-67 in the Lanherne household, long pepper chives, fenugreek, honey, and garlic, were purchased for making a drink for a horse; although it is not specifically stated that this was in order to cure an ailment, this is the most probable reason for the purchases.<sup>238</sup> Indeed, as with plasters, ointments, and salves, drinks for sick animals could be purchased; in 1299 a drink (*potio*) and a draught (*potus*) were purchased for infirm horses at Merton College, Oxford,<sup>239</sup> whilst in 1512-13 a draught was purchased for sick oxen at Battle Abbey.<sup>240</sup>

A wide variety of ingredients could be given to animals as food and drink. The majority of drinks were herbal, generally mixed with water, ale, or wine, although more unusual ingredients were used. For instance, two remedies for farcy included quicksilver,<sup>241</sup> whilst a horse suffering from sickness of the womb was to drink his own blood; “yf tou seest þat þe hors drawe in the blod whan he drynkith thou shalt wel knowe þat þe hors is rekeuerynge. And yf hit fall reklesliche out of his mouth that is to kne of deth”.<sup>242</sup> Such a description gives testimony to the observation of sick animals, as well as showing the prognostic indications of their demeanor. Interestingly, *Prince Edward's Booke* and the second version of the *J.B. Treatise* are the only treatises to offer

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<sup>234</sup> BL MS Sloane 3285, f.90v. The giving of a drink for this ailment was sensible, for a drink would eventually reach the stomach.

<sup>235</sup> *HawkRemI*, 34.

<sup>236</sup> *HawkRemII*, 43.

<sup>237</sup> BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>238</sup> *LHA*, 30.

<sup>239</sup> *MCR*, 183.

<sup>240</sup> *BAA*, 159. For purchases made from apothecaries and a smith, see below, 190-91.

<sup>241</sup> BL MSS Sloane 3285, f.89r; Royal 17.A.XXXII, f.129v.

<sup>242</sup> BL MS Sloane 3285, f.90r-v.

drinks as remedies for hawks,<sup>243</sup> perhaps reflecting the fact they need to drink little, the juices of their meat being sufficient.<sup>244</sup> The types of food offered to animals to treat ailments, however, differed between birds of prey and other animals, for it imitated their natural eating habits. For instance, oat bread was recommended when it was desirable to make a hound swift,<sup>245</sup> and bread was also given to sick horses;<sup>246</sup> bread made from bran and drasts was recommended for brest,<sup>247</sup> whilst bread of laurel berries, mixed with May butter, was one remedy for strangullion.<sup>248</sup> Indeed, in May 1285 bread was twice purchased for an infirm destrier in the household of the Earl and Countess of Warenne.<sup>249</sup> Oats were given to sheep which were weak from pox in 1356 at Merton College's manor of Farleigh,<sup>250</sup> and oats were also purchased in the household of Richard Mitford (d.1407), bishop of Salisbury, in November 1406 for medicating an aged horse.<sup>251</sup> In contrast, meat featured more prominently when regimenting birds of prey. Thus sparrow was recommended for both rye and pain in the crop,<sup>252</sup> whilst the flesh of a culver, with honey and pepper, was thought to be beneficial for a hawk suffering from aggresteyne.<sup>253</sup> Not all authors, though, specified the exact animals from which the meat was to come, the author of *Hawk Remedies I* referring simply to 'flesh' or 'meat'.<sup>254</sup> Although the majority of foods given medically were such as might be found in a daily diet, this was not always the case. For example, soap was not only to be given to horses suffering from costiveness and botts,<sup>255</sup> but was

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<sup>243</sup> PEB, 10, 11, 13, 14; J.B.II, 115. Instructions to give birds drinks in Latin falconry treatises were not rare. See Van den Abeele, *Fauconnerie*, 239-40.

<sup>244</sup> Salvin and Brodrick, *Falconry*, 45.

<sup>245</sup> PC, f.187r; *De animalibus*, 1367. Oat bread was possibly very similar to the modern dog biscuit, MG, 187. Bread formed the staple diet of hounds, *The Master of Game* stating that young hounds nourished "of grece and fat brothe...ben not so wel breched as þei that eten alway brede and watir", MG, 46. For the purchase of bread for greyhounds and a bercelet, see PRO E101/379/4.

<sup>246</sup> Horsebread often formed part of the mediaeval English horse's diet. It could be made of various ingredients, such as beans and bran; in 1419 in Dame Alice de Bryene's (d.1435) household it was made of one quarter dried peas and two quarters oats, *HBA*, 126.

<sup>247</sup> BL MSS Cotton Julius D.VIII, f.114r; Royal 17.A.XXXII, f.128v.

<sup>248</sup> *HorseRemII*, 93; BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>249</sup> PRO E101/505/17. Bread was again purchased on 15 June for an infirm horse, *ibid.*

<sup>250</sup> M. Saaler, 'The Manor of Farleigh: The Evidence for Economic Changes During the 14<sup>th</sup> Century', *Surrey Archaeological Collections* 83 (1996), 63.

<sup>251</sup> *HAME*, I, 297.

<sup>252</sup> *MKSG*, 141; *DT*, 22; *PH*, 46.

<sup>253</sup> *Ibid.*, 31.

<sup>254</sup> *HawkRem I*, 20, 26, 27.

<sup>255</sup> *ST*, f.63v; BodL MS Ashmole 1444, p.303.

also recommended to make a hawk mute well.<sup>256</sup> Similarly, slime, along with earthworms and sugar roset, was to be given to hawks suffering from filanders.<sup>257</sup> Whilst four-footed animals were given food just as it was, when treating birds of prey their meat was often washed or anointed. For instance, in a remedy for peer, the hawk's meat was to be washed in water in which polypody, fennel, parsley roots, daisy (brusworth), and medlar (mylitar) had been boiled,<sup>258</sup> whilst a hawk which had been poisoned was to have a powder of treacle and pepper grains cast onto her meat.<sup>259</sup> Thus the food given to birds of prey could be acting in two different ways; it could either be acting as an excipient, being the substance used to incorporate the active ingredients of the remedy, or it could be acting as the remedy itself; as B. Van den Abeele points out, distinguishing between the two is not always easy.<sup>260</sup>

Sometimes an animal which was being prepared as food was itself given food before being slaughtered. Thus a remedy to mew hawks hastily involved putting wheat in broth in which adders had been boiled, and once the wheat began to cleave, feeding that wheat to hens or chickens, which were then given to the hawk.<sup>261</sup> Food prepared in this way absorbed the medicinal value from what it was cooked in, which was then passed on to the falcon or hawk. At other times, the creature might be starved. For instance, one remedy for a pursive horse advised putting nine gloat eels (glutte elys), which had been kept in a pot meatless for three days, into the horse, "for they wil scowre & open his pipes & guttis and clense him withynne & cum outer ayen behynde".<sup>262</sup> These were certainly an ingenious cleansing agent.

Although animals could just be given the food to eat, or have it added to their usual meal, sometimes it was formed into pellets or pills. For instance, a medicine for

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<sup>256</sup> *HawkRemII*, 42.

<sup>257</sup> *Ibid.*, 47.

<sup>258</sup> *DT*, 30.

<sup>259</sup> *PEB*, 16.

<sup>260</sup> Van den Abeele, *Fauconnerie*, 218.

<sup>261</sup> *PH*, 36. See also *PEB*, 21; *AT*, 262. Parallels can be found in both a thirteenth-century French translation of the twelfth-century Guillelmus treatise, and in *Le Livre du Roy Modus* (written before 1338), R. Hands, "Dancus Rex" in English', *Mediaeval Studies* 35 (1973), 361-62; *Le Livre du Roy Modus: Des Jagdbuches des König Modus aus der Handschrift MS 10.218-19* (Bibliothèque Royal Albert I<sup>er</sup>, Bruxelles), codicology D. Thoss, tr. M. Haehn (Graz, 1989), 95. C. Burnett notes that this remedy for mewing hawks "is the most widely diffused recipe in medieval falconry", *AT*, 273 n.67. For some variants on this remedy, see Van den Abeele, *Fauconnerie*, 234. B. Van den Abeele suggests that its popularity is justified because of the analogy between the mewing falcon and the snake which sheds its skin, *ibid.*, 236.

<sup>262</sup> BL MS Sloane 686, f.67r. The eels were to be "bigger than a mannes thomb", *ibid.*

cows, “to be gyven att all tymys”, consisted of elecampane, garlic, bay salt, butter, eggs, and lungwort, which were to be made into three balls to be given to the cow.<sup>263</sup> Interestingly, both *The Proceis of Hawkyng* and *Prince Edward's Booke* advised the falconer to “knytte fast her beke” when giving pellets to a hawk suffering from teyne, so that the hawk did not cast the pellet back out.<sup>264</sup> A similar procedure was carried out on horses when they were suffering from mourning of the chine. Part of the medication was to put a liquid into both nostrils, and in order to prevent the horse snorting it back out the horse's nose was to be held together “soo long þat it semeth þat his jen wol gon oute”, after which he was to be allowed to “take wynde”.<sup>265</sup> Likewise, when giving a horse eggs for strangullion, it was advised to hold the horse's mouth together, to make him swallow the eggs.<sup>266</sup> The administration of a pellet or pill to a hound can be seen in fig. 13, where the hound is restrained by one hunter, another administering the medication.

Animals suffering from constipation or other blockages of the bowel were often treated by means of a suppository. Some were vegetable based, as the cabbage in olive oil (a lubricating agent) recommended for dogs who could not scumber.<sup>267</sup> Others, however, could be mineral based, such as the Paris candle, heated against the fire, which was another remedy recommended for hawks suffering from cray.<sup>268</sup> Interestingly, when soap was used as a suppository to dissolve congealed stone, the hawk's tewel was to be knit fast with a thread to prevent the bird from muting.<sup>269</sup> Indeed, notions of hygiene were also taken into account, for when butter was used as a suppository, the author of *Prince Edward's Booke* stated this was to be applied “with pure handes”.<sup>270</sup>

Some remedies were of a practical nature, such as one for a restive horse, found in *The Sothebe Treatise*. The author instructed that a shackle was to be made of a

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<sup>263</sup> Afterwards an egg was to be broken into their mouths, BodL MS Laud Misc. 598, f.1v.

<sup>264</sup> PH, 29; PEB, 13. The hawk was also to be warmed by the fire before the pellets were given to her.

<sup>265</sup> ST, f.59r.

<sup>266</sup> *HorseRemII*, 97.

<sup>267</sup> MG, 54.

<sup>268</sup> PP, 15.

<sup>269</sup> *HawkRemI*, 33.

<sup>270</sup> PEB, 7. When birds of prey were sprayed with water from the falconer's mouth, as a form of refreshment from the heat of the sun, Frederick II of Hohenstaufen (1194-1250) recommended that “the falconer should first wash out his own mouth three or four times with cold water, to cleanse it of mucus that might otherwise adhere to the bird's feathers and make them sticky”, AVCA, 190.

whip cord and placed between the testicles and penis, and a cord fastened to that. A child was then to ride the horse, with a pair of spurs, pulling on the cord whenever the horse displayed “his fowle taiche [defect]”. After doing this for three or four days, the horse would stop being restive.<sup>271</sup> Similarly, as indicated in the previous chapter, horses suffered from a variety of ailments afflicting their legs and feet, and many of the remedies for these ailments involved shoeing. For example, a horse which was lame due to a tendon in the shoulder was to be fitted with curved shoes, which presumably helped the horse in his gait,<sup>272</sup> whilst a horse suffering from laminitis was to be shod with shoes without calkins.<sup>273</sup> In contrast, horses suffering from mendesanes were to be shod with shoes which had high calkins, bearing their weight on the sides and not the point.<sup>274</sup> Likewise, a horse which had risen flesh on his foot was not to bear anything at the point, and should the foot be tender underneath, he was to be shod with a large and thin shoe.<sup>275</sup> Exercise was also occasionally advocated in order to help cure an ailment. Thus a horse suffering from colt’s evil was first to be ridden for three days,<sup>276</sup> whilst a horse suffering from botts or other worms was to be “led vp and down the space of a quarter of an houre” after being given a drink.<sup>277</sup> Indeed, in order to keep the claws of hounds worn down, it was advised to lead them “iii tymes in þe weke on huntyng and at þe leest twyes”; when they were at rest, “men shuld lede hem out euery day a myle or ii vpon grauel or vpon right hard pathe bi a revere syde bicause þat her feet may be harder”.<sup>278</sup> Sometimes rest was advocated, as was the case when both horses and hounds were suffering from a hurt stifle,<sup>279</sup> or when making birds of prey fat.<sup>280</sup>

Another means of curing ailments was to use charms, although this was not utilised often for animals other than the horse; of the sixty-six charms found within

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<sup>271</sup> ST, f.51v. A more detailed description is provided in *HorseRemI*, 75.

<sup>272</sup> BMH, f.42r.

<sup>273</sup> *Ibid.*, f.57r. Similarly, a horse suffering from brest was to be shod without calkins, BL MSS Cotton Julius D.VIII, f.114r; Royal 17.A.XXXII, f.128v.

<sup>274</sup> BMH, f.53r.

<sup>275</sup> *Ibid.*, f.42v-43r.

<sup>276</sup> ST, f.61r.

<sup>277</sup> BL MS Royal 17.A.VIII, f.82v.

<sup>278</sup> MG, 54.

<sup>279</sup> ST, f.57r; MG, 56.

<sup>280</sup> PH, 45; PEB, 15.

the sources, only five are for animals other than the horse.<sup>281</sup> Charms fell into five categories: (i) amulets; (ii) incantations, whether prayers or mystical words, said over the body of the animal; (iii) exorcism addressed to the disease; (iv) narrative charms, whereby an anecdote relating to a sacred or legendary person, who suffered something analogous to the ailment from which the animal was suffering, was related; and (v) transference of the disease by invocation to an object.<sup>282</sup>

Many charms fell into the first category of amulets. For example, the keys of churches could be applied, hot or cold, to the heads of mad dogs in order to cure them,<sup>283</sup> and a fabric roll of 1503-04 from Ripon Collegiate Church records the burning iron of St Wilfrid (*Seintwilfrideburningeyron*), which was used to brand beasts (*averia*) to protect them from murrain and sickness.<sup>284</sup> Should a dog be suffering from a web on its eye, one remedy was to put a collar of elm-tree leaves and bark around its neck; it was thought that when they dried the web would fall away.<sup>285</sup> Likewise, a charm for horses suffering from farcy involved tying mullein leaves bound in a cloth to the horse, “and or þe levys be drye in þe cloth þe knottes of þe farcion wilbe drye & hole”.<sup>286</sup> The former, however, was deemed to be of little help in *The Master of Game*, and it seems that other authors may also have felt the same about charms; the author of the remedies for horses found in British Library manuscript Arundel 272 obviously thought very little of charms, for although this is a copy of the first twenty remedies in the collection found in *Horse Remedies II*, the charms have been omitted.<sup>287</sup> Yet not everyone was scathing of such remedies. A charm for foundyng in *Horse Remedies II* was

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<sup>281</sup> See MG, 94; PEB, 17; BL MS Sloane 686, f.68r.

<sup>282</sup> These categories are based upon those given by J.F. Payne, *English Medicine in the Anglo-Saxon Times: The FitzPatrick Lectures for 1903* (Oxford, 1904), 114-15. Another category given by Payne was prayers addressed to herbs, and this can also be found in animal medicine; one remedy for glanders stipulated that when gathering the nettle crops three *pater nosters* and three *aves* were to be said, BL MS Royal 17.A.XXXII, f.129r.

<sup>283</sup> *Memorials Ripon*, III, 167 n.1. There was a similar superstition of using the keys of chapels to brand horses for pest, *ibid*. The use of church keys to cure ailments was a practice which continued long after the end of the Middle Ages, R.H. Dunlop and D.J. Williams, *Veterinary Medicine: an Illustrated History* (St Louis, 1996), 212.

<sup>284</sup> *Memorials Ripon*, III, 167. From the fourteenth century the canons had been hiring out, for a fee, this burning iron, so that people could brand their cattle, D. Webb, *Pilgrimage in Medieval England* (London, 2000), 249.

<sup>285</sup> MG, 51.

<sup>286</sup> BL MS Sloane 686, f.66v.

<sup>287</sup> Although charms were commonly used for horses, the authors of BL MS Sloane 3285 and *Horse Remedies II* include a large number compared to other authors; eleven and fifteen respectively.

noted to be “proues for sothe of many marchall”,<sup>288</sup> whilst a charm for farcy was said to be “good for man and best”.<sup>289</sup> Indeed, the author of the version of *The Boke of Marchalsi* found in Trinity College manuscript R.14.51 replaced the French epilogue with a charm for vives, surely an indication that he had faith in such cures.<sup>290</sup>

Some amuletic charms were inserted into the flesh of the animal. For instance, in a remedy for farcy, a thin plate of lead was to have written on one side “*jhesus nazareus et iudeus crucis misereri mei*” (Jesus the Nazarene and Jew of the cross, have pity on me) which was to face towards the horse, whilst the other side had written on it “*Super aspidem et basilistus ambulabis et conle (?) et dicitur*”<sup>291</sup> (It is said, you will walk upon the viper and the basilisk, and you will trample the lion and the snake), which was to face outwards; the front of the horse was then slit and the lead plate put in accordingly.<sup>292</sup> Interestingly, the placement of the charm could be dictated by the position of the ailment within the body of the animal; in two different remedies for farcy the charm was to be tied to the tail if the ailment was in the hind quarters of the horse, but tied to the mane if it was in the fore quarters.<sup>293</sup>

Other charms were incantations said over the body of the animal. For instance, in order to protect a hawk from being attacked by a heron the author of *Prince Edwarde’s Booke*, advised the falconer to say “*Vicit leo de tribu Juda radix David alleluia*” (The lion of the tribe of Judah, root of David, has conquered. Alleluia).<sup>294</sup> As a general charm before the bird was flown, the following could be said: “*In nomine Domini volatilia celi erunt sub pedibus tuis*” (In the name of the Father, all flying things of the sky

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<sup>288</sup> *HorseRemII*, 101.

<sup>289</sup> BL MS Sloane 3285, f.89r.

<sup>290</sup> *BMT*, f.77v.

<sup>291</sup> This appears to be a corruption of the Vulgate Psalm 90:13, “*super aspidem et basiliscum ambulabis, et conculcabis leonem et draconem*”. My thanks to P. Maxwell-Stuart for bringing this to my attention.

<sup>292</sup> Before this, however, a mass was to be sung to the Holy Ghost, and an offer of a penny made, *HorseRemII*, 92. The singing of masses in the cure of animals was a long-standing tradition; in the *Lacnunga*, a collection of medical recipes dating to c.1000, a remedy for a horse or other beast which had succumbed to disease (“shot”, probably elf-shot) included the singing of twelve masses, whilst pigs suffering a sudden murrain were to have four masses sung over them, *Leechcraft: Early English Charms, Plant Lore, and Healing*, ed. S. Pollington (Hockwold-cum-Wilton, 2003), 225, 231.

<sup>293</sup> BL MSS Royal 17.A.XXXII, f. 131v; Sloane 686, f.66v. For sex affecting placement, see above, 112.

<sup>294</sup> *PEB*, 17. The same charm is found in *De animalibus*, 1481, but here it is to protect the hawk against the eagle – as it is in the twelfth-century treatise by Gerardus Falconarius, *Dancus Rex*, 228. Thus the charm has been adapted to English usage.

shall be under your feet).<sup>295</sup> The fact that the charms were in Latin only gave them added potency, for it was the language used by the Church, not the vernacular English of everyday, and thus was perhaps seen as a closer link to God.<sup>296</sup> Not all charms, however, were intelligible; a charm for farcy involved saying “*mala magubula mala magubula*” into the horse’s ear three times, along with three *pater nosters*.<sup>297</sup> The words appear to be a mixture of Latin and gibberish (very much like abracadabra), and, as M.L. Cameron suggests, the unintelligibility of the words in such charms probably contributed to their efficacy.<sup>298</sup> Yet there is also a rhythm to the words, the chanting of which makes the spell.

Although charms could be in the form of exorcisms addressed to the disease, only one such example appears to have survived for animals; if a horse was suffering from felon, the following was to be said:

I coniure y<sup>e</sup>, wikked feloun, in y<sup>e</sup> name of god al weldyng of heuen, erthe and hell, and of y<sup>e</sup> sonne, and of y<sup>e</sup> mone, and of y<sup>e</sup> .vij. sterres, and of all creatures, and of all daingeles, and of all y<sup>e</sup> confessoeres, bisschopes and of all hundred abbotes redy to syng on mydwynter nyght, yat y<sup>u</sup> ne entres ne no longer dwell in y<sup>e</sup> name of y<sup>e</sup> fader and of y<sup>e</sup> sone and of y<sup>e</sup> holy gost.<sup>299</sup>

In the fifteenth century, the most popular method of treating farcy was by means of a charm.<sup>300</sup> A narrative charm, in two parts, was particularly popular, the first part invoking St Mary (Mother of God), St Job, and the souls of St Job’s father, mother, and ancestors, the second part naming St Job and counting down nine worms.<sup>301</sup> Although this charm was commonly used against worms in both human and

<sup>295</sup> PEB, 17. Similar versions are found in both *De animalibus*, 1481, and *Dancus Rex*, 226.

<sup>296</sup> Indeed, it seems that the potency of Latin was long-standing, for in the *Lacnunga* remedies for lung illness in cattle, a sprained horse, and a shot horse all included charms in Latin, *Leechcraft*, 231, 235.

<sup>297</sup> T. Hunt, *Popular Medicine in Thirteenth-Century England* (Cambridge, 1990), 96. W.L. Braekman appears to give an erroneous reading of “*mala mag bula Mala magubula*”, *HorseRemII*, 96.

<sup>298</sup> Cameron, *Anglo-Saxon Medicine*, 134. It is also possible that such words had been corrupted from the original Latin, or other language, and that in their original form they were perfectly intelligible, Payne, *English Medicine*, 120.

<sup>299</sup> *HorseRemII*, 103-04. Compare to *METH*, 97.

<sup>300</sup> Of the seven remedies for this ailment found in BL MS Sloane 3285, five of them are charms, whilst five of the eight remedies in *Horse Remedies II* are also charms, BL MS Sloane 3285, ff.89r-v; *HorseRemII*, 91-2, 96-7, 102.

<sup>301</sup> See BL MSS Cotton Julius D.VIII, f.113v (where St Job’s friends’ souls are invoked, not that of his ancestors); Royal 17.A.XXXII, f.129v; *HorseRemII*, 92; *METH*, 99 (where this remedy was also recommended for felon). A French version can be found in BodL MS Digby 86, f.28r, cited in Hunt,

horse medicine,<sup>302</sup> the connection between worms and farcy is suggested by Albertus Magnus, who noted that some called farcy *vermis*, “because the superfluous humour in the flesh and skin creates holes which resemble holes of worms”.<sup>303</sup> St Job was also invoked in a remedy for farcy found in the fifteenth-century treatise *The Boke of Marchalsi*, but the nine worms which grieved St Job so much are counted upwards, rather than down: “And ix tymes he [St Job] prayde to Ihesu Crist þat he schulde amenuse hem. And at the first prayer he leses hem by a worm, at the second by ij, at þe iij by three...” and so on.<sup>304</sup> The inclusion of the number nine only added to the potency of the charm, for nine was a powerful number, being a multiple of three, the Holy Trinity. Interestingly, this charm for farcy formed part of a much longer remedy, which not only additionally invoked St Charity, but also recalls the act of bending pennies to saints.<sup>305</sup> In total four charms were to be said.<sup>306</sup> After the first charm a penny was to be taken from the owner of the horse, who was to “pray þe for Seint Charitee þat þou doo thy cure, þat God Almyghty sende amendement”; after the second charm the horse was to be blessed with the penny on his front, sides, and back, and upon completion of the remedy it was stipulated that “þe first mesell [leper] þat þou meteste, zeve hym þat ilke peny in the worschup of God and of Seint Iob”.<sup>307</sup> Another narrative charm told of the three nails by which Christ was nailed to the cross, the strength of which was to heal the horse of cloying,<sup>308</sup> whilst a charm to

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*Popular Medicine*, 83-4. For a facsimile of the manuscript, see *Facsimile of Oxford, Bodleian Library*, MS Digby 86, J. Tschann and M.B. Parkes, EETS, SS 16 (Oxford, 1996).

<sup>302</sup> Hunt, *Popular Medicine*, 81. For examples of its use against worms in horses see BL MSS Sloane 3285, f.90v; Royal 17.A.XXXII, f.120r. See also CUL MS Dd.4.44, f.31r, cited in *IMEP XIX*, [18], which consists only of the second part of the charm. A charm against worms or botts found in BL MS Sloane 686, f.66v, involved writing on a bill “*Job habuit vermes*” [Job had worms], which was then to be hung on the horse’s mane, and “anoon forthwith þe hors shal ariyse & goo forth saff & the wormes or bootes shall dye & com forth in his cayme [dung]”.

<sup>303</sup> *De animalibus*, 1389-90.

<sup>304</sup> *BMO*, 33-4. A similar charm is found in *Horse Remedies II*, where the Archangel Raphael was to slay the nine worms, “fro .i. tul .ij., fro ij tul iij” up until “fro .viij. til ix”, when the worms were counted back down to “fro .ij. til .j.”, *HorseRemII*, 96.

<sup>305</sup> See below, 147.

<sup>306</sup> It also includes an amuletic charm, for three crosses were to be made (one of the roots of red dock and red nettle, one of lead, and one of leather), which were to be inserted under the skin of the horse, *BMO*, 32-3. Odenstedt suggests that this was in order to establish a magic connection with the Crucifixion, *ibid.*, 73.

<sup>307</sup> *Ibid.*, 32-5.

<sup>308</sup> BL MS Royal 17.A.XXXIII, f.129r. Just as charms were a popular means of curing farcy, so too did they form the most prominent method of cure for cloying. In BL MS Royal 17.A.XXXII, ff.128v-129r, all three remedies are charms, two of which are in Latin. The English charm is also found in BL MS

staunch blood told how the Jordan stood still at Christ's baptism: "God was borne in bedlehem, done on y<sup>e</sup> rode tre in ierhusalem, cristened he was in flum iordan; lord as y<sup>e</sup> flod stode, so staunche yis blode, be it of man or of beest, if it be yi wille; pater noster and .v. Aue".<sup>309</sup> Staunching blood by means of charms also seems to have been a popular remedy, for of the four treatises to offer remedies for staunching blood, only the *Treatise on Horses* offers remedies which are not charms.<sup>310</sup>

Sometimes it is unclear what the connection was between the saint and the ailment in narrative charms. For instance, if a horse was suffering from cloying, the following charm was to be said, together with three *pater nosters* and three *aves* "in ye name of seynt spirit": "God als wisseli as y<sup>u</sup> hang on y<sup>e</sup> rode, and longi(n)us string y<sup>e</sup> to y<sup>e</sup> hert w<sup>t</sup> a spere, saue yis hors".<sup>311</sup> Similarly, a charm for a horse that was wranch<sup>312</sup> told the story of Architeclyn sitting on a bench, holding in his left hand a "3erde of a breres" which he blessed with this right hand.<sup>313</sup> Perhaps the act of saying the charm itself was believed to be power enough to cure the ailment.

In some instances the charm worked by transferring the disease by invocation to another object, and this can be found in a remedy for cloying, where the marshal was to hold a nail, point upward, and say "God him self wounded was, as his swete wil was, it neyer oke [festers] ne it ne swal [swell], if christes wil he ne more yis ne chal", followed by three *pater nosters*; then a cross was made under the hoof of the horse, and the horse made to stand on the nail.<sup>314</sup> It is also possible that a charm for farcy, found in British Library manuscript Sloane 3285, was intended to have the same effect. An iron tool was to be held over the horse whilst the marshal said "*In nomine patris et filii et spiritus sancti. Amen*" three times, followed by three *pater nosters*, and the words "hors of

Cotton Julius D.VIII, f.114r, but only one *pater noster* and *ave maria* are to be said, rather than three. Two of the four remedies found in *Horse Remedies II* are charms, *HorseRemII*, 95-6.

<sup>309</sup> *HorseRemII*, 98. See also *METH*, 91; *ST*, f.65r. The three charms for staunching blood in *HorseRemII*, 98, are all to be found in *METH*, 91, but the instructions of the second charm, which are in Latin in the former treatise, are in English in the latter.

<sup>310</sup> See *BMH*, f.56v; *HorseRemII*, 98; *ST*, f.65r; *METH*, 89-91.

<sup>311</sup> *HorseRemII*, 95. Longinus, the name traditionally given to the soldier who pierced Christ's side upon the cross, is more often found in charms for staunching blood, Payne, *English Medicine*, 130; Hunt, *Popular Medicine*, 81.

<sup>312</sup> A sprain or strain. Braekman appears to give an erroneous reading of "wrauth" (of a fierce and violent nature) for this ailment, but "wranch", as found in Hunt, *Popular Medicine*, 96, would seem to be the correct reading, especially as one remedy for this ailment involved hanging a written charm about the foot of the horse, *HorseRemII*, 96.

<sup>313</sup> *Ibid.*, 98.

<sup>314</sup> *Ibid.*, 95-6.

what har that tou be y the grete with the gretyng that god grette adam”. The tool was then to be cast over the horse three times.<sup>315</sup>

Before a charm was commenced it was sometimes required that the colour of the horse and the name of its owner was specified; thus a fifteenth-century charm for founder in a horse, found amongst a collection of human remedies, opened with “say þis charme .iij. and ask ate bygynnyng of whate colour þe hors is and þe name of hym þat it owe”.<sup>316</sup> Likewise, charms for farcy required the asking of “ye mannes name yat owes y<sup>e</sup> hors, and ye hew of ye hors”,<sup>317</sup> whilst, another charm for farcy found in *The Boke of Marchalsi* involved naming the horse “by hys name and by hys colour”.<sup>318</sup> As W.L. Braekman points out, there was a close connection between the request to know the name of the animal and the colour of its skin, for animals were often named after the colour of their coats.<sup>319</sup> Both the naming of the animal and the owner ensured that the charm was directed towards the right animal.<sup>320</sup>

Sometimes recourse was sought in saintly cures, and the aid of the saints was sought on behalf of a variety of animals, from birds of prey, horses, and dogs, to cattle, sheep, and pigs.<sup>321</sup> Of all the animals helped, however, by far the most common were horses and birds of prey, those animals primarily associated with the nobility.<sup>322</sup>

Saintly intervention could be solicited in a number of ways. At the simplest level the aid of the saint could be invoked. In the fifteenth century two horses belonging to Thomas Symon were weak for a long time, but were miraculously

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<sup>315</sup> BL MS Sloane 3285, f.89r.

<sup>316</sup> *Studies on Alchemy*, 130.

<sup>317</sup> *HorseRemII*, 96, 102.

<sup>318</sup> *BMO*, 32. Braekman remarks that the requirement of knowing the horse’s colour and owner’s name is a well-known feature of charms for animals, *Studies on Alchemy*, 123. Yet aside from the examples stated above, only in seven other charms for horses (out of sixty-one) is the colour of the horse mentioned. See BL MS Sloane 3285, ff.88v-89r, 89v, 90v, 91v; CUL MS Dd.4.44, f.31r, cited in *IMEP XIX*, [15]. In human charms, it was sometimes essential to name the sick man and his father, Payne, *English Medicine*, 119.

<sup>319</sup> *Studies on Alchemy*, 123. For example, George Cely (c.1458-89) owned horses named Bayard and Great Sorell, whilst in 1279-80 Aymer de Valance, earl of Pembroke (d.1324) had a falcon gentle called Blanchepenne, *Cely Letters*, 130, 143, 149, 165; PRO E101/99/15.

<sup>320</sup> *Studies on Alchemy*, 123.

<sup>321</sup> For a detailed discussion of this aspect of animal welfare see B. Aitchison, ‘Holy Cow!: The Miraculous Cures of Animals in Late-Medieval England’, *European Review of History* (forthcoming).

<sup>322</sup> In a reversal of the care roles, in a French Book of Hours, written for François de Dinteville, Bishop of Auxerre, in 1525, St Roch (d.1327) is depicted in a Wilderness outside Piacenza, where he caught the plague on a pilgrimage to Rome; his sores are attended by an angel whilst a dog brings him his food, P. Murray Jones, *Medieval Medicine in Illuminated Manuscripts* (London, 1998; first published 1984 as *Medieval Medical Miniatures*), 25.

returned to health at the invocation of King Henry VI of England (1422-61).<sup>323</sup> Interestingly, sometimes the saint called upon could change depending upon the animal; in a charm for worms, farcy, or sudden sickness in horses or rothers, the practitioner was to place his hands (which had been washed on Candlemas day in water in which church candles had been quenched) on the animal, praying to St Joy if it was a horse, but to St Luke if it was a rother.<sup>324</sup>

Many animals were measured to the saint, whereby a thread the length of the animal was made into the wick of a candle which could then be taken to a shrine.<sup>325</sup> Thus in the thirteenth century when an ox belonging to Henry, prior of St Guthlac of Hereford, suffered a swelling so that it suffocated and died, the prior measured the body of the ox and had a candle made to the measurement, in honour of St Wulfstan (c.1008-1095) – the ox subsequently recovered, and Henry brought the candle from Hereford to Worcester.<sup>326</sup> In cases where a large number of animals were afflicted, each animal could be measured individually, or the thread passed round the whole herd, as both Denis the Chamberlain, monk of Norwich Cathedral, and the knight Goscelin le Gros did in the late-twelfth century when their oxen were diseased.<sup>327</sup> As such, the thread would be too long to make into the wick of a candle, and instead could be folded back upon itself, or twisted, before being coated in wax.<sup>328</sup> This highlights the important fact that the wick of the candle could not be any length – it had to contain the length of the animal measured.<sup>329</sup> Such specifications may have had a two-fold importance. On the one hand, the candle was being given to the saint in thanks for a cure, and therefore it was important that it accurately represented the

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<sup>323</sup> *Henry VI Miracles*, 41. Although miracles were attributed to King Henry VI of England (1422-61), he was never formally canonised, Henry VII (1485-1509) abandoning the process which he had begun due to the high fees charged by the Roman court, *ibid.*, 5.

<sup>324</sup> BL MS Sloane 686, f.68r. Candlemas, 2 February, was the day that all the Church's candles for the year were blessed. By washing his hands in this water the practitioner was effectively blessing his hands also for the year.

<sup>325</sup> The same was also carried out for humans; in 1286, Alexander the *candelarius* was paid 14d for making a wax candle the height of Eleanor of Castile (1241-90), wife of Edward I (1272-1307), which was sent to be burned before the shrine of a favourite saint, either to plead intercession for a return to health, or to give thanks for recovery, *CHEC*, 23, 23 n.72.

<sup>326</sup> William of Malmesbury, *The Vita Wulfstani: To Which are Added the Extant Abridgments of this Work and the Miracles and Translation of St Wulfstan*, ed. R.R. Darlington, Camden Society, 3<sup>rd</sup> Series 40 (London, 1928), 151.

<sup>327</sup> Thomas of Monmouth, *The Life and Miracles of St William of Norwich*, ed. A. Jessop and M.R. James (Cambridge, 1896), 153-54.

<sup>328</sup> Alternatively, it could be rolled into a coil, Finucane, *Miracles and Pilgrims*, 95.

<sup>329</sup> *Ibid.*, 96.

animal. On the other hand, the candle may also have been viewed as a sympathetic form of medicine, with the burning of the wick within the candle symbolically representing the ailment being burned away, under the watchful gaze of the saint.<sup>330</sup>

Another means of soliciting a cure was to offer an oblation to the shrine of the saint, although what this was is not always specified. For example, when the falcon of the nobleman Peter Malorre was killed in 1292, he went to the tomb of St Thomas Cantilupe to whom “he devotedly promised an oblation [*oblatio*]”.<sup>331</sup> Similarly, Edward I paid 6*d* for “gifts made at the shrine of St Thomas of Hereford and the one of St Thomas of Canterbury” when one of his falcons was sick,<sup>332</sup> and in 1536 the commissioners of Thomas Cromwell (in or before 1485-1540) found that at Arden Priory, near Rievaulx Abbey, women were making offerings to the image of St Bride (d.c.525), protectress of sick animals, “for cows lost or sick”.<sup>333</sup> Other oblations, however, were specified, the most common offering being the gift of a penny, which had been bent over the ill animal as an indication that it was dedicated to the saint. Thus a horse which had lost its sight many times was cured by Thomas Cantilupe after its owner promised an oblation and bent a coin for it,<sup>334</sup> and when the falcons of Edward I were sick in 1296-97 pennies were bent for them and sent to various shrines.<sup>335</sup> Indeed, a remedy for a forspoken horse involved cutting a cross in the horse’s forehead with a penny, and then bending the penny to St Joy. The penny was to be put within the skin, being removed once the horse had recovered and offered to the saint.<sup>336</sup>

It was also not uncommon for wax images of the animal to be sent to shrines.<sup>337</sup> Thus in 1285-86 Edward I spent 4*s* 8*d* on wax to make a likeness of a sick

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<sup>330</sup> *Ibid.*

<sup>331</sup> AASS, October I, 678.

<sup>332</sup> Mclean, *English at Play*, 56. It is interesting that the aid of more than one saint was being called upon. Perhaps this was done in order to ensure help was given, as a form of ‘hedging one’s bets’.

<sup>333</sup> *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, ed. J. Gairdner, vol. X (London, 1887), 140; Webb, *Pilgrimage*, 250. My thanks to J. Kerr for this reference.

<sup>334</sup> AASS, October I, 667.

<sup>335</sup> A.J. Taylor, ‘Edward I and the Shrine of St Thomas of Canterbury’, *Journal of the British Archaeological Association* 132 (1979), 26.

<sup>336</sup> ST, f.64r. Interestingly, coin-bending was called “the English custom” by the commission investigating the canonisation of Thomas Cantilupe in 1307, Finucane, *Miracles and Pilgrims*, 95.

<sup>337</sup> Images were not only made of wax. When, in the late-twelfth century, the hawk of Duke Matthew of Lorraine received a deadly wound to the head, he promised a silver bird to the Mother of God of

gyrfalcon to be placed at Thomas Becket's (1120?-1170) shrine.<sup>338</sup> The image did not necessarily have to be of the whole animal, but, as when making an offering on behalf of a sick person, could be of the part of the body afflicted. When a man's pack-horse (*caballus*) was taken ill with a nasal haemorrhage which lasted many days, fearing to lose his horse, he promised St Bridget of Sweden (d.1373) a waxen image of the horse's head; whereupon the haemorrhage immediately stopped.<sup>339</sup> Larger items might be placed around the shrine, but smaller items could be hung up; when a gyrfalcon of Edward II (1307-27) was ill its waxen image was hung at a shrine, that the saint might work its recovery.<sup>340</sup> Indeed, when alterations were carried out in Exeter Cathedral in 1943, fragments of human limbs and animals, all made of hollow wax, were found on a ledge over the tomb of Bishop Edmund Lacey (d.1455), some of which had strings in them, by which means they had been suspended above the bishop's bones.<sup>341</sup> Although Edward I had clearly had waxen images made, as too would others, no doubt, who could afford it, sometimes waxen images were sold by local dealers at established shrines. Most of the replica offerings were of human limbs and organs, but animals and birds also featured amongst items available, indicating that enough people sought a cure for their animals at shrines to warrant the making of such images.<sup>342</sup> Indeed, although no information is supplied about the vendor, in 1368 Nicholas de Litlington, Abbot of Westminster (1362-86), expended 6d upon the purchase of a wax falcon to be offered at a shrine.<sup>343</sup>

Sometimes the cure of an ailment involved sending the animal itself on a pilgrimage. Edward I sent Thomelin Corbet, one of his falconers, to the shrine of Thomas Cantilupe with a sick falcon,<sup>344</sup> whilst in the late-fourteenth to early-fifteenth century the running hounds, lymers, and greyhounds of Louis d'Orléans (1372-1407)

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Rocamadour if she saw fit to give life to his hawk, *The Miracles of Our Lady of Rocamadour: Analysis and Translation*, ed. and tr. M. Bull (Woodbridge, 1999), 187.

<sup>338</sup> *RWH* 1285-86, 38.

<sup>339</sup> AASS, October IV, 544.

<sup>340</sup> M. Bateson, *Medieval England, 1066-1350* (London, 1903), 297.

<sup>341</sup> Finucane, *Miracles and Pilgrims*, 97. The custom of taking waxen images of human limbs, bodies, and heads to be hung in a church or cathedral is a practice which continues today.

<sup>342</sup> Finucane, *Miracles and Pilgrims*, 97.

<sup>343</sup> Westminster Muniments MS 24, 512, cited in J.A. Robinson, *The Abbot's House at Westminster* (Cambridge, 1911), 10 n.3.

<sup>344</sup> McLean, *English at Play*, 56. In Germany, clerics complained about peasants showing the host to sick horses in order to cure them, E. Cohen, 'Animals in Medieval Perceptions: The Image of the Ubiquitous Other', in Manning and Serpell, *Animals and Human Society*, 63.

were sent on a pilgrimage to Saint-Mesmer, near Orléans, to protect them from rabies, where a mass was sung and offerings of wax and money given to the saint.<sup>345</sup> At other times the saints themselves might give instructions on how to cure the animal. When a hawk belonging to King Henry II (1154-89) of England was pierced in her eye by a crane, the falconer made a vow to St Thomas Becket. In a dream the saint told the falconer to look for twelve pimples (*pupulae*) on the falcon, which when opened would restore the bird to health. The next day the falconer carried out the saint's orders, whereupon the bird opened her eyes and called for food.<sup>346</sup> Thus in this miracle the suggested remedy parallels some textual procedures found in treatises and recipe collections.

Other cures might involve oil from lamps and holy water, both of which were powerful therapeutic agents. As Cameron points out, after their consecration for use in Christian ceremonies they were viewed as substantially different to what they had been before; in such a guise they might be expected to have medical properties not present in their original form.<sup>347</sup> Thus a remedy for a horse suffering from founder went as follows:

Tak an handful of otis and blesse hem and say a pater noster and an aue for seynt ipolith Soule, and pray to god and seint ypolite to saue thyn hors and tak an holy candle and droppe on the otis and sprengt among holi watir and aftirward gif the otis to þe hors to ete and do this thre sides.<sup>348</sup>

Even by drinking water associated with the saint, animals could be cured; the palfrey of the Countess of Gloucester had suffered from pursey for two years, but once it had drunk from the fountain of Simon de Montfort (c.1208-65) and had its head and face

<sup>345</sup> A. Champollion-Figeac, *Louis et Charles Ducs D'Orléans: Leur Influence sur les Arts, la Littérature et l'Esprit de leur Siècle* (Geneva, 1980; first published 1844), 93. Indeed, the custom continues today to hold a *messe des chiens* on 3<sup>rd</sup> November, the translation of St Hubert (d.727), the patron saint of hunting and rabies, B. Johnston, 'The Dogs of Yesteryear', *History Today* 29 (1979), 118.

<sup>346</sup> *Materials for the History of Thomas Becket, Archbishop of Canterbury*, ed. J.C. Robertson, 7 vols., Rolls Series 67.i-vii (London, 1875-85), I, 528-29.

<sup>347</sup> Cameron, *Anglo-Saxon Medicine*, 138.

<sup>348</sup> BL MS Sloane 3285, ff.90v-91r. See also CUL MS Dd.4.44, f.31v, cited in *IMEP XIX*, [20]. The Hippolytus mentioned here is probably St Hippolytus of Rome, the patron saint of horses. In *The Boke of Marchalsi* his legend is adapted for use in a veterinary work, where the author states that St Hippolytus lived with wild horses for fourteen years. He prayed to God for knowledge of keeping horses, in order that he might instruct others in the art, and also prayed to be baptised. An angel came to perform the baptism, and told Hippolytus to go to King Herod, who, upon learning that the saint had lived amongst wild horses, tied the saint to four wild horses to see if they would tear him apart - but the horses refused to harm the saint despite provocation to do so, *BMO*, 21-3.

washed therein, it regained its health.<sup>349</sup> It was also believed that by soaking a relic in water, the water would absorb the virtues of the saint, and the use of such therapeutic agents was a common home remedy.<sup>350</sup> Such a procedure can be found in *The Canterbury Tales*, when the Pardoner tells of the powers of his sheep shoulder-bone:

Than shewe I forth my longe cristal stones,  
Y-crammed ful of cloutes and of bones;  
Reliks been they, as wenen they echoon.  
Than have I in latoun a sholder-boon  
Which that was of an holy Jewes shepe.  
“Good men,” seye I, “tak of my wordes kepe;  
If that this boon be wasshe in any welle,  
If cow, or calf, or sheep, or oxe swelle  
That any worm hath ete, or worm y-stonge,  
Tak water of that welle, and wash his tonge,  
And it is hool anon; and futhermore,  
Of pokkes and of scabbe, and every sore  
Shal every sheep be hool, that of this welle  
Drinketh a draughte; tak kepe eek what I telle.”<sup>351</sup>

Similarly, a fabric roll of 1503-04 from Ripon Collegiate Church records a payment of 19½d for a ‘Pokstane’ of St Wilfrid (c.633-709), used to protect beasts from sickness, which may have been achieved by dipping it in water, like the Scottish charm stone Clach-na-Bratach, the water being given to the animals to drink.<sup>352</sup>

Interestingly, neither human nor saintly intervention was always needed when animals were ill. For instance, Albertus Magnus wrote that when dogs were sick “they eat detestable herbs in order that they should be forced to vomit the bad humours”.<sup>353</sup> Similarly, it was thought that the best medicine for hounds which could not keep their meat down was to let them “go where þe wil and lat hem ete al þat euere þei wil, for sumtyme þe contrarious þing turneþ hem to good”.<sup>354</sup> Dogs could also cure their wounds by licking them with their tongue, for saliva has antiseptic healing properties,

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<sup>349</sup> *Montfort Miracles*, 68-9. A coin was then bent in honour of this miracle.

<sup>350</sup> Finucane, *Miracles and Pilgrims*, 89-90.

<sup>351</sup> Geoffrey Chaucer, *The Complete Works*, ed. W.W. Skeat (Oxford, 1949), 556.

<sup>352</sup> *Memorials Ripon*, III, 167-8, 167 n.2.

<sup>353</sup> *De animalibus*, 1363. This was a classical belief; Bartholomeus Anglicus (before 1203-1272) told how both Homer (?850 BC) and Pliny (AD 23-79) wrote about dogs purging themselves on herbs, *PR*, II, 1167. Indeed, he also reported that Avicenna believed the dog was very envious of this knowledge of herbs, and “he is wel sory if eny man knowe þe vertu of þe herbes”, *ibid.*, 1170.

<sup>354</sup> *MG*, 53.

a fact not unnoted by mediaeval authors – thus the version of *The Master of Game* copied by John Shirley (c.1366-1456), preserved in British Library manuscript Additional 16165, noted that “the hound tongue beareth medicine and especially to himself”.<sup>355</sup> Thus some remedies actually encouraged the dog to lick his wounds in order to cure it. If a dog was suffering from wounds from fighting another dog, raw sheep’s wool wet in olive oil was to be bound on for three days, after which the wound was to be anointed with olive oil, with the hound free to lick it with his tongue and so healing it himself.<sup>356</sup> Indeed, when hounds had suffered maggots in wounds, once they had been killed, butter was to be applied, which would encourage the hound to lick the wound with pleasure.<sup>357</sup> Although help was to be given to a horse suffering from a navel gall, after treatment the author of *The Sothebe Treatise* advised to “let him alone for he will saue him self”.<sup>358</sup>

Sometimes preventative measures were taken against ailments. For example, the author of the *Treatise on Horses*, when discussing corns, wrote “But for to tech 3ow how 3e schul kepe an hors þat he ne take no suche manere harm, y wold if y cowþe. Þus haue j seie men kepe here hors from cornus”.<sup>359</sup> Indeed, the advice to shepherds to “be warre of gresyng fowle mornynge” may have been in order to prevent sheep catching ailments,<sup>360</sup> and a medicine for swine, “to be gyven them betwene the seynt mary dayes” [15 August and 8 September], where no ailment was specified, was also probably intended for preventive measures.<sup>361</sup> Similarly, when cattle were found to be suffering from murrain, Fitzherbert recommended bleeding all those in the same pasture as the affected beasts, “and there shall no mo be sicke, by goddes leue”.<sup>362</sup> Indeed, the author of *The Boke of Marchalsi* advised giving a horse a rowel once a year,

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<sup>355</sup> MG, 56 n.1.

<sup>356</sup> *Ibid.*, 55-56. The same remedy was also recommended when hounds smote their forelegs against their hind legs, *ibid.*, 56.

<sup>357</sup> PC, f.187r; *De animalibus*, 1366.

<sup>358</sup> ST, f.59v.

<sup>359</sup> METH, 117. For the remedy, see above, 86.

<sup>360</sup> “Beware of Grazing on Foul Mornings”: a Gentleman’s Husbandry Notes’, ed. C.E. Moreton and C. Richmond, *Norfolk Archaeology: A Journal of Archaeology and Local History* 43:3 (2000), 501.

<sup>361</sup> The swine were also to be bled, either at the ear or tail, BodL MS Laud Misc. 598, f.1v. It seems that the giving of medicines may have been popular between these dates, for a medicine for sick sheep, consisting of “a leke of tar and a sponfovl of rovnnyng watur”, was also to be given between the Saint Mary days, Cambridge, Trinity College MS O.2.53, f.58v, cited in *IMEP XI*, 108.

<sup>362</sup> FBH, 54. Fitzherbert also recommended letting blood in those cattle which had been in company with those suffering from lung-sought, suggesting this too was an infectious ailment, *ibid.*

beneath the throat, which would help protect the horse from botches; it was also thought to be good for the eyes.<sup>363</sup> Gaston Phébus sought protection for his most valuable hounds, the *limiers* or sleuth hounds, by stipulating that those in charge of them should keep the dogs in their room; this would prevent them becoming as mangy as they would if they were with other dogs in the kennel.<sup>364</sup> Prevention from illness could also be sought by seeking the aid of the saints. Thus in 1285-86, before his gyrfalcons were put into the mew to moult their feathers, Edward I either had coins bent over them, or offered oblations<sup>365</sup> – and just as gifts were sent to various shrines when his birds were ill, so too did Edward send these oblations to “divers places”, no doubt hoping for as much protection for his birds as he could gain.<sup>366</sup> Likewise, on St Hippolytus’ day (13 August), coins were bent for Edward’s chargers, also placing them under the protection of the saints.<sup>367</sup>

#### IV.

#### “þei do more harme þen good”: precautions taken when treating animals

When treating animals there was an awareness that sometimes special care needed to be taken. For instance, one of the remedies for a horse suffering from the fike involved cutting a hole in a piece of leather to the size of the fike; this was placed over the tumour and packed with sticky clay or a paste of fine flour, “so þat þe hole skyn be not I-hurte with eny hot þyng þat schal be y-layd þer-to”.<sup>368</sup> Similarly, when a hound was suffering from flying mange, it was instructed that the ointment should only be applied to the hound “þer as he is mamewe [mange] and in none oþer place”, presumably due to the extreme burning properties of quicksilver and verdigris.<sup>369</sup> Indeed, other authors, too, were aware of the need to protect the animal from

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<sup>363</sup> *BMH*, f.46v. Albertus Magnus stated that cauterisations carried out on birds of prey in the month of March were more useful, suggesting that cauterisations done in this month were for preventative purposes, *De animalibus*, 1478. Compare to *Dancux Rex*, 104.

<sup>364</sup> Gaston Phébus, *Livre de Chasse*, ed. G. Tilander, *Cynegetica* 18 (Karlshamn, 1971), 191. This was an ancient belief. See *Xenophon and Arrian On Hunting (KYNHĒTIKOE)*, ed. A.A. Phillips and M.M. Willcock (Warminster, 1999), 103.

<sup>365</sup> *RWH 1285-86*, 227, 232-34.

<sup>366</sup> *Ibid.*, 227.

<sup>367</sup> L.F. Salzman, ‘Some Sussex Miracles’, *Sussex Archaeological Collections* 66 (1925), 73.

<sup>368</sup> *METH*, 111.

<sup>369</sup> *MG*, 50.

substances in a remedy. Thus a capital lye, a burning agency, which was to be anointed onto a scabbed horse, was not to touch healthy skin, “for þen it wol make þe here pile away þrouȝ violense of it-self”.<sup>370</sup> It was not only skin, however, which needed protecting; the author of *The Percy Poem* warned the falconer that parsley or rue dropped into the eyes of the hawk would blind her, hindering her ability to see her game.<sup>371</sup> Similarly, when treating horses for a web on the eye by means of blowing powder into the eye, the author of one treatise advised against blowing too much powder in at once, “for-a-ventur [fear] þat þei do more harme þen good for al-þynge þat is to myche is noȝt”.<sup>372</sup> Likewise, a hawk being treated for a broken feather, which was to be extracted by means of the blood of a rat, was not to have any of the blood on her healthy feathers – for presumably this too would make them fall out.<sup>373</sup>

One remedy for malanders involved bleeding the horse on the leg and then applying a hard-boiled egg to the site, which the author claimed was better than cutting, because of the danger to the sinews and veins which cutting involved.<sup>374</sup> Indeed, one author stated “ffor wite þou forsoþe þat it falleþ þe not to kerue ne to brenne in stedes [places] þer veynes & synuus both liggyng as in þe loyntes & oþer stedes þat is good ynowȝ buþ to knowe”.<sup>375</sup> Sinews and veins could easily be damaged by a hot iron, perhaps maiming a horse for life; indeed, the author of *The Boke of Marchalsi* advised when cauterising galls not to come near any sinew or bone with the cautery iron.<sup>376</sup> Accidents could sometimes happen, though, and the author of the *Treatise on Horses* advised that if a sinew was cut or punctured in any way, no cold water was to touch it, for this would cause the sinew to rot.<sup>377</sup> This belief was based upon the humoral theory that sinews were cold and dry; as water was cold and wet the moisture of the water would thus cause the sinew to rot.<sup>378</sup>

Even after treatment care was needed. After a dog had been anointed for quick mange he was not to be allowed to lick himself, for otherwise he could come to

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<sup>370</sup> *METH*, 105.

<sup>371</sup> *PP*, 15. See also, *PH*, 9.

<sup>372</sup> *METH*, 143.

<sup>373</sup> *PEB*, 16-17.

<sup>374</sup> BodL MS Digby 29, f.298v.

<sup>375</sup> *METH*, 123.

<sup>376</sup> *BMH*, f.49r.

<sup>377</sup> *METH*, 133. The notion of not allowing cold water to touch sinews was widespread. See *De animalibus*, 1383; *Cirurgie des chevaux*, 399.

<sup>378</sup> *METH*, 133.

harm,<sup>379</sup> and a horse which had been treated for mendesanes was not to lick his foot, for then his foot would fester, and he could not be cured.<sup>380</sup> Sometimes if due care was not taken this could lead to the death of the animal. For instance, when pricking the lampas [fig. 14], it was advised to prick the length of the wound, “for if þat þu dist prikkyn ouerwert þe woundis wyth þe lancet, þu myst keruyn the veynis in to, and þan myth þe hors bled to deth”.<sup>381</sup> Likewise, a horse could also die if all of the corns found in vives were removed; thus it was recommended only to remove forty.<sup>382</sup> Interestingly, Albertus Magnus noted that care was to be taken that no moonlight fell upon abscesses and wounds, “because moonlight very frequently induces death in an injured horse”.<sup>383</sup>

Sometimes care needed to be taken that the ailment was not made worse. The author of the *Treatise on Horses* advised not touching the sore radunculus with any iron, whether hot or cold, in the beginning when the humours were stirring, “so þat þe humours ne be more engendred þen þei were bifore, & greue more þat lyme þat it is on, or ellus oþer lymes þat buþ ney þer-to, or ellus renneþ to sum oþer stede ney þe herte, where-þrowþ þe hors may lache [catch] his deþ”.<sup>384</sup> Similarly, when cutting the hawk out of a horse’s eye the marshal had to take care not to cut the grease (gres) of the eye, for this could cause the horse to lose his sight.<sup>385</sup> Indeed, the austringer had to be sure to bathe the bird after applying orpiment or stavesacre to rid a hawk of vermin, for these ingredients could maim a bird in poor health.<sup>386</sup> Care also needed to be taken with the food given to an animal after treatment. For instance, a horse which had been treated for wounds of the tongue, or canker on the tongue, was to eat no oats afterwards, “for þei wold gon into þe wondis of þe tonge & prikkyn hym & greuen hym”.<sup>387</sup>

Animals could feel pain, a fact not unmarked by mediaeval authors; the author of the *Treatise on Horses* noted that the sinew of a horse “wol smerte more þat is but

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<sup>379</sup> MG, 50. This was presumably due to the inclusion of verdigris amongst the ingredients.

<sup>380</sup> BMH, f.52r.

<sup>381</sup> BMO, 26.

<sup>382</sup> BMH, f.21r.

<sup>383</sup> *De animalibus*, 1380.

<sup>384</sup> METH, 137.

<sup>385</sup> BMH, f.19v.

<sup>386</sup> *HawkRemI*, 28.

<sup>387</sup> BMH, f.27r.

onliche y-pricked or stonyed with a stroke of a ston þen it wol þouȝ it were kyt a two".<sup>388</sup> Indeed, Theodoric of Cervia took active measures to prevent the infliction of pain when operating on a horse, giving a recipe for an opium draught, an anaesthetization which would also make it easier to perform the operation.<sup>389</sup> The idea of not causing pain can also be found in falconry treatises. According to Albertus Magnus, "If you wish to extract a broken feather without pain, take the blood of a small animal called a *gruile* or the blood of a rat, and smear the place of the feather and it will fall out"; honey, cooked down to a great thickness and made into a shaft the size of the opening of the feather, was then to be placed in the hole, presumably so its antiseptic and soothing qualities could act as a disinfectant.<sup>390</sup> Interestingly, the two Middle English treatises in which this remedy is found make no mention of alleviating the bird of pain (although in the Kerdeston manuscript it was thought the remedy would extract the feather "with-owte difficulte and dissesse")<sup>391</sup>, suggesting that this was an observation Albertus Magnus had made himself. It is worth noting, however, that some authorities did not advocate the removal of a broken feather. Rather, the feather was to be 'imped', a process involving joining another feather, which had been suitably shaped, to the stump of the broken one by means of a two-headed needle [fig. 15].<sup>392</sup> Today the needle is dipped in vinegar or brine, the tenacity of the rusted iron keeping the needle in its place.<sup>393</sup> Nothing is mentioned in *Prince Edwarde's Booke*, the Kerdeston manuscript, or *De animalibus* regarding this process, but the author of *The Percy Poem* advised that if a hawk broke her tail,

To take a needle and salt it well.  
Hit saueth her feders wyth-oute faile.  
If hit be putte in kendely and welle.<sup>394</sup>

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<sup>388</sup> *METH*, 133.

<sup>389</sup> Theodoric of Cervia, *Pferdeheilkunde*, III, 44.

<sup>390</sup> *De animalibus*, 1491. The 'gruile' has not been identified; it is probably a small rodent, Albert the Great, *Man and the Beasts: De animalibus (Books 22-26)*, ed. and tr. J.J. Scanlan (New York, 1987), 285 n.106.i.

<sup>391</sup> *PEB*, 16-17; *Kerdeston*, 54. *The Proceis of Hawykng*, which has so much in common with *Prince Edwarde's Booke*, has no corresponding paragraph.

<sup>392</sup> Imping is described in both *PEB*, 17, and *De animalibus*, 1483, and *PEB*, 17.

<sup>393</sup> See Michell, *Practice of Hawking*, 227-29.

<sup>394</sup> *PP*, 23.

Imping is still in use today, just as it is still recommended not to remove the broken feather: “In no case should the broken feather of a Hawk be *pulled* out, because when such is done it is seldom replaced; and even if a new feather does appear, it is almost certain to be a *crimped* and deformed one”.<sup>395</sup> Perhaps the medicine recommended to merely make the feather fall out did not have the same effect.

There was also a notion of sterilising wounds, and it seems that many ailments were sterilised with vinegar, which has antiseptic properties.<sup>396</sup> For instance, after frounce on a hawk had been burned, but before a powder was applied, the wound was to be washed with vinegar or eisel,<sup>397</sup> whilst another remedy advised washing the throat with vinegar after the frounce had been pared away.<sup>398</sup> Similarly, after the mule had been removed when a horse was suffering from mules, and the wound had been cauterised, the wound was to be washed daily “wyth vinegir or wyth ius of planteyn or wyth hote wyne”.<sup>399</sup> Both vinegar and wine have antiseptic properties, whilst the distilled water of plantain, with alum and honey dissolved in it, has been used “for washing, cleansing and healing a sore ulcerated mouth or throat”; thus the juice on its own may have been of help in healing the sore.<sup>400</sup> Indeed, it seems that care was taken to ensure that wounds did not turn septic. For instance, the author of *Hawk Remedies II* noted that should the wound of frounce stink, “þen wassh yt yche tyme with venegar and dry hit up”, which was to be done until the hawk was recovered.<sup>401</sup> Likewise, wounds in birds of prey were to be cleansed with wine until dead flesh appeared.<sup>402</sup>

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<sup>395</sup> Salvin and Brodrick, *Falconry*, 120 [italics by editors].

<sup>396</sup> Y. Poulle-Drieux notes that the use of wine, vinegar, and hot water in French stable accounts of the thirteenth and fourteenth centuries attests to the hygienic practices of the marshals, Y. Poulle-Drieux, ‘Practique de l’Hippiatrie à la fin du Moyen Âge’, in *Comprendre et Maîtriser la Nature au Moyen Âge: Mélanges d’Histoire des Sciences offerts à Guy Beaujouan*, preface M. Terrasse, introduction D. Jacquart (Geneva, 1994), 333.

<sup>397</sup> *DT*, 30.

<sup>398</sup> *PP*, 12, 15; *HawkRemII*, 45. Another remedy advised rubbing the wound with a mixture of ground mustard and powder of soot, *HawkRemI*, 27. Mustard flour, made from black mustard, is “a capital antiseptic and sterilising agent”, Grieve, *Modern Herbal*, 569.

<sup>399</sup> *BMH*, f.50r.

<sup>400</sup> Grieve, *Modern Herbal*, 642.

<sup>401</sup> *HawkRemII*, 46.

<sup>402</sup> *PEB*, 18; *PH*, 39.

V.  
 “*et sanabitur*”: efficacy of animal treatments

Some authors had great faith in their cures, believing that an animal would never suffer from the ailment again. For example, the author of *The Sothebe Treatise* noted that his drink for botts “shal sle þe bottes for euer”,<sup>403</sup> whilst the author of the version found in *Horse Remedies I* noted that the remedy for melettes “shall make hym hole for euer more off þat maladye”.<sup>404</sup> Likewise, the author of *Prince Edwarde’s Booke* remarked that “withoute doute” the hawk would be cured when using the remedy for dry frounce.<sup>405</sup> Such remarks were probably part of the advertisement for the promotion of the use of the text or particular remedy. Indeed, in 1450-51 Nicholas the Smith of Barnard Cross warranted, under penalty of one noble, that the horse Sorelle would never again suffer from vives (*vyvisse*).<sup>406</sup> Nicholas was putting his reputation on the line, but advocating great faith in his cure. It was also often remarked that a remedy had been proved, or that the author personally had seen it work.<sup>407</sup> In a charm for founder, the author of one treatise qualified it with “for yis proues for sothe of many marchall”,<sup>408</sup> whilst a remedy for myltes was to be made, “for it is proued”.<sup>409</sup> Likewise, another author verified (“I trewe þat wyll hele her”) that hedgehog meat given to a hawk often would heal her of dehydration.<sup>410</sup> Indeed, the author of *The Percy Poem* said of his remedies,

Better in the world can no man telle.  
 That euer I hurde where-euer I come,  
 I swere by the vestment, boke, & bell  
 Thei arn the beste yf thei be well done.<sup>411</sup>

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<sup>403</sup> *ST*, f.63v.

<sup>404</sup> *HorseRemI*, 80.

<sup>405</sup> *PEB*, 10.

<sup>406</sup> *BWM*, 37-8.

<sup>407</sup> Interestingly, where in one remedy for the bite of a mad hound Gaston Phébus remarked “And this is good and true, because I have proved it”, Edward, second duke of York, changed this to “and þis is a good medecyne and a trew for it haþ be preuyd”, Phébus, *Livre de Chasse*, 116; *MG*, 49.

<sup>408</sup> *HorseRemII*, 101.

<sup>409</sup> *Ibid.*, 100.

<sup>410</sup> *HawkRemII*, 42. The efficacy of this may be wondered at, however, given that hedgehog was also recommended for hawks suffering from gout and cramp in the legs, *PH*, 40; *PEB*, 18, 16.

<sup>411</sup> *PP*, 25.

This last line is interesting, for it suggests that the efficacy of the treatments lay as much with those performing the cure, as with the healing properties of the remedy.

Sometimes authors attempted to give their remedies some kudos by ascribing them to other persons. In *The Boke of Marchalsi* a remedy for curing trenchelons “was þe marchausie þat King Fretheryk contryued”,<sup>412</sup> whilst the cure for rabies in the *Practica canum* was ascribed to Amonicus, King of Valencia.<sup>413</sup> Yet the persons to whom the remedies were ascribed were not always specifically named. For instance, the author of *The Durham Treatise* stated of a remedy for salve that “An ostreger mad it þat cowth great skylle on hawkys”,<sup>414</sup> whilst the author of the *Treatise on Horses*, when discussing eye ailments, wrote “And ȝit wol y schewe as y haue herde of proued maysterus a good medycyne, & swyþe [swiftly] helynge for hors eyen”.<sup>415</sup>

Authors obviously could have great faith in their own remedies. It was not uncommon for authors to add at the end of their remedies that the animal ‘shall be whole’. For example, the author of *The Durham Treatise* commented to this effect on twelve of his eighteen remedies, whilst the author of British Library manuscript Arundel 272 made such remarks on ten of his sixteen remedies. Yet authors were not always so trusting in the remedies of others. The author of *The Percy Poem* gave an alternate remedy for lice, of white wine and tansy ground in seam,<sup>416</sup> which other men used, but he remarked that it would not slay the lice immediately, and that he could not say when it would.<sup>417</sup> Similarly, when discussing cures for men and beasts which had been bitten by a mad hound, the author of *The Master of Game* remarked that going to the sea and making nine waves pass over the victim “is but a litel helpe”, whilst he was also sceptical of the practice of applying a cock’s fundament to the

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<sup>412</sup> *BMH*, f.35v. If Frederick II is meant, it is probable that “þe marchausie” refers to that of Jordanus Ruffus, Frederick’s “*miles in marestalla*”, Jordanus Ruffus, *Hippiatria*, 1. It could also, however, refer to the vernacular work of Frederick II’s farrier, Master Albrecht, who worked in the stables of the emperor at Naples, and wrote from personal experience. For a brief overview of this work, see P.F. Cuneo, ‘Beauty and the Beast: Art and Science in Early Modern European Equine Imagery’, *Journal of Early Modern History* 4:3-4 (2000), 302-04.

<sup>413</sup> *PC*, f.187r. The version of this treatise found in BodL MS Ashmole 1427, f.27r, names the king as Hamo, whilst Albertus Magnus called him Armeria, *De animalibus*, 1366. It is possible that these names are a Christianised version of a Muslim name, for Valencia was under Muslim rule until the mid-thirteenth century, in which case we may never be able to determine who they were. Loncke, however, notes that M. Giese proposes an identity of Ibn Mardaniš, *Practica Canum*, 171 n.2.

<sup>414</sup> *DT*, 36.

<sup>415</sup> *METH*, 143-45.

<sup>416</sup> B. Danielsson translates “in same” as “in the same wine”, but I believe that seam is intended.

<sup>417</sup> *PP*, 16.

wound, which was thought to suck out the venom.<sup>418</sup> Although authors may not have had great confidence in other remedies, this shows that they were aware of other alternatives, and prepared to use them.

For all that it was believed some remedies were effective and others not, it was recognised that not all ailments could be cured. For instance, Fitzherbert remarked that “I knewe neuer manne that coulde helpe it, or fynde remedye therefore” for cattle suffering from gout; all that could be done was to put the animal to good pasture and feed him well.<sup>419</sup> Similarly, whilst in 1283 an annalist of Dunstable Priory gave a remedy to protect sheep against scab, he reported “But [against that] infirmity, which is produced through moisture, nothing was influential”.<sup>420</sup> In *The Master of Game* it was stated that if “eny hounde is wood of eny of þe ix woodnesse he shal neuere be hool”, and that the dog would be dead within nine days.<sup>421</sup> Yet interestingly, even though it was believed that this ailment could not be cured, there were still attempts to do so. For instance, one remedy for the cure of rabies was to suspend the dog in running water for nine days by its forelegs, with its hind feet barely touching the ground, after which its head was to be shaved and bathed with beet juice.<sup>422</sup> There were also attempts to prevent it arising; it was thought that ragemuet could be caused by a worm under the tongue, and thus the removal of this worm would prevent the dog going mad.<sup>423</sup> Yet it seems that attempts were not always made to cure ailments, a fact which is highlighted by archaeological evidence from mediaeval Galway, where the hip-bone of a small dog was found; it showed a false joint surface, indicative of a long-standing

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<sup>418</sup> MG, 49. This latter remedy can also be found in *Le Livre du Roy Modus*, 62.

<sup>419</sup> FBH, 57.

<sup>420</sup> *Annales Monastici*, III, 306. T.H. Lloyd suggests this ailment was liver fluke, T.H. Lloyd, ‘Husbandry Practices and Disease in Medieval Sheep Flocks’, *Veterinary History* 10 (1977-78), 12.

<sup>421</sup> MG, 47. Only seven versions of madness are actually discussed. Even at the end of the nineteenth century if a dog had bitten another animal or a human it was not to be immediately destroyed but quarantined for nine to fifteen days, by which time a rabid dog would be dead, *The Uses of Elliman’s Embrocation for Horses, Dogs, Birds, Cattle* (Slough, 1899), 81.

<sup>422</sup> It was also recommended that any food given to the dog was to be dipped in beet juice, PC, f.187r. See also *De animalibus*, 1366.

<sup>423</sup> MG, 48. Bartholomeus Anglicus, citing Pliny, also noted that the removal of this worm caused madness to cease, PR, II, 1169. Yet Edward, second duke of York, noted that “ye shuld fynde but fewe houndes þat þei ne han a worme vnder the tunge”, and was sceptical about this cure, realising that it was not a worm under the tongue, but a vein, MG, 48.

dislocated hip, which evidence suggests that the dog remained active after the incident, with no apparent human intervention.<sup>424</sup>

Authors could, however, sometimes disagree about the curability of an ailment. In the sixteenth century Fitzherbert believed that mourning of the chine was incurable,<sup>425</sup> yet fifteenth-century remedies are to be found in British Library manuscript Cotton Julius D.VIII, *Horse Remedies II*, and *The Sothebe Treatise*.<sup>426</sup> The former two are merely collections of remedies, yet even the more detailed text of *The Sothebe Treatise* gives no indication that the ailment was incurable. Likewise, the author of *The Percy Poem* claimed there was no cure for aggeleons or worms in the stomach,<sup>427</sup> but remedies for the former can be found in *The Durham Treatise*, *The Proceis of Hawkyng*, *Prince Edward's Booke*, and the *J.B. Treatise*.<sup>428</sup> Indeed, what could be cured in one type of animal was not always curable in another. For instance, although both cattle and sheep could be affected by the turn, Fitzherbert noted that he had seen no sheep cured of the ailment.<sup>429</sup> Similarly, as shown above, there was no cure for gout in cattle, yet this ailment in birds of prey (sometimes called podagra) was curable.<sup>430</sup>

Sometimes the curability of an ailment depended upon another factor, such as the conformation of the animal; the author of *The Boke of Marchalsi* advised his readers not to try to cure horses which were lame on the shoulder if this was due to bad conformation, for then nothing could be done to cure it,<sup>431</sup> and a horse which was suffering from rate would die within nine years unless he had had the malady as a foal.<sup>432</sup> At other times the curability of the ailment could depend upon how far it had progressed. For instance, should a ringbone grow long, then it was difficult to cure,<sup>433</sup>

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<sup>424</sup> E.M. Murphy, 'Animal Palaeopathology in Prehistoric and Historic Ireland: A Review of the Evidence', in J. Davis, et al. (eds.), *Diet and Health in Past Animal Populations: Current Research and Future Directions* (Oxford, 2005), 20. If the dog was a stray, however, human intervention would be unexpected.

<sup>425</sup> *FBH*, 66.

<sup>426</sup> BL MS Cotton Julius D.VIII, f.114r; *HorseRemII*, 93; *ST*, ff.59v-59r.

<sup>427</sup> *PP*, 15. Later in the treatise, however, the author claims that the remedies for rye, cray, or frounce, "arn gode also for the farsynys & aggeleons", thus contradicting himself, *ibid.*, 24.

<sup>428</sup> *DT*, 32; *PH*, 46-7; *PEB*, 14; *J.B.I*, 111; *J.B.II*, 114; *J.B.IV*, 139.

<sup>429</sup> *FBH*, 56.

<sup>430</sup> *Ibid.*, 57; *DT*, 32; *PH*, 38, 40; *HawkRemII*, 43; *PEB*, 18. The author of *The Percy Poem*, however, remarked that none of his remedies would cure the gout in birds of prey, *PP*, 17.

<sup>431</sup> *BMH*, f.41r. All the owner could do was keep the horse moist with olive oil and grease, and wash him with fresh broth, presumably in an attempt to ease his lameness, *ibid.*, f.41v.

<sup>432</sup> *Ibid.*, f.17v. Perhaps those horses which survived were suffering from a chronic form of the ailment, and thus appeared to be cured after an attack.

<sup>433</sup> *FBH*, 69.

whilst a horse suffering from farcy which had had the malady so long that his flank was “gerd up”, with yellow, clear snot coming out of his nostrils, was not to be treated “for he ne is but ded” and would die within nine days.<sup>434</sup> The location of the ailment could also affect the ease with which the ailment could be cured. If farcy was in sinewy sites, in the muscles, in the cavities of the bones, or in divers places about the limbs, then it was difficult to cure; but should it come in fleshy sites, then “þat is esi to hele”.<sup>435</sup> Likewise, cattle suffering from turn, where the bladder was under the horn, were past cure.<sup>436</sup>

There can be no doubt that some remedies would have been ineffective in curing the ailment; a powder for curing wounds of dead flesh, to be made from horse skin, horse bones, hart or sheep horn, and old shoe soles, was likely to be of little help.<sup>437</sup> Likewise, a drink to cure trenchelons which contained half a pound of arnement, of which the horse was to be given a saucerful at the beginning, and then double, would perhaps cause more damage than help cure the ailment.<sup>438</sup> It is also doubtful how helpful a remedy for a poisoned dog would be, where cheese, brown bread, and garlic, pounded together, were to be washed down with “newalle cornes”.<sup>439</sup> Indeed, as has already been shown, treatment was not always successful, for the falcon of George Cely (c.1458-89) could not be cured of her sickness.<sup>440</sup>

Other remedies, however, would have been effective.<sup>441</sup> For instance, two of the remedies for dead flesh contained the caustic quicklime, which would have cured the ailment.<sup>442</sup> Similarly, one recipe collection for horses contained a recipe for “a coresyf þat me clepit the redegunde”, which also removed dead flesh. It was made by boiling honey and verdigris over a slow fire in a brass pot, then laying it to the sore once it has cooled.<sup>443</sup> Verdigris, being corrosive and irritant, would thus presumably burn away the proud flesh, whilst at the same time the antiseptic properties of honey

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<sup>434</sup> *BMH*, f.31r.

<sup>435</sup> *METH*, 93.

<sup>436</sup> *FBH*, 56.

<sup>437</sup> *METH*, 125. See also *BMH*, f.58r, and compare to *De animalibus*, 1389.

<sup>438</sup> *BMH*, ff.34v-35r.

<sup>439</sup> Oxford, Balliol College ms 354, cited in *IMEP VIII*, 11.

<sup>440</sup> See above, 53.

<sup>441</sup> For a discussion of the remedies in the *Livre de Chasse*, and their effects, see Boor-van der Putten, “Maladies des Chiens”, 64-9.

<sup>442</sup> *METH*, 123-25. See also *BMH*, f.57v.

<sup>443</sup> BL MS Royal 17.A.XXXII, f.130v.

would have prevented infection from setting in to the sore.<sup>444</sup> The use of dung in plasters – a plaster for raised frounce was to contain goat, deer, or sheep muck,<sup>445</sup> whilst a plaster for the fester contained both hen and dove dung<sup>446</sup> – was also eminently sensible, for the droppings would be both warming and adhesive, and would thus make the plaster hold to the body of the animal. In addition, they would also form a crust, allowing the wound to heal over.

Another cure which would have been effective was that for a broken leg or thigh in a bird of prey; mastic, frankincense (olibanum), moneywort, and daisy were pounded together and put in a linen cloth, which was then wrapped around the leg or thigh.<sup>447</sup> The mastic and frankincense would have set firm, acting as a plaster cast, and so holding the broken bone in place until it could knit together. A similar remedy for hounds suffering a broken bone can be found in *The Master of Game*. The bone was to be knit then bound with flax wetted with egg-white. This too formed a plaster cast, which was held in place by four splints so that the bone did not move.<sup>448</sup> Practical remedies for staunching blood would also have been effective; two remedies found in the *Treatise on Horses* used proven styptics, one employing felt, burned a little, wet in red nettle juice, the other using the powder of the puffball, a fungus which grows on rotten logs and which contains fibrous meshes that enhance the coagulation of blood.<sup>449</sup> The practice of binding a feather to the place where the blood ran would also probably have been effective, the individual fibres helping with coagulation.<sup>450</sup> Likewise, although there were various ointments for scab, they all contained active

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<sup>444</sup> For notions of sterilising wounds, see above, 156.

<sup>445</sup> *HawkRemI*, 36.

<sup>446</sup> *HorseRemII*, 103. Compare to BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>447</sup> *PEB*, 19. Broken bones could also be repaired by being bound in a hot loaf, or bound with cock dung soaked in vinegar, *ibid.*, 18. Binding the bone was not the only method used to cure this ailment, one author claiming that giving a hawk the powder of burned oak and washing her meat in lukewarm milk would heal a broken bone, *HawkRemII*, 43.

<sup>448</sup> *MG*, 53. Those dogs suffering from broken bones were also to be given the juice of comfrey and self-heal in their broth or meat as “þa shal make þe bonys joyne to giders”, *ibid.*, 53. Comfrey has a reputation as a vulnerary, whilst self-heal is astringent, Grieve, *Modern Herbal*, 217, 732. Indeed, in the seventeenth century such was comfrey’s reputation with regards to healing broken bones that Nicholas Culpeper wrote, “yea, it is said to be so powerful to consolidate and knit together, that if they be boiled with dissevered pieces of flesh in a pot, it will joint them together again”, Nicholas Culpeper, *Culpeper’s Complete Herbal: Consisting of a Comprehensive Description of Nearly all Herbs with their Medicinal Properties and Directions for Compounding the Medicines Extracted from Them* (Leeds, no date), 98-9.

<sup>449</sup> The powder of the puffball was to be mixed with swine dung, which would adhere to the body of the horse, *METH*, 89-91; Albert the Great, *Man and the Beasts*, 39. Compare to *De animalibus*, 1379-80.

<sup>450</sup> *METH*, 91.

ingredients which would have been effective in curing the ailment; that for hounds included black pitch, a cutaneous stimulant,<sup>451</sup> whilst allopathic methods were sought for horses by means of caustic ingredients, one remedy containing quicklime, another verdigris.<sup>452</sup> Indeed, the tar used in sheep salves had powerful antiseptic properties.<sup>453</sup> Eminently sensible advice was given for hounds which could not keep any food down due to a sickness in the throat (an ailment which also afflicted humans); they were to be given meat cut up in small chunks so that they could swallow it without labour, and it was to be given in small quantities so that the hound could digest it better.<sup>454</sup> Buttered eggs were also thought to “doþ hem moche good”, a food which would have been easy to eat and light on the stomach.<sup>455</sup> A remedy for laminitis may also have been effective, for it involved riding the horse into water and letting the horse stand there, presumably so that the cold water would counter the swelling.<sup>456</sup> Indeed, standing in water was also recommended for swelling of the testicles,<sup>457</sup> and in fig. 16 a horse receives this treatment for sore withers.

Although it is unlikely that the bite of a rabid dog (treated in the same way for both humans and beasts) could be cured, the two recommended poultices did have qualities for healing wounds. The first poultice contained salt, vinegar, strong garlic, and nettles.<sup>458</sup> The vinegar would have a bactericidal effect, the antiseptic properties of garlic would prevent the wound from suppurating, whilst the nettles would arrest the bleeding.<sup>459</sup> The second poultice was composed of leeks, strong garlic, chives, rue, nettles, olive oil, and vinegar.<sup>460</sup> The olive oil would have soothing effects, whilst the rue would ward off contagion and prevent the attack of fleas and other noxious insects.<sup>461</sup>

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<sup>451</sup> MG, 51.

<sup>452</sup> METH 105, 107.

<sup>453</sup> OED. Sheep salves are discussed below, 186-87.

<sup>454</sup> MG, 53.

<sup>455</sup> *Ibid.*

<sup>456</sup> *HorseRemII*, 100. Cold water bran poultices are recommended by Thompson, *Veterinary Science*, 142.

<sup>457</sup> BL MS Royal 17.A.XXXII, f.130r; *HorseRemII*, 93.

<sup>458</sup> MG, 49. This is very similar to a remedy found in *Le Livre du Roy Modus*, where the bite wound was to be washed with the salt, vinegar, and garlic, then rubbed with stinging nettle, *Le Livre du Roy Modus*, 62.

<sup>459</sup> Grieve, *Modern Herbal*, 344, 577.

<sup>460</sup> MG, 49.

<sup>461</sup> Grieve, *Modern Herbal*, 599, 695.

## VI.

## “fyll ye soore full of yt but ons a day”: the preparation and administration of medicines

When curing animals it might be thought that immediate treatment would be required. Whilst in the majority of instances the remedy could be made there and then, this was not always the case, for some remedies took a period of time to make. For instance, an ointment for curing maggots in birds of prey was to be allowed to sit for three days, before being strained through a linen cloth,<sup>462</sup> whilst a medicine for eschafure in horses was to “stond stille all a nyght” so that it could become clear.<sup>463</sup> Likewise, a remedy for cray, where egg-whites were whipped, was to be allowed to “stond a whyll”, to allow an oil to form underneath, in which the hawk’s meat was to be wet.<sup>464</sup> Some could take even longer to prepare. The ingredients for a bath, which was “good for eury hors þat is hurte on ony ioynt”, were to be seethed for a fortnight.<sup>465</sup> In cases where medicines took a period of time to make it seems that the ailment was never something which required immediate attention, and thus the health of the animal was in no way jeopardized.

The time at which medicines were administered could vary. For instance, a hawk suffering from cray was to be given meat steeped in egg-white (which had been pushed through a sponge) both at night and in the morning.<sup>466</sup> In contrast, a horse suffering from a pearl on the eye was to have a juice administered to the eye only at night,<sup>467</sup> whilst a horse suffering from chaudpiss was to be starved overnight, given a herbal drink the following morning, and then to remain “metles & drynkles iij. hours after”.<sup>468</sup> Indeed, the need to ensure medicine was given on an empty stomach was also found for other ailments. Thus the author of *The Sothebe Treatise* recommended starving horses suffering from strangullion, a cough, purse, a fretting in the guts, or trenchelons before giving them medication in the form of a drink.<sup>469</sup> Similarly, one of

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<sup>462</sup> *PEB*, 15.

<sup>463</sup> *BMH*, f.39v.

<sup>464</sup> *TBS*, 94.

<sup>465</sup> *Ibid.*, ff.44r, 43v.

<sup>466</sup> *PH*, 10-11. Compare to *HawkRemI*, 32.

<sup>467</sup> *ST*, f.58r. This was not stipulated in the version found in *HorseRemI*, 85.

<sup>468</sup> *ST*, f.62r.

<sup>469</sup> *Ibid.*, ff.61v, 62v, 63r, 63v. See also *CUL MS Dd.4.44*, f.31v, cited in *IMEP XIX*, [19].

the remedies for teyne found in *The Proceis of Hawkyng* stipulated that the hawk “be voide when ye yeue hir the medecyne”.<sup>470</sup>

It was not only the time at which remedies were to be given which varied, but also the length of time for which they were to be applied. For instance, a horse suffering from eschaufure was to be bathed twice a day for no more than five days,<sup>471</sup> whilst a horse suffering from a web in the eye was to have a mixture of honey and hare gall dropped into its eye once for three days.<sup>472</sup> Likewise, a bird of prey suffering from vermin was to have a powder on her for three days, before she was to be allowed to bathe.<sup>473</sup> In contrast, a horse which might be lame in the shoulder was to have a seton “dwellen wyth inne þe skyn þre wekys & þe reole an moneth”.<sup>474</sup> A horse suffering from morfound, which was to be treated “with good paryng and shoyng”, would not be able to bear a man for three months, and “nor he shall neuer trede so boldely vpon the harde stones as he dydde before”.<sup>475</sup> Indeed, the horse Gresel Fysymon was seemingly treated with oil and ointment for a three-week period (13 February to 5 April 1337) in the household of Katherine de Norwich (d.1341x43).<sup>476</sup> Some remedies, though, could be much shorter; when using white soap as a suppository in hawks suffering from a stopped tewel, this was to be left in only for three hours, “for sope is a corasy [corrosive]”.<sup>477</sup> Similarly, a hawk with cramp in her wings was to have her wing placed between two halves of bread only for “the space of alfe a quarter of an howre”,<sup>478</sup> whilst one plaster for sorews in horses was only to be applied for an hour.<sup>479</sup>

Although the period over which the medication was to be given was sometimes specified, at other times the remedy was to be applied until the animal had recovered.<sup>480</sup> For example, *The Proceis of Hawkyng* gave a remedy for teyne whereupon

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<sup>470</sup> PH, 29. This remedy does not appear in *Prince Edward's Booke*, as do the other two remedies for teyne.

<sup>471</sup> BMH, f.40r.

<sup>472</sup> METH, 145.

<sup>473</sup> HawkRemI, 27.

<sup>474</sup> BMH, f.46v.

<sup>475</sup> FBH, 69.

<sup>476</sup> HAME, I, 209, 212, 216, 220. This last entry refers merely to a horse, but it is likely that Gresel Fysymon was the recipient of the purchases.

<sup>477</sup> Hawk Remedies I, 33-34.

<sup>478</sup> PH, 31.

<sup>479</sup> BMH, f.54r.

<sup>480</sup> For many remedies, however, no time period was specified.

the hawk was to be given “iii morcellis every day unto the tyme that she be hoole”,<sup>481</sup> and likewise a hound suffering from malemort in the nostrils was to breathe in scented steam “iii or iiij tymes euey day in to þe tyme þat he be hool”.<sup>482</sup> In a remedy for a horse slavering abnormally, a cloth was to be soaked in a mixture of honey, salt, and eisel, which was to be rubbed “ofte syþe þe hors palays [palate] þer wiþ al aboute as þe þynkeþ best”.<sup>483</sup> Similarly, in a remedy for scab, an ointment was to be applied twice or thrice a day, “as þe þynkeþ best”,<sup>484</sup> whilst the marrow of a heron was to be kept in a box and applied to a bird suffering from gout or a bruise or wound “when hit nedes”.<sup>485</sup> Thus it can be seen that those caring for sick animals had to have excellent judgement; it was important for them to be knowledgeable about the healthy state of their animal, for only when they had returned to this state would they be deemed cured. If treatment was stopped too soon, there was a risk that the animal might die.

Some means of administering medication were quite innovative. When birds of prey needed to be given liquid medication, this was first enclosed in a gut, as is described in *Prince Edwarde’s Booke* for hawks suffering from filanders: “Take the jus of Nepter [catmint] and put it in a small gutte of a capon othere a henne and knyt the bothe endes with a threde, and fastynge lete here receyue it all hole and knyt þe beke lest she cast it out”.<sup>486</sup> Hawks and falcons drink very little, and the use of this method ensured that they received a full dose of medicine, for the gut would dissolve in the birds’ stomach, administering the medication.<sup>487</sup> Yet it was not only liquids which were administered in guts; when a hawk was suffering from anguilles, one remedy involved putting the pressure (rennet) of a premature lamb into culver guts, which were then

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<sup>481</sup> *PH*, 29.

<sup>482</sup> *MG*, 53.

<sup>483</sup> *METH*, 133.

<sup>484</sup> *Ibid.*, 107.

<sup>485</sup> *HawkRemII*, 43.

<sup>486</sup> *PEB*, 10. The version found in *The Proceis of Hawkyng* omits the directions to fasten together the beak of the hawk, *PH*, 30. Swaen erroneously identified nepter as bryony, *PEB*, 25 n.59<sup>a</sup>.

<sup>487</sup> This is a method which first appeared in Adelard of Bath’s *De avibus tractatus*: “enclose the juice of dragonwort in the gut of a hen or a pigeon, binding it at both ends, and put into his mouth as much as he can take”, *AT*, 258. A parallel description can be seen in Gerardus Falconarius; see *Dancus Rex*, 210. There were a number of advantages to administering liquid by this method: the liquid was swallowed at once; the odour or bitterness was not perceptible at the moment of administration; and the action of the ingredient was held back until the gut dissolved, Van den Abeele, *Fauconnerie*, 240. Today falconers use a syringe with a plastic tube, *AT*, 272 n.57.

given to the hawk on an empty stomach.<sup>488</sup> Likewise, a remedy for filanders stipulated that wormseed and sugar roche were to be put into an instestine and given with her supper; this would cure the bird in one night.<sup>489</sup>

The remedies found in the treatises and recipe collections were obviously intended to be made by those using them. For example, a remedy for malanders instructed that the fire over which the ingredients were boiled was to be “easy”, for otherwise “the sope will mak all rynne out of the pan”,<sup>490</sup> and when washing the meat of a hawk suffering from stoppyng, the water, in which daisy and parsley had been seethed, was to be “mylde warm, for yfe þ<sup>e</sup> fleche be scaldyd, it wyll not endow in hyr but sche wyll cast yt vp a 3en”.<sup>491</sup> The level of detail provided for the preparation and administration of medicines, however, varied. For instance, sometimes there were no instructions regarding the making of the medicine. Thus a remedy for radunculus advised the reader to “Make sum oþer plaster þat be drawynge and helynge”.<sup>492</sup> Similarly, the author of *The Percy Poem* never gives a recipe for an ointment, but simply refers to salve, or deute,<sup>493</sup> whilst the author of *The Boke of Marchalsi* merely stated for a horse suffering from sorews in the knees “3if þat þou perceyue þat a hors halte on þe soros and it be noght comyn oute enoynte it oþer whyle and it shal hastyne hym out þe more”.<sup>494</sup> Clearly this indicates that the person using the treatise, and thus, by extension, treating the animal, was expected to be knowledgeable about the various properties of plasters and ointments. Indeed, in *Horse Remedies II* a remedy for swelling simply lists the ingredients, with no instructions as to what should be done with them: “Take a litel wyn, bernage [bugloss], and crem of mylk, and ensouns [onions], and grece of a mylte [spleen] of a bore *et sanabitur*”.<sup>495</sup> Whilst the lack of instructions as to

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<sup>488</sup> *PH*, 46-7. Hands glosses ‘pressure’ as ‘pressed mutton’, but the correct interpretation is given by C. Clark, who shows that it is an adoption of a French word into an English context, C. Clark, review of *English Hawking and Hunting in The Boke of St. Albans: A Facsimile Edition of Sigs. a2-f8 of The Boke of St. Albans (1486)*, ed. R. Hands (Oxford, 1975), in *The Review of English Studies*, NS 28:110 (May, 1977), 202.

<sup>489</sup> *J.B.IV*, 139.

<sup>490</sup> BL MS Royal 17.A.VIII, f.82r. Soap, however, is not mentioned amongst the ingredients.

<sup>491</sup> *HawkRemI*, 29.

<sup>492</sup> *METH*, 133.

<sup>493</sup> *PP*, 16, 23. Deute was likewise recommended for a hawk suffering from gout, *HawkRemII*, 43.

<sup>494</sup> *BMH*, f.46v.

<sup>495</sup> *HorseRemII*, 92.

what should be done with the ingredients could be due to scribal error,<sup>496</sup> it could also indicate that there was an assumption the reader would know what to do – the most obvious conclusion being that the ingredients were to be mixed together to form an ointment.

At other times, however, the instructions given could be very informative, such as those for making oil for scab:

Tak of þe myddel rynde of a tre þat sum men clepuþ buchyl & þei makeþ caudeles of þat same ryne, take þen þat same rynde & schauē away þe ouemuste & take þe myddel rynde, & hew it al smale & fil a pot of erþe þat is newe ful þer-of & loke þat þe same pot haue þre holis or .4. in þe bottum þer-of, & take an-oþer pot þat is wel ileded with-inne & set þe pot with þe ryndus upon þe leded pot & loke þat þe brynkes of þe leded pottus mouþe & þe brynkus of þe pot with þe ryndus be wel dabbid with cleye & with hors-donge so þat non oþer flauor entre in-to þe pottus ne non reche [smoke] come oute. And if þou se eny reche come out loke þou daube it eft-sonus [immediately], & also þe pottis mouþe with þe ryndus þou schalt helyn it with a ston & daube it in þe maner forsayde & þen make a good fyer aboute þe pottis of wode & cole. And when þe wode & þe cole buþ I-brend out, þen take oute þe pottis & þe oyle þat þou fyndest in þe neþer pot geder it up & with a feþer grece þe schabbede stedus þries on þe daie.<sup>497</sup>

Interestingly, instructions were not always set down in a logical order. For instance, in one recipe collection the medicine for glanders was given, which was then followed by instructions for what was to be done before: the horse was first to be given a drink of groundsel, ale, and liquorice, and to have his nostrils cleaned out.<sup>498</sup>

Instructions could also be provided regarding the administration of medicine. For instance, when gobbets of celandine were being given to a hawk engleimed in the stomach, the austringer was to “opyn esely her mowthe and put ther-in gobetys into her throte wyth þy fyngyr”.<sup>499</sup> Sometimes it seems that instructions were given because the procedure was likely to be unfamiliar. For instance, it is unlikely that it would have been common knowledge on how to attach a remedial purse to the testicles of hounds, and thus the hunter was instructed, once the ingredients had been placed in the cloth purse to “putteþ his ballockes [in that purse] and byndeþ wiþ a bond þerto by twix þe

<sup>496</sup> The version found in BL MS Arundel 272, f.63v, whilst omitting the bugloss, does contain the instructions “& laye therto”.

<sup>497</sup> *METH*, 107-09. Compare to *De animalibus*, 1393-94.

<sup>498</sup> BL MS Royal 17.A.VIII, ff.82r-v.

<sup>499</sup> *Kerdeston*, 54.

thyes and aboue þe bak make wel fast þe ballok vpward, and leue an hool in þe clothe for to put out the tayle and his eris, and anoþer hole bifore for þe yerde þat he may scombre and pysse”.<sup>500</sup> Instructions were certainly needed for more complicated procedures, especially those where surgical intervention was needed, as when removing the worm from beneath a dog’s tongue, to prevent the dog from suffering ragemuet:

men shal take þe hounde whan he is passed half a zeere and hoolde fast his fowre feet, and put a staf ouer wherte is mouthe bicause þat he shuld not bite and after take þe tounge and ye shal fynde þe worme vndur þe tounge. Than shal ze slitte þe tounge vndirnethe and put a nedel wiþ threde by twix þe worme and þe tounge and knyt it and draw þe worme out with þe þrede or ellis wiþ a smal pynne of tre.<sup>501</sup>

Similarly, where cutting was involved, detailed instructions could be given, as for a hound which was suffering from a withered thigh: “þan slitteþ þe thi alonge and ouyrwete wiþinne þe thie croswyse vpon þe boon, þat is vponne þe turne boone of þe knee behynde”.<sup>502</sup> Likewise, instructions for where to cut a horse suffering from vives were also given, although the level of detail varied. For instance, the author of *The Sothebe Treatise* wrote “than lay his ere along bitwen þe jawe & þe necke, and at þe lengthes ende of his ere cut þe skyn the lengthe of an almond”.<sup>503</sup> In contrast, another remedy directed the marshal simply to slit the skin, one to slit the skin “vnder y<sup>e</sup> hors ere”, and one to take hold of the vives and slit them in the middle, two finger-lengths.<sup>504</sup>

Although such instructions helped the reader to understand how to perform the remedy, this was not the only means of help given; analogies to everyday things also helped with the preparations of remedies. For example, one of the drinks recommended for trenchelons was to be thick, “as þou it wer gruell”,<sup>505</sup> as was an ointment in a remedy for farcy.<sup>506</sup> In another remedy for trenchelons the mixed

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<sup>500</sup> MG, 56.

<sup>501</sup> MG, 48.

<sup>502</sup> *Ibid.*, 56.

<sup>503</sup> ST, f.60v.

<sup>504</sup> See BL MS Arundel 272, f.63v; *HorseRemII*, 94; *BMH*, f.20v. A very different remedy was to be found in Ashmole 1444, where both ears were to be filled with bay salt and then bound fast until the next day, BodL MS Ashmole 1444, p.301.

<sup>505</sup> *BMH*, f.34v.

<sup>506</sup> *METH*, 95.

ingredients were to resemble a sauce,<sup>507</sup> whilst the ingredients for a powder to remove dead flesh were to be kneaded together “on þe maner of dow”.<sup>508</sup> Similes were also employed; in one remedy for cray, egg-white was to be laboured “in a sponge as weele as ye wolde make grayce for rede Inke till it be like water”,<sup>509</sup> whilst in another it was to be beaten “tyll it be lyk snow”.<sup>510</sup> Likewise, an ointment for scab in horses was to have eisel and oil added until it was the thickness of an ointment,<sup>511</sup> and when pouring a herbal remedy for farcy into a horse’s drink, *The Boke of Marchalsi* instructed this was to be done “tyl þat hys drinke be colorid all grene with þe ius of þe herbis”.<sup>512</sup>

Analogies were also used to indicate the size of pellets and pills which were given to animals. For example, in a remedy for stone, pellets were to be made “the grettenes of a Not”,<sup>513</sup> whilst in a remedy for a hawk engleimed in the stomach, the root of celendine was to be cut into three gobbets, which were to be the size of a small nut and “rounde and esy to swalowe”.<sup>514</sup> Nuts were roughly the size of castings, and so provided a good idea of what the bird could swallow.<sup>515</sup> Similarly, when administering the juice of dragonwort in the gut of a capon to hawks suffering from anguilles, the austringer was to ensure that the gut was cut to a size which the bird could swallow.<sup>516</sup> In contrast, when a horse suffering from botts was given a mixture of black soap and bay salt to swallow, this was to be “y<sup>e</sup> quantityte [of] a tennys ball”.<sup>517</sup> Such analogies were useful visual aids because they were everyday things which people would have been familiar with. They not only made the subject matter easier to understand, but they also enabled the reader to physically envisage what was being described. Not

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<sup>507</sup> *BMH*, ff.34v-35r.

<sup>508</sup> *Ibid.*, f.57v.

<sup>509</sup> *PH*, 10. The remedy appears in a similar form in *HawkRemI*, 32. Hands suggests that the connection between the two treatises is one of common origin, rather than direct copying, *BSA*, 99.

<sup>510</sup> *TBS*, 94.

<sup>511</sup> *METH*, 105-07. Similarly, in a remedy for an ointment for the surrond malady or starkness in the legs of a horse, the ingredients were to be boiled well together, “& whan they be thourought bylyd it wyll be lyke an onymnt”, BodL MS Eng Misc. d.285, f.1r.

<sup>512</sup> *BMH*, f.30r.

<sup>513</sup> *PH*, 41. In a remedy for the stone in *De Animalibus*, the medication was “to the quantity of two beans”, *De animalibus*, 1485.

<sup>514</sup> *Kerdeston*, 54. The hawk was then to be held on the hand in the sun, and she would cast up the gobbets in an hour “wyth moche flem and glette”, *ibid.*

<sup>515</sup> *AT*, 270 n.30.

<sup>516</sup> *PH*, 47; *PEB*, 14. Swaen misidentified this herb as tarragon, *ibid.*, 28.

<sup>517</sup> BodL MS Ashmole 1444, p.303. Whole eggs could also be recommended for ailments. See *ibid.*, p.301; *HorseRemII*, 97; BL MSS Cotton Julius D.VIII, f.114r; Royal 17.A.XXXII, f.128v.

everyone treating animals would have been medically minded, and thus naturalistic analogies in the remedies were helpful in the preparation of a medicine.<sup>518</sup>

Information was not only provided about the methods of preparation, but also for the quantities of the ingredients, and overall five categories of weights and measures were used. Firstly were those which were exact, such as pounds, ounces, pints, pennyweights, *denarii*,<sup>519</sup> or specified numbers of an item. For example, an ointment for quick mange was to be made with six pounds of honey, a quart of verdigris, six pounds of oil of nuts, and six pounds of water in which velerian had been boiled;<sup>520</sup> a remedy for frounce listed all of the ingredients in terms of pennyweights and *denarii* (d.);<sup>521</sup> and a remedy for malanders used twenty cloves of garlic, whilst one for strangullion used twelve eggs.<sup>522</sup> Secondly were those which were imprecise, such as handfuls, spoonfuls, or saucerfuls. Thus a medicine for swine included a handful of herb of grace, whilst a remedy for lampas in horses included a saucerful of honey.<sup>523</sup> The third category consists of those measures which were rough, such as a ‘quantity’, ‘portion’, or ‘a little’. For example, a remedy for galanders included a quantity of fresh grease and honey,<sup>524</sup> whilst a remedy for botches used “a littill larde”.<sup>525</sup> The fourth type of measurements were those which were relative, such as one part *x* to two parts *y*, or ‘as much as’. For instance, a remedy for cray included “the poudere of saxifragie and of sperge” mixed together with “.ij. pertys off fresche buttyr and the .iiij. parte off hony”,<sup>526</sup> whilst a remedy for cut or punctured sinews used equal amounts of seam, honey, and wine.<sup>527</sup> Finally, weights and measures could be indicated by analogy to another object. In a remedy for a poisoned dog the cheese was to be the size of “a good

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<sup>518</sup> Analogies could also be used to describe other matters. For instance, when discussing the digestive process of falcons, Frederick II compared their mutes to the progress of a fire in a limekiln; see *AVCA*, 136.

<sup>519</sup> The author of *Hawk Remedies II* explained that a *denarius* “is als mych to say a .iiij. peny we3th”, *HawkRemII*, 41. This is interesting, because a *denarius* is a penny; therefore it would be expected that a pennyweight and *denarius* were the same measurement.

<sup>520</sup> *MG*, 50.

<sup>521</sup> *HawkRemII*, 45; *J.B.IV*, 138. In this latter no amount is specified for May Butter; the former stipulated 4d worth.

<sup>522</sup> BL MS Cotton Julius D.VIII, f.114r; *HorseRemII*, 97.

<sup>523</sup> BodL MS Laud misc. 598, f.1v; *BMO*, 26.

<sup>524</sup> BL MS Royal 17.A.VIII, f.82r.

<sup>525</sup> *PH*, 45. This measure is omitted from *PEB*, 15.

<sup>526</sup> *HawkRemII*, 41.

<sup>527</sup> *METH*, 133.

wallnott”,<sup>528</sup> whilst a remedy for a melette on a horse’s leg included “as much alome as an egge”.<sup>529</sup> Different types of weights and measures were more popular than others for different animals. Thus whilst exact measures were most common for horses, birds of prey, and livestock, relative weights and measures were those used most frequently for dogs. For all animals, however, analogies were used infrequently [tables VIII.v]. Overall, though, it was most common for no weights or measures to be supplied. For example, a remedy for the bite of a mad dog said to “Take lekes and stronge garlek chibollis [chives] rewe and nettelis and hakk hem smale wiþ a knyff and þan medle hem with oyle olyff and vinnegre and boyle hem togiddre”, with no indication as to their proportions.<sup>530</sup>

The frequency of use of weights and measures differed between animals; they were employed most often for livestock, followed by horses, birds of prey, and finally dogs. Indeed, in the *Practica canum*, the only indication of a quantity is in the remedy for impetigo or mange, where the ingredients for the salve were to be mixed with twice as much old pork grease or butter.<sup>531</sup> Yet even within the same animal groups there are marked differences regarding how often authors employed weights and measures. Thus whilst the author of *The Sothebe Treatise* provided such information for 86% of his ingredients, the author of *The Boke of Marchalsi* only gave this for 24% of his ingredients, whilst this information was only given for 8% of the ingredients in the recipe collection found in British Library manuscript Royal 17.A.XXXII. Likewise, whilst the author of *Hawk Remedies II* supplied weights and measures for 51% of his ingredients, the author of *Prince Edwarde’s Booke* only supplied it for 28% [tables VIII.i-iv]. Generally there was a lack of information regarding weights and measures, indicating that those using the recipes were expected to be able to judge for themselves the quantities and proportions of the ingredients.

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<sup>528</sup> Oxford, Balliol College MS 354, cited in *IMEP VIII*, 11.

<sup>529</sup> ST, f.55r. The version in *HorseRemI*, 80, specified “an henne egge”.

<sup>530</sup> MG, 49.

<sup>531</sup> PC, f.187r. Compare to *De animalibus*, 1365, where it is additionally stated that the ingredients for the salve are to be of equal amounts.

## VII.

## “kerve it with an hors hare”: the instruments used when treating animals

A variety of instruments was needed in order to perform operations and administer treatment. For example, when a horse was being treated for barbs, *The Boke of Marchalsi* recommended putting a staff in his mouth, “for to holdyn up hys lippys”,<sup>532</sup> whilst when feeding a purse-eyed horse eggs which had been soaked in vinegar, a man was to hold up the horse’s head with a cord, so that he swallowed the eggs.<sup>533</sup> Amongst the list of medicines in the 1345 account of William le Ferrour, keeper of Edward III’s (1327-1377) horses south of the Trent, are “big ropes for throwing (*prosternandis*) horses”, presumably those used to support horses in their operations, as was seen in fig. 8.<sup>534</sup> Whilst some instruments were used to facilitate ease of treatment, others were used to restrain the animal. Being wild, hawks and falcons were going to struggle when attempting to treat them. Thus when dropping daisies into the nares of a hawk, to cure her of rye in the head, it was recommended that she be wrapped up first.<sup>535</sup> [See fig. 17, where a falcon having her eyes seeled is wrapped up.] Similarly, a hound suffering from canker on the penis was to be held upright, with his mouth and legs bound; the operation needed more than one person, for whilst one man held the dog, taking “þe yarde bakwarde ny the ballokis”, another man “shal drawe wel þe skyn in maner þat þe yarde may al come out”.<sup>536</sup> The fact that the dog has his muzzle and all four legs bound suggests that the procedure may have caused some discomfort to the animal, and thus by restraining the dog the operation would have been easier to perform. Indeed, precautions were also taken to prevent further injury; the canker was to be removed with the fingers, “for if it were taken away with a knife men might cut him”.<sup>537</sup>

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<sup>532</sup> *BMH*, ff.22v-23r.

<sup>533</sup> *BMO*, 30.

<sup>534</sup> Cited in H.J. Hewitt, *The Horse in Medieval England* (London, 1983), 15. Laurentius Ruisius gave detailed instructions for suspending a horse: “Take four ells of strong cloth of large hemp, sow some straps there, put it under the belly until at the chest and attach the cloth with the cords to the beams of the ceiling in a manner to support a part of the body of the horse”, Moulé, *Médecine Vétérinaire*, 151.

<sup>535</sup> *PP*, 15.

<sup>536</sup> *MG*, 54.

<sup>537</sup> *Ibid.* There appears to be a printing error in the Middle English transcription at this point, thus the modern translation is given. Boor-van der Putton concludes that such a procedure would avoid hæmorrhages and deforming scars, Boor-van der Putten, “Maladies des Chiens”, 58.

Instruments were also required for performing operations, and there was obviously a wide range of tools available. For instance, an awl (elsen) was used in a remedy for corns to make holes,<sup>538</sup> a hot “swyuel” was to be used to make a hole in a swelling,<sup>539</sup> whilst a fleam was used to smite galls.<sup>540</sup> Lancets were used to perform phlebotomy, but the shape of these could differ. When bleeding a horse which had lost its desire to eat due to fullness of blood, Albertus Magnus stated that the lancet (*fleubotomius*) was to be wide but not thick,<sup>541</sup> whilst when bleeding a horse with lampas the lancet was to “keruyth at þe poynt on boþe sydis”.<sup>542</sup> In contrast, when phlebotomy was performed on a bird of prey suffering from gout, the remedy stipulated that a silver pin was to be used upon both thighs to let blood.<sup>543</sup> Clearly these phlebotomy instruments were adapted to the needs and size of the animal, a practice which was also found with other instruments. When removing a haw from a horse’s eye the needle was to be “delie [fine] & quareld at þe poynt”,<sup>544</sup> yet when discussing seeling birds of prey, Frederick II wrote that this should be done with a round needle, as a triangular needle “is likely to cut the lid”.<sup>545</sup> Although needles could be purchased – the hunting expenses of Louis d’Olréans (1372-1407) included twelve needles for sowing the wounds made by wild boars<sup>546</sup> – these needles may have been adapted from normal needles; after all, when removing a web from a hound’s eye, the huntsman was told to “Take a nedel and bowe it in þe myddel þat it be croked”.<sup>547</sup>

The greatest variety in instruments, however, was to be seen in cautery irons. A remedy for farcy, where holes were to be cauterised, specified an iron “þat is smal bi fore”.<sup>548</sup> In contrast, in a remedy for fike the cautery iron was to be “as brode as þe sore is”,<sup>549</sup> whilst that used in a remedy for galls was not to be sharp, but round in front,

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<sup>538</sup> METH, 119-21.

<sup>539</sup> *Ibid.*, 131.

<sup>540</sup> BMH, f.48v.

<sup>541</sup> *De animalibus*, 1379.

<sup>542</sup> BMO, 26. Theodoric of Cervia recommended a sharp knife shaped like a letter ‘S’, which was clearly curved, Theodoric of Cervia, *Die Pferdeheilkunde des Bischofs Theoderich von Cervia, Abhandlung II*, ed. G. Klütz (Berlin, 1936; inaugural veterinary dissertation, 1722), 24.

<sup>543</sup> *HawkRemII*, 43.

<sup>544</sup> BMH, f.20r.

<sup>545</sup> AVCA, 138.

<sup>546</sup> Champollion-Figeac, *Louis et Charles*, 94.

<sup>547</sup> MG, 52.

<sup>548</sup> METH, 95.

<sup>549</sup> *Ibid.*, 111.

like a feather.<sup>550</sup> Just as some needles were adapted to personal use, so too were cautery irons. In *The Sothebe Treatise* an iron to cauterise lampas was to be made “croked & thyn as a knyves blade”, whilst in the remedy for glanders a “nayle wande” was to have its end made crooked, “þe lengthe of a bene & as grete as a been”.<sup>551</sup> Although a variety of cautery irons are mentioned for the horse, this is not the case with other animals. A “hoott iren” is mentioned in *The Master of Game*,<sup>552</sup> whilst in Fitzherbert’s *Husbandry* “a culture, or a payre of tonges, or such an other yren” was used to cauterise cattle.<sup>553</sup> The preferred instruments for performing cautery upon birds of prey were spoons and needles.<sup>554</sup>

It was not only the shape of the cautery iron which could differ, but also the material from which it was made. For example, a remedy for vives used a “zerd of siluyr” to burn the wound.<sup>555</sup> Indeed, the author of *The Boke of Marchalsi* discussed which material was best for cautery irons. Silver was better than iron because it would hold its shape and thickness when heated and could not be heated too much – if a cautery stick of iron was overheated, it would fall to pieces. Gold was better even than silver, for it was harder and held the heat even longer than silver. If, however, neither silver nor gold was available, “mak þi zerde of stell, for the steel is hard, and it fallit not a-wey so somonly of scalis, as doth þe jren” – but one still had to be careful not to overheat a steel cautery iron, for then scales would fall off it and it would become thinner in one place than in another, which would be seen upon the horse.<sup>556</sup> Clearly the author was concerned about treating the horse in the best possible manner, although the concern was probably related to its value as a symbol of status in

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<sup>550</sup> *BMH*, ff.48v-49r. Sometimes nothing about their shape was specified. Thus farcy in fleshy places was to be burned simply with “an hot yre”, *METH*, 95.

<sup>551</sup> *ST*, ff.58v, 59v. *The Boke of Marchalsi* also specified that the cautery iron for lampas was to be “crokyd”, *BMO*, 25. The description of cautery irons recalls those descriptions found in human surgical texts, such as that of Lanfranc of Milan (thirteenth-century), who discussed ten forms of cautery irons, to be used on different parts of the body, Lanfranc of Milan, “*Science of Cirurgie*”, 307, 308.

<sup>552</sup> *MG*, 49.

<sup>553</sup> *FBH*, 57.

<sup>554</sup> See below, 176-77.

<sup>555</sup> *BMH*, f.21r.

<sup>556</sup> *BMO*, 25. Albertus Magnus, too, was concerned about marking a horse; he noted that after cauterising a horse suffering from frenzy (*frenes*), cooked chervil ground with fat was to be applied “lest the burned places should appear without hairs”, *De animalibus*, 1387.

mediaeval society.<sup>557</sup> The materials of other instruments could also differ. For instance, in a remedy for glanders, setons of canvas were to be used, for canvas rotted towards the flesh, which was better suited to a malady which was deep within the flesh, such as glanders; horsehair setons rotted outward, and thus were to be used when the ailment was not so deep.<sup>558</sup> Thus, when it was unclear if the horse was lame on the shoulder, the setons were to be made from “þe har of hys tayl”.<sup>559</sup>

The instructions to “mak þi 3erde of stell” in *The Boke of Marchalsi* suggest that each marshal made his own cautery irons, or that he requested one specifically from a blacksmith. Indeed, a hurt shoulder on a horse was to be burned “with a wel-y-made yren”.<sup>560</sup> Other instruments were also made. In *Hawk Remedies I* a knife was to be made of green hazel with a sharp edge, to scrape away frounce.<sup>561</sup> Hazel had the advantage of being easy to carve and flexible.

Interestingly, a variety of items could be used as medical instruments. For instance, hot balls of horehound, watercress, or the middle bark of hazel could be used to cauterise a fike,<sup>562</sup> whilst an innovative way to apply heat to a cramped wing was to encase the wing between two halves of white bread, somewhat colder than when it came out of the oven.<sup>563</sup> In *The Durham Treatise* podagra was to be cut open with a horse hair,<sup>564</sup> whilst the author of *The Boke of Marchalsi* recommended removing the corns of vives with a crochet horn.<sup>565</sup> Indeed, in a remedy against scab in sheep, the ointment was to be applied to a “thwong or elis an elys skin”, which was then to be rubbed about the neck of the sheep.<sup>566</sup> Spoons were also used in medical procedures, most notably to perform cautery, as in a remedy for frounce, both *Prince Edward's Booke* and *The Proceis of Hawkyng* specifying that a silver spoon should be heated at the

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<sup>557</sup> Jordanus Rufus believed that the horse was the noblest animal, “because through [the horse] himself, princes, magnates and knights are distinguished from inferior people, and because a lord is not able to be seen appropriately among private citizens except with [the horse] being in the middle”, Jordanus Ruffus, *Hippiatria*, 1.

<sup>558</sup> *BMH*, f.22r.

<sup>559</sup> *Ibid.*, f.46r.

<sup>560</sup> *METH*, 131.

<sup>561</sup> *HawkRemI*, 27.

<sup>562</sup> *METH*, 111.

<sup>563</sup> *PH*, 31; *PEB*, 16. Hands notes that this is not true cramp, *BSA*, 107.

<sup>564</sup> *DT*, 32.

<sup>565</sup> *BMH*, f.20v. In *ST*, f.60v, a tynde of a hart's horn was to be used.

<sup>566</sup> The ointment was to be applied to the skin, and instructions were given on how to do this: “set hym on his ers betwyx thi legges and shave or deperte the wulle about the nek so yt thou maist come easilly to the skin”, BL MS Royal 17.A.VIII, f.81r.

small end;<sup>567</sup> in *Hawk Remedies II*, however, it was specified that an oaken (eyke) spoon should be used.<sup>568</sup> Later in *The Proceis of Hawkyng* a silver spoon was used to cleanse botches which had been cut from a hawk's jaw.<sup>569</sup> Although nothing is mentioned about heating up the spoon, this is presumably what is intended, as a form of cautery. Indeed, in the same treatise a silver needle was used to cauterise the nostrils of a bird suffering from reume called agrum.<sup>570</sup> Daggers and razors could be used to pare away skin, as when removing raised frounce from the mouth,<sup>571</sup> although a white stick or hazel stick could be used instead,<sup>572</sup> whilst another author recommended a quill.<sup>573</sup> Although knives could be used to make incisions, they could also be used in a different manner, as when removing lice: "take a knyfe and wete the oon side of the blade therof with yowre mowth, and alway as thay appere lay the wete side of the knyfe to them, and they will cleue ther to".<sup>574</sup>

One of the most frequently mentioned items were feathers, which were put to a multiplicity of uses. For instance, they could be used to apply ointments, being used in remedies for lampas, wounds of the tongue, to close wounds of farcy,<sup>575</sup> and to apply ointment to a wounded bird of prey.<sup>576</sup> They could also be used to apply powder to the eye, as when a horse was suffering from a pearl in the eye,<sup>577</sup> or to drop juice into the nares of hawks suffering from rye.<sup>578</sup> When a horse was suffering from a hard growth in the shoulder, a feather was to be inserted between the skin and the flesh, and then blown down to separate the skin from the flesh, before the "wynde" was

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<sup>567</sup> PEB, 7; PH, 6. Adelard of Bath used a spoon to pour liquid into the bird's beak, AT, 260.

<sup>568</sup> *HawkRemII*, 41.

<sup>569</sup> PH, 45. In PEB, 15, a tin spoon could also be used.

<sup>570</sup> PH, 44. In continental treatises needles of different materials were recommended for cautery, including silver, iron, steel, bronze, and copper. See *Dancus Rex*, 64, 106, 140, 142, 144; Van den Abeele, *Fauconnerie*, 247.

<sup>571</sup> DT, 30; MKSG, 141; PEB, 7; PH, 7. In the *Tractatus de sperveriis* a gold florin, sharpened on one side so that it would cut well, was to be used when making an incision in the tail of a bird of prey, *Tractatus de sperveriis*, cited in Van den Abeele, *Fauconnerie*, 246.

<sup>572</sup> *HawkRemII*, 45. Another author, too, recommended picking out frounce "with ane hassylle wand", J.B.I, 110.

<sup>573</sup> J.B.IV, 138.

<sup>574</sup> PH, 25.

<sup>575</sup> BMO, 26; BMH, ff.27r, 53v.

<sup>576</sup> PH, 39.40; PEB, 18.

<sup>577</sup> BMH, f.20v.

<sup>578</sup> MKSG, 141; PEB, 7; PH, 9. An alternative remedy was to drop bay oil into the nares by means of a swan feather, *HawkRemII*, 47.

squeezed out and an ointment was applied.<sup>579</sup> Indeed, an ingenious use of the feather was its use by Albertus Magnus in the cure of broken legs in birds of prey – not only was a plaster to be made which included egg-white, which would have formed a hard ‘cast’, thus minimising the movement of the broken leg,<sup>580</sup> but the whole was to be enclosed in a splint (*incanna*) made by splitting the wing feather of a vulture.<sup>581</sup> According to *Prince Edwarde’s Booke* the leg was only to be wrapped in a cloth after the sticking agents had been applied.<sup>582</sup>

Instruments were not only needed for performing treatment, but also for the preparation of remedies. For instance, ingredients were sometimes to be ground in a mortar. In a remedy for rye, daisy was to be stamped in a mortar and the juice wrung out,<sup>583</sup> whilst the liver of a black goat was to be ground to dust in a mortar, when a horse grew feeble in sight.<sup>584</sup> When cattle suffered from lung-sought, feitergrasse was to be bruised “a lytell in a mortar”.<sup>585</sup> Sometimes it was even specified what instrument a medicine was to be mixed with. For instance, that for eschafure was to be mixed “wel togeder wyth a staf”,<sup>586</sup> whilst an ointment for flying mange was to be always stirred with a pot-stick.<sup>587</sup> Instruments were not always needed, however. *The Durham Treatise* stipulated that the powder of saxifrage and fresh butter, with which to treat cray, were to be tempered together “with þi thumb”,<sup>588</sup> whilst in a remedy for barbs, the groom in charge of the horse was to clean out with his finger every day “all þat euer he fyndit in his mowthe”.<sup>589</sup>

There were sometimes specifications as to the type of pots which remedies should be made in. Although natural products were sometimes required – in a remedy

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<sup>579</sup> ST, f.55v. A feather was put to the same use in the remedy for a hurt stifle, *ibid.*, f.57r.

<sup>580</sup> Egg white has long been used as a stiffening agent, as in a remedy for a broken leg in Bald’s *Leechbook* (tenth century), *Leechdoms, Wortcunning, and Starcraft of Early England: Being a Collection of Documents for the Most Part Never Before Printed, Illustrating the History of Science in this Country Before the Norman Conquest*, ed. O. Cockayne, 3 vols., RS 35.i-iii (London, 1864-66), II, 67.

<sup>581</sup> *De animalibus*, 1487.

<sup>582</sup> PEB, 19.

<sup>583</sup> PEB, 7; PH, 9; DT, 22.

<sup>584</sup> METH, 145.

<sup>585</sup> FBH, 54.

<sup>586</sup> BMH, f.39v.

<sup>587</sup> MG, 50.

<sup>588</sup> DT, 22.

<sup>589</sup> BMH, f.23r.

for vermin the medicine was to be made in an oyster shell,<sup>590</sup> whilst an oyster shell was used to heat bay oil in a remedy for rye<sup>591</sup> – more often specifications about the material of the pot were given. Eggs were to be soaked in vinegar in an earthen pot in one remedy for strangullion,<sup>592</sup> whilst special pots with holes in for making capital lye and oils were mentioned in remedies for scab.<sup>593</sup> Sometimes new vessels were to be used; a new pot was to be used when making a powder for extracting thorns,<sup>594</sup> and a medicine for mewing a bird quickly was to be seethed for a long time in “a newe erthe potte þat neuer was vsed”.<sup>595</sup> In the latter instance this was presumably so there would be no contaminating taste in the food from the pot, which would put the falcon off eating. Indeed, when giving birds of prey hard-boiled eggs to eat, Adelard of Bath (c.1080-c.1152) advised that they should be mashed “in a shallow dish without any smell – in a vessel of silver rather than bronze”.<sup>596</sup> The fact that brass vessels could affect the medicine is highlighted in the second version of the *J.B. Treatise*, where a remedy for peer was to be put into an earthen pot, “ellys þe watir wyll stynke of þe brasse”.<sup>597</sup>

In some instances a bronze or copper vessel was actually required, possibly because it formed part of the process of forming the medicine. In *The Proceis of Hawkyng* the remedy for aggresteyne was to be prepared in a brass basin, presumably to allow the strong vinegar to react with it – for the mixture was only to be applied three days later.<sup>598</sup> Similarly, a remedy for lice in the same treatise was also to be prepared in a brass basin, with which it is likely that the quicksilver would have reacted.<sup>599</sup>

It seems that some ailments were treated on the spot, and thus were in need of storage. For instance, it was recommended that the ash (*pulvis*) of a swallow, to be

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<sup>590</sup> *HawkRemI*, 28.

<sup>591</sup> *HawkRemII*, 47.

<sup>592</sup> *HorseRemII*, 97. A remedy for fallera was likewise to be prepared in an earthen pot, *PH*, 37.

<sup>593</sup> *METH*, 105, 107. Compare to *De animalibus*, 1393.

<sup>594</sup> *PC*, f.187r; *De animalibus*, 1366.

<sup>595</sup> *PEB*, 20-1.

<sup>596</sup> *AT*, 242-44. Compare to ‘Fragment d’un Traité’, 37, where *paelee* was to be made in a silver bowl.

<sup>597</sup> *J.B.II*, 115. This qualification is omitted in the same remedy found in *J.B.IV*, 139. D. Scott-Macnab surmises that the the herbal mixture would react with brass to produce an unpleasant odour and taste, offensive to the hawk, *Sporting Lexicon*, 164.

<sup>598</sup> *PH*, 31. Likewise, a remedy for *tineae*, found in both the twelfth-century treatise of Gerardus Falconarius and the *De animalibus*, was to be prepared in a brass vessel; amongst the ingredients was very strong vinegar, *Dancus Rex*, 216; *De animalibus*, 1480.

<sup>599</sup> *PH*, 25.

burned with the swallow's innards (*interiores*), which was used to remove any thorns or barbs on hounds, were to be stored "in a small box until the dog requires such medicine".<sup>600</sup> It was also recommended for bresour or gout that the marrow of heron was kept in a box and anointed when needed.<sup>601</sup> After the ointment for cray was made it was to be kept in a box,<sup>602</sup> which two authors recommended the falconer carry with him,<sup>603</sup> whilst a recipe for a salve found in *Hawk Remedies II* was to be placed in a tight vessel and kept for all the year.<sup>604</sup> Similarly, a general ointment for birds of prey, consisting of butter, saffron, and sugar, was to be kept in a box, being given in the morning and evening.<sup>605</sup> It was not only boxes, however, which were used to store medicines; a powder for dead flesh was to be kept in a bladder.<sup>606</sup> Interestingly, evidence survives to show that people did indeed store their medications. Under the sheep costs for 1378-79 in an account for Avening, Gloucestershire, a payment for clay pots to contain grease was recorded,<sup>607</sup> whilst in 1481 Richard Cely the Younger (d.1493) advised his brother George that he had received "the fayreste sor hawke...wythin aull Yngelond, the qwheche schauill be as whel kepyd tyll ze cwm...and I haue yowr box wyth saulwe - hyt schall be whell kepyd tyll ze cwm".<sup>608</sup>

## VIII.

### "tansey verdigrece & aschen of an eldren tre": the *materia medica* of animal treatment

A great variety of ingredients was used in the healing of animals, from animal parts (whether the flesh, skin, grease, or internal organs), to herbs, spices, and minerals.<sup>609</sup> Indeed, over seven hundred individual materials are named in the treatises

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<sup>600</sup> PC, f.187r. See also *De animalibus*, 1366.

<sup>601</sup> *HawkRemII*, 43.

<sup>602</sup> See above, 105.

<sup>603</sup> DT, 22; *HawkRemII*, 41.

<sup>604</sup> *HawkRemII*, 41.

<sup>605</sup> J.B.I, 112.

<sup>606</sup> METH, 125.

<sup>607</sup> C. Dyer, 'Sheepcotes: Evidence for Medieval Sheepfarming', *Medieval Archaeology: Journal of the Society for Medieval Archaeology* 39 (1995), 154.

<sup>608</sup> *Cely Letters*, 122.

<sup>609</sup> For a discussion of the *materia medica* of Latin falconry treatises, see Van den Abeele, *Fauconnerie*, 221-31. A less complete discussion on those found in Latin veterinary treatises can be found in Poulle-

and recipe collections, of which the majority fall into the category of vegetable, followed by animal, *preparata*, and finally, mineral.<sup>610</sup>

Some materials within the categories were clearly more favoured than others when treating different animals. For instance, those plants most commonly used in the treatment of horses were garlic, morel, elder, rue, and sage. In contrast, whilst garlic, nettles and rue were most commonly used in the treatment of hounds, parsley and daisy were the most popular when treating birds of prey. [See tables IX.i-iv] At other times, however, the same materials were popular in the remedying of many animals. For instance, pepper and ginger were both used in remedies for hounds, birds of prey, and horses; indeed, ginger was amongst the ingredients used to treat the horses of Elizabeth de Burgh (1294/5-1360),<sup>611</sup> and was also amongst the medicaments for horses in the account of William de Fremelesworth in 1352-54, who was in charge of the warhorses of Edward III.<sup>612</sup> Similarly, salt was used in the remedies for all animals,<sup>613</sup> as too were milk, grease, and eggs [tables IX.i-xvi].

The majority of materials could be found in England; indeed, in a remedy for swollen testicles it was specified that the eggs used were to be “of his owne”, i.e., not bought.<sup>614</sup> As Van den Abeele shows, many could be obtained easily without purchase; *preparata* such as honey and oil from the kitchen, animal parts from the farmyard, whilst the countryside would supply many of the local plants.<sup>615</sup> Other materials, however, had to be imported. Exotic plants were used, such as fenugreek, galingale, myrobalan, and saffron; aromatic substances such as incense, frankincense, and mastic were part of the *materia medica* of treating animals, as too were spices such as cinnamon, cumin, ginger, pepper, and turmeric, the latter being used in a remedy

Drieux, ‘L’Hippiatrie’, 107-12. An annotated list of ingredients found in the *Practica canum* and the *De canibus* of Albertus Magnus is given in *Practica Canum*, 123-40.

<sup>610</sup> I have followed both Van den Abeele and Loncke in classifying the materials into these four categories; *preparata* contains prepared items such as honey, wax, bread, broth, vinegar, and salve. The popularity of the ingredients is a pattern followed for horses and birds of prey, but not dogs or livestock [table IX.xviii]; it is probable that the results for the latter are not fully representative of the mediaeval trend, due to the paucity of extant evidence.

<sup>611</sup> F.A. Underhill, *For Her Good Estate: The Life of Elizabeth de Burgh* (Basingstoke, 1999), 77.

<sup>612</sup> M. Prestwich, *Armies and Warfare in the Middle Ages: the English Experience* (New Haven, 1996), 33. E. Prestwich mistakenly calls William, Richard.

<sup>613</sup> Interestingly, one author constantly referred to “bay salte”, suggesting he wanted to use sea salt rather than rock salt, BodL MS Ashmole 1444, pp.300-02. Rock salt (saltgemme) was specified for horses with a streen or web on the eye, BMH, f.19v-20a; METH, 143.

<sup>614</sup> *HorseRemII*, 93.

<sup>615</sup> Van den Abeele, *Fauconnerie*, 224.

against the staggart.<sup>616</sup> Substances such as pitch, coral, olive oil, and mummy also had to be sourced from overseas; interestingly, a remedy for sickness in the entrails in hawks specified that Spanish salt was to be used.<sup>617</sup> A large number of the *materia medica* came from animals, yet in only one instance was this not native; a remedy for lost courage in hawks required the flesh and blood of a peacock.<sup>618</sup>

Whilst a few ingredients appear to have been used to cure specific ailments – for instance, orpiment was only used to rid birds of prey from pox, lice and vermin,<sup>619</sup> whilst poppy was only used in cures of farcy and felon<sup>620</sup> – the majority of ingredients were used to cure a multiplicity of ailments. Thus parsley could be used to cure rye, a stopping of the head, peer, and to break the panell in birds of prey, and to cure staggart in horses; tar was used to heal mange and staggart in horses, and scab, blindness, worms in the foot, and the foul in livestock; and olive oil was found in remedies for podagra, wounds, and stone in birds of prey, for hurt sinews, scab, lame knees, vives, glanders, a hurt stifle, and curing dead flesh in horses, and to cure the bite of a mad dog, wounds, withered thighs, and an inability to scumber in hounds. With ingredients being so versatile, a common stock could be kept, which could probably heal the majority of common ailments likely to afflict animals.

To what extent, though, were such ingredients purchased? Unfortunately, detailed information regarding this is not always forthcoming; often it is simply stated that medicines were purchased. For instance, an account of the expenses of Eleanor (1318-55), sister of Edward III, upon her marriage, include a payment to the clerk of the marshalsea for *medicina equorum*, and the mention that Walter Stedeman was delayed in London, looking after the sick destrier named Corder; 3s 4d were spent upon making medicines.<sup>621</sup> Likewise, in the household of Sir John Howard, duke of Norfolk (d.1485) “medecynis” for a horse were purchased in 1463-64 [tables X.i.iii].<sup>622</sup> From such information it is not possible to say which ingredients were purchased, or even if these were individual ingredients – for it is possible that these were pre-

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<sup>616</sup> BodL MS Ashmole 1444, p.301.

<sup>617</sup> PH, 43; PEB, 17.

<sup>618</sup> PH, 28.

<sup>619</sup> PP, 16; PH, 25; DT, 32; *HawkRemI*, 27; *J.B.I*, 110; *J.B.II*, 114; *J.B.IV*, 138.

<sup>620</sup> BL MS Royal 17.A.XXXII, f.129v; *HorseRemII*, 91; *METH*, 99.

<sup>621</sup> *Expenses Eleanor*, 131, 132.

<sup>622</sup> *MHE*, 241.

prepared remedies. At other times, however, named ingredients were purchased. In the household of Eleanor, countess of Leicester (1215?-75), on 7 April 1265, under the title of *Mareschalcia* are some ingredients from the spicery – pepper, ginger, cinnamon, galingale? (*galingalium*), cloves (*gariofili*), and *risae*.<sup>623</sup> It is not stated that these are for use in medicines, but given they are listed under the marshalsea, it seems that this was their purpose – perhaps to be stored in the stables, so as to be on hand for use. In the household of Richard Mitford in 1406-07, the purchases for the horse of the bishop included fat, honey, elecampane, arnement, and finugreek,<sup>624</sup> whilst in the household of Richard Bell, bishop of Carlisle, in c.1485-86, liquid fat was released for anointing his sheep.<sup>625</sup> Indeed, in the household of Edmund Mortimer, earl of March (1352-81), in 1378 fat was a common purchase for his horses, in one instance being purchased for their feet.<sup>626</sup>

As can be seen from tables XI.i-iv, however, the list is not numerous, compared to the ingredients listed in the treatises and recipe collections. Indeed, there are no veterinary purchases recorded for dogs. This paucity is probably due to the fact that not only is the record of the purchase of ingredients for veterinary purposes not common in household and manorial accounts, but also that, as noted above, many ingredients could be obtained without purchase. It may well be that purchases for the household kitchen made their way into veterinary recipes; as this is nowhere stated, however, it is not possible to say which ingredients were being used. Another problem faced with the purchase of ingredients is that very rarely is it stated for what ailment they were intended.<sup>627</sup> As many ingredients could be used to treat a multiplicity of ailments it is also impossible to say for certain which ailments were being treated. Yet some ingredients were used in relatively few recipes, and thus it can be guessed from which ailment the recipient was suffering. As stated above, orpiment was only recommended in the treatment of birds of prey, to rid them of pox, lice, and vermin.

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<sup>623</sup> *Ibid.*, 17.

<sup>624</sup> *HAME*, I, 413.

<sup>625</sup> *Ibid.*, II, 461.

<sup>626</sup> *Ibid.*, I, 253. For other purchases of fat, see *ibid.*, 248, 250, 251, 254.

<sup>627</sup> Although most of the ingredients purchased for livestock were for sheep, and were those commonly used in making sheep salves.

Thus it is possible that the purchase of this ingredient in 1288-89 in Edward I's household for one of his falcons was for such an ailment.<sup>628</sup>

The cost of such purchases could vary. Some expenses were very small. Thus in 1416-17 in the Dunster household  $\frac{1}{2}d$  was spent on verdigris and  $1d$  on white wine for an infirm horse.<sup>629</sup> In 1299 in the household of Henry de Lacy, earl of Lincoln (1249-1311),  $4d$  was spent on white fat for an infirm horse,<sup>630</sup> and  $4d$  was also spent on medicines in Sir John Howard's household in 1463-64.<sup>631</sup> In contrast,  $8d$  was spent each on an ointment and salve for horses in the same year,<sup>632</sup> whilst  $8d$  was the total of the medicines for a drink for a horse in 1466-67 in the Lanherne household.<sup>633</sup> In 1432  $12d$  was spent on curing a horse in the Beauchamp household,<sup>634</sup> and this was also the amount spent in 1482 on a medicine for a horse in the Howard household.<sup>635</sup> To put these prices in context,  $12d$  was the winter wages of the custodians of the cows and lambs at Beaulieu Abbey in 1269-70, or the wage received per day by some of Edward III's falconers and keepers of the horses in the 1340s.<sup>636</sup> Indeed, sometimes no expenses were to be spared when curing sick animals; in 1232 Henry III (1216-72) ordered the Bishop of Carlisle to "find the necessary to cure the royal palfrey dying at Harrow, whatever the expense".<sup>637</sup> Similarly, in the Shirley manuscript of *The Master of Game* is added, at the end of the chapter on the sicknesses of hounds, "And God forbid that for (a) little labour or cost of this medicine, man should see his good kind hound perish, that before hath made him so many comfortable disports at divers times in hunting"<sup>638</sup> – testimony to the great human affinity to the animal in question, and that love of an animal could be an added determinant to the nature and quality of care given.

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<sup>628</sup> RWH 1286-89, 337.

<sup>629</sup> DHA, 122.

<sup>630</sup> HAME, I, 166.

<sup>631</sup> MHE, 241.

<sup>632</sup> *Ibid.*, 236, 248.

<sup>633</sup> LHA, 30.

<sup>634</sup> BHB, 216.

<sup>635</sup> HBNS, 400.

<sup>636</sup> ABBA, 317; CPR: *Edward III A.D. 1327-1377*, 16 vols. (London, 1891-1916), V, 180; VI, 10.

<sup>637</sup> McLean, *English at Play*, 33.

<sup>638</sup> MG, 57 n.1.

Interestingly, specifications were made about the ingredients used. Sometimes a remedy might call simply for grease, as in a remedy for a restive horse<sup>639</sup> or a remedy for aggesteyne in hawks.<sup>640</sup> More often, however, the type of grease was specified. This might be old, fresh, with or without salt, or from a particular animal; grease from swine and boar, and tallow from sheep, were commonly used in horse remedies, whilst recipes for scab in Fitzherbert's *Husbandry* could be made with capon, goose, or swine grease, or sheep suet.<sup>641</sup> Indeed, Albertus Magnus told how to make goose grease for a hawk suffering from gout (*gutta*):

Mix all these things<sup>642</sup> together, and cast all into the stomach of a goose. Sew up the aperture strongly and put away for one day. And then roast the goose well and collect the fat which falls from it in some earthen vessel, and with this ointment the gouty place should be rubbed.<sup>643</sup>

Specifics were also stated for other ingredients. For example, a variety of milk could be used, such as that from different animals (goat, cow, mare), or that from women; in a remedy for filanders the milk was to come from a woman with a boy child,<sup>644</sup> whilst a remedy for dim eyes specified that of a woman with "a mayde child", if a mare was afflicted.<sup>645</sup> Sometimes the milk was to be either sweet<sup>646</sup> or sour.<sup>647</sup> A variety of oils were also used. Olive oil was the most common, but other oils mentioned were oil of Spain,<sup>648</sup> "oyle imaked of notis",<sup>649</sup> oil of the spurge laurel,<sup>650</sup> and oil of bay.<sup>651</sup> Indeed, one author described how to make the latter: "Take þe leves of bay tre and þe berys and grynd hem to geder to poudyr. Take oyle and ij. so moche of boter and streynen hem þorowe a clothe".<sup>652</sup> Interestingly, a remedy for

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<sup>639</sup> BL MSS Royal 17.A.XXXII, f.130r; Cotton Julius D.VIII, f.113v.

<sup>640</sup> PH, 31.

<sup>641</sup> FBH, 46.

<sup>642</sup> Goose, bear, and fox fat; cat flesh; wax, labdanum, and aloe wood, made into a powder; the juice of the greater and lesser *policaria*; and a sliced white onion.

<sup>643</sup> *De animalibus*, 1487.

<sup>644</sup> *HawkRemII*, 47; *J.B.IV*, 139. Alternate remedies used mare's milk. See *J.B.I*, 111; *J.B.II*, 114.

<sup>645</sup> *METH*, 143.

<sup>646</sup> *BMO*, 38; *METH*, 109.

<sup>647</sup> *PC*, f.187r; *De animalibus*, 1366.

<sup>648</sup> *PH*, 28; *PEB*, 13.

<sup>649</sup> *MG*, 51.

<sup>650</sup> *PEB*, 18.

<sup>651</sup> *ST*, f.54v; *PP*, 15; *HawkRemI*, 35; *HawkRemII*, 47.

<sup>652</sup> BodL MS Digby 95, f.94r.

malanders used lamp oil.<sup>653</sup> Honey could be thick or thin, raw, or, as specified in a remedy for farcy, good.<sup>654</sup> Ale, an ingredient only prescribed for horses, was likewise sometimes to be ‘good’, as in two different remedies for botts in horses.<sup>655</sup> Similarly, a variety of wines was used. For instance, red wine lee was recommended for horses suffering from either paynes or colt’s evil,<sup>656</sup> whilst white wine was recommended for swelling of the eyes in horses or lice in hawks.<sup>657</sup> Sometimes specific wines were required, vernage being used in the swelling of horses’ eyes,<sup>658</sup> and Chambéry in a medicine for swine.<sup>659</sup>

Some of the ingredients used were more unusual. The author of *The Proceis of Hawkyng*, for instance, recommended ridding a hawk of filanders by feeding her iron filings mixed with pork.<sup>660</sup> The remedy for rate required the sweat of a young black horse, and in order to obtain this the marshal was to “lat don arnyn [run] a blak hors or scouren him til þat he swete a-boute þe heued and a-bout þe brest...And þan lat do gadyr þe swet to-gedir”.<sup>661</sup> Similarly, a remedy for paynes used a spider’s web,<sup>662</sup> a remedy for gout in the head used mummy,<sup>663</sup> whilst another remedy for filanders used slime.<sup>664</sup>

Interestingly, with regards to the treatment of scab in sheep, it is possible to see a development in the manner in which it was treated. Whilst the method remained the same – the use of an ointment – the ingredients used changed. In 1272 on the bishopric of Winchester’s estate of Knoyle sulphur was purchased, at a cost of 3½d, to cure scabby sheep;<sup>665</sup> in 1277 an annalist of Waverley Abbey recommended an

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<sup>653</sup> BL MS Royal 17.A.XXXII, f.131r.

<sup>654</sup> *METH*, 95.

<sup>655</sup> *ST*, f.63v; BodL MS Ashmole 1444, p.303.

<sup>656</sup> *ST*, ff. 56v, 61r.

<sup>657</sup> *METH*, 143; *PP*, 16.

<sup>658</sup> BL MSS Cotton Julius D.VIII, f.113v; Royal 17.A.XXXII, f.130r.

<sup>659</sup> BodL MS Laud Misc. 598, f.1v.

<sup>660</sup> *PH*, 30-1. E.B. Michell recommended, as one cure for filanders, iron filings, with oil of bitter almonds, Michell, *Practice of Hawking*, 141.

<sup>661</sup> *BMO*, 36.

<sup>662</sup> *METH*, 147.

<sup>663</sup> *PH*, 37.

<sup>664</sup> *HawkRemII*, 47.

<sup>665</sup> BWA Eccl. 2. 159301, cited in Payne, ‘Agrarian Conditions’, 202 n.74. At the turn of the twentieth century sulphur was recommended for true mange, *Elliman’s Embrocation*, 100. As a parasiticide, sulphur has been largely replaced by more effective substances, although proprietary organic preparations of sulphur are still used in the treatment of mange, BVD, <http://www.credoreference.com/entry.do?id=7883297>, accessed 10.12.08.

ointment made from quicksilver (*vivum argentum*) and pork fat (*unctus porcinus*);<sup>666</sup> and an ointment of old grease, quicksilver, and verdigris was recommended by an annalist of Dunstable Priory in 1283.<sup>667</sup> By the sixteenth century, however, sheep scab was being treated with tar, and Fitzherbert gave detailed instructions for the mixing of tar for the treatment of scab: “Let thy terre be medled with oyle, gose-grease, or capons grease, these three be the beste, for these wyll make the terre to ronne abroad: butter and swynes grease, whan they be molten, are good, soo they be not salte”.<sup>668</sup> Indeed, he remarked that it was important for the tar to be mixed with other ingredients, for without them tar “is to kene, and is a fretter, and no healer”.<sup>669</sup> A transition in the ingredients purchased for sheep can be seen in the accounts from Bolton Priory.<sup>670</sup> In the 1290s oil, verdigris, and quicksilver were purchased on a yearly basis, with fat (*pinguedo*) and tallow (*sepum*) also being common purchases; at the turn of the fourteenth century, however, bitumen is purchased, which, within a few years, becomes the staple ingredient [see table X.iii].<sup>671</sup> Similarly, R.C. Payne noted a change in the ingredients used in ointments to treat all manner of diseases in sheep on Wiltshire estates between the thirteenth and fifteenth centuries, with sulphur, wine, verdigris, and mercury all giving way to tar and grease by the latter half of the fourteenth century.<sup>672</sup>

Many ingredients recommended were efficacious. For instance, camomile is good for earache, having anodyne properties,<sup>673</sup> and thus the use of camomile milk to

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<sup>666</sup> *Annales Monastici*, II, 389.

<sup>667</sup> *Ibid.*, III, 306.

<sup>668</sup> *FBH*, 46.

<sup>669</sup> *Ibid.*

<sup>670</sup> No ailment is mentioned, but it is probable that the ingredients were intended for a salve. Sheep salves were probably intended to protect sheep against a variety of ailments, including scab; Fitzherbert remarked that his cheap version of sheep salve could be used at “all tymes of the yere”, and that it would “heale the scabbe, and kyll the shepe-lyce”, *FBH*, 47. The preventative nature of the salve can be seen by the fact that it could be anointed at shearing time. For example, at Durham Cathedral Priory in 1525-26 and 1534-35 sheep were anointed at the same time that they were sheared, *DAR*, I, 108, 111. Indeed, M.L. Ryder remarks that up until the end of the nineteenth century hill sheep in Britain were smeared with a mixture of tar and butter in the autumn, so as to form a protection against the climate; it also guarded against external parasites, M.L. Ryder. *Sheep and Man* (London, 1983), 682.

<sup>671</sup> Bitumen was not only used for salve, but also for marking the sheep for identification, as occurred at St Radegund’s Priory, Cambridge, in the fifteenth century: “And in bitumen and pitch purchased this year for the marking and anointing of the sheep, 2s 1d”, cited in E. Power, *Medieval English Nunneries c.1275 to 1535* (Cambridge, 1922), 127 n.2.

<sup>672</sup> Payne, ‘Agrarian Conditions’, 208.

<sup>673</sup> Grieve, *Modern Herbal*, 187, 186.

treat sickness in the ears of hounds was sensible advice.<sup>674</sup> Similarly, the application of mallow to tumours or swellings, as recommended both in the *Practica Canum* and by Albertus Magnus, would have been effective due to its demulcent and emollient properties.<sup>675</sup> An alternate remedy was to use linseed (*linum semen*) cooked with fresh blood, the former of which is also emollient and demulcent.<sup>676</sup> Whilst the recommendation of treating lice and mites in hawks with wormwood might at first glance be mistaken for sympathetic medicine,<sup>677</sup> in actual fact it has been shown that some of the components of wormwood are effective in getting rid of parasitic worms.<sup>678</sup> Foods suggested for fattening animals would also have been effective, such as the butter, an extremely fatty food, recommended for hounds,<sup>679</sup> or the eggs for lean horses.<sup>680</sup> Indeed, sometimes the author informed his audience why a certain ingredient had been used. Once a corn had been removed from a horse the hole was to be filled once a day with hards of hemp or flax, for, as the author explained, “herdus wol kyndeliche clensi woundes or apostemes & also þei wol not suffri ded flesche engendri in þe sore”.<sup>681</sup>

Sometimes alternative ingredients were suggested. Thus the author of one treatise wrote that dead flesh could be healed “with bature y-made of smalache [smallage], & morel if þou maist gete it”, to which were added other ingredients.<sup>682</sup> A remedy for vives was to have a powder put in the wound; should this fall out it was to be sieved with olive oil, “and 3if þat þou haue non oyle tak may botter or fresche gres”.<sup>683</sup> Similarly, in a remedy for rye, powder of ginger with vinegar was recommended as an alternative to mustard.<sup>684</sup> Indeed, the remedy for lowe found in *The Boke of Marchalsi* contained vinegar or strong wine, or, should neither be available,

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<sup>674</sup> MG, 52.

<sup>675</sup> PC, f.187r; *De animalibus*, 1366; Grieve, *Modern Herbal*, 508.

<sup>676</sup> PC, f.187r; *De animalibus*, 1366; Grieve, *Modern Herbal*, 319.

<sup>677</sup> See AT, 256; PH, 41.

<sup>678</sup> C.W. Fetrow and J.R. Avila, *The Complete Guide to Herbal Medicines* (New York, 2000), 580. In a late fourteenth-century version of the Macer Floridus herbal wormwood was recommended for destroying “wormez in þe bely”, *Macer Floridus*, 61.

<sup>679</sup> PC, f.187r; *De animalibus*, 1366.

<sup>680</sup> BL MS Sloane 3285, f.90r.

<sup>681</sup> METH, 121.

<sup>682</sup> *Ibid.*, 123.

<sup>683</sup> BMH, f.21v.

<sup>684</sup> *HawkRemII*, 46, J.B.IV, 137.

sweet milk.<sup>685</sup> These ingredients are very different, but the question and answer format of the treatise allowed the efficacy of both to be explained:

Mayster, why zeuest þou hym þe vinegar or þe milk, syn þe ton is strong and þe odir swete?

For þe vinheger is so strong and poinant þat he shal sle þe worme wyth hys strengthe. And þe milk is so swete þat þe worm shal receyuin so mekyl þerof þat he sal lesyn hys strengthe or dyen.<sup>686</sup>

In a remedy for a swollen flank in a horse, four herbs were required, but the author stated that only some could be used “if þou myzt not come to alle”.<sup>687</sup> Interestingly, in a remedy for cramp in the *J.B. Treatise*, one author states “Take þe iusse of clyuerse or hayryfe sych as ze fede gese with”;<sup>688</sup> as cleavers and hairif are the same plant, the author has either not realised this, or has deliberately given its two names in order to aid identification, a not uncommon procedure. Thus in *Hawk Remedies II* the herb ‘frodill’ was described: “yt is herbe crowfote and the rote is rounde as an onyoun”; directions were even supplied on how to tell if the herb was good: “Cut hym and lay hym on thi tong and iff yt be vre [good] it wyll byte þe sharplich”.<sup>689</sup> Similarly, a remedy for quick mange included “an herbe...þat men callyn in latyn Cleoborum, and in oþer langage Valerian, þe whiche men snes [makes men sneeze]”.<sup>690</sup>

Although alternative ingredients were proffered, it is clear that authors believed some ingredients to be better than others. For example, powder of sandragon was recommended for healing wounds in birds of prey, but “yff þu may gete no sankdragoun, take larde off bakoun off the fatte, and make a tente þeroff and putte hit þerinne and chaunge hit not, and all way as the flessch dryues yt owte, cut away w<sup>f</sup> a shere tyll hit come all owte, but the pouder off sankdragoun ys beest”.<sup>691</sup> Similarly, a pearl in a horse’s eye could be destroyed either by the application of a powder made

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<sup>685</sup> *BMO*, 38.

<sup>686</sup> *Ibid.*, 39.

<sup>687</sup> *METH*, 129.

<sup>688</sup> *J.B.II*, 115.

<sup>689</sup> *HawkRemII*, 47.

<sup>690</sup> *MG*, 50.

<sup>691</sup> *HawkRemII*, 43. Sandragon was purchased for the curing of a gyrfalcon of Edward I, although nothing is mentioned of the actual ailment, *RWH 1285-86*, 8.

from the stone called tutty or of a powder of green copperas, yet the author of the *Boke of Marchalsi* thought that “þe ston is bettyr whan men may haue it”.<sup>692</sup>

Some ingredients, however, were obviously of a harmful nature, and thus care had to be taken with the preparation of some remedies. For instance, when powdering the ingredients for the cure of fire, it was advised to pound them in a mortar out of the wind so that the powder did not blow about, and the mortar was to be covered by a cloth so that the powder did not touch the person pounding it.<sup>693</sup> It seems that these precautions were necessary because of the addition of caustic unslaked lime – although this was not stated by the author.

It appears that those in charge of animals were not always expected to know what the ingredients were. For example, a plaster for the penis of a hound which could not urinate comprised the leaves of leeks, white horehound (*marrubium album*), motherwort, pellitory (peritorie), chickweed (*morsus galline*), nettles and parsley leaves, all mixed with swine’s grease; should the hunter, however, not know what some of the ingredients were, “þat is hard to vndirstond 3e shul fynde att apotaries þe whiche knowyn wel alle þise þingis”.<sup>694</sup> Sometimes it seems that the ingredients were only available from the apothecary, such as the sousse needed to cure sickness in the eyes of hounds.<sup>695</sup> Similarly, the mummy needed for a remedy for gout in the head and kidneys (raynes) of hawks was to be obtained from apothecaries.<sup>696</sup> Indeed, apothecaries may have been turned to as a common supplier, for the apothecary of Louis XI of France (1461-83), Guion Moreau, supplied various ointments, powders, and plasters for the treatment of Louis’ sick dogs,<sup>697</sup> whilst Thomas Alsop (d.1558), apothecary, supplied ingredients to both Henry VIII (1509-47) and his niece Margaret Douglas (1515-78) for their animals.<sup>698</sup> There were, however, others who could also be turned to for aid; in 1407, in the household of Richard Mitford, divers medicines were

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<sup>692</sup> *BMH*, f.20v.

<sup>693</sup> *BMH*, f.33v.

<sup>694</sup> *MG*, 55. Leeks, pellitory, and parsley have diuretic virtues, which would be absorbed through the skin, whilst the nettles would activate the local circulations and the permeability of the capillaries, Boor-van der Putten, “Les Maladies des Chiens”, 68.

<sup>695</sup> *MG*, 51.

<sup>696</sup> *PH*, 37. The rather unusual heading of “For the gowte in the hede and in the raynes” may come from a mis-reading of a heading such as that found in the *Dancus Rex* treatise: “*Cum renes capit gutta mortalis*” (When mortal gout seizes the kidneys), *ibid.*, 108-09; *Dancus Rex*, 60.

<sup>697</sup> MacDonogh, *Reigning Cats and Dogs*, 177.

<sup>698</sup> H.C.G. Matthew and B. Harrison (eds.), *Oxford Dictionary of National Biography: From the Earliest Times to the Year 2000*, 60 vols. (Oxford, 2004), I, 898.

purchased for two of his horses from a smith (*faber*).<sup>699</sup> Interestingly, there were certain times when it was propitious to gather ingredients. Thus one remedy for sickness in the entrails of birds of prey advised that honey was to be gathered at the changing of the moon.<sup>700</sup> Similarly, *The Boke of Marchalsi* noted that the herbs for a drink to cure courtys were to be gathered on a Friday, “for þat is þe best day for to gadere herbis of all þe weke”.<sup>701</sup> The herb ‘doun’, used in a remedy for eschafure, was good in the season when it was green,<sup>702</sup> and the herbs for a bath were likewise to be picked when green.<sup>703</sup> A remedy for sinews which had been cut in two required earthworms which were mating, and these were to be gathered in the morning, before the sun rose.<sup>704</sup>

## Conclusion

As has been shown, there was a variety of treatments available to animals, from surgical and therapeutic, to charms and saintly intervention. Most remedies contained a mixture of methods, whether surgical and therapeutic, or two different therapeutic forms. Whilst in some instances this was due to treating the first method of treatment, such as anointing sites of cauterisation, it is also possible that the practice was deliberately used in order to allow the animal’s body to react to the most appropriate treatment.

Of the treatments, it is noticeable that surgical intervention was somewhat infrequently used on all animals, and, in the case of horses, can be found more often in the treatises rather than in the recipe collections. This suggests that different audiences were being targeted: treatises were perhaps aimed at those households which could afford the services of a marshal, a man who would be trained in the performance of such treatment, whilst recipe collections were perhaps aimed at smaller households, where there was an interest in curing one’s own animals. Although surgery was more favoured when treating horses, phlebotomy being the practice most commonly

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<sup>699</sup> HAME, I, 345.

<sup>700</sup> PH, 43. This was the phase opposite to that of the full moon, *ibid.*, 111. *Prince Edwarde’s Booke* gives “waynyng” of the moon, which denotes approximately the same period, PEB, 17; BSA, 111.

<sup>701</sup> BMH, ff.32r-v.

<sup>702</sup> *Ibid.*, f.40r. It was also advised to heat no more of the herb than would be used, *ibid.*

<sup>703</sup> *Ibid.*, f.43v.

<sup>704</sup> METH, 135.

employed, in contrast, the simple act of making incisions was used more frequently on birds of prey, a fact which is perhaps explained by the relative size of the animals. Other surgical procedures included cautery, and the use of setons and rowels. Such procedures could be far more complicated than the administration of therapeutic remedies, and thus detailed instructions were often provided. Interestingly, cautery and setons could be used to cause a local reaction, which transported the ailment, rather than directly curing the ailment itself. Likewise, garsing and cutting were not always the principal healing agent, but were a means of allowing other medicines to penetrate the skin.

The majority of remedies, however, were therapeutic in nature, such as plasters, ointments, washing, fumigations, and suppositories – essentially external, rather than internal, applications. Given the apparent lack of anatomical knowledge, however, this is not surprising. Although the same types of treatments were used on all animals (for instance, ointments were popular for horses, dogs, birds of prey, and sheep), as with surgery, different methods were favoured for different animals. Thus plasters were prominent in curing dogs and horses, whilst birds of prey were often medicated through the giving of foods – and interestingly, the food given medicinally often echoed the natural eating habits of the animal, thus indicating that knowledge of daily regimen was also important in the treatment of illness. Differences in treatment were probably due to a great extent to the physiognomy of the animal; after all, it would not be practical to apply plasters to feathered birds of prey. Indeed, the need to give treatment suited to a particular species can be seen in the instruments used to treat animals; certainly in cautery the size of the instrument was suited to the animal, needles and spoons being used for hawks and falcons.

There was clearly a common source of knowledge from which authors gathered their information, as shown by the similarity of many remedies in the treatises and recipe collections. Yet there were subtle differences, suggesting that people were working from experience, and adapting remedies to their own use. As Albertus Magnus remarked, “the wise falconer, however, may add to or delete from these [remedies] through experience over time, as he sees to be expedient to the complexion of his birds”.<sup>705</sup> It is most likely that the adaptations arose out of practice, and were

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<sup>705</sup> *De animalibus*, 1481.

thus passed from generation to generation. Although there were many remedies available, some treatises contained only one remedy per ailment, which may indicate that the author believed this to be the best remedy for that particular illness. In works intended for those unskilled in the treatment of animals, though, it would make matters easy, for no choice would have to be made about which remedy would be more appropriate to use. Yet there were advantages to having multiple remedies to hand; should one fail, another could be tried, and some authors deliberately stated this as a reason for giving more than one remedy for an ailment. Indeed, certainly in the cure of dead flesh, alternative remedies, where no cutting was involved, might have been preferred by those who felt they did not have enough skill to perform such procedures. Thus such recipe collections were more user-friendly manuals, and had something in common with the antidotaries of human medicine.

Some remedies could be used against more than one ailment, although sometimes the ailments were of a similar nature, such as ringbone and spavin. Indeed, whilst most remedies were usually restricted to a particular animal, this was not always the case, some being good for both dogs and horses (and, indeed, humans). Yet interestingly, aside from *Hawk Remedies I* treating swollen frounce in a hawk with sheep salve, *The Master of Game* was the only treatise to suggest that treatment could cross the animal boundaries. Perhaps this was reflective of the forward thinking of the author, yet the fact that the same is not found in the treatises and recipe collections for the horse suggests that such treatises were of a more focused and specialist orientation.

The physical make-up of an animal could sometimes dictate the remedy. For instance, horses could be shod to cure ailments, whilst drinks were not often given to birds, as they would normally drink very little. Yet sometimes there is no clear explanation as to why one remedy might be popular for one animal and not another, such as the popularity of charms (employed in such ailments as farcy, cloying, felons, sorews, and to staunch blood) in the cure of horses, a practice which can surely not be put down to physical make-up. Neither can it be attributed to the status of the animal, for hounds and birds of prey were also valuable animals. One explanation could be that other means of treatment had been found wanting, but this surely must have been the case with other animals too. Another explanation, however, is simply that of a quirk of fate – for as has been shown, the author of *The Master of Game* had little faith

in the amuletic elm collar, and was thus unlikely to include further charms. Thus the general paucity of treatises for dogs and livestock may mean that evidence from others, who did use charms, has simply not survived. As evidence from Ripon Collegiate Church shows, people did have faith in the healing powers of amulets for livestock. It is entirely possible that those of a lower social status, for whom little evidence survives, had recourse to charms, which form of treatment may well have been more accessible than the expenses of medicines and a practitioner. Indeed, evidence from *Vitae* indicates that all classes of society approached the saints in seeking cures for their sick animals (although the nobility formed the majority), and therefore it is possible to postulate that charms would have figured amongst home cures for a variety of animals, rather than just the horse. When whole flocks or herds were threatened with disease, however, the saints were perhaps the most appropriate source to turn to for a cure, being the ultimate generalists. Indeed, the evidence from saintly intervention shows that people did not always have to rely on professional help when their animals were sick, although in many cases they may have had no choice.

As shown in chapter one, those curing animals needed great skill, and this is more so in evidence in the treatment of ailments. When treating animals it was not only necessary to identify the ailment, but also to take into consideration certain factors regarding the animal, such as its humoral make-up, sex, age, and physical condition, for all could affect the means of treatment given. Indeed, the seasons, too, had to be taken into account, whether judging if it was warm enough to bathe an animal, or so cold that extra wrappings were needed to cover a surgical operation. Other skills were also needed. On the one hand they had to take on the role of surgeon, being able to perform intricate operations and set broken limbs. Additionally, certainly when bleeding horses, they had to know how much to bleed the animal, taking into account age and health. On the other hand, those treating animals also had to be physicians, preparing and applying medicines. Yet when performing remedies there was often a lack of instructions: weights and measures were not always given; they might be told to hold a wound open, with no instructions on how to do so, or similarly be told to make a salve; and sometimes there were no instructions as to what to do with the ingredients. In addition, occasionally special care needed to be taken not to hurt the animal. This could be guarding against something hot touching

healthy skin, ensuring ingredients did not get in the eyes, or being careful not to cut sinews. Indeed, those treating animals had to judge for themselves when an animal was cured, for it was not always specified how long treatment should be undertaken – the more usual instruction was to continue treatment until the animal had recovered.

Whilst there can be no doubt that mediaeval authors had great faith in their cures (although they could be wary of those proffered by others), it is also the case that they might justly have been confident, for some remedies would undoubtedly have been effective, such as binding a broken bone in flax and egg-white, or treating tumours with mallow, a plant with demulcent and emollient properties. Indeed, the virtues of plants were well known, and thus they would have been chosen accordingly.

Although detailed instructions were not always given, where they were included they were often very visual and descriptive, which would have been of great benefit to those treating animals who were not necessarily medically minded or trained. Help was also provided by other means, such as the use of analogies (yet it is noticeable that these are more commonly found when dealing with horses than for other animals). Thus a mixture might have to be kneaded in the manner of dough, or matter which looked like a pigeon's maw removed, whilst a tennis ball was ingeniously used to indicate the size of something a horse could swallow; smaller nuts were used to indicate the size of pellets to be given to birds of prey. Nature was not only employed as an indicator of weights and measures, but was also used to provide instruments; hazel sticks could be used for paring, whilst feathers could be used to apply ointments and powders. Indeed, a wide range of instruments was available, including knives, awls, fleams, and swivels. Some were adapted for specific use, as the needle which was bowed to remove a web from a hound's eye. The most information, however, survives for the cautery irons used on horses, with details given about their shape, and the material from which they should be made. This is an interesting contrast to the spoons and needles used for cauterising birds of prey, suggesting that whilst authors of veterinary treatises developed specific instruments for the task, authors of hawking treatises were content to utilise existing objects – yet both were appropriate to treating the animal in question.

A wide range of ingredients was used when treating animals, from those easily obtainable in the household, to those which had to be imported from abroad.

Different ingredients were favoured for different animals, but some, such as eggs and butter, were universally used. Many ingredients could be used for curing multiple ailments, suggesting that it would be possible always to have on hand a core stock with which to treat the great variety of illnesses. Indeed, authors would sometimes suggest alternatives, thus taking into consideration the availability of ingredients: exotic spices such as cumin and pepper, which had to be sourced from overseas, might not always be available, or within the price range of the owner of the animal; English plants may simply be out of season, or not abundant in a particular part of England.

The purchase of ingredients (which were not always individually listed, but sometimes just called medicines) in household and monastic accounts, although being limited in their number, nevertheless serves to back up the textual recommendations of the treatises and recipe collections, thus highlighting the actuality of animal care. Yet the fact that ingredients could be used to cure a variety of ailments means no firm conclusions about the ailment from which the animal in a household was suffering can be drawn – as very often no details are supplied regarding the ailment. Similarly, household purchases do not record all the ingredients which went into a medicine, such as those obtained from the garden; and it is also likely that some replenishes and purchases were made ‘off the record’, never making it into the household account. Thus whilst such sources are undoubtedly of great value regarding the reality of animal welfare, they can only supply so much information. The clearest picture of the care of sick animals is therefore to be achieved through an examination of a multiplicity of sources.

## Conclusion

The aim of this study has been to provide an insight into the state of veterinary treatment in late-mediaeval England, an area which has geographically received little attention. A broader approach than has hitherto been undertaken was adopted, through comparing and contrasting the ailments suffered by different animals, and the various treatments meted out. The reality of care has also been a matter of interest, and thus not only have veterinary treatises, hunting and falconry manuals, husbandry treatises, and recipe collections been consulted, but also sources which would provide insight into the actuality of the care of sick animals, namely personal letters, household and manorial accounts, and saints' *Vitae*.

As has been shown, there were a variety of people responsible for animal welfare, taking care of them not only on a day-to-day basis, but also when they were ill. Unlike today, there was no one veterinarian responsible for a variety of animals; rather, the health of different animals was the responsibility of those in charge of them. Thus marshals and grooms cared for horses, falconers and austringers for birds of prey, hunters for hounds, and shepherds, cowherds, and swineherds for sheep, cattle, and pigs respectively. Others, however, could be responsible for animals on a daily basis, such as the wife who cared for the king's falcons, or the carter who was to be responsible for his horses. Whilst in most cases of illness the animal would be tended by someone of the household, with regard to horses this was not always the case. They could also be attended by marshals outwith the household, who were perhaps itinerant, or based in a town. Certainly from the fourteenth century there was a move towards a professional guild, regulating their practices, as evidenced by the Ordinance of Farriers, a practice which is not evident for those caring for other animals. Although different animals were treated by different people, there is the elusive reference to a *veterinarius* in the fourteenth-century account rolls of Heacham manor, a term which suggests that this person also attended animals other than the sheep mentioned in the roll. No other evidence has yet come to light to corroborate the existence of such a specialist veterinarian, thus it is impossible to say how widespread and common were such people. Even though it may not be possible, at this

stage, to suggest if the *veterinarius* at Heacham was commonplace or an oddity, *The Master of Game* shows that those responsible for a particular animal could treat a different animal suffering from the same ailment; smiths could take a web out of a hound's eye, because the same procedure was undertaken upon horses suffering from the same ailment. How frequently this occurred, however, is not possible to determine; treatises and recipe collections concerned with the horse certainly make no reciprocal reference.

A great variety of ailments was suffered by animals in late-mediaeval England. Although some were specific to particular animals, many more were common throughout the animal species, broad ailments such as swellings and sores, and specific illnesses such as mange. What is apparent from this study is that for horses, and to a lesser extent, birds of prey, there existed a more extensive medical vocabulary, evidence of the long-standing hippiatric and falconry traditions. Such an extensive vocabulary, such as different names for ailments of a horse's foot, is testament to the great observation of those caring for animals, an observation which is evident in the treatises and recipe collections of late-mediaeval England. For instance, many authors broke ailments down into different forms. Thus the author of *The Master of Game* noted seven forms of madness, whilst the author of *Hawk Remedies I* noted a dry and wet form of cray. The good degree of observation is also indicated by other factors, such as detailed descriptions in the performance of operations, as in the description given by John Fitzherbert of finding the vein in the necks of cattle suffering from murrain. Where indications of causes, and the symptoms of ailments, are given, this also indicates the close observation undertaken of sick animals.

In the detection of illness, symptoms or descriptions of the ailment were an important factor, for animals were unable to voice the fact they were ill. Even so, such information is not given consistently in any of the sources here under discussion. Indeed, it was common for recipe collections to omit this information altogether. This suggests that in late-mediaeval England concern was with the practical treatment of the animal, rather than with more theoretical knowledge. The lack of such information, however, is also suggestive of other matters. For instance, those treating sick animals needed to be aware of when their animal was ill, which had to be done by observation. Thus it is clear that even though symptoms are not always to be found in the sources,

those treating the animal would nonetheless possess such knowledge, knowledge presumably passed on orally rather than in written form. Indeed, other information is also lacking in the sources. Although instructions could be supplied for more complicated or dangerous procedures, some aspects of treatment, such as how to apply bandages and plasters, is missing, inferring that such practices were taught by practical experience, and were thus expected to be common knowledge. Indeed, those treating animals not only had to be knowledgeable about ailments, but also about the day-to-day health of the animal. On the one hand, it was contradictions to usual health which could indicate illness. On the other hand, mistakes in daily regimen could be a cause of illness, whether not taking proper care with equipment, housing them incorrectly, or giving them unsuitable food. Thus daily regimen played an important role in animal health.

From this study it is clear that more evidence survives for the treatment of horses than for other animals. Much also survives for birds of prey, but there is very little for other animals such as dogs and livestock. To some extent this is probably due to the importance of the animals. The horse was vital to every aspect of mediaeval society, from lowly cart animal to prized destrier. Indeed, both horses and birds of prey were animals inextricably linked with nobility, both being symbols of status. Thus it would seem to be imperative that they were kept in good health and any ailments treated immediately and in the best manner. Hounds, too, were associated with nobility, and it is thus more difficult to explain the paucity of treatises and recipes for their care; perhaps this is due to the fact that, as noted above, they could be easily replaced, unlike horses and birds of prey. Indeed, as far as hunting and hawking were concerned, these were matters of interest to the nobility and aristocracy; therefore it is probable that they themselves would have had an interest in reading treatises regarding these matters. Although they could also have had an interest in such matters as the points to look for when buying a horse, information which was supplied in treatises, it is difficult to envisage such an interest in the veterinary aspects, which formed the bulk of these works. By the sixteenth century gentlemen farmers were on the rise, and this may explain the paucity of information regarding the care of livestock prior to this date, and Fitzherbert's inclusion of such matters in his *Husbandry*. As the thirteenth-century husbandry treatises indicate, knowledge of their ailments existed and care was

taken to treat them; given that those in charge of livestock were of a low social status, and thus presumably for the most part were illiterate, veterinary knowledge must therefore have been passed on orally. Just because extensive written evidence does not survive detailing their ailments and cures, this is no reason to suppose that the knowledge and treatment of livestock ailments was not of a high standard.

An important facet of this study was to examine the reality of care meted out to animals. Treatise and recipe collections tell of the ideal of animal care, but do not generally indicate if such treatment was carried out – there is only the word of the author that they had seen such a remedy performed, or that a particular recipe was advocated by a particular person, such as the recipes in British Library manuscript Royal 17.A.XXXII taught by Hugh Bromfeld, ferroure. Thus sources such as household accounts provide information about the actuality of care, such as who was caring for the animal, what medicines and ingredients were purchased, and, less commonly, the ailment from which an animal was suffering. They show that a variety of people were called upon to treat animals, from marshals and horse leeches, to the elusive *veterinarius*. Sometimes owners themselves cared for the animals, such as the Cely family; at other times, all we can learn is that the service of ‘a certain man’ was called upon. Medicines purchased included drinks and plasters, remedies which were advocated in the treatises and recipe collections. The ingredients purchased, too, reflect those named in the recipes, but it is not possible to tell to what use they were put; not only could a single ingredient be used in a multitude of recipes for different ailments, but often the account detailing the purchase does not include the ailment from which the animal was suffering. An area which these sources do highlight, however, is the variety of animals treated. For instance, whilst the internal evidence of veterinary treatises suggests that they were primarily directed towards horses such as destriers, household accounts reveal that other horses, too, received medical treatment, such as the black hackney treated at Merton college in the thirteenth century, or the sumpter treated in the household of Edmund Mortimer, earl of March (1352-81) in 1378. Thus a remedy intended for a high-status animal was equally applicable to a low-status one, and seemingly used for both.

Finally, although some treatises, such as *The Proceis of Hawkyng* and the *Treatise on Horses*, were influenced by earlier continental works, the treatment of animal

ailments in late-mediaeval England was by no means static. As has been shown, many of the same ailments can be found in various sources, indicating that there was a common knowledge of some remedies; thus *Prince Edward's Booke* and *The Proceis of Hawkyng* have much in common, as do British Library manuscripts Royal 17.A.XXXII, Cotton Julius D.VIII, and *Horse Remedies II*. Through the use of this common material it is possible to see the selectivity of the individual authors, whether by the omission of remedies, or changes to order or wording. Thus variants, alternatives, and the advocacy of particular recipes, all indicate the evolution and promotion of practical experience. The fact that authors were making changes to remedies indicates that they were conscious of what constituted good treatment in the selections of their personal choice; they were placing their mark, no matter how small, upon the evolution of veterinary medicine.

## Appendix B

### Glossary of Ailments<sup>1</sup>

Non-English words are italicised.

**Aggeleons:** appears to be an Anglicisation of *anguilles*.

**Aggresteyne:** itching, *BSA*, 107.

**Anguilles:** intestinal worms, *BSA*, 113.

**Aposteme:** a gathering of purulent matter in any part of the body; a large deep-seated abscess *OED*.

**Barbs:** inflammation of the folds of the mucous membrane under the horse's tongue, which protect the orifices of the ducts of the submaxillary glands, *OED*. The authors of *The Boke of Marchalsi* and *The Sothebe Treatise* recommended cutting out the barbs, not realising the swelling was the result of the ailment, not the cause, *BMH*, f.23r; *ST*, f.58v.

**The blood:** a sickness amongst sheep which causes them to die suddenly, "and er he dye, he wil stande stil, and hange downe the heed & other-while quake", *FBH*, 48. J.F. Smithcors identifies this with anthrax, the splenic fever of sheep and cattle, Smithcors, *Veterinary Art*, 160.

**Botches:** boils or ulcers, *OED*. In horses they grow "on length as þou it were smale stones" on the neck and sides, and may have puss in them, *BMH*, f.30r-v. In birds of prey they grew in the jaw, although the author of *Prince Edwardes Booke* noted that they could also grow in the feet. See *PH*, 45; *PEB*, 15. In hounds they were sores which came under the throat or in other parts of the body, *MG*, 55.

**Botts:** worms in horses; BL MS Royal 17.A.VIII, f.82v, has a remedy for "the bottes or othre wormes".

**Bresour:** a bruise or wound in birds of prey, *Hawks and Horses*, 51.

**Brest:** damage, injury, or harm, *OED*.

**Broken wind:** an incurable disease of the organs of respiration in horses, caused by the rupture of the air-cells, which disables them from bearing fatigue, *OED*

**Bruised:** hurt or damaged by a heavy blow, *OED*.

**Canker:** A chronic, non-healing sore or ulcer, especially one that extends into surrounding tissue, *OED*.

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<sup>1</sup> Only those ailments mentioned in the body of this study are described here.

**Canker of the tongue:** F. Smith suggests that this is the result of bit injuries, Smith, *Veterinary Literature*, 111. Yet it could also be ulcers on the tongue. *The Boke of Marchalsi* describes how underneath the tongue “þou shal fynde on many stedis smale burbeletis [blisters]. And hys mowth shal be zelu-red, and þe skyn shal be ofte on many placis, and namliche be-neþin”, *BMO*, 28.

**Chaudpiss:** according to W.L. Braekman, this was painful urinating of the horse, although *The Sothebe Treatise* describes it an ailment where the horse is unable to urinate, *Hawks and Horses*, 108; *ST*, ff.61v-62r.

**Cloying:** a hurt which arises from the smith driving a nail into the quick of the foot of the horse, causing the horse to go lame, *FBH*, 72. See also **retrete**.

**Colt's evil:** a swelling of the testicles in horses, which “cometh of a grete corage of him self; and then his corage fallith down into his membris & þere it congeleth and causeth his coddess to swelle”, *ST*, f.61r. Fitzherbert, however, noted that it arose from a “ranknes of nature and bloudde”, *FBH*, 69.

**Combe:** an ailment in horses, which appears to be some sort of sore. See *HorseRemII*, 98; BL MS Sloane 3285, f.88v.

**Common mange:** a form of mange suffered by hounds, which comes over all the body of the hound, *MG*, 50.

**Curb:** a hard swelling on the hock or other part of a horse's leg, *OED*.

**Corn:** a corn, callosity, *METH*, 184.

**Costiveness:** a form of constipation, described in *ST*, f.63v, as “whan þat an hors may not cayme [defecate]”.

**Courtyss:** a type of **farcy**: “wyl þe he suyth þe veines he is clepyd farsys and whan þat he goth to þe hepisward with outyn to þe croupeward [hindquarters] he is clepyd courtes”, *BMH*, f.31v.

**Cratches:** a disease in the feet of horses, in which the pastern appears as if scratched. According to Fitzherbert the ailment caused the horse to become lame, *FBH*, 72.

**Cray:** a form of constipation in hawks, where the excrements become excessively hard and are passed with difficulty, *OED*. The author of *The Durham Treatise* believed that cray was “þe perelluste” disease in birds of prey, *DT*, 22.

**Dead flesh:** proud flesh, granulation tissue, *METH*, 185.

**Dewbolne:** a disease where cattle are swollen with wind from eating too much rich grass, *FBH*, 55.

**Eschawfing of the neck:** Smith suggests that it may mean gall (chafe), when applied to the surface of the body, Smith, *Veterinary Literature*, 112. It certainly appears to cause the horse discomfort, for the horse will then rub himself with his hind foot or against a tree, which can then cause mange in the neck, *BMH*, ff.39r-v.

**Fallera:** a gall ailment in birds of prey, *AT*, 256.

**Falling madness:** a form of canine madness which causes the dog “to falle nowe in oon syde and nowe in anoþer side”, *MG*, 48.

**Farcy:** a form of **glanders** in horses in which lymph vessels near the skin become thickened, with skin lesions and abscess-forming nodules, *Hawks and Horses*, 109.

**Felon:** a small abscess or boil, an inflamed sore, *OED*.

**Filanders:** intestinal worms, *Hawks and Horses*, 53. The author of one treatise described them as “longe smale wormys w<sup>t</sup> rede hedes an ynch long”, *HawkRemI*, 36.

**Fike:** it appears to be some sort of soft tumour. The description given in Sloane 2584 is as follows: “Fike is an euel þat wol gendri in hore [clammy humour, mucus] of hym, & it is called a fyke for-as-myche as it is neysche gaderynge of humours of rede colour or of blo colour of blak with-oute hooro spryngynges oute of þe skyn in þe manere of a rype fyge where-of it takeþ his name”, *METH*, 109.

**Fire:** an ailment named in *BMH*, f.32v, possibly an inflammatory or gangrenous disease of the skin, *OED*.

**Flank madness:** a form of canine madness, so called because “þei ben so forswonge by the mydell of þe flankes as þough þei had neuyr ete mete and panteb in her flankes with moch payn”; the dog will not eat, has a stooping head, and rolls about when walking, *MG*, 48.

**Flying mange:** a form of mange suffered by hounds; it comes more commonly in the hounds’ ears and legs than in any other part of the body, and was thought to be the worst to heal, *MG*, 50.

**Forspoken:** an ailment “That cometh whan þat an vnhappy creature nameth þe best, & biddeth not god save him”. Symptoms of the ailment were watery eyes and appearing downcast, *ST*, f.64r.

**Foul:** foot rot, “and that is betwene the cleese [claws], sometyme before, and sometyme behynde, and it wyll swell, and cause hym to halt”, Smithcors, *Veterinary Art*, 161; Fitzherbert, 57.

**Founder:** inflammation of the laminar structures of a horse's foot *OED*.

**Fourmys:** “a maladi þat men clepyn on englisch þe ringbon [**ringbone**]”, *BMH*, f.18r.

It appears to be accurately described in *The Boke of Marchalsi*: “The fourmys wexin on þe bon in þe pastroun betwen þe corounale of þe fote & þe ferst joynt upward & whan þat he is first wexende he schewith hym up on þe fore & orwhile on boþe”, *ibid.*, f.50v.

**Frounce:** a canker of the mouth, where the mucous membrane of the mouth and throat becomes inflamed, whilst the tongue swells and is coated with a brownish white matter, *BSA*, 97.

**Furious madness:** a form of canine madness where the dog cries and howls in a loud voice, and runs around biting things, *MG*, 47. This is one of the two main forms of rabies which occurs today, the other being **ragemuët**, *OED*.

**Fy:** an ailment mentioned in *The Boke of Marchalsi*, “and whan þat þei ben brostyn men clepen hem in þis lond watirbledders & be 3ond þe se þe fyze”, *BMH*, f.36r. It seems to be a skin ailment of some sort. The ailment is found in the *Cirurgie des chevaux*, but no description is given, *Cirurgie des chevaux*, 370. L. Moulé, however, classes it as a tumour, Moulé, *Médecine Vétérinaire*, 110.

**Gafas:** an ailment which behaves like **glanders**, but unlike this ailment, it can be healed with stews and ointments, *BMH*, f.18v. Smith (who transcribed it as ‘safas’), suggested that it was a nasal discharge or catarrh, Smith, *Veterinary Literature*, 112.

**Galls:** any synovial enlargement of the limbs, Smith, *Veterinary Literature*, 112.

**Glanders:** a contagious disease in horses, which could be of the nasal, pulmonary, or glandular form; when it is of the type producing skin lesions, it is known as **farcy**, *BVD*, <http://www.credoreference.com/entry.do?id=7880701>, accessed 22.02.09.

**Gout:** a disease characterised by painful inflammation of the smaller joints, *OED*.

**Haw:** inflammation of the nictitating membrane (third eyelid) of a horse or dog, which was thought to be an excrescence by early farriers, *OED*.

**Impetigo:** various pustular diseases of the skin, *OED*.

**Interfere:** interference of the feet, the knocking of one foot against the other, *FBH*, 153. It is now called ‘over-stepping’, *ibid.*, 142.

**Jedos:** some sort of sore in horses, *BL MS Sloane 3285*, f.91r.

**Kmory:** a sickness which comes of eating moist hay which cats or other vermin have urinated upon; it causes the horse’s mouth to grow clammy so that he will not eat, *ST*, f.59v.

**Lampas:** a disease of horses, consisting in a swelling of the fleshy lining of the roof of the mouth behind the front teeth, *OED*.

**Lice:** numerous kinds of parasitic insects infesting the skin of animals, *OED*.

**Liver fluke:** an ailment of the liver in animals, caused by liver-flukes. See **liver rot**.

**Liver rot:** a disease of the liver in cattle and sheep caused by liver flukes, flatworms which depended upon both the animal and the fresh-water snail for their lifecycle; deposited by the snail in grass which was then eaten by cattle or sheep, the fluke migrated to the liver, causing the animal to become ill, Trow-Smith, *Livestock Husbandry*, 157; Thompson, *Veterinary Science*, 214-18. See also **rot**.

**Lung-sought:** a lung disease in cattle. Fitzherbert indicated that the ailment was infectious; it caused the animal to cough twenty times an hour, and few recovered, *FBH*, 54. Smithcors suggests that it was probably pleuropneumonia, Smithcors, *Veterinary Art*, 160.

**Lowe:** a worm in the back of a horse, *BMO*, 37. Smith suggests that this might be warbles, a small hard tumour, caused by the pressure of the saddle on a horse's back, Smith, *Veterinary Literature*, 111.

**Madness of the head:** a form of canine madness where the hound does not eat anything and thus dies, *MG*, 48.

**Malander:** a sore located behind a horse's knee, *OED*.

**Malbesanes:** an ailment of the horse's hoof. See *HorseRemII*, 99. Perhaps a variant spelling of **mendesanes**.

**Malemort:** glanders in the nostrils, whereby the hound cannot smell anything, *MG*, 52.

**Mange:** any of various skin diseases of mammals and birds caused by ectoparasitic mites, usually characterized by intense itching, inflammation, and hair loss, *OED*. *The Master of Game* mentions that hounds can suffer from four kinds of mange: see **quick mange**, **flying mange**, **common mange**, and **scab**.

**May sickness:** an ailment afflicting sheep, *Seneschaucy*, 274. It may be related to **rot**, see above, 97 n.258.

**Melette:** "A melette is on the hele, and hit is a drye scabbe that rouyth for defavte þat he is not clene wyppyd, and is sette vp wete", *HorseRemI*, 80.

**Mendesanes:** described in *BMH*, f.51r, as an ailment which comes between the hoof and coronet of the foot. Smith suggests that it might be cracked or greasy heals,

Smith, *Veterinary Literature*, 112. Maliesanes may be a variant spelling. See *BMH*, f.18r. See also **malbesanes**.

**Morfound:** lameness, stiffness, or other symptoms attributed to taking cold, *OED*. Thus Fitzherbert noted that it “cometh of rydynge faste tylle he swete, and than sett vp sodeynely in a colde place, without lytter, and take cold on his fete”; it caused the feet to grow white and crumble like a pumice, *FBH*, 69. Smith notes that this is the original form of **founder**, Smithcors, *Veterinary Art*, 161.

**Moros:** these may be tumours, Smith, *Veterinary Literature*, 111.

**Mourning of the chine:** described in *The Sothebe Treatise* as an ailment which came of a cold after a great heat, “and it causeth þe flessch alonge by þe chyne to rote & to drawe to matter, and it cometh through his hede along by þe chyne vane, & it will matter out at his nostrell”, *ST*, f.58v. Smith noted that it applied in all cases of chronic nasal discharge, and so embraced mainly glanders and ozæna (a chronic disease of the nose characterized by atrophy of the nasal mucosa and bone, with a thick secretion that forms dry, extremely fetid crusts, *OED*), and that the discharge was thought to come from the spinal marrow, Smith, *Veterinary Literature*, 112.

**Mules:** sores on the lower legs of a horse, *OED*.

**Murrain:** an infectious disease, plague, or pestilence, *OED*.

**Navel-gall:** a gall or bruise in the middle of a horse’s back, *OED*.

**Panell:** the area around the hawk’s fundament, *OED*. As an ailment, the name appears to indicate a form of constipation.

**Paynes:** a disorder characterized by the formation of sores on the feet and legs of horses. According to Braekman, this is stiffness in the horse’s heel, and the treatise found in Bodleian Library manuscript Ashmole 1444 refers to the ailment as “paynes in a horsse heles”, *Hawks and Horses*, 113; BodL MS Ashmole 1444, p.302.

**Pearl in the eye:** any white lesion of the eye, especially a corneal opacity or a cataract, *OED*.

**Peer:** a form of constipation, later called the **stone**; Braekman, however, identified it as asthma, *Sporting Lexicon*, 214; *DT*, 31.

**Polione:** a swelling of the hawk’s lower leg, above the jess, *Sporting Lexicon*, 214.

**Pies:** a disease which causes the hawk to swoon, *Sporting Lexicon*, 214.

**Pin:** a hard, painful growth on the underside of a hawk’s foot, like a corn, *Sporting Lexicon*, 214.

**Podagra:** pain in the foot, specifically that of gouty arthritis; **gout**, *OED*.

**Pox:** various diseases of domestic animals characterized by sores or scabs on the skin, *OED*. In birds of prey the sores are those especially caused by external parasites such as mites, *Sporting Lexicon*, 214

**Pursey:** short of breath, wheezy, asthmatic; **broken wind**, *OED*.

**Quick mange:** a form of mange suffered by hounds; it makes them lose their hair and breaks the skin in many places, which becomes great and thick, *MG*, 49-50.

**Rabies:** a viral disease, almost inevitably fatal if untreated, which affects the nervous system and typically causes agitated, aggressive behaviour, hydrophobia, and paralysis, *OED*. *The Master of Game* describes seven forms of this canine madness: see **furious madness**, **running madness**, **ragemuet**, **falling madness**, **flank madness**, **sleeping madness**, and **madness of the head**.

**Radunculus:** a blood tumour, Moulé, *Médecine Vétérinaire*, 110.

**Ragemuet:** dumb rabies, where the hound neither runs about nor bites anything, and will not eat; it was thought “to comeþ to hem of a worme þ<sup>r</sup> þe haue vnder þe tunge”, although it was realised that this was not in reality a worm “but a grete veyn þat houndes haue vnder þe tounge”, *MG*, 47-8. This is one of the two main forms of rabies which occurs today, the other being **furious madness**, *OED*.

**Ramageness:** wildness in a hawk, *OED*.

**Rate:** enteritis, inflammation of the bowels, especially of the small intestines, *OED*.

**Refreidure:** cold, catarrh, *BMO*, 116.

**Retrete:** a discomfort caused by a nail hammered into the quick of the foot of a horse, causing the horse to limp, *ST*, f.52v. See also **cloying**.

**Reume:** some form of catarrh or cold of the head of hawks, *BSA*, 112. Symptoms of this ailment were closed eyes and shaking of the head, *ibid.*, 42.

**Reume called agrum:** symptoms of this ailment were “blobbed” mouth and cheeks, *PH*, 44. Perhaps a more severe form of catarrh or cold. See *BSA*, 112.

**Ringbone:** a deposit of bony matter on the pastern-bones of a horse *OED*. Indeed, one author remarked that “A ryng bon groweth about the hove”, *ST*, 53v. See also **fourmys**.

**Risen upon:** a disease of cattle, where the head swells, especially by the eyes; it is caused by a blister under the tongue, *FBH*, 55. Smithcors suggests that the ailment

is probably gloss-anthrax, a localised form of the disease which affects the tongue, Smithcors, *Veterinary Art*, 160.

**Rot:** a virulent disease affecting the liver of sheep which are fed on moist pasture-lands, *OED*. See also **liver-rot**.

**Running madness:** a form of madness in hounds which has the same symptoms as **furious madness** (see above), except that the dog will only bite other hounds, *MG*, 47.

**Rye:** a stopping up of the nares, which prevents the falcon or hawk from casting, *Hawks and Horses* 58.

**Scab:** a cutaneous disease in animals, especially sheep, resembling the itch and the **mange**; psoroptic mange. *The Master of Game* lists this as the fourth type of mange from which hounds suffer. It arose from being in the kennel too long or from being kept in unclean conditions, *MG*, 51.

**Scale:** the name applied to various skin diseases, *OED*. A.C. Svinhufvud suggests it may be ringworm, *METH*, 222.

**Sleeping madness:** a form of canine madness where dogs lie as if asleep; they die from lack of food, *MG*, 48.

**Sorew:** an ailment like a **splint**, “but it is a lyttell longer and more, and lyeth vppe to the knee on the inner side”, *FBH*, 68. An earlier author described it as being “in þe manere of a greystil it is as grete as an almonde and it growith vpon þe fore legge on þe Innerside and in þe midle of þe legge”, *ST*, ff.54r-v.

**Soros:** the original French spelling of **sorew**.

**Spavin:** a hard, bony tumour or excrescence formed at the union of the splint-bone and the shank in a horse’s leg, and produced by inflammation of the cartilage uniting these bones, *OED*. A disease of the hock joint, Miller and West, *Veterinary Dictionary*, 131-33.

**Splint:** a callous tumour which develops into a bony excrescence on the metacarpal bones of a horse’s leg. It usually occurs on the inside of the leg along the union of the splint-bones with the canon-bone, *OED*. According to *The Sothebe Treatise* it grew under the knee, *Sothebe Treatise*, f.54v.

**Staggart:** probably staggers, an erratic gait caused by in-coordination of the limbs, *BVD*, <http://www.credoreference.com/entry.do?id=7883193>, accessed 31.06.09.

**Starkness in the legs:** probably stiffness in the legs.

**Stone:** a disease caused or characterised by the formation of a hard morbid concretion in the body; possibly akin to **cray**, *OED*.

**Strangullion:** a disease of horses, characterised by inflammation and swelling of the glands of the throat, *OED*.

**String-halt:** an ailment of horses, which makes the horse twitch up his leg suddenly, and makes him lame, *FBH*, 71.

**Stopping:** probably a form of constipation.

**Surrond malady:** an ailment in the legs of horses; perhaps **sorews**?

**Teyne:** asthma or catarrh, *BSA*, 107.

**Thrush:** an inflammation of the lower surface of the frog of a horse's hoof, accompanied with a fetid discharge, *OED*.

**Tineae:** external worms, Albertus Magnus, *On Animals*, 1605.

**Tortes:** abscesses between the skin and flesh of the horse, *BMO*, 123. The author of one treatise remarked upon the etymology of the name: "Tortes beþ apostemes in þe ouer half of þe flesche, genderynge with-inne þe skyn in þe manere of a Cake þat man clepuþ tarteles, of þe whiche he takeþ his name", *METH*, 113-15. Compare to *Animalibus*, 1381.

**Trenchelons:** colic, severe paroxysmal griping pains in the belly, *OED*. It was thought in the Middle Ages that it was caused by small worms which bred in the gut, *ST*, f.63v.

**Turn:** sturdy or gid, a brain-disease in sheep and cattle, which makes them run round and round. It was thought to be caused by a bladder in the forehead between the skull and the brains, but is in fact due to the pressure of a 'worm cyst' in part of the brain, *OED*; *FBH*, 140 n.62, 56; Miller and West, *Veterinary Dictionary*, 446-47.

**Ventayle:** perhaps short-winded, where the horse suffers from, or is liable to, difficulty of breathing, Smith, *Veterinary Literature*, 111; *OED*.

**Vinecrache:** 'craces' indicate cracks in the skin of the limbs, either from itchy legs, cracked heels, or other causes; although Smith did not understand the prefix 'vine', it may indicate the form of the cracks, i.e., as vine- or vein-like, Smith, *Veterinary Literature*, 112. It is possible, however, that the term comes from "vive crache", under which name recent cracks are discussed in the *Cirurgie des chevaux*, 369. The term "quyk crache" is found in BL MS Sloane 3285, f.91v, which may be same ailment.

**Vives:** hard swellings in the submaxillary glands of a horse; the presence of these was regarded as a specific morbid condition in a horse, *OED*. Latin authors discussed

both vives and **glanders** under the same heading, *vivulae*; see, for example, Theodoric of Cervia, *Die Pferdeheilkunde*, I, 56; Jordanus Ruffus, *Hippiatria*, 31-2. In the Middle English treatises, however, they are dealt with as separate ailments, although of a very similar nature, being swellings in the neck. See, for example, *ST*, ff.59v, 60v.

**Warrybrede:** some kind of ulcer or eruption, *OED*. Smithcors believes this to be warbles, swellings about the size of a marble or small walnut occurring upon the backs of cattle in spring and early summer, caused by the presence in them of the larvae of one of the warble flies, Smithcors, *Veterinary Art*, 161; *BVD*, <http://www.credoreference.com/entry/7883809>, accessed 31.06.09. Fitzherbert, however, remarks that warrybreds come in divers parts of the body and legs of cattle, *FBH*, 56.

**Wasting of the liver:** an ailment of horses mentioned in *ST*, f.64r.

**Web:** a thin white film or opacity growing over the eye; a kind of cataract, *albugo*, *leucoma*, or *pterygium*, *OED*.

**Windgalls:** soft tumours on either side of a horse's leg just above the fetlock, *OED*.

**Withered thighs:** an ailment in hounds caused by smiting the foreleg against the hind leg, “wherefore her theis dryen [wither or dry up] and bene lost þerby”, *MG*, 56.

**Wood-evil:** a local name for dysentery or a similar disease in sheep or cattle, *OED*. The description given by Fitzherbert, however, where the disease takes sheep “moste commonly in the legges, or in the necke, and maketh them to halt, and to holde theyr necke awry”, suggests that it is some other form of illness, *FBH*, 49. The disease was most common on hilly, ley, or ferny ground, *ibid*.

**Wranch:** a sprain or strain, *OED*.

**Wrote in the eye:** a wart-like growth in the eye, *Hawks and Horses*, 116.

## Appendix A Glossary of Terms

Non-English words are italicised.

**Affer/aver:** a draught horse or draught animal, *OED*.

**Alaunt:** a large fierce dogs used for hunting deer and boar; it was also the dog used by butchers for herding cattle. See *MG*, 64-5, 115-16; *Sporting Lexicon*, 148-49.

**Alum:** a whitish transparent mineral salt, which is very astringent, *OED*.

**Alum-glass:** crystallised alum, *OED*.

**Ambling:** a horse's gait, whereby it moves the two feet on one side together, alternatively with the two feet on the other side, *OED*.

**Anodyne:** having the power of assuaging pain; a medicine or drug which relieves pain, *OED*.

**Arnement:** ink, or materials with which it is made, *OED*.

**Awl:** a small tool, having a slender, cylindrical, tapering, sharp-pointed blade, with which holes may be pierced, *OED*.

**Basterd:** a mixed breed of hound; a cross-breed of falcon of some kind, *Sporting Lexicon*, 148, 154.

**Bercelets:** hounds trained to follow wounded game, *TH*, 64. W.A. and F.N. Baillie-Grohman suggest they were shooting dogs. See *MG*, 125, 165.

**Berceletter:** the person in charge of the **bercelets**. See *MG*, 165.

**Berner:** the person in charge of the **brachets**, although the term was also used to indicate someone in charge of hounds generally, or a kennelman. See *MG*, 125, 165.

**Bovetter:** the person in charge of *bovetti*, bullocks in their first year.

**Brache(t):** see **raches**.

**Calkin:** the turned-down ends of a horse-shoe which raise the horse's heels from the ground; also a turned edge under the foot of the shoe, *OED*.

**Capital lye:** the first, or strongest, alkaline solution, *OED*.

**Castings:** feathers, fur, or tow given with the meat to a hawk, to cleanse the gorge (the crop, or first stomach), Salvin and Brodrick, *Falconry*, 133.

**Cautery:** the act of burning organic tissue by either a hot implement or caustic substances; the former is known as actual cautery, the latter as potential, *OED*.

**Chambéry:** a sharply sweet vermouth, *OED*.

**Chives:** the first shoots of a plant, *LHA*, 30 n.42.

**Chyle:** the semi-liquid contents of the digestive tract during the first stages of digestion, Albertus Magnus, *On Animals*, 1770.

**Corser:** a horse-dealer, someone “that byeth all rydden horses, and selleth them agayne”, *FBH*, 74.

**Creance:** a long fine line or cord attached to a hawk's leash, by which she is restrained from flying away when being trained, *OED*.

**Destrier:** the mediaeval war-horse, usually of greater value and size than the average mediaeval horse, Hyland, *Warhorse*, 221.

**Deute:** a salve or ointment prepared from the root of the marshmallow, *PP*, 37.

**Dung-hill curs:** dogs which scavenge on rubbish dumps, *Sporting Lexicon*, 149.

**Eisel:** vinegar made of fruit other than grapes, *BMO*, 89.

**Engleim:** to make slimy, clammy, or sticky; also, to clog, choke, or surfeit (the stomach), *OED*.

**Enosed:** means “a bone in their throat”, *MG*, 47 n.8.

**Fastyng spodyll:** Perhaps a fine powder obtained by calcination, *Hawks and Horses*, 59.

**Faucon florye:** a species of falcon named by Symmachus, *Kerdeston*, 58.

**Faucon ientyle:** falcon-gentle, another name for the peregrine falcon, *OED*. See *Sporting Lexicon*, 154. For a description of the peregrine falcon, see Michell, *Practice of Hawking*, 16-20.

**Faucon pyleryne:** falcon-pilgrim, another name for the peregrine falcon. See *BSA*, 117.

**Favkone of þe roche:** falcon of the rock, another name for the peregrine falcon, *Sporting Lexicon*, 206.

**Feitergrasse:** the name of a kind of grass, *Fitzherbert*, 154.

**Ferroure:** a smith or farrier, *OED*.

**Fewterer:** the person in charge of greyhounds. See *MG*, 138, 165.

**Fleam:** a kind of lancet used for bleeding horses, *OED*.

**Floatage:** the fat skimmings which float on the top of the pot in which meat is boiled, *DAR*, III, 915.

**Garse:** to scarify, to make a series of cuts or incisions in, *OED*.

**Green copperas:** protosulphate of iron, *OED*.

**Greyhound:** the term encompasses a variety of dogs used in hunting which hunted chiefly by sight. See *MG*, 62-3, 142-45.

**Harrier:** a hound which 'harried' all types of game, evidently a smaller kind of running hound, *MG*, 61, 149-51.

**Hobby:** a small species of falcon; a small or middle-sized horse, *OED*. See Salvin and Brodrick, *Falconry*, 83-6; Michell, *Practice of Hawking*, 26-7; Hyland, *Warhorse*, 32.

**Hoggaster:** a young ram not yet a **hurtard**, *DAR*, III, 924.

**Horse-master:** someone who "bieth wylde horses, or coltes, and bredeth theym, and selleth theym agayne wylde, or breaketh parte of them, and maketh theym tame, and than selleth them", *FBH*, 74.

**Hurtard:** a ram of full growth, *DAR*, III, 925.

**Kennet:** a small dog used in hunting, *OED*. See *MG*, 171, for etymology.

**Labdanum:** ladanum, gum resin which exudes from plants of the genus *cistus*, *OED*.

**Lanner:** a species of falcon. For a description, see Salvin and Brodrick, 98-101; Michell, *Practice of Hawking*, 23-5.

**Lanneret:** the male **lanner** falcon, *OED*.

**Lee:** the sediment deposited in the containing vessel from wine and some other liquids, *OED*.

**Letigres:** A.E.H. Swaen postulated that it was "an oral perversion and scribal corruption of *litharge*", protoxide of lead prepared by exposing melted lead to a current of air, *PEB*, 30; *OED*.

**Lye:** alkalisated water, primarily that made by the lixiviation of vegetable ashes, *OED*.

**Lymer:** a scenting hound used to track game, of no particular breed. See *MG*, 172-74

**Lymerer:** the person in charge of **lymers**. See *MG*, 173.

**Marlyone:** the merlin, a species of small falcon, *Sporting Lexicon*, 212.

**Mastiff:** a dog used as a guard dog, and in hunting wild boar, *MG*, 68. The dogs described in *The Master of Game* are not the English mastiff, but the French *matin*, “big hardy dogs somewhat light in the body with long heads, pointed muzzles, flattened forehead and semi-pendant ears; some were rough and others smooth coated, *ibid.*, 175-76.

**Melland:** probably the milan or kite, although it may the milion [see **mylyon**], *Sporting Lexicon*, 153.

**Morel:** any of several kinds of nightshade with black or deep-purple berries, *OED*.

**Mummy:** a substance prepared for medicinal use from mummified flesh, *OED*.

**Musket:** the male sparrowhawk, *OED*.

**Must:** the juice of freshly pressed grapes before or during fermentation into wine; a thick, pulpy mixture of crushed grapes prepared for or undergoing fermentation, *OED*.

**Mute, to:** of birds of prey, to discharge faeces, to defecate, *OED*.

**Mutes:** the droppings of birds of prey, Salvin and Brodrick, *Falconry*, 135.

**Mylyon:** milion, an obscure bird of prey adopted from the Middle East, *Sporting Lexicon*, 153.

**Nares:** the nostrils of birds of prey, Salvin and Brodrick, *Falconry*, 135.

**Noble:** an English gold coin first minted by Edward III, usually valued at 6s 8d (half a mark), *OED*.

**Orpiment:** yellow arsenic, *OED*.

**Paelee:** a food of birds, made with eggs, butter, and milk or fresh water, ‘Fragment d’un Traité, 42.

**Palfrey:** a quality, comfortable riding horse, usually noted as **ambling**, Hyland, *Warhorse*, 222.

**Phlebotomy:** the act of extracting blood from a vein by means of surgical incision, *OED*. See also **ventose**.

**Populeon:** an ointment containing the buds of the black poplar and other herbs, used to relieve pain, inflammation, and itching, *OED*.

**Pottle:** an amount equal to half a gallon, *OED*.

**Prikheried curis:** prick-eared dogs, *BSA*, 150; *OED*.

**Quart:** a quarter of a gallon or two pints, *OED*.

**Quitter:** pus, a virulent discharge, *OED*.

**Raches:** one of the main groups of **running hounds**, pursuing their quarry by scent, *Sporting Lexicon*, 296. See also *MG*, 181-83.

**Realgar:** an arsenic-containing mineral that occurs as soft red masses, *OED*.

**Rother:** an ox; an animal of the ox kind, *OED*.

**Rouncey:** a horse of almost all work, from war-horse to pack horse, Hyland, *Warhorse*, 222.

**Rowel:** a circular piece of leather or other material with a hole in the centre, which was inserted between the flesh and skin of an animal to cause the discharge of humours, *OED*.

**Running hounds:** the mainstay of the hunt, pursuing prey by scent. They were generally smallish dogs such as **kennets**, **raches**, and **harriers**, *Sporting Lexicon*, 284. See also *MG*, 58-61, 185-88.

**Saker:** a large species of falcon. See Michell, *Practice of Hawking*, 22-3; Salvin and Brodrick, *Falconry*, 96-8.

**Sakeret:** the male **saker** falcon, *OED*.

**Scumber:** to defecate, *OED*.

**Seam:** fat, grease, *OED*.

**Seeling:** sowing a hawk's eyelids together to temporarily blind her, thus making her more easily tamed. See *BSA*, 96.

**Sengreen:** the houseleek, *OED*.

**Seton:** a thread, piece of tape, or the like, drawn through a fold of skin so as to maintain an issue or opening for discharges, or drawn through a sinus or cavity to keep this from healing up, *OED*.

**Sousse:** oxide of zinc, *MG*, 278.

**Stirk:** a young bullock or heifer, usually between one and two years old, *OED*.

**Stirketter:** the person in charge of **stirks**, *DAR*, III, 971.

**Stottarius:** the person in charge of **stots**, *DAR*, III, 972.

**Stot:** the term generally means a horse of inferior status, a work-horse. In the North, however, it means an ox from one to four years of age, *OED*; *DAR*, III, 972.

**Strictory:** a medical compress, *OED*.

**Stylet:** a slender probe, *OED*.

**Sugar rocet:** a mixture of sugar and oil obtained from rose petals, *Hawks and Horses*, 59.

**Sumpter:** a pack or baggage horse, *OED*.

**Sward:** the surface of the soil covered with grass or other herbage, *OED*.

**Swyuel:** a swivel, seemingly some sort of surgical instrument for boring holes. See *METH*, 131.

**Tares:** the cultivated vetch, *Vicia sativa*, grown (often with oats and such like) as fodder, *OED*.

**Tent:** a roll or pledget, usually of soft absorbent material, often medicated, or sometimes of a medicinal substance, formerly much used to search and cleanse a wound, or to keep open or distend a wound, sore, or natural orifice, *OED*.

**Tercelet:** the male of any falcon or hawk, *OED*.

**Tewel:** the rectum, *OED*.

**Thwong:** thong, a narrow strip of hide or leather, *OED*.

**Tiring:** anything tough and appetising enough given to a hawk to keep pulling and picking at to satisfy her hunger. This not only strengthens all the muscles, but also keeps the bird occupied so that she does not pine for freedom, and prevents her beak from growing to an unnatural length at the point, Michell, *Practice of Hawking*, 187-88.

**Tryndeltayles:** trundle-tails, dogs with curly tails; low-bred dogs, *OED*.

**Twybelyng foule:** a species of falcon named by Symmachus, *Kerdeston*, 58.

**Tynde:** tine, each of the pointed branches of a deer's horn, *OED*.

**Tutty:** the crude zinc oxide obtained by the smelting of copper ore with zinc, *MED*.

**Unslaked lime:** quicklime, lime which has not yet been slaked, *OED*.

**Ventose:** a cupping glass; a form of bleeding by means of this, *OED*. This was a lesser form of bleeding than **phlebotomy**. The site would first be scarified, before a heated cup was applied, the vacuum drawing a steady flow of blood. See Rawcliffe, *Medicine and Society*, 68-9.

**Vernage:** a strong and sweet kind of white Italian wine, *OED*.

**Verdigris:** The green rust which forms naturally on copper or brass, or which can be artificially made by pouring acid onto plates of copper, *OED*.

**Wether:** a castrated ram, *OED*.

## Appendix C

### Medicinal Actions of Herbs<sup>1</sup>

**Alexanders** [black lovage]: the roots and fruit are aromatic and stimulant, diuretic and carminative, Grieve, *Modern Herbal*, 500.

**Aloes**: purgative; it is used in veterinary practice as a bitter tonic in small doses, and externally as a stimulant and desiccant, Grieve, *Modern Herbal*, 29.

**Balm**: carminative, diaphoretic, and febrifuge, Grieve, *Modern Herbal*, 77.

**Beet**: valued today as an appetising vegetable, Grieve, *Modern Herbal*, 94. It was thought that the white beet was “of a cleansing and digesting quality, and provoketh urine”; the juice was thought to open obstructions of the liver and spleen, and to be good for the headache and “turnings of the brain”. The red beet was thought “to stay bloody flux, women’s courses, and the whites, and to help the yellow jaundice”; the juice put into the nostrils purged the head, helped noise in the ears, and was good for tooth ache, Culpepper, *Complete Herbal*, 44-5.

**Bugloss**: diuretic, demulcent, and pectoral, Grieve, *Modern Herbal*, 142.

**Cabbage**: according to Nicholas Culpeper the cabbage had a variety of virtues, including bringing down women’s courses, helping those entering into consumption, and taking away pain and ache. See Culpeper, *Complete Herbal*, 70-1.

**Camomile**: tonic, stomachic, anodyne, and antispasmodic, Grieve, *Modern Herbal*, 186.

**Chickweed**: demulcent, refrigerant; it is mostly used in the form of an ointment, Grieve, *Modern Herbal*, 196.

**Chives**: mostly used to flavour food, as it contains a pungent volatile oil, rich in sulphur, present in all the onion plants, which causes the distinctive smell and taste, Grieve, *Modern Herbal*, 201. It was thought that “an excellent remedy for the stoppage of urine” could be made from them, Culpeper, *Complete Herbal*, 91.

**Cinnamon**: carminative, astringent, stimulant, and antiseptic; it is usually prescribed with other medicines, Grieve, *Modern Herbal*, 202.

**Cloves**: the most stimulating and carminative of all aromatics; the medicinal properties reside in the volatile oil, Grieve, *Modern Herbal*, 208.

**Crowfoot**: acrid; the bruised leaves and roots will act as a caustic, Grieve, *Modern Herbal*, 235-36.

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<sup>1</sup> Only those herbs mentioned in the body of this study are described here.

**Cumin:** stimulant, antispasmodic, and carminative; due to its very disagreeable flavour its medicinal use today is almost confined to veterinary practice, in which it is employed as a carminative, Grieve, *Modern Herbal*, 243.

**Daisy:** it once had a great reputation as a cure of fresh wounds, when applied externally, and against inflammatory disorders of the liver, when taken internally in the form of distilled water of the plant, Grieve, *Modern Herbal*, 247. See also Culpeper, *Complete Herbal*, 112.

**Dragonwort:** it was believed to scour and cleanse the internal, and external, parts of the body; an ointment of it was good for wounds and ulcers. It consumed cankers, and removed the pin and web from the eyes, Culpeper, *Complete Herbal*, 125-26.

**Elecampane:** Diuretic, tonic, diaphoretic, expectorant, alterative, antiseptic, astringent, and gently stimulant, Grieve, *Modern Herbal*, 280.

**Elder:** the bark is purgative; emollient ointment can be made from the green inner bark, Grieve, *Modern Herbal*, 270.

**Fennel:** aromatic and carminative; powdered fennel has the effect of driving away fleas from stables and kennels, fennel being disliked by fleas, Grieve, *Modern Herbal*, 296.

**Fenugreek:** the seeds are employed in the preparation of emollient cataplasms, ointments, and plasters; it is a principal ingredient in home-made medicines of grooms and horse-keepers, Grieve, *Modern Herbal*, 299. Culpeper noted that it was of a softening and dissolving nature, Culpeper, *Complete Herbal*, 138.

**Flax:** emollient, demulcent, and pectoral, Grieve, *Modern Herbal*, 319.

**Frankincense:** stimulant, although now seldom used internally; it is also used in plasters, Grieve, *Modern Herbal*, 327.

**Galingale:** stimulant and carminative, Grieve, *Modern Herbal*, 340.

**Garlic:** diaphoretic, diuretic, expectorant, stimulant; it also has stomachic and antiseptic properties, Grieve, *Modern Herbal*, 344.

**Ginger:** stimulant and carminative, Grieve, *Modern Herbal*, 354.

**Hemp:** it is principally used for easing pain, inducing sleep, and soothing nervous disorders, Grieve, *Modern Herbal*, 397.

**Herb of grace:** it is unclear if the mediaeval authors intended **vervain** or **rue**.

**Horehound:** see **white horehound**.

**Houseleek:** refrigerant, astringent, and diuretic; in large doses houseleek juice is emetic and purgative, Grieve, *Modern Herbal*, 423.

**Laurel berries:** stimulant and narcotic, Grieve, *Modern Herbal*, 465.

**Lavender:** it has aromatic, carminative, and nervine properties, Grieve, *Modern Herbal*, 471.

**Leek:** a culinary herb, allied to the **onion**, *OED*.

**Linseed:** see **flax**.

**Liquorice:** demulcent, moderately pectoral, and emollient, Grieve, *Modern Herbal*, 491.

**Lungwort:** the leaves have been supposed to be demulcent and pectoral; an infusion of the dried herb in water can be taken to subdue inflammation, and for its healing effect in pulmonary complaints, Grieve, *Modern Herbal*, 502.

**Mallow:** great demulcent and emollient properties, Grieve, *Modern Herbal*, 508.

**Mastic:** stimulant and diuretic, Grieve, *Modern Herbal*, 522.

**Mint:** stimulant, carminative, and antispasmodic; the effects of spearmint oil are less powerful than that of peppermint, Grieve, *Modern Herbal*, 536. Mint is also aromatic.

**Morel** [nightshade]: black nightshade has a reputation of being very poisonous, but this has been disputed. It has narcotic properties. Deadly nightshade is narcotic, diuretic, sedative, antispasmodic, and mydriatic, Grieve, *Modern Herbal*, 582-3, 588.

**Motherwort:** diaphoretic, antispasmodic, tonic, nervine, and emmenagogue, Grieve, *Modern Herbal*, 555.

**Mullein:** it has very markedly demulcent, emollient, and astringent properties; it is thus useful in pectoral complaints and bleeding of the lungs and bowels. Mullein oil is a valuable destroyer of disease germs, Grieve, *Modern Herbal*, 565.

**Myrobalan:** astringent, *OED*.

**Nettle:** preparations of the herb have astringent properties, and also act as a stimulating tonic; it is anti-asthmatic, Grieve, *Modern Herbal*, 578.

**Oak:** its action is slightly tonic, strongly astringent, and antiseptic, Grieve, *Modern Herbal*, 596.

**Oats:** nervine, stimulant, and antispasmodic, Grieve, *Modern Herbal*, 597.

**Olive:** the leaves are astringent and antiseptic; the oil is a nourishing demulcent and laxative. The oil can also be used as a lubricant, Grieve, *Modern Herbal*, 599.

**Onion:** antiseptic and diuretic, Grieve, *Modern Herbal*, 599.

**Parsley:** it has carminative, tonic, and aperient action, but is primarily used for its diuretic properties; the root is faintly aromatic, Grieve, *Modern Herbal*, 614, 613.

**Pellitory:** the root has a pungent efficacy in relieving toothache and in promoting a free flow of saliva. It is a rubefacient and local irritant, Grieve, *Modern Herbal*, 622.

**Pepper:** aromatic, stimulant, and carminative; it is said to possess febrifuge properties. Externally it is rubefacient, Grieve, *Modern Herbal*, 627.

**Poppy:** the white poppy is hypnotic, sedative, astringent, expectorant, diaphoretic, and antispasmodic, Grieve, *Modern Herbal*, 652.

**Radish:** it is an excellent food remedy for stone, gravel, and scorbutic conditions, Grieve, *Modern Herbal*, 668. Culpeper added that it provoked urine, Culpeper, *Complete Herbal*, 287.

**Red dock:** alterative, deobstruent, detergent, and tonic, Grieve, *Modern Herbal*, 259.

**Red fennel:** see **fennel**.

**Red nettle:** see **nettle**.

**Rosemary:** tonic, astringent, diaphoretic, stimulant. Oil of rosemary has the carminative properties of other volatile oils, as well as being an excellent stomachic and nervine; the oil can also be used externally as a rubefacient, Grieve, *Modern Herbal*, 683.

**Rue:** strongly stimulating and antispasmodic; often employed, in the form of a warm infusion, as an emmenagogue. In excessive doses it is an acro-narcotic poison, and should not be administered immediately after eating, due to its emetic tendencies. Externally, rue can be employed as a rubefacient, Grieve, *Modern Herbal*, 696.

**Saffron:** carminative, diaphoretic, and emmenagogue, Grieve, *Modern Herbal*, 700.

**Sage:** stimulant, astringent, tonic, and carminative, Grieve, *Modern Herbal*, 703.

**Sandragon** [dragon's blood]: it was formerly given as an astringent in diarrhoea, but officially it is never used internally, being regarded as inert, Grieve, *Modern Herbal*, 262.

**Saxifrage:** resolvent, diaphoretic, stomachic, diuretic; the root is very hot and acrid. Cows which feed on this plant have their flow of milk increased, Grieve, *Modern Herbal*, 720.

**Smallage** [wild celery]: carminative, stimulant, diuretic, tonic, and nervine, Grieve, *Modern Herbal*, 183.

**Spurge:** irritant, emetic, and cathartic; internal use has been abandoned, owing to the severity of its action. Its chief use is as a vesicant, principally in veterinary practice, Grieve, *Modern Herbal*, 764.

**Spurge laurel** [mezezeon]: stimulant and vesicant, Grieve, *Modern Herbal*, 532.

**Turmeric:** a mild aromatic stimulant, seldom used in medicine except as a colouring, Grieve, *Modern Herbal*, 823.

**Valerian:** a powerful nervine, stimulant, carminative, and antispasmodic; it is used as a sedative to the higher nerve centres in condition of nervous unrest. It also allays pain and promotes sleep. Large doses, however, can produce pain in the head, heaviness, and stupor, Grieve, *Modern Herbal*, 828.

**Vervain:** astringent, diaphoretic, antispasmodic; it can also be used as a febrifuge, Grieve, *Modern Herbal*, 832.

**Watercress:** it has antiscorbutic properties, Grieve, *Modern Herbal*, 845.

**White horehound:** it has long been noted for its efficacy in lung troubles and coughs. Preparations of horehound are used as expectorants and tonics; it is a popular pectoral remedy. Taken in large doses it acts as a purgative, Grieve, *Modern Herbal*, 416.

**White lily:** vermifuge, tonic, anti-periodic, and febrifuge, Grieve, *Modern Herbal*, 477.

**Wormwood:** tonic, stomachic, febrifuge, and anthelmintic, Grieve, *Modern Herbal*, 859.

## Appendix D

### Tables I.i-iv Number of remedies per ailment

Table I.i

Horses						
	Source	Date	Number of ailments <sup>1</sup>	Number of ailments with single remedy	Number of ailments with multiple remedies	Number of ailments with no remedy
T <sup>2</sup>	<i>METH</i>	s. xiv <sup>ex</sup> -xv <sup>in</sup>	29	9 (31%)	19 (66%)	1 (3%)
	<i>BMH</i> <sup>3</sup>	s. xv <sup>med</sup>	62	32 (52%)	21 (33%)	9 (15%)
	<i>ST</i>	s. xv	49	49 (100%)	/	/
RC <sup>2</sup>	BodL MS Digby 29, f.6v	s. xv <sup>1</sup>	1	1 (100%)	/	/
	BodL MS Digby 29, f.298v	s. xv <sup>1</sup>	2	1 (100%)	/	/
	<i>IMEP VIII</i> , 41	s. xv <sup>med</sup>	1	/	1 (100%)	/
	<i>HorseRemII</i>	s. xv	35	20 (57%)	15 (43%)	/
	BL MS Sloane 3285	s. xv	31	22 (71%)	9 (29%)	/
	BL MS Sloane 686	s. xv	18	15 (82%)	3 (17%)	/

<sup>1</sup> The number of ailments does not equate with the number of remedies, for some ailments had a joint remedy, whilst others had multiple remedies. Likewise in tables I.ii-iv.

<sup>2</sup> T= Treatise; RC= Recipe collections. Likewise in tables I.ii-iv, II.i-iv, V.i-iv, VI.i-iv, VII.i-iv, VIII.i-iv.

<sup>3</sup> In all tables this includes the omissions supplied from *BMT*.

RC	BL MS Royal 17.A.XXXII, ff.128r-131v	s. xv	18 <sup>4</sup>	8 (44%)	10 (56%)	/
	BL MS Cotton Julius D.VIII	s. xv	17	12 (71%)	5 (29%)	/
	BL MS Royal 17.A.VIII	s. xv	6	4 (67%)	2 (33%)	/
	BodL MS Digby 95	s. xv	6	4 (66%)	2 (33%)	/
	BL MS Royal 17.A.XXXII, f.120r	s. xv	3	3 (100%)	/	/
	IMEP XIX, [14-20]	s. xv	5	4 (80%)	1 (20%)	/
	IMEP XIX, [9]	s. xv	1	1 (100%)	/	/
	IMEP XIX, [28]	s. xv	1	1 (100%)	/	/
	<i>Studies on Alchemy</i>	s. xv	1	1 (100%)	/	/
	BodL MS Eng misc. d.285	s. xv-xvi	4	4 (100%)	/	/
	BL MS Egerton 1995	s. xv <sup>ex</sup> -xvi	3 <sup>5</sup>	3 (100%)	/	/
	IMEP XI, 106	s. xv <sup>ex</sup> -xvi	1	1 (100%)	/	/
	BodL MS Ashmole 1444	s. xvi	18	14 (78%)	4 (22%)	/
	IMEP VIII, 10	s. xvi	2	2 (100%)	/	/

<sup>4</sup> One ailment is unnamed. Likewise in table II.i.

<sup>5</sup> The first is illegible. Likewise in table II.i

Table I.ii

Birds of Prey						
	Source	Date	Number of ailments	Number of ailments with single remedy	Number of ailments with multiple remedies	Number of ailments with no remedy
T	PP	s. xv <sup>1</sup>	16	9 (56%)	4 (25%)	3 <sup>6</sup> (19%)
	DT	s. xv <sup>1</sup>	10	6 (60%)	4 (40%)	/
	HawkRemI	s. xv <sup>med</sup>	30	21 (70%)	6 (20%)	3 (10%)
	PH	1486	46	31 (67%)	13 (28%)	2 (4%)
	MKSG	s. xv <sup>ex</sup>	4	4 (100%)	/	/
	PEB	s. xv	42	28 (66%)	13 (31%)	1 (2%)
RC	Kerdeston	s. xv <sup>in</sup>	2	1 (50%)	1 (50%)	/
	HawkRemII	s. xv	19	10 (53%)	9 (47%)	/
	J.B.I	s. xv	13	12 (92%)	1 (8%)	/
	J.B.II	s. xv	13	5 (38%)	8 (62%)	/
	J.B.IV	s. xv	13	9 (69%)	3 (23%)	1 (8%)
	TBS	s. xv <sup>ex</sup> -xvi	4	2 (50%)	2 (50%)	/
	IMEP VIII, 8	poss. s. xvi	1	1 (100%)	/	/

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<sup>6</sup> This was a deliberate omission for two of the ailments.

Table I.iii

Dogs						
	Source	Date	Number of ailments	Number of ailments with single remedy	Number of ailments with multiple remedies	Number of ailments with no remedy
T	PC	c.1280	12	8 (66%)	4 (33%)	/
	MG	s. xv <sup>in</sup>	35	23 (66%)	4 (11%)	8 <sup>7</sup> (23%)
RC	IMEP XI, 108	s. xv <sup>ex</sup> -xvi	1	1 (100%)	/	/
	IMEP VIII, 1	s. xvi	1	1 (100%)	/	/

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<sup>7</sup> This was deliberate for the seven forms of madness.

Table I.iv

Livestock						
	Source	Date	Number of ailments	Number of ailments with single remedy	Number of ailments with multiple remedies	Number of ailments with no remedy
T	<i>FBH</i>	1534	16	15 (94%)	/	1 <sup>8</sup> (6%)
RC	BodL MS Laud misc. 598	s. xv <sup>in</sup>	2 <sup>9</sup>	2 (100%)	/	/
	BL MS Royal 17.A.VIII	s. xv	1	1 (100%)	/	/
	BL MS Sloane 686	s. xv	3	3 (100%)	/	/
	<i>IMEP XI</i> , 108	s. xv <sup>ex</sup> -xvi	2	2 (100%)	/	/

<sup>8</sup> This is a deliberate omission.

<sup>9</sup> Neither are named, both being a “medycyne”.

Tables II.i-iv  
Number of ailments with symptoms, causes, and descriptions

Table II.i

Horses							
	Source	Number of ailments	Only ailment and remedy given	Causes	Symptoms	Description	No symptom or description
T	<i>METH</i>	29	12 (41%)	15 (52%)	11 (38%)	7 (24%)	15 (52%)
	<i>BMH</i>	62	24 (39%)	23 (37%)	18 (29%)	20 (32%)	28 (45%)
	<i>ST</i>	49	11 (22%)	18 (37%)	13 (27%)	20 (41%)	22 (45%)
RC	BodL MS Digby 29, f.6v	1	1 (100%)	/	/	/	1 (100%)
	BodL MS Digby 29, f.298v	2	2 (100%)	/	/	/	2 (100%)
	<i>IMEP VIII</i> , 41	1	1 (100%)	/	/	/	1 (100%)
	BL MS Sloane 3285	31	31 (100%)	/	/	/	31 (100%)
	BL MS Sloane 686	18	17 (94%)	1 (6%)	/	/	18 (100%)
	BL MS Royal 17.A.XXXII, ff.128r-131v	18	18 (100%)	/	/	/	18 (100%)
	BL MS Cotton Julius D.VIII	17	17 (100%)	/	/	/	17 (100%)
	BL MS Royal 17.A.VIII	6	6 (100%)	/	/	/	6 (100%)
	BodL MS Digby 95	6	6 (100%)	/	/	/	6 (100%)
	BL MS Royal 17.A.XXXII, f.120r	3	3 (100%)	/	/	/	3 (100%)
	<i>IMEP XIX</i> , [14-20]	5	5 (100%)	/	/	/	5 (100%)
	<i>IMEP XIX</i> , [9]	1	1 (100%)	/	/	/	1 (100%)
	<i>IMEP XIX</i> , [28]	1	1 (100%)	/	/	/	1 (100%)

RC	<i>Studies on Alchemy</i>	1	1 (100%)	/	/	/	1 (100%)
	BodL MS Eng misc. d.285	4	4 (100%)	/	/	/	4 (100%)
	BL MS Egerton 1995	3	3 (100%)	/	/	/	3 (100%)
	IMEP XI, 106	1	1 (100%)	/	/	/	1 (100%)
	BodL MS Ashmole 1444	18	18 (100%)	/	/	/	18 (100%)
	<i>HorseRemII</i>	35	34 (97%)	/	1 (3%)	/	34 (97%)
	IMEP VIII, 10	2	2 (100%)	/	/	2 (100%)	/

Table II.ii

Birds of Prey							
	Source	Number of ailments	Only ailment and remedy given	Causes	Symptoms	Description	No symptom or description
T	PEB	42	31 (74%)	4 (10%)	10 (24%)	2 (5%)	31 (74%)
	PP	16	9 (56%)	4 (25%)	2 (13%)	3 (19%)	10 (63%)
	DT	10	4 (40%)	3 (30%)	4 (40%)	/	6 (60%)
	PH	46	21 (46%)	6 (13%)	21 (46%)	3 (7%)	24 (52%)
	HawkRemI	30	13 (43%)	4 (13%)	13 (43%)	2 (7%)	14 (47%)
	MKSG	4	1 (25%)	3 (75%)	3 (75%)	2 (50%)	1 (25%)
RC	IMEP VIII, 8	1	1 (100%)	/	/	/	1 (100%)
	TBS	4	4 (100%)	/	/	/	4 (100%)
	HawkRemII	19	11 (58%)	/	7 (37%)	3 (16%)	11 (58%)
	Kerdeston	2	1 (50%)	/	/	1 (50%)	1 (50%)
	J.B.II	13	5 (38%)	/	7 (54%)	3 (23%)	5 (38%)
	J.B.I	13	1 (8%)	/	/	12 (92%)	1 (8%)
	J.B.IV	13	/	/	/	13 (100%)	/

Table II.iii

Dogs							
	Source	Number of ailments	Only ailment and remedy given	Causes	Symptoms	Description	No symptom or description
T	PC	12	11 (92%)	/	1 (8%)	/	11 (92%)
	MG	35	15 (43%)	12 (34%)	12 (34%)	3 (9%)	21 (60%)
RC	IMEP XI, 108	1	1 (100%)	/	/	/	1 (100%)
	IMEP VIII, 1	1	1 (100%)	/	/	/	1 (100%)

Table II.iv

Livestock							
	Source	Number of ailments	Only ailment and remedy given	Causes	Symptoms	Description	No symptom or description
T	FBH	16	1 (6%)	4 (24%)	14 (88%)	5 (31%)	1 (6%)
RC	BodL MS Laud misc. 598	2 <sup>10</sup>	2 (100%)	/	/	/	2 (100%)
	BL MS Royal 17.A.VIII	1	1 (100%)	/	/	/	1 (100%)
	BL MS Sloane 686	3	3 (100%)	/	/	/	3 (100%)
	IMEP XI, 108	2	2 (100%)	/	/	/	2 (100%)

<sup>10</sup> Neither are named, both being a “medycyne”.

**Tables III.i-iv**  
**Ailments, with treatises they are named in**

Table III.i<sup>11</sup>

<b>Horses</b>		
Affreyed (F)	Founder (B, D2, H, I1, I5, S2, S4)	Restive (C, H, R3, S1, S2, S3)
Barbs (B, F, S3)	Fretsyd in guts (S3)	Retret (S3)
Blind (F)	Fy (B)	Ringbone/fourmys (B, C, D3, F, H, S2, S3)
Botches (B)	Fystylon on shoulder (A)	Risen flesh (B)
Botts (A, F, R1, R2, S1, S3),	Gafas (B)	Scab/royne (B, D3, Eg, F, M, S3)
Brest (C, R3)	Galls/galling (B, H, S1)	Scale (M)
Broken wind (F)	Glanders (B, F, R1, R3, S1, S3)	Selander (F)
Bruise (S1)	Gout artik (S2)	Shoulder, hurt (M)
Canker (S3)	Graveling (F, S3)	Sickness, sudden (S1)
Canker in lip (M)	Gygge (S3)	Sinews, cut or lacerated (M)
Canker on tongue (B)	Head, fat in (M)	Sore, falls (S1)
Canker in wethersound (S3)	Heel, stubbed in (A)	Sore back (A, H)
Cercylote (S2)	Heels, tender (B)	Sorews (B, C, F, H, R3, S2, S3)
Cetur (H)	Hide bound (A)	Spavin (B, F, S2, S3)
Chaudpiss (B, H, S3)	Hoof, loose (S3)	Splint (F, H, S3)
Cloying/acloyed (C, F, H, R3)	Hoof, soft (H)	Spurred on vein (M)
Colt's evil (F, S3)	Hoof, straight (S3)	Staggart (A)
Combe (H, S2)	Hoof, stubbed (A)	Starkness in legs (En)
Cordes (D3, F, S3)	Jedos (S2)	Staunch blood (B, H, M, S3)
Corns (M)	Kmory (S3)	Straightness of breast (B)
Costiveness (S3, S1)	Lame on knees or above (B)	Stifle, hurt (S3)
Cough (A, S1, S3)	Lame on shoulder (B)	Strangullion (B, C, F, H, R3, S2, S3)
Courtys (B)	Lameness of tendon (B)	String-halt (F)
Cratches (F)	Lampas (B, F, S3)	Stone, void (S2)
Curb (B, F, H, S3)	Lean (S2)	Stonying (S1)
Dead flesh (B, M, R3)	Lice (F)	Stonying in pastern (S3)
Defoulid in war (B)	Liver, wasting of (S3)	Stonying in shoulder (S3)
Enterfyre (F)	Losing weight (B)	Surrond (En)
Eschaufure (B)	Lowe (B)	Swelling (B, C, H, R3)
Eschawfing of the neck (B)	Malanders (B, C, D2, F, H, R1, R3, S2, S3)	
Evil, for all (I5, S2)	Malbesanes (H)	
Eyes, ailment of (B, I6, S1, S2)	Malflanc (S2)	
	Maliesanes (B)	

<sup>11</sup> A= BodL MS Ashmole 1444; B= BMH; C= BL MS Cotton Julius D.VIII; D1= BodL MS Digby 29, f.6v; D2= BodL MS Digby 29, f.298v; D3= BodL MS Digby 95; Eg= BL MS Egerton 1995; En= BodL MS English misc d.285; F= FBH; H= *HorseRemII*; I1= IMEP VIII, 10; I2= IMEP VIII, 41; I3= IMEP XI, 106; I4= IMEP XI, [9]; I5= IMEP XIX, [14-20]; I6= IMEP XIX, [28]; M= METH; R1= BL MS Royal A.VIII; R2= BL MS Royal 17.A.XXXII, f.120r; R3= BL MS Royal 17.A.XXXII, ff.128r-131v; S1= BL MS Sloane 686; S2= BL MS Sloane 3285; S3= ST; S4= *Studies on Alchemy*.

Eyes, blood in (M)	Malt de lang (H)	Swelling about eyes (M)
Eyes, dim (M)	Mange (A, B, C, Eg, H, M, R3)	Swelling of back (S2)
Eyes, gout over (B, S2)	Melit (S3)	Swelling of flank (M)
Eyes, grow feeble in sight (M)	Mendesanes (B)	Swelling of/gorge on leg (H, S3)
Eyes, haw in (B, F, S)	Meulis (B)	Swelling of neck (C, H, S2)
Eyes, hurt in (M)	Morfound (F)	Swelling of testicles (C, H, R3)
Eyes, pearl in (A, B, S1, S2, S3)	Mourning of the chine (C, F, H, S3)	Swelling of thighs (S2)
Eyes, pin in (M)	Mourning of the tongue (F)	Swollen or hurt shoulder (M)
Eyes, streen in (B)	Moros (B)	Sylaunder (S3)
Eyes, stroke in (S1, S2)	Myllettes (F)	Teynt/ateynt (B, F, S3)
Eyes, swelling in (M)	Myltes (H)	Tongue, wound of (B)
Eyes, watering (B, M)	Navel gall (A, F, S3)	Tortes (M, S2)
Eyes, web on (A, H, M, S1, S2)	Nightmare (S3)	Trenchelons (A, B, C, H, R3, S2, S3)
Eyes, wrote in (S3)	Over ridden (I1)	Ventayle (B)
Farcy (A, C, D3, F, H, I2, I3, I4, I5, M, R1, R2, R3, S1, S2, S3)	Paro of latoun (B)	Vinegrache (B)
Farcy, little (B)	Paynes (A, B, C, D1, D3, En, F, H, M, R1, R3, S2, S3)	Vives (A, B, F, H, S3)
Farcy, second (B)	Pissing blood (B, H)	Warts (F)
Felon (H, M)	Pissing, cannot (D3)	Windgalls/molettes (B, En, F, S1, S3)
Fester (C, H, R3)	Pursey (B, F, I5, S1, S3)	Womb, sickness in (S2)
Fike (M)	Quick crache (S2)	Worms (A, F, H, I5, R1, R2, R3, S1, S2)
Fire (B)	Radunculus (M)	Wounds, to heal (B, S2)
Forsaken horse (S3)	Rate (B)	Wrauth (H)
Forcens (B)	Rankelyng, falyon (R3)	Yellowse (A)
Foot, tender underneath (B)	Rauncle (B)	
	Refreidure (B)	

Table III.ii<sup>12</sup>

Birds of Prey		
Aggresteyne (P2)	Fat, to make (P1, P2)	Polione/pallion (J1, J2, J3, J4, P2)
Anguilles/aggeleons (D, H2, J1, J2, J3, J4, P1, P2, P3)	Feather, broken (K, P1)	Poose (P2)
Aposteme (P3)	Feather, broken in cave (P1)	Portpen (H2)
Artetik (P2)	Feet, afrayed (P3)	Pox (J1, J3, J4)
Bite of beast (P1)	Fever and heat (P1)	Puttithover (P2)
Botches (P1, P2)	Filanders (H1, H2, J1, J2, J3, J4, P1, P2)	Pyppe (H2)
Botches in foot (P1)	Flyth worm (H1)	Ramageness (H1)
Bone, broken (H2, P1)	Foot, soreness in (H1)	Refreynd (P2)
Botts (H1, H2)	Foot, tickled in (H1)	Reume (P2)
Bresour (H1, H2)	Foot, wounded or bruised (P3)	Reume called agrum (P2)
Bruised (D)	Frounce (D, H1, H2, J1, J2, J3, J4, M, P1, P2, P3)	Rye (D, H2, J1, J2, J3, J4, M, P1, P2, P3, T)
Canker (H2)	Frounce, like corn (H1)	Rye, thickened in head (P3)
Cast, cannot (H1, J2, P1)	Frounce, dry (P1, P2)	Scab (P1)
Casting flesh (P1, P2)	Frounce, like drifts of snow (H1)	Sickness (H1, P2)
Casting, held too long (D)	Frounce, raised (H1)	Sickness in entrails (P1, P2)
Casting worms at fundament (P2)	Frounce, waxed great as a nut (M, P1, P2)	Sickness, internal (P1, P2)
Claw, lost (P1)	Fysworm(H1)	Sickness of swelling (P2)
Cough (P1, P2)	Gorge, to keep (I)	Sickness, unknown (P1)
Cramp (D, J1, J2, J3, J4, P1)	Gout (H2, P1, P2, P3)	Skrills or cries (P1)
Cramp, cold (H1)	Gout in head and kidneys (P2)	Soars (P1, P2)
Cramp, hot (H1)	Gout in throat (P2)	Sorge/gorge worm (H1)
Cramp in thigh, foot, or legs (P1, P2)	Gout in wings (P1)	Stone (H2, P1, P2)
Cramp, in wings (P1, P2)	Head, great (H1)	Stone in fundament (P2)
Cray (D, H2, J1, J2, J3, J4, M, P1, P2, P3, T)	Head, stopped in (H1)	Stopping (H1)
Cray, dry (H1)	Lice (J3, J4, P1, P2, P3)	Stopping in bowel (H1)
Cray, wet (H1)	Lost courage (P1, P2)	Stopping in towel (H1)
Crop, pain in (P2)	Maggots (P1)	Strongelde (H1)
Cumbered in the bowels (P1, P2)	Mists and ill airs (H2)	Swelling (P1)
Dead flesh (P1)	Mites (J1, J3, J4, P1, P2, T)	Swelling of gut (H1)
Dehydration called tyme (H2)	Nares, grievance of (H1)	Tail, broken (P3)
Digest, cannot (H1, J2)	Panell, to break (H2)	Taynt (P2)
Dry (H2, P1, P2)	Panell, unclean (H1)	Teyne (P1, P2)
Dryness in legs and within (T)	Peer (D, J1, J2, J3, J4)	Tiring, too feeble to take (P3)
Eager, to make (H2)	Pies (J1, J2, J3, J4)	Unlusty/unbaste (P1, P2)
	Pin (J1, J2, J3, J4)	Vermin (D, H1, J2, P2)
		Vermin, overrun with (H1)
		Worms (J1, P3)
		Worms in stomach (P3)

<sup>12</sup> D= DT; H1= HawkRemI; H2= HawkRemII; I= IMEP VIII, 8; J1= J.B.I; J2= J.B.II; J3= J.B.III; J4= J.B.IV; K= Kerdeston; M= MKSG; P1= PEB; P2= PH; P3= PP; T= TBS.

Engleimed in stomach (K) Fallera (P2) Farcy (P3)	Podagra (D, P2) Poisoned (P1)	Wounds/wounded (H2, P1, P2, P3)
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Table III.iii<sup>13</sup>

Dogs		
Bite of a mad hound (M)	Languish due to illness (P)	Rabies (P)
Bones, broken (M)	Legs and feet, hurt from	Ragemuet (M)
Botches (M)	briars (M)	Rankles (P)
Canker (M)	Leprosy (P)	Scab (M)
Canker in the penis (M)	Madness of head (M)	Scrotum, evil in (M)
Chilled (M)	Madness, falling (M)	Scumber, may not (M)
Claws, not to lose (M)	Madness, flank (M)	Sickness in ears (M)
Exertion from hunt (P)	Madness, furious (M)	Sickness in throat (M)
Eyes, web in (M)	Madness, running (M)	Stifle joint inflamed (M)
Farcy (M)	Madness, sleeping (M)	Swift, to make (P)
Fat, to make (P)	Malemort in nostrils (M)	Thighs, withered (M)
Feet, bruised soles (M)	Mange (I2, P)	Thorns, to extract (P)
Feet, heated (M)	Mange, common (M)	Tumours (P)
Feet, joints out of place (M)	Mange, flying (M)	Wounds from fighting and biting (M)
Fistula (M)	Mange, quick (M)	Wounds, maggots/worms in (M, P)
Impetigo (P)	Piss, may not (M)	
	Poisoned (I1)	

Table III.iv<sup>14</sup>

Livestock		
Sheep	Blindness (F)	Pox (F)
	Blood (F)	Rot (F, S1)
	Kote (I)	Scab (F, R)
	Maggots (F)	Sick (I)
	May sickness (S1)	Turn (F)
	Murrain (S1, W)	Wood-evil (F)
		Worms in foot (F)
Cattle	Dewbolne (F)	Murrain (F)
	Disease of the lungs (W)	Risen upon (F)
	Farcy (S2)	Sickness, sudden (S2)
	Foul (F)	Turne (F)
	Gout (F)	Warrybrede (F)
	Liver rot (H)	Worms (S2)
	Lung-sought (F)	

<sup>13</sup> I1= IMEP VIII, 11; I2= IMEP XI, 108; M= MG; P= PC.

<sup>14</sup> F= FBH; H= Husbandry; I= IMEP XI, 108; R= BL MS Royal 17.A.VIII; S1= Seneschaucy; S2= BL MS Sloane 686; W= WH.



## Tables IV.i-iii

## Ailments suffered by animals, mentioned in non-veterinary sources

Table IV.i

Horses		
Ailment	Year	Source
Blind	1288	AASS, October I, 667
Blind (lost sight)	1291	AASS, October I, 676
Blind	xiv <sup>in</sup>	<i>Death and Memory</i> , 177
Blind	1337	CCR, 181
Blind ( <i>in morina...cecus</i> )	1357-58	CMR, 585.
Blind	1480	<i>Cely Letters</i> , 100
Cough	1480	<i>Cely Letters</i> , 73
Eye, sore	1479	<i>Cely Letters</i> , 51
Farcy	1380-81	DAR, III, 590
Farcy, and running sores in legs	1453	<i>Paston Letters</i> , I, 255.
Farcy	1483	HBNS, 400
Hurt leg	1535	<i>Lisle Letters</i> , II, 431
Hurt tongue	1288	AASS, October I, 668
Lame	1536	<i>Lisle Letters</i> , III, 312
Limping	1302	AASS, October I, 692
Limping	1479	<i>Cely Letters</i> , 44
Malady	1482	<i>Cely Letters</i> , 144
<i>Malum linguae</i>	1254	<i>Annales Monastici</i> , III, 194
Molte 3elonge	1360	HCR, 11
Murrain	1267-68	WMA, 8
Murrain (on seven manors and in the stables)	1269-70	ABBA, 62, 95, 106, 107, 123, 143, 149, 150, 155, 262
Murrain	1276-77	WMA, 19
Murrain	1280-81	WMA, 24
Murrain	1283-84	WMA, 39
Murrain	1285-86	WMA, 46
Murrain	1287-88	RWH 1286-89, 477
Murrain (on two manors)	1288-89	DAB, 130, 132
Murrain	1289-90	CMR, 191
Murrain	1289-90	WMA, 51
Murrain	1292-93	WMA, 64
Murrain	1296-97	WMA, 69
Murrain	1298-99	WMA, 77
Murrain	1299-1300	DAB, 185
Murrain	xiv <sup>in</sup>	<i>Death and Memory</i> , 187
Murrain	1302-03	WMA, 87
Murrain	1305-06	WMA, 96-97
Murrain	1306-07	DAB, 154

Murrain	1307-08	<i>DAB</i> , 167
Murrain	1307-08	WMA, 101
Murrain	1308-09	WMA, 105
Murrain	1310-11	WMA, 110
Murrain	1312-13	WMA, 115
Murrain	1314-15	WMA, 120
Murrain	1316-17	DCM MS GB-0033-DCD-Bill.acs
Murrain	1321-22	<i>BPC</i> , 496
Murrain	1322-23	WMA, 132-33
Murrain	1330-31	DCM MS GB-0033-DCD-Bill.acs
Murrain	1339-40	DCM MS GB-0033-DCD-Bill.acs
Murrain	1341	<i>DAR</i> , II, 312
Murrain	1344-45	<i>DAR</i> , II, 544
Murrain	1347	<i>HCR</i> , 10
Murrain	1347-48	<i>CMR</i> , 441
Murrain	1348	<i>HCR</i> , 10
Murrain	1349	<i>CMR</i> , 476
Murrain	1350-53	PRO E101/104/13
Murrain	1353-54	<i>CMR</i> , 540
Murrain	1354	<i>HCR</i> , 10
Murrain	1358	PRO E101/105/12
Murrain	1358-59	<i>CMR</i> , 601-02
Murrain	1364	<i>HCR</i> , 11
Murrain	1365	<i>HCR</i> , 11
Murrain	1387	<i>HCR</i> , 13
Murrain	1388-89	DCM MS GB-0033-DCD-Enr.lstk.acs
Murrain	1389-90	DCM MS GB-0033-DCD-Enr.lstk.acs
Murrain	1390-91	DCM MS GB-0033-DCD-Enr.lstk.acs
Murrain	1394-95	DCM MS GB-0033-DCD-Pitt.acs
Murrain	1398	<i>HCR</i> , 13
Murrain	1408	<i>HCR</i> , 14
Murrain	1409	<i>HCR</i> , 14
Murrain	1431-32	<i>HAME</i> , II, 547, 548
Murrain	1468	<i>CREC</i> , 164
Murrain	1483-84	DUL MS CCB B/81/11
Not eating	1300	AASS, October I, 690
Pursey	xiii <sup>ex</sup>	<i>Montfort Miracles</i> , 68
Raging with insanity	1294	AASS, October I, 682
Pierced by iron prong	xv <sup>ex</sup>	<i>Henry VI Miracles</i> , 194

Pierced in neck by arrow	1296	AASS, October I, 684
Pierced in stomach	1290	AASS, October I, 674
Sore impaired	1482	<i>Cely Letters</i> , 164
Spavin	1455-56	BWM, 87
Swollen head	c.1240	<i>Vita Wulfstani</i> , 153
Vives	1449-50	BWM, 34
Vives	1450-51	BWM, 37

Table IV.ii

Birds of Prey		
Ailment	Year	Source
Broken wing	1290	AASS, October I, 674
Broken wing	1294	AASS, October I, 681
Casting up food	xiii <sup>ex</sup>	<i>Montfort Miracles</i> , 71
Choking	1295	AASS, October I, 683
Cray and cramp	1479	<i>Cely Letters</i> , 63
Injured leg	1538	<i>Lisle Letters</i> , V, 252
So bruised as to be good as lame in both legs	1472	<i>Paston Letters</i> , III, 68
Swollen legs	xiii <sup>ex</sup>	<i>Montfort Miracles</i> , 98
Wounded head; eye hanging out	1289	AASS, October I, 669

Table IV.iii

Livestock			
	Ailment	Year	Source
Sheep	Itch ( <i>prurigo</i> )	1283	<i>Annales Monastici</i> , III, 306
	Murrain	1258-59	WMA, 3
	Murrain	1267-68	WMA, 8-9
	Murrain (in the <i>Bercaria</i> )	1269-70	ABBA, 168
	Murrain	1271-72	WMA, 15
	Murrain	1276-77	WMA, 19
	Murrain	1280-81	WMA, 25
	Murrain	1281-82	WMA, 30
	Murrain	1282-83	WMA, 34
	Murrain	1283-84	WMA, 40
	Murrain	1285	<i>CPR: Edward I</i> , II, 160
	Murrain	1285-86	WMA, 46
	Murrain (on ten manors)	1288-89	DAB, 127, 128, 131, 133, 134, 135, 136
	Murrain	1289-90	CMR, 192-93; 197
	Murrain	1289-90	WMA, 51
	Murrain	1290-91	CMR, 210
	Murrain	1290-91	WMA, 55
	Murrain	1291-92	CMR, 226
	Murrain	1291-92	WMA, 59-60
	Murrain	1292-93	WMA, 65
	Murrain	1293-94	CMR, 244-45
	Murrain	1294-95	CMR, 261, 266
	Murrain	1296-97	CMR, 277-78
	Murrain	1296-97	WMA, 69-70
	Murrain	1297-98	DAB, 176
	Murrain	1297-98	CMR, 295, 296
	Murrain	1297-98	WMA, 73
	Murrain	1298-99	CMR, 312
	Murrain	1298-99	WMA, 75, 78
	Murrain	1299-1300	WMA, 83
	Murrain	1302-03	WMA, 88
	Murrain	1304-05	WMA, 93
	Murrain	1305-06	WMA, 97
Murrain	1306-07	DAB, 154-55	
Murrain	1307-08	WMA, 102	
Murrain	1307-08	DAB, 167-68	
Murrain	1308-09	WMA, 106	
Murrain	1310-11	WMA, 111	
Murrain	1312-13	WMA, 116	
Murrain	1317-18	CMR, 329	

Sheep	Murrain	1318-19	CMR, 347
	Murrain	1322-23	WMA, 133
	Murrain	1327-28	CMR, 366
	Murrain	1328-29	CMR, 387
	Murrain	1329	ERS, I, 147-48
	Murrain	1329-30	CMR, 407
	Murrain	1338-39	DAR, II, 309 n.2
	Murrain	1341	DAR, II, 312
	Murrain	1344	DAR, I, 206
	Murrain	1346-47	CMR, 425
	Murrain	1347	HCR, 10
	Murrain	1347-48	CMR, 442, 443
	Murrain	1348	HCR, 10
	Murrain	1348-49	CMR, 458
	Murrain	1349	CMR, 477
	Murrain	1349-50	CMR, 491
	Murrain	1350-51	CMR, 507
	Murrain	1351-52	CMR, 519
	Murrain	1352	CMR, 527-28
	Murrain	1354	HCR, 10-11
	Murrain	1356-57	CMR, 569
	Murrain	1357	HCR, 11
	Murrain	1357-58	CMR, 586
	Murrain	1358	HCR, 11
	Murrain	1359	HCR, 11
	Murrain	1360	HCR, 11
	Murrain	1364	HCR, 11
	Murrain	1365	HCR, 11-12
	Murrain	1370	HCR, 12
	Murrain	1371	HCR, 12
	Murrain	1372	HCR, 12
	Murrain	1373	CREC, 17, 19
	Murrain	1375	CREC, 22, 24-5
	Murrain	1376	CREC, 30, 33
	Murrain	1378	HCR, 12
	Murrain	1380-81	DAR, II, 313
	Murrain	1381	CREC, 34
	Murrain	1382	CREC, 38-9, 41
	Murrain	1383	CREC, 42, 44-5
	Murrain (on eleven manors)	1383-84	DCM MS GB-0033-DCD-Enr.lstk.acs
Murrain	1384	HCR, 12-13	
Murrain	1387	HCR, 13	
Murrain	1390	CREC, 51	
Murrain	1391	CREC, 55	

Sheep	Murrain	1393-94	DCM MS GB-0033-DCD-Ket.acs
	Murrain	1398	<i>HCR</i> , 13
	Murrain	1398	<i>CREC</i> , 62
	Murrain (on five manors)	1399-1400	DCM MS GB-0033-DCD-Enr.lstk.acs [See also <i>DAR</i> , II, 315-16]
	Murrain	1406	<i>HCR</i> , 13-14
	Murrain	1406-08	DCM MS GB-0033-DCD-Ket.acs
	Murrain	1407	<i>HCR</i> , 14
	Murrain	1408	<i>HCR</i> , 14
	Murrain	1409	<i>HCR</i> , 14
	Murrain (on two manors)	1416-17	<i>DAR</i> , II, 317-18
	Murrain	1419	<i>HBA</i> , 130
	Murrain	1421-23	DCM MS GB-0033-DCD-Enr.lstk.acs
	Murrain	1447	<i>DAR</i> , II, 319
	Murrain	1457	<i>CREC</i> , 145
	Murrain (on two manors)	1467-68	<i>HAME</i> , II, 554
	Murrain	1479-80	DUL MS CCB B/81/9
	Murrain	1485-86	<i>HAME</i> , II 561.
	Murrain	1515-16	DUL MS CCB B/81/17
	Pestilence ( <i>pestis</i> )	1254	<i>Flores Historiarum</i> , II, 395
	Plague ( <i>lues</i> )	1274	<i>Chronica Albani</i> , III, 37
	Plague ( <i>lues</i> )	1274	<i>Chronica Albani</i> , II, 84
	Plague ( <i>lues</i> )	1349	Knighton, <i>Chronicon</i> , II, 61
	Pocks (on two manors)	1383-84	DCM MS GB-0033-DCD-Enr.lstk.acs
	Pocks	1415	BWA Eccl. 2. 159418, cited in Payne, 'Agrarian Conditions', 204, 204 n.79
	Pocks	1416-17	<i>DAR</i> , II, 317
	Pocks	1424-25	HMA, General Series S.C.6 1059/1-19, cited in Payne, 'Agrarian Conditions', 207
	Redeyll	1417	<i>DAR</i> , II, 318
	<i>Rubeus morbus</i>	1357	BWA Eccl. 2. 159368, cited in Payne, 'Agrarian Conditions', 203 n.78
	<i>Rubeus morbus</i>	1395	BWA Eccl. 2. 159402, cited in Payne, 'Agrarian Conditions', 203 n.78
	Scab	C13	<i>CBP</i> , 254
	Scab	1272	BWA Eccl. 2. 159301, cited in Payne, 'Agrarian Conditions', 201-02
	Scab ( <i>scabies</i> )	1275	<i>Chronica Albani</i> , II, 86
	Scab, called clausik	1277	<i>Annales Monastici</i> , II, 388-89

Sheep	Scab, called clousik	1277	<i>Annales Monastici</i> , IV, 473
	Scab ( <i>scabies</i> )	1283	<i>Annales Monastici</i> , III, 306
	Scab	1329	ERS, I, 148
Cattle	Lung-sought	c.1430-31	DUL MS CCB B/81/1
	Madness	1289-90	CMR, 182
	Murrain	1267-68	WMA, 4, 8-9
	Murrain (on nine manors)	1269-70	ABBA, 58, 62, 67, 96, 107, 118, 143, 150, 156
	Murrain	1271-72	WMA, 15
	Murrain	1275	BAA, 41
	Murrain	1280-81	WMA, 24-5
	Murrain	1282-83	WMA, 34
	Murrain	1283-84	WMA, 39
	Murrain	1285-86	WMA, 46
	Murrain	1287-88	RWH 1286-89, 477
	Murrain (on eight manors)	1288-89	DAB, 128, 129, 130, 132, 133, 134, 136
	Murrain	1289-90	WMA, 51
	Murrain	1290-91	WMA, 55
	Murrain	1291-92	CMR, 214, 225
	Murrain	1291-92	WMA, 59
	Murrain	1292-93	WMA, 64
	Murrain	1293-94	CMR, 243
	Murrain	1296-97	WMA, 69
	Murrain	1297-98	DAB, 176
	Murrain	1297-98	WMA, 73
	Murrain	1298-99	CMR, 311
	Murrain	1298-99	WMA, 78
	Murrain	1299-1300	DAB, 185
	Murrain	1299-1300	WMA, 83
	Murrain	1301-02	BPC, 126
	Murrain	1302-03	WMA, 85, 88
	Murrain	1303-04	BPC, 165
	Murrain	1304-05	BPC, 186
	Murrain	1304-05	WMA, 92
	Murrain	1305-06	WMA, 96
	Murrain	1306-07	DAB, 154
	Murrain	1307-08	DAB, 167
Murrain	1307-08	DAR, I, 2	
Murrain	1307-08	WMA, 101	
Murrain	1308-09	BPC, 249	
Murrain	1308-09	WMA, 106	
Murrain	1310-11	WMA, 110-11	
Murrain	1311-12	BPC, 325	

Cattle	Murrain	1312-13	BPC, 335
	Murrain	1312-13	WMA, 115
	Murrain	1314-15	BPC, 380
	Murrain	1314-15	WMA, 120
	Murrain	1316-17	DCM MS GB-0033-DCD-Bill.acs
	Murrain	1318-19	CMR, 336
	Murrain	1320-21	BPC, 479
	Murrain	1321-22	BPC, 496
	Murrain	1322-23	BPC, 512
	Murrain	1322-23	WMA, 133
	Murrain	1327-28	CMR, 353, 365
	Murrain	1328-29	CMR, 385
	Murrain	1330	ERS, I, 330
	Murrain	1333-34	DAR, I, 28
	Murrain	1337-38	DAR, I, 34
	Murrain	1338	DAR, I, 200
	Murrain	1344	DAR, I, 206
	Murrain	1344-45	DAR, II, 544
	Murrain	1346-47	CMR, 423
	Murrain	1347	HCR, 10
	Murrain	1348	HCR, 10
	Murrain	1349	CMR, 468
	Murrain	1349-50	CMR, 490
	Murrain	1350-51	CMR, 506
	Murrain	1351-52	CMR, 518, 519
	Murrain	1351-52	DAR, I, 207
	Murrain	1353-54	CMR, 541
	Murrain	1354	HCR, 10
	Murrain	1354-55	CMR, 555
	Murrain	1358-59	CMR, 602
	Murrain	1360	HCR, 11
	Murrain	1364	HCR, 11
	Murrain	1365	HCR, 12
	Murrain	1370	HCR, 12
	Murrain	1371	HCR, 12
	Murrain	1373	CREC, 19
	Murrain	1375	CREC, 25
	Murrain	1376	CREC, 30
	Murrain	1377-78	BPC, 556
	Murrain	1378	HCR, 12
Murrain	1382	CREC, 41	
Murrain	1383	CREC, 42, 44-5	
Murrain (on seven manors)	1383-84	DCM MS GB-0033-DCD-Enr.lstk.acs	
Murrain	1384-85	DAR, II, 390	

Cattle	Murrain	1387	<i>HCR</i> , 13
	Murrain	1391-92	<i>HCR</i> , 13
	Murrain	1396-97	<i>DAR</i> , I, 136
	Murrain	1398	<i>HCR</i> , 13
	Murrain (on eight manors)	1399-1400	DCM MS GB-0033-DCD-Enr.lstk.acs [See also <i>DAR</i> , II, 315-16]
	Murrain	1400	<i>DAR</i> , III, 603
	Murrain	1401-02	DCM MS GB-0033-DCD-Ket.acs
	Murrain	1403	DCM MS GB-0033-DCD-Mugl.acs
	Murrain	1404	<i>DAR</i> , II, 390
	Murrain	1407	<i>HCR</i> , 14
	Murrain	1408	<i>HCR</i> , 14
	Murrain	1409	<i>HCR</i> , 14
	Murrain	c.1430-31	DUL MS CCB B/81/1
	Murrain	1452	<i>MFA</i> , III, 127
	Murrain	1454	<i>MFA</i> , III, 134
	Murrain	1467-68	<i>HAME</i> , II, 554
	Murrain	1483-84	DUL MS CCB B/81/11
	Murrain	1515-16	DUL MS CCB B/81/17
	Not eating	xiii <sup>ex</sup>	<i>Montfort Miracles</i> , 88
	Pestilence ( <i>pestis</i> )	1319	<i>Chronicon Lanercost</i> , 240
	Pestilence ( <i>pestis</i> )	1319	<i>Chronica Albani</i> , III, 104-05
	Pocks	1455	<i>MFA</i> , III, 140
	Pocks	1456	<i>MFA</i> , III, 242
Pigs	Leprosy ( <i>in morina in lepra</i> )	1294-95	CMR, 261
	Murrain	1267-68	WMA, 8
	Murrain (on 3 manors, and in the piggery)	1269-70	ABBA, 62, 83, 96, 97, 183, 184
	Murrain	1271-72	WMA, 15
	Murrain	1276-77	WMA, 19
	Murrain	1281-82	WMA, 30
	Murrain	1283-84	WMA, 40
	Murrain	1285-86	WMA, 47
	Murrain	1288-89	CMR, 179
	Murrain	1288-89	CMR, 192
	Murrain	1289-90	WMA, 51
	Murrain	1290-92	CMR, 209
	Murrain	1291-92	CMR, 225, 226
	Murrain	1291-92	WMA, 60
	Murrain	1294-95	CMR, 261
Murrain	1296-97	WMA, 70	

Pigs	Murrain	1296-97	CMR, 295
	Murrain	1297-98	WMA, 74
	Murrain	1298-99	CMR, 311
	Murrain	1298-99	DAB, 180
	Murrain	1298-99	WMA, 78
	Murrain	1299-1300	WMA, 83
	Murrain	1302-03	WMA, 88
	Murrain	1304-05	WMA, 93
	Murrain	1305-06	WMA, 97
	Murrain	1307-08	DAR, I, 2
	Murrain	1307-08	WMA, 102
	Murrain	1308-09	WMA, 106
	Murrain	1310-11	WMA, 111
	Murrain	1312-13	WMA, 116
	Murrain	1314-15	WMA, 120
	Murrain	1316-17	DCM MS GB-0033-DCD-Bill.acs
	Murrain	1322-23	WMA, 133-34
	Murrain	1347	HCR, 10
	Murrain	1348	HCR, 10
	Murrain	1348	CREC, 6-7
	Murrain	1350	CREC, 12
	Murrain	1352	HCR, 10
	Murrain	1354	HCR, 10
	Murrain	1356	CREC, 15
	Murrain	1357	HCR, 11
	Murrain	1358	HCR, 11
	Murrain	1365	HCR, 11-12
	Murrain	1370	HCR, 12
	Murrain	1371	HCR, 12
	Murrain	1372	HCR, 12
	Murrain	1373	CREC, 17, 19
	Murrain	1375	CREC, 22, 24-5
	Murrain	1376	CREC, 30, 33
	Murrain	1378	HCR, 12
	Murrain	1381	CREC, 34
	Murrain	1382	CREC, 38-9, 41
	Murrain	1383	CREC, 42, 45
	Murrain	1387	HCR, 13
	Murrain	1390	CREC, 51
	Murrain	1391	CREC, 55
Murrain	1391-92	HCR, 13	
Murrain	1394-95	DCM MS GB-0033-DCD-Pitt.acs	
Murrain	1398	HCR, 13	
Murrain	1406	HCR, 13	
Murrain	1407	HCR, 14	

Pigs	Murrain	1408	<i>HCR</i> , 14
	Murrain	1409	<i>HCR</i> , 14
	Murrain	1411	<i>HCR</i> , 14
	Pocks	1306-07	<i>DAB</i> , 155
	Talun	1283-84	<i>WMA</i> , 40
Animals	Pestilence ( <i>pestis</i> )	1315	<i>Chronicles Edward</i> , I, 214
	Pestilence ( <i>pestilence</i> )	1319	<i>LRE</i> , 336
	Plague ( <i>lues</i> )	1318	<i>Flores Historiarum</i> , III, 186
	Plague ( <i>lues</i> )	1318 and 1319	Knighton, <i>Chronicon</i> , I, 412

Tables V.i-iv  
Number of surgical remedies in the treatises

Table V.i

Horses				
	Source	Total number of remedies	Remedies including surgery	Purely surgical remedies
T	<i>BMH</i>	76	38 (50%)	8 (11%)
	<i>ST</i>	49	23 (47%)	4 (8%)
	<i>METH</i>	97	32 (33%)	15 (15%)
RC	BodL MS Digby 29, f.298v	2	1 (50%)	/
	BL MS Royal 17.A.VIII	7	2 (29%)	/
	BodL MS Digby 95	8	2 (25%)	/
	BL MS Cotton Julius D.VIII	21	5 (24%)	/
	BL MS Sloane 686	13	3 (23%)	1 (8%)
	BL MS Sloane 3285	47	11 (23%)	1 (2%)
	BL MS Royal 17.A.XXXII, f.128r-131v	30	5 (17%)	/
	<i>HorsRemII</i>	65	9 (14%)	1 (2%)
	<i>IMEP XIX, [14-20]</i>	7	1 (14%)	/
	BodL MS Ashmole 1444	19	2 (11%)	/
	BodL MS Digby 29, f.6v	1	/	/
	BL MS Royal 17.A.XXXII, f.120r	2	/	/
	<i>IMEP VIII, 10</i>	1	/	/
	<i>IMEP VIII, 41</i>	2	/	/
	BodL MS English misc. d.285	3	/	/
	BL MS Egerton 1995	2	/	/
	<i>Studies on Alchemy</i>	1	/	/
	<i>IMEP XI, 106</i>	1	/	/
	<i>IMEP XIX, [9]</i>	1	/	/
<i>IMEP XIX, [28]</i>	1	/	/	

Table V.ii

Birds of Prey				
	Source	Total number of remedies	Remedies including surgery	Purely surgical remedies
T	MKSP	4	2 (50%)	/
	DT	18	3 (17%)	1 (6%)
	HawkRemI	42	5 (12%)	1 (2%)
	PP	19	2 (11%)	/
	PEB	59	6 (10%)	1 (2%)
	PH	70	6 (9%)	2 (3%)
RC	HawkRemII	39	5 (13%)	1 (3%)
	J.B.I	13	1 (8%)	/
	J.B.IV	15	1 (7%)	/
	J.B.II	19	/	/
	TBS	7	/	/
	Kerdeston	3	/	/
	IMEP VIII, 8	1	/	/

Table V.iii

Dogs				
	Source	Total number of remedies	Remedies including surgery	Purely surgical remedies
T	MG	37	9 (24%)	3 (8%)
	PC	17	1 (6%)	1 (6%)
RC	IMEP VIII, 11	1	/	/
	IMEP XI, 108	1	/	/

Table V.iv

Livestock				
	Source	Total number of remedies	Remedies including surgery	Purely surgical remedies
T	<i>FBH</i>	18	8 (50%)	4 (22%)
RC	BL MS Royal 17.A.VIII	1	1 (100%)	/
	BodL MS Laud misc. 598	2	1 (50%)	/
	<i>IMEP XI, 108</i>	2	/	/
	BL MS Sloane 686	1	/	/



RC	BodL MS Digby 29, f.6v	/	/	/	/	/	/	/	/	/	/
	BL MS Royal 17.A.XXXII, f.120r	/	/	/	/	/	/	/	/	/	/
	IMEP VIII, 10	/	/	/	/	/	/	/	/	/	/
	IMEP VIII, 41	/	/	/	/	/	/	/	/	/	/
	BodL MS English misc. d.285	/	/	/	/	/	/	/	/	/	/
	BL MS Egerton 1995	/	/	/	/	/	/	/	/	/	/
	<i>Studies on Alchemy</i>	/	/	/	/	/	/	/	/	/	/
	IMEP XI, 106	/	/	/	/	/	/	/	/	/	/
	IMEP XIX, [9]	/	/	/	/	/	/	/	/	/	/
	IMEP XIX, [28]	/	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>55</b>	<b>31</b>	<b>47</b>	<b>9</b>	<b>18</b>	<b>1</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>/</b>

Table VI.ii

		Birds of Prey									
	Source	Phlebotomy	Cautery	Cutting and garsing	Pricking and smiting	Paring and shaving	Cupping	Seton	Rowel	Stylot	Sewing
T	PEB	/	1	4	/	/	/	/	/	/	1
	PH	2	3	2	/	/	/	/	/	/	/
	DT	/	1	3	/	/	/	/	/	/	/
	HawkRemI	3	/	2	/	/	/	/	/	/	/
	PP	/	/	/	/	2	/	/	/	/	/
	MKSG	/	2	/	/	/	/	/	/	/	/
RC	HawkRemII	1	1	2	/	1	/	/	/	/	/
	J.B.I	/	/	/	/	1	/	/	/	/	/
	J.B.II	/	/	/	/	/	/	/	/	/	/
	J.B.IV	/	/	/	/	1	/	/	/	/	/
	TBS	/	/	/	/	/	/	/	/	/	/
	Kerdeston	/	/	/	/	/	/	/	/	/	/
	IMEP VIII, 8	/	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>6</b>	<b>8</b>	<b>13</b>	<b>/</b>	<b>5</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>1</b>

Table VI.iii

		Dogs									
	Source	Phlebotomy	Cautery	Cutting and garsing	Pricking and smiting	Paring and shaving	Cupping	Seton	Rowel	Stylot	Sewing
T	MG	1	1	6	/	/	1	1	/	/	/
	PC	/	1	/	/	/	/	/	/	/	/
RC	IMEP VIII, 11	/	/	/	/	/	/	/	/	/	/
	IMEP XI, 108	/	/	/	/	/	/	/	/	/	/
Total		1	2	6	/	/	1	1	/	/	/

Table VI.iv

Livestock											
	Source	Phlebotomy	Cautery	Cutting and garsing	Pricking and smiting	Paring and shaving	Cupping	Seton	Rowel	Stylot	Sewing
<b>T</b>	<i>FBH</i>	4	1	5	/	/	/	/	/	/	/
	BodL MS Laud misc. 598	1	/	/	/	/	/	/	/	/	/
	BL MS Royal 17.A.VIII	/	/	/	/	1	/	/	/	/	/
	BL MS Sloane 686	/	/	/	/	/	/	/	/	/	/
	<i>IMEP XI</i> , 108	/	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>/</b>	<b>1</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>



RC	IMEP VIII, 10	/	/	/	/	/	1	1	/	/	/	/	1	/	/	/	/	/	
	BL MS Egerton 1995	1	/	/	/	/	1	/	/	/	/	/	/	/	/	/	/	/	2
	BodL MS English misc. d.285	2	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	BodL MS Digby 29, f.6v	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	IMEP XI, 106	/	1	/	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/
	BL MS Royal 17.A.XXXII, f.120	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	2	/
	IMEP VIII, 41	/	/	/	/	2	/	/	/	/	/	/	/	/	/	/	/	/	/
	IMEP XIX, [9]	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	/
	IMEP XIX, [28]	/	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	<i>Studies on Alchemy</i>	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	/
	<b>Total</b>	<b>149</b>	<b>55</b>	<b>38</b>	<b>1</b>	<b>52</b>	<b>69</b>	<b>36</b>	<b>/</b>	<b>23</b>	<b>/</b>	<b>9</b>	<b>10</b>	<b>2</b>	<b>/</b>	<b>/</b>	<b>61</b>	<b>76</b>	

Table VII.ii

		Birds of Prey																
	Treatise	Plasters	Ointments	Powders	Fumigation	Washing	Drink	Food	Washing and anointing	Starving	Suppositories	Shoeing	Exercising	Rest	Tiring	Castings	Charms	Other
T	PEB	3	12	7	/	2	8	10	12	1	2	/	/	1	1	/	3	13
	PH	/	11	3	/	2	/	32	22	1	/	/	/	1	2	/	/	15
	DT	/	4	2	/	1	/	5	4	/	/	/	/	1	2	1	/	6
	HawkRemI	2	3	4	1	/	/	14	15	/	2	/	/	/	4	/	/	15
	PP	/	3	/	/	2	/	4	2	/	1	/	/	/	2	/	/	8
	MKSG	/	2	/	/	/	/	1	1	/	/	/	/	/	/	/	/	/
RC	HawkRemII	/	5	4	2	2	/	14	11	/	1	/	/	/	2	1	/	9
	J.B.I	/	1	2	1	2	/	2	3	/	/	/	/	/	/	1	/	3
	J.B.II	/	1	2	1	1	1	7	3	1	/	/	/	/	1	/	/	4
	J.B.IV	/	1	2	/	2	/	5	3	1	/	/	/	/	1	/	/	5
	Kerdeston	/	2	/	/	/	/	1	1	1	/	/	/	/	/	/	/	1
	TBS	/	/	/	/	/	/	2	3	/	/	/	/	/	1	/	/	1
	IMEP VIII, 8	/	/	/	/	/	/	/	1	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>5</b>	<b>45</b>	<b>26</b>	<b>5</b>	<b>14</b>	<b>9</b>	<b>97</b>	<b>81</b>	<b>5</b>	<b>6</b>	<b>/</b>	<b>/</b>	<b>3</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>82</b>

Table VII.iii

		Dogs																
	Treatise	Plasters	Ointments	Powders	Fumigation	Washing	Drink	Food	Washing and anointing	Starving	Suppositories	Shoeing	Exercising	Rest	Tiring	Castings	Charms	Other
T	MG	7	6	/	1	6	1	4	/	/	2	/	2	1	/	/	1	10
	PC	7	3	1	/	2	/	4	/	/	/	/	/	/	/	/	/	6
RC	IMEP VIII, 11	/	/	/	/	/	/	2	/	/	/	/	/	/	/	/	/	/
	IMEP XI, 108	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>14</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>/</b>	<b>/</b>	<b>2</b>	<b>/</b>	<b>2</b>	<b>1</b>	<b>/</b>	<b>/</b>	<b>1</b>	<b>16</b>

Table VII.iv

		Livestock																
	Treatise	Plasters	Ointments	Powders	Fumigation	Washing	Drink	Food	Washing and anointing	Starving	Suppositories	Shoeing	Exercising	Rest	Tiring	Castings	Charms	Other
<b>T</b>	<i>FBH</i>	1	3	/	/	2	/	1	/	/	/	/	/	/	/	/	/	10
<b>RC</b>	BodL MS Laud misc. 598	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/	/	/
	BL MS Royal 17.A.VIII	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	BL MS Sloane 686	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	/
	IMEP XI, 108	/	/	/	/	/	/	2	/	/	/	/	/	/	/	/	/	/
	<b>Total</b>	<b>1</b>	<b>4</b>	<b>/</b>	<b>/</b>	<b>2</b>	<b>/</b>	<b>6</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>1</b>	<b>10</b>

**Tables VIII.i-v**  
**Number of ingredients with weights and measures**

Table VIII.i

		Horses							
	Source	Exact <sup>15</sup>	Imprecise <sup>16</sup>	Rough <sup>17</sup>	Relative <sup>18</sup>	Analogy to something else	No weights or measures	Total	% of ingredients with weights and measures
<b>T</b>	<i>ST</i>	101	54	5	3	1	26	190	86%
	<i>BMH</i>	46	15	15	26	2	145	249	42%
	<i>METH</i>	27	4	14	25	/	220	290	24%
<b>RC</b>	<i>IMEP XI</i> , 106	9	/	/	/	/	/	9	100%
	BodL MS English misc. d.185	5	/	/	/	/	1	6	83%
	<i>IMEP VIII</i> , 10	/	/	3	/	/	1	4	75%
	BL MS Egerton 1995	6	/	/	/	/	5	11	55%
	BodL MS Ashmole 1444	22	2	7	2	2	33	68	51%
	BL MS Royal 17.A.VIII	5	/	6	/	/	17	28	39%
	BL MS Sloane 686	8	1	/	/	/	15	24	38%
	<i>IMEP XIX</i> , [14-20]	3	1	/	/	/	10	14	29%
	<i>HorseRemII</i>	28	2	4	2	/	116	152	24%
	BL MS Sloane 3285	8	1	1	8	1	97	116	16%
	BodL MS Digby 95	3	/	1	/	/	26	30	15%
	BL MS Cotton Julius D.VIII	5	/	3	/	/	56	64	13%
	BL MS Royal 17.A.XXXII, f.128r-131v	4	/	2	/	/	72	78	8%
	<i>IMEP VIII</i> , 41	/	/	/	/	/	5	5	/
	BodL MS Digby 29, f.6v	/	/	/	/	/	4	4	/
	BodL MS Digby 29, f.298v	/	/	/	/	/	3	3	/
	<i>IMEP XIX</i> , [28]	/	/	/	/	/	1	1	/
	BL MS Royal 17.A.XXXII, f.120r	/	/	/	/	/	/	/	/
<i>IMEP XIX</i> , [9]	/	/	/	/	/	/	/	/	
<i>Studies on Alchemy</i> , 130	/	/	/	/	/	/	/	/	

<sup>15</sup> Such as pounds and ounces, or a specified number of an item. Likewise for tables VIII.ii-v.

<sup>16</sup> Such as handfuls, spoonfuls. Likewise for tables VIII.ii-v.

<sup>17</sup> Such as measures, portions, a little, some. Likewise for tables VIII.ii-v.

<sup>18</sup> Such as 'as much as'. Likewise for tables VIII.ii-v.

Table VIII.ii

Birds of Prey									
	Source	Exact	Imprecise	Rough	Relative	Analogy to something else	No weights or measures	Total	% of ingredients with weights and measures
T	MKSG	2	/	/	2	/	8	12	33%
	PH	23	/	6	23	/	119	171	30%
	PEB	16	/	4	13	/	85	118	28%
	PP	5	/	/	/	/	19	24	21%
	HawkRemI	12	/	1	/	2	79	94	16%
	DT	1	/	4	2	/	70	77	9%
RC	IMEP VIII, 8	1	/	/	/	/	/	1	100%
	HawkRemII	38	/	/	11	/	47	96	51%
	J.B.VI	11	1	2	/	/	25	39	36%
	J.B.II	8	2	2	/	/	28	40	30%
	Kerdeston	/	/	1	/	/	3	4	25%
	J.B.I	3	2	/	/	/	21	26	19%
	TBS	1	/	/	/	/	10	11	9%

Table VIII.iii

Dogs									
	Source	Exact	Imprecise	Rough	Relative	Analogy to something else	No weights or measures	Total	% of ingredients with weights and measures
T	MG	10	4	4	11	/	67	96	30%
	PC	/	/	/	2	/	27	29	7%
RC	IMEP VIII, 11	1	1	1	/	1	/	4	100%
	IMEP XI, 108	/	/	/	/	/	2	2	/

Table VIII.iv

Livestock									
	Source	Exact	Imprecise	Rough	Relative	Analogy to something else	No weights or measures	Total	% of ingredients with weights and measures
T	FBH	4	1	/	/	1	11	17	35%
RC	IMEP XI, 108	1	1	2	/	/	/	4	100%
	BL MS Royal 17.A.VIII	/	/	/	/	/	4	4	/
	BodL MS Laud Misc. 598	3	2	/	/	/	6	11	45%
	BL MS Sloane 686	/	/	/	/	/	/	/	/

Table VIII.v

Overall Percentages						
Animal	Exact	Imprecise	Rough	Relative	Analogy	None
Horses	21	6	5	5	/ <sup>19</sup>	63
Birds of prey	17	1	3	7	/ <sup>19</sup>	72
Dogs	8	4	4	10	1	73
Livestock	22	11	6	0	3	58

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<sup>19</sup> Less than 1%.

Tables IX.i-xvii  
*Materia medica*, with number of occurrences

Vegetable

Table IX.i

Horses			
21 Garlic	4 Southernwood	2 Savage	1 'Honbolok'
18 Pepper	4 Tansey	2 Turmeric	1 Ivy
16 Bran	4 Wheat	2 Valerian	1 Laurel
16 Morel	3 Aniseed	2 Violet	1 Lily
14 Elder	3 Cloves	2 White ginger	1 Lorvey
11 Oats	3 Cumin	2 Wood	1 Lavender
11 Rue	3 Daisy	1 Aloes	1 Maidwort
11 Sage	3 Grain	1 Apple	1 Marigold
10 Bayes	3 Groundsel	1 Apple tree	1 Mast
10 Flax	3 Hay	1 'Bannot' leaves	1 Meld
10 Red nettle	3 Hurds	(banewort?)	1 Motherwort
9 Betony	3 Madder	1 Beet	1 Mouse ear
9 Hards	3 Matfellon	1 Black cumin	1 Mugwort
9 Mint	3 Nettle	1 Black hellebore	1 'Mylward'
9 Savine	3 Onions	1 Blackthorn	1 Orygon
8 Houseleek	3 Poppy	1 Briar	1 Peppermint
8 Red dock	3 Red fennel	1 'Buchyl' (birch?)	1 Pine tree
7 Ground elder	3 Ryemeal	1 Bugle	1 Primerole
6 Mullein	3 Tormentil	1 Bugloss	1 Primrose
6 Mustard	2 Avens	1 Bullace	1 Puffball
6 Plantain	2 Balm	1 Burdock	1 'Peble'
7 Wormwood	2 Bean-haulm	1 Calamint	1 Red cabbage
5 Ash	2 Broom	1 Colophony	1 Red popile
5 Beans	2 Cinnamon	1 Comfrey	1 Ribwort
5 Celandine	2 Crowfoot	1 Cudweed	1 Rose-hip berries
5 Elecampane	2 Galingale	1 Culrage	1 Saffron
5 Frankincense	2 Galls (from	1 Dandelion	1 'Salven' (savin?/ sage?)
5 Ginger	spicery)	1 'Doun'	
5 Ground ivy	2 Gillyflower	1 Dragonwort	1 Selfheal
5 Liquorice	2 Green turf	1 Earthbynde	1 'Sharuebud'
5 Radish	2 Hemp	1 English yany	(shawbubbe?)
5 Smallage	2 Horehound	1 Euphrasy	1 Siser
5 Vervain	2 Leek	1 Fennel	1 Sloe
5 Water cress	2 Lovage	1 Fiveleaf	1 Spearmint
4 Agrimony	2 Mastic	1 Foxglove	1 Spurge
4 Barley	2 Parsley	1 Freydele	1 Stancrop
4 Bark dust	2 Pimpernel	1 Grass	1 Straw
4 Cerfoil	2 Poppywort	1 Gromwell	1 Walnut
4 Fenugreek	2 'Pulante'	1 Haw tree	1 Wart leaf
4 Hemlock	2 Red mint	1 Haythorn	1 White hellebore

4 Long pepper	2 Red onion	1 Hazel	1 Wild teasel
4 Mallows	2 Rosin	1 Holly thistle	1 Wood-sear
4 Rhubarb	2 Sandragon	1 Holy mallow	1 Wood sorrel

Table IX.ii

Birds of Prey			
21 Parsley	3 Pennywort	1 Boke apples	1 Papaya
11 Daisy	3 Red nettles	1 Borage	1 'Paranye'
11 Pepper	3 Southernwood	1 Broom	1 Parsley-piert
10 Cinnamon	3 Spurge	1 Brown fennel	1 Peas
10 Ginger	2 Agrimony	1 Cardamon	1 Pimpernel
10 Polypody	2 Alexanders	1 Consound	1 Primrose
10 Saxifrage	2 Aloes	1 Cost	1 Puffball
9 Bruisewort	2 Aloes <i>citrinum</i>	1 Fenugreek	1 Red cabbage
9 Radish	2 Bayes	1 Fern	1 Red camomile
8 Rue	2 Catmint	1 Garlic	1 Red watercress
8 Saffron	2 Centaury	1 Lavender	1 Rosin
8 Stavesacre	2 Cerfoil	1 Lavender	1 Rhubarb
6 Celandine	2 Cloves	cotton	1 Rushes
6 Fennel	2 Comfrey	1 Leek	1 Savory
6 Mustard	2 Cress	1 Liquorice	1 'Sodokke' (sour
5 Frankincense	2 Crowfoot	1 Liverwort	dock?)
5 Plantain	2 Elder	1 Mace	1 Sawdust
5 Sandragon	2 'Folid'	1 Mary's seal	1 Tansy
4 Balm	2 Gillyflower	1 Mastic	1 Thyme
4 Red fennel	2 Ground ivy	1 Maidenwort	1 'Verne'
4 Rosemary	2 Hyssop	1 Milfoil	(varnish?/vervain?)
4 Sage	2 Pellitory	1 Moses yard	1 Vine
4 Wheat	2 Pennyroyal	1 Mouse-ear	1 White asphodel
3 Cleavers	2 Maryall	1 Mugwort	1 Wild sage
3 Dragonwort	2 Samphire	1 Mylitar	1 Wild thyme
3 Hazel	2 Shepherd's	1 Myrobalan	1 Wormseed
3 Horehound	purse	1 Nut	1 Wormwood
3 Houseleek	2 Succory	1 Oak	1 Yellow Flag
3 Nettles	1 Aloes <i>epatike</i>	1 Oak apples	

Table IX.iii

Dogs							
3	Garlic	1	Cabbage	1	Mastic	1	Pine seed
3	Nettles	1	Celandine	1	Mildew	1	Resin
3	Rue	1	Chickweed	1	Mint	1	Sage
2	Beets	1	Chives	1	Motherwort	1	Selfheal
2	Bran	1	Comfrey	1	'Newalle' corns	1	Spurge
2	Flax	1	Elder tree	1	Nuts	1	Storax
2	Leeks	1	Ginger	1	Onions	1	Tansy
2	Linseed	1	Groundsel	1	Parsley	1	Pellitory
2	Mallows	1	Iris	1	Peach tree	1	White
1	Agarite	1	Laurel	1	Pennyroyal		horehound
1	Broom	1	Marsh mallow	1	Pepper	1	White lilies

Table IX.iv

Livestock			
2	Broom	1	Garlic
1	Bedding	1	Herb of grace
1	Elecampane	1	Lungwort
1	Feitergrasse	1	Moldes

## Animal

Table IX.v

Horses			
57 Eggs	21 Milk	8 Horn	2 Glutte eel
23 whole	6 milk	5 hart	2 Herring
20 whites	5 cow	2 sheep	2 Lard
8 yolks	4 women	1 cattle	2 Snail
5 hard-boiled	3 goat	8 Pork/bacon	2 Spittle
1 shell	2 sweet	5 Mole	2 Suet
50 Grease	1 mare	4 Bones	2 Toad
20 swine	16 Urine	2 horse rib	1 Swallow
13 fresh	9 urine	1 horse hip	1 Bowels (cock)
8 grease/same	5 human	1 horse thigh	1 Dog (mastiff)
7 old	1 cow	3 Feet	1 Dove
1 hen	1 stale	2 hen	1 Head (dog)
1 hound	10 Seam	1 wren	1 Hair
40 Dung	8 seam	3 Oysters	1 Liver (goat)
16 hen/chicken	2 of lard	3 Smalgrece	1 Skin (horse)
8 dove	14 Tallow	2 Beef	1 Sinews (horse)
5 horse/own	13 sheep	1 beef	1 Spider web
4 cattle	1 tallow	1 broth	1 Sweat (horse)
1 dog	7 Gall	2 Blood (own)	1 Womb (swine)
1 dung	3 ox/bull	2 Earthworms	
1 goose	1 boar		
1 man	1 gall		
1 pig	1 hare		
1 swallow	1 hen		
1 swine			

Table IX.vi

Birds of Prey			
27 Milk	8 Pork	4 Hedgehog	1 Bat
11 women	8 Dung	4 Liver	1 Bollocks (buck)
5 milk	2 sheep	3 red cock	1 Bone (hen ribs)
4 goat	1 allow	1 liver	1 Cockles
4 mare	1 cock	4 Sparrow	1 Coral
3 cow	1 deer	3 hedge	1 Cream
20 Eggs	1 dove	1 sparrow	1 Duck
11 whites	1 goat	4 Wings	1 Claws (rabbit)
7 yolks	1 goose	2 duck	1 Earthworm
1 yolk, hard	7 Chicken/hen	1 pigeon	1 Fowl
1 whole	6 Lard	1 small bird	1 Frog
14 Grease	3 of bacon	3 Adder/snake	1 Lamb rennet
5 fresh	2 lard	3 Cat flesh	1 Mummy
3 grease	1 goat	3 Gut	1 Neck (hen)
2 capon	5 Beef	2 pigeon	1 Oyster shell
2 clarified	3 martinmass	1 hen	1 Ox
1 old	2 beef	3 Skin	1 Penis (buck)
1 swine	5 Culver	2 adder/snake	1 Plumage
9 Blood	4 Eel	1 hare	1 Seam
2 peacock	4 Flesh/meat	2 Chicken crops	1 Swine bristles
1 culver	4 Gall	2 Dove	1 Tail (pig)
1 hare	3 red cock	1 stock dove	1 Tiring
1 hedgehog	1 gall	1 dove	1 Tongue (hart)
1 hot	4 Heart	2 Feathers	1 Veins (sheep)
1 lamb	2 swine	2 Hair	
1 mouse	1 goose	1 hare	
1 raton	1 sheep	1 rabbit	
8 Marrow		2 Mouse	
4 goose wing		2 Peacock	
2 pork		2 Tallow	
1 heron		1 sheep	
1 marrow		1 tallow	

Table IX.vii

Dogs		
5 Milk	3 Eggs	1 Innards (swallow)
2 goat	1 buttered	1 Meat
1 camomile	1 white	1 Spittle
1 sour	1 whole	1 Swallow
1 warm	2 Lard, fresh	1 Tallow, sheep
4 Grease, of swine	1 Blood	
2 old	1 Cock	
1 grease		
1 hog		

Table IX.viii

Livestock	
4 Grease	3 Egg
1 capon	1 Suet (sheep)
1 goose	1 Urine, old
1 grease	
1 swine	

## Mineral

Table IX.ix

Horses			
37 Salt	12 Brimstone	2 Chalk	1 Nitre
28 Verdigris	12 Lime	2 Coal	1 Ornal
26 Water	12 Quicksilver	2 Lead	1 Pewter
13 water	8 Bay salt (sea salt)	2 Saltgemme (rock salt)	1 Pitch
3 sea/salt	6 Alum	2 Sulphur <i>vivum</i>	1 Quick sand
2 clean	6 Soot	2 Tartar	1 Rock alum
2 herbal	5 Tar	2 White lead	1 <i>Sal alkaly</i> (salt)
2 holy	4 Green coprose	1 Black Pitch	1 Salt stone called sandberry
2 standing	3 Alum glass	1 Black tartar	1 Stone pitch
1 running tap	3 Clay	1 Bolus	1 Sugar candy
1 well	3 Realgar	1 Calamine	1 Tutty
23 Arnement	3 Vitriol	1 Fastyng spodyll	1 White coprose
14 Unslaked lime			1 White tartar

Table IX.x

Birds of prey			
22 Water	7 Orpiment	2 Stone	1 Iron filings
11 water	6 Salt	1 Brimstone	1 'Letigres' (litharge?)
4 clean	6 Sugar candy	1 Black flint	1 Soot
3 herbal	3 Alum	1 Chalk	1 Soussé
3 running	2 Arnement	1 Cinders	1 Unslaked lime
1 well	2 Quicksilver	1 Fastyng spodyll	1 White sugar
7 Sugar	2 Spanish salt	1 Flint	

Table IX.xi

Dogs			
7 Water	3 Salt	1 Mercuric Sulphide	1 Quicklime
4 water	2 Verdigris	1 Mercury	1 Quicksilver
1 clean	1 Black pitch	1 Potter's clay	1 Soot
1 herbal			1 Soussé
1 running			

Table IX.xii

Livestock		
5 Tar	1 Bay salt	1 Salt
2 Water (running)	1 Green coprose	

*Preparata*

Table IX.xiii

Horses			
67 Honey	20 Flour	15 Eisel	3 Cheese
64 honey	11 wheat	13 eisel	3 Drasts
1 good	4 rye	2 strong	2 Incense
1 thick	3 flour	6 Wax	2 Leather
1 thin	1 fine	4 virgin	2 Malt
31 Vinegar	1 bean	2 wax	2 Nerval
19 vinegar	20 Ale	6 Lye	2 Vernage
6 red	10 ale	5 lye	2 Wool
3 white	6 good	1 strong	1 black
1 fine	3 stale	5 Shoes	1 rags
1 good	1 sour	4 soles	1 Ashes
1 vinegar	19 Butter	1 shoe	1 Baker's durst
25 Wine	11 butter	4 Broth	1 Diarlem
17 wine	7 May	2 bean	1 Felt
3 white	1 clarified	1 beef	1 Glass
3 red	18 Oil	1 lean	1 'Grene maute'
2 strong	10 olive	3 Bread	(sprouted malt?)
22 Soap	6 oil	1 new	1 Holy candle
11 black	1 bay	1 sour	1 Paste
7 soap	1 lamp	1 white	1 Pentemyron
2 Old			1 Penta olyf
2 White			1 Starch amadin

Table IX.xiv

Birds of Prey			
27 Honey	16 Vinegar	4 Wax	2 Deute
23 honey	14 vinegar	3 virgin	2 Incense
2 raw	2 strong	1 wax	2 Treacle
1 virgin	13 Oil	3 Bread	1 Antioch
1 wax of	6 olive	2 white	1 Ashes
26 Butter	4 bay	1 hot	1 Broth
10 May	2 of Spain	3 Salves	1 Candle
8 fresh	1 oil	2 salve	1 Eisel
5 butter	7 Wine	1 sheep	1 <i>Escompe sall</i>
2 cow	4 white	3 Soap (white)	1 Essence
1 new	2 clear	3 Sugar roche	1 Flour
	1 wine	2 Cloth	1 Slime
	4 Populeon		

Table IX.xv

Dogs			
7 Oil	3 Broth	3 Honey	1 Cheese
5 olive	3 Butter	3 Vinegar	1 Cloth
1 nut	2 butter	2 Bread	1 Salve
1 oil	1 May	1 bread	1 Soap
5 Wine		1 brown	1 Sops
		2 Incense	
		2 Wool	

Table IX.xvi

Livestock	
3 Oil	1 Ashes
2 Butter	1 Wine (Chambéry)

Totals<sup>20</sup>

Table IX.xvii:

	Horses	Birds of Prey	Dogs	Livestock	Totals
Vegetable	168	112	43	8	331
Animal	76	97	18	7	198
Mineral	49	25	14	5	93
<i>Preparata</i>	68	40	18	4	130
Total	361	274	93	24	752

<sup>20</sup> These totals include the subcategories listed in tables V.i-iv to VIII.i-iv.

**Tables X.i-iii**  
**Purchases of ingredients and medicines in households**

**Table X.i**

Horses				
Year	Items Purchased	Cost <sup>21</sup>	Ailment	Source
1286-87	Plasters ( <i>emplastra</i> ), powders ( <i>pulveres</i> ), and other medicines	/	/	RWH 1286-89, 55
1286-87	Oil, honey, and other plasters	27s 8d	/	RWH 1286-89, 59
1286-87	Making plasters to anoint horses and purchase of honey	4d	/	RWH 1286-89, 404
1287	Bread	4d	Sick	PRO E101/505/17
1287	Bread	8d	Sick	PRO E101/505/17
1287	Honey, white fat ( <i>alba pinguedo</i> ), spices, garlic, ointment ( <i>unctus</i> ) [including carriage]	20d	Sick	PRO E101/505/17
1287	Medicinal things ( <i>res medicinales</i> ) [with carriage]	3d	Sick	PRO E101/505/17
1287	Bread	1d	Sick	PRO E101/505/17
1287	Bread	1½d	Sick	PRO E101/505/17
1287	May butter	8d	Sick	PRO E101/505/17
1288-89	Unguent ( <i>unguentum</i> )	/	Sick	RWH 1286-89, 211
1288-89	Ointment and plasters.	/	/	RWH 1286-89, 218
1289	Fat ( <i>pinguedo</i> )	½d	/	MCR, 228
1290	Bread	3d	Sick	HRS, I, 94
1290	Plaster	5½d	/	CHEC, 107
1290-91	Olive oil and plaster	4s 9d	Sick	PRO E101/97/7
1292-93	Things ( <i>res</i> ) to cure two horses	/	Wounded	Expenses Brabant, 5

<sup>21</sup> Prices have been omitted when they include other costs of a non-veterinary nature. Likewise in tables X.ii-iii.

1294-96	Grease and salve ( <i>intractum</i> )	2d	Sick	PRO E101/505/25
1294-96	Ointment	1½d	Sick	PRO E101/505/25
1297	Fat	/	/	MCR, 260
1297-98	Oil, for anointing foals	3s 5d	/	BPC, 80
1297-98	White fat for anointing foals	9d	/	BPC, 80
1298-99	Unguent	2d	/	MCR, 180
1299 <sup>22</sup>	Drink ( <i>potio</i> )	8d	Sick	MCR, 183
1299	Draught ( <i>potus</i> ) and unguent	6d	Sick	MCR, 183
1299	White fat	4d	Sick	HAME, I, 166
1300-01	Eggs	1d	Sick	MCR, 193
1300-01	Vinegar ( <i>vinum acrum</i> )	½d	Sick	MCR, 193
c.1299	Soft ointment	/	Sick	DAR, II, 496
1300-01	Verdigris, honey, arnement	3s 1d	/	DAR, II, 502
1302-03	Ointment, arnement, pitch ( <i>pix</i> ), honey	7s 4½d	Sick	DAR, II, 504
1302-03	Honey, ointment, arnement [with wages of marshal]	7s 9¼d	/	DAR, II, 504
1306-07	Ointment, honey, arnement, verdigris, sulphur, copperas, wax, pitch [with services of marshal]	11s 1d	Sick	DAR, II, 505
1332	Medicines	/	/	<i>Expenses Eleanor</i> , 131
1332	Medicines	3s 4d	/	<i>Expenses Eleanor</i> , 132
1333-34	Gum and seam ( <i>sagimen</i> )	/	/	DAR, I, 116
1334-35	Sandragon, copperas, verdigris	9d	For the foot	DAR, II, 525
c.1335	Arnement and gum	2s 6d	/	DAR, II, 530
1335-36	Bread, vinegar ( <i>acetum</i> ), seam, olive oil, gum	7s....d	/	DAR, II, 527
1335-36	1 flask of wine	8d	/	DAR, II, 528
1336-37	Oil and ointment	3½d	/	HAME, I, 209

<sup>22</sup> In the same account olive oil, honey, a draught and olive oil, and fat were purchased, but it is not clear if these were intended for infirm horses.

1336-37	Ointment	/	/	HAME, I, 212
1336-37	Oil	2d	/	HAME, I, 216
1336-37	Oil and ointment	3d	/	HAME, I, 220
1341	Arnement and gum	11½d	/	DAR, II, 542
1344	Gum and arnement [with payment to marshal]	12d	Sick	DAR, I, 40
1356-57	Ointment and salve	9d	/	DAR, III, 719
c.1364-65	Gum, unguent, and other arnements ( <i>alia attramentis</i> )	2s 6d	Sick	DAR, II, 568
1378	Tallow ( <i>cebum</i> )	5d	/	HAME, I, 248
1378	Tallow	7d	/	HAME, I, 250
1378	Tallow	12½d	/	HAME, I, 251
1378	Tallow	3d	Feet of horses	HAME, I, 253
1378	Tallow	2½d	/	HAME, I, 254
1402-03	Medicines made by John Ferroure	12s	/	DAR, III, 604
1405	Fresh tallow	2d	Feet of horse	DHA, 115
1406-07	Medicines and 4 bushels of oats	/	Aged	HAME, I, 297
1406-07	Divers medicines	/	/	HAME, I, 345
1406-07	Medicines	/	/	HAME, I, 413
1406-07	Tallow	4d	/	HAME, I, 413
1406-07	½ flask of honey	4d	/	HAME, I, 413
1406-07	1lb elecampane	6d	/	HAME, I, 413
1406-07	1lb arnement and 1lb fenugreek	6d	/	HAME, I, 413
1406-07	Medicines	/	/	HAME, I, 426
1414-15	Medicines	18d	/	DAR, II, 301
1416-17	Unguent	2d	Feet of horse	DHA, 122
1416-17	Verdigris and white wine	½d; 1d	Sick	DHA, 122
1423-24	Medicines	/	/	DAR, I, 141

1431-32	Divers medicines this year [including expenses of Thomas Ferour]	4s 10d	/	HAME, II, 533
1432	Medicines	12d	/	BHB, 216
1450-51	Medicine [with payment to Nicholas Smythe for cure]	20d	/	BWM, 46
1459	Medicine	/	/	BWM, 135
1463-64	Ointment	8d	/	MHE, 236.
1463-64	Medicines	4d	/	MHE, 241
1465	Medicines	5d	/	MHE, 301
1466-67	Long pepper chives for drink	4d	/	LHA, 30
1466-67	Fenugreek, honey, and garlic for drink	4d	/	LHA, 30
1471-72	Medicines for the year [and marshalsea]	2s 6d	/	DAR, III, 643
1483	A medicine	12d	Farcy	HBNS, 400
1504-05	Medicines	12d	/	DAR, II, 306
1507-08	Medicines for horses	/	/	DAR, II, 307
1509-10	Medicines for the year [with marshalsea and blood-letting]	2s 7d	/	DAR, III, 661
1511-12	Medicines for the year [with marshalsea, blood-letting, and cautery ( <i>sering</i> )]	3s 4d	/	DAR, III, 662
1535-36	Medicines for horses	/	/	DAR, II, 419
1536-37	Medicines for the year [including payment to Jacob Robynson for marchalsi and his robe]	20s	/	DAR, III, 698

Table X.ii

Birds of Prey				
Year	Items Purchased	Cost	Ailment	Source
1285-86	Sandragon [including expenses of groom]	2s 3d	/	RWH 1285-86, 8
1285-86	Vinegar, white wine, sand ( <i>pulvis</i> )	6d	For feet	RWH 1285-86, 214
1288-89	Felt, vinegar, soap, and dandelion	/	/	RWH 1286-89, 336
1288-89	Orpiment and <i>draut</i>	12d	/	RWH 1286-89, 337

Table X.iii

Livestock					
	Year	Items purchased	Cost	Ailment	Source
Sheep	1280-81	Verdigris and unguent	/	/	WMA, 22
	1280-81	Tallow and ointment through the year	2s 6d	/	WMA, 22
	1281-82	Verdigris and ointment	13s 4½d	For treating sheep	WMA, 28
	1282-83	1lb verdigris, 2 gallons ointment	/	/	WMA, 32
	1285-86	6 gallons unguent	3s 3d	/	WMA, 42
	1285-86	Quicksilver ( <i>argentum vivum</i> )	12d	/	WMA, 42
	1285-86	Verdigris	25d	/	WMA, 42
	1291-92	Fat, verdigris, milk, oil, and tar ( <i>ter</i> ).	60s 8½d	/	BPC, 44
	1292-93	Ointment, quicksilver, verdigris, and ewe's milk ( <i>lacte agnorum</i> )	£6 8s 11d	/	BPC, 50
	1293-94	Ointment, quicksilver, verdigris and ewe's milk	70s 2½d	/	BPC, 50

Sheep	1294-95	Ointment, oil, quicksilver and verdigris	/	/	BPC, 55
	1294-95	Ointment	16d		CMR, 253
	1295-96	Ointment, oil, quicksilver, verdigris	/	/	BPC, 60
	1296-97	Ointment, ?verdigris ( <i>viridis colos</i> ), quicksilver	/	/	BPC, 69
	1296-97	4lb ointment	6d	/	CMR, 270
	1296-97	4lb copperas	4d	/	CMR, 270
	1296-97	Quicksilver	1 $\frac{3}{4}$ d		CMR, 270
	1296-97	Sulphur	$\frac{1}{2}$ d	/	CMR, 270
	1297-98	Oil, tallow, fat	46s 8d	/	BPC, 80
	1297-98	?Verdigris and quick-silver	8s 10d	/	BPC, 80
	1297-98	3lb ointment	4 $\frac{1}{2}$ d	/	CMR, 286
	1297-98	4lb copperas	4 $\frac{1}{4}$ d	/	CMR, 286
	1297-98	Quicksilver	$\frac{1}{2}$ d	/	CMR, 286
	1298-99	Oil, tallow, and fat	£4 10s 7 $\frac{1}{2}$ d	/	BPC, 92
	1298-99	Quicksilver and ?verdigris, purchased at York and Boston	/	/	BPC, 92
	1299-1300	Ointment	/	/	BPC, 105
	1299-1300	Bitumen ( <i>bitumen</i> ) and oil	22s 10d	/	BPC, 105
	1299-1300	10lb quick silver	7s 6d	/	BPC, 105
	1299-1300	20lb verdigris	10s 10d	/	BPC, 105
	1301-02	16lb verdigris from preceding year	11s 8d	/	BPC, 129
	1301-02	Tallow and fat	£8 7s	/	BPC, 129
	1301-02	Tallow	5s	/	BPC, 129
	1301-02	6lb verdigris	6s	/	BPC, 129

Sheep	1302-03	Ointment, tallow, oil, and bitumen	£4 2s 11d	/	BPC, 147
	1302-03	Quick silver and verdigris	20s	/	BPC, 147
	1302-03	Tallow from the Cellerar	7s 6d	/	BPC, 147
	1302-3	Quick silver, verdigris, oil, and bitumen at Boston	74s 4½d	/	BPC, 147
	1302-03	Bitumen	/	/	WMA, 85
	1303-04	Fat and tallow	£4 7s 11d	/	BPC, 166
	1304-05	23 stone tallow at divers prices	17s 9d	/	BPC, 181
	1304-05	2 barrels bitumen	18s	/	BPC, 181
	1305-06	20 stone ointment	18s 9d	/	BPC, 197
	1305-06	30 stone tallow	32s 7d	/	BPC, 197
	1305-06	Bitumen	8s	/	BPC, 197
	1306-07	22½ stone tallow, 16 stone ointment	36s 3d	/	BPC, 215
	1306-07	2 stone ointment	3s	/	DAB, 149
	1306-07	2½ gallons tar ( <i>tarra</i> )	1s 6d	/	DAB, 149
	1307-08	Unguent, tallow, and bitumen	48s 2d	/	BPC, 233
	1308-09	3 barrels and 13 gallons bitumen	14s 4d	/	BPC, 253
	1308-09	22 stone ointment, 26 stone tallow	65s 8d	/	BPC, 253
	1309-10	4lb tallow, 8½lb butter	15s 4d	/	BPC, 272
	1310-11	2 barrels bitumen	12s	/	BPC, 292
	1311-12	Ointment and fat	54s	/	BPC, 316
	1311-12	Bitumen	34s 7½d	/	BPC, 316
	1312-13	2 barrels bitumen	10s	/	BPC, 341
	1313-14	Bitumen	4s	/	BPC, 365
	1313-14	13lb ointment	26s	/	BPC, 365
1314-15	Bitumen and ointment	30s 10d	/	BPC, 385	

Sheep	1316-17	Bitumen	2s 4d	/	BPC, 425
	1317-18	20 gallons bitumen	6s 8d	/	BPC, 445
	1318-19	12 gallons bitumen purchased at York [with carriage]	9s 10d	/	BPC, 464
	1320-21	Bitumen	8s 5d	/	BPC, 484
	1320-21	11 stone 10lb unguent	16s 11½d	/	BPC, 484
	1320-21	Ointment purchased at Broadshaw	12d	/	BPC, 484
	1321-22	Ointment and bitumen	35s 6d	/	BPC, 499
	1321-22	Tallow, ointment, and bitumen	13s	/	BPC, 499
	1321-22	Ointment from Broadshaw	3s	/	BPC, 499
	1322-23	Bitumen purchased at York and elsewhere [with carriage]	29s 5½d	/	BPC, 516
	1322-23	29 stone unguent and tallow [with carriage]	5s 7d	/	BPC, 516
	1322-23	Tallow and butter from Bradshaw	/	/	BPC, 516
	1323-24	5 barrels bitumen	/	/	BPC, 531
	1323-24	16 ½ stone, tallow, butter, and unguent	29s	/	BPC, 531
	1324-25	3 barrels bitumen from York	17s	/	BPC, 545
	1324-25	13 stone tallow and 5 stone butter	19s 11d	/	BPC, 545
	1327-28	3 gallons tar	2s	/	CMR, 355
	1327-28	20lb fat	21d	/	CMR, 355
	1328-29	1½ gallons tar	9d	/	CMR, 375
	1328-29	5lb white fat	10d	/	CMR, 375
1338-39	Earth and white fat	53s 9d	/	DAR, II, 310	
1338-40	Bitumen and unguent	/	/	DAR, II, 378	

Sheep	1346-47	1 gallon bitumen	6d	/	CMR, 416
	1346-47	Ointment	3d	/	CMR, 416
	1347-48	1 gallon bitumen	4d	/	CMR, 433
	1347-48	Ointment	3d	/	CMR, 433
	1349	½ gallon bitumen	3d	/	CMR, 472
	1349	Ointment	2d	/	CMR, 472
	1349-50	4 gallons bitumen	2s 4d	/	CMR, 482
	1349-50	Ointment	12d	/	CMR, 482
	1357-58	1 gallon and ¼lb tar	10½d	/	CMR, 576
	1357-58	Ointment [to mix with above tar]	7d	/	CMR, 576
	1377	½ gallon bitumen	6d	/	DAR, I, 46
	1377-78	3 barrels bitumen	16s 6d	/	BPC, 564
	1377-78	Tallow	26s	/	BPC, 565
	1377-78	1 barrel bitumen	4s	/	BPC, 565
	1377-78	1lb “kysape”	/	/	DAR, III, 587
	1383-84	Bitumen and seam (at Westgate).	3½d; 14d	/	DCM MS GB-0033-DCD-Enr.lstk.acs
	1383-84	Seam (at Birkhouse)	6d	/	DCM MS GB-0033-DCD-Enr.lstk.acs
	1398-40	Seam (at Birkhouse)	14d	/	DCM MS GB-0033-DCD-Enr.lstk.acs
	1398-40	Seam (at Bearpark)	14d	/	DCM MS GB-0033-DCD-Enr.lstk.acs
	1398-40	Seam (at Hoghall)	4d	/	DCM MS GB-0033-DCD-Enr.lstk.acs
1407-08	Sheep ointment ( <i>unctura ovium</i> )	12d	/	BAA, 98	
1408-09	Bitumen	15s 6d	/	DAR, III, 607	

Sheep	1409-10	Ointment	13d	/	BAA, 102
	1412-13	Ointment made for sheep	20d	/	BAA, 106
	1415-16	Butter.	14d	/	Tillotson, <i>Marrick Priory</i> , 32
	c.1419	Tallow and floatage ( <i>flotagium</i> )	/	/	DAR, III, 616
	1438-39	Tallow and floatage	/	/	DAR, I, 71
	1459	Bitumen	8s 5d	After shearing	DUL MS CCB B/81/3
	1483-84	Floatage	/	/	DAR, II, 415
	c.1485-86	Ointment	/	/	HAME, II, 561
	1536-37	Tallow and dripping ( <i>feodum coquinae</i> )	/	/	DAR, III, 697
Cattle	1346-47	10 gallons ale	10d	Sick	CMR, 416
	1376-77	Lard ( <i>exungia</i> ).	1d	For necks	DAR, II, 386
	c.1485-86	Solid tallow ( <i>cepum rigidum</i> )	/	/	HAME, II, 561
	1512-13	Draught.	11d	Sick	BAA, 159
Animals	1322-23	Tallow and garlic. Ointment.	2d 1d	/	WMA, 125, 127
	1469-71	1 pottell tar	4d	/	<i>Stonor Letters and Papers</i> , 194
	c.1485-86	Liquid tallow ( <i>cepum liquefactum</i> )	7s 6d	/	HAME, II, 561

**Tables XI.i-iv**  
**Ingredients purchased, with number of occurrences<sup>23</sup>**

Table XI.i

Vegetable	
<b>Horses</b>	6 Gum
	2 Fenugreek
	2 Garlic
	1 Elecampana
	1 Oats
	1 Pepper
	1 Sandragon
1 Spices	
<b>Birds of Prey</b>	1 Dandelion
	1 Sandragon
<b>Livestock</b>	1 Garlic

Table XI.ii

Animal		
<b>Horses</b>	7 Fat 4 fat 3 white	
	7 Tallow 6 tallow 1 fresh	
	1 Eggs	
	1 Grease	
	<b>Livestock</b>	26 Tallow 24 tallow 1 liquid 1 solid
		19 Fat 12 fat 3 floatage 2 white 1 dripping 1 lard
3 Milk		

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<sup>23</sup> For the sources this information is taken from see tables X.i-iii.

Table XI.iii

<b>Mineral</b>	
<b>Horses</b>	9 Arnement 4 Verdigris 2 Copperas 2 Pitch 1 Sulphur
<b>Birds of Prey</b>	1 Orpiment 1 Sand ( <i>pulvis</i> )
<b>Livestock</b>	33 Bitumen 17 Verdigris 13 Quicksilver 5 Tar 2 Copperas 1 Earth 1 Sulphur

Table XI.iv

<b><i>Preparata</i></b>	
<b>Horses</b>	9 Honey 7 Oil 5 oil 2 olive 6 Bread 2 Wine 1 wine 1 white 1 Butter (May) 1 Powders 1 Vinegar 1 Wax
<b>Birds of Prey</b>	2 Vinegar 1 Felt 1 Soap 1 Wine (white)
<b>Livestock</b>	8 Oil 5 Butter 1 Ale 1 Soap (kysape)

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