

**The Transformation of a Medieval Sussex Vineyard into a Deer Park, a Case Study:  
The Arundel “Little Park” 1150-1400**

by  
Jacqueline Gergal

A thesis  
presented to the University of Waterloo  
in the fulfilment of the  
thesis requirement for the degree of  
Master of Arts  
in  
History

Waterloo, Ontario, Canada, 2021

©Jacqueline Gergal 2021

## AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## ABSTRACT

This thesis examines medieval deer parks in West Sussex from 1150-1400 with a thorough case study of Arundel's "Little Park". This paper sheds light on the common medieval English practice of imparking to understand its environmental implications, including shifts in landscape management and deforestation, and cultural ideals that shaped medieval hunting practices. As a part of south-east England, West Sussex in the Middle Ages possessed rich and fertile agricultural land, large areas of woodland, and a thriving human population. Located in a prosperous coastal region, the Arundel estate was important because of its proximity to the shores of the continent and its favorable climate.

"Little Park," a former vineyard turned deer park, allows for an investigation into medieval people's responses to changing climates, social attitudes around agricultural and forestry practices, and provides a unique perspective into the environmental history of medieval Sussex. With the onset of the Little Ice Age around 1300, grapes became difficult to cultivate in England, resulting in changes to landscape management practices. In England, between the mid-twelfth and fifteenth centuries, wealthy landowners embarked upon systematic enclosures of land through a series of imparkments. Due to a cooling and more unpredictable climate, the managers of the Arundel estate decided to convert Little Park into a deer park in 1301. A common trend in the fourteenth century, agricultural land was converted into deer parks and pastoral farmland at an increased rate in comparison to previous centuries since these types of land uses became more profitable and culturally more significant. This thesis approaches the Arundel Little Park from a vantage point of environmental change and transformation to explain the fluid nature of medieval landscapes and how these spaces were frequently modified to remain profitable when faced with variations in weather, climate, and socioeconomic wealth.

## ACKNOWLEDGEMENTS

I would like to thank everyone who supported me throughout this entire process.

First, I would like to thank Andrew Moore and Caley McCarthy for helping me narrow in on my topic and for teaching me about archives and specialized historical research. I am grateful for your help and advice throughout my entire academic journey, and I am especially thankful for your help during the early stages of my thesis.

Thank you to my parents and brother for pushing me and for always believing in me. Nothing worth attaining is ever easy but love and support make everything easier.

I would also like to thank the people working at the various archives I received primary documents from. Despite the COVID-19 pandemic, archivists from the National Archives and the West Sussex Records Office went to great lengths to assist me in document retrieval. Pandemic restrictions did not stop these archivists from sending documents overseas to contribute to my research and I know they are happy that I was able to take these records and tell these old and long-forgotten stories.

Lastly and most importantly, I would like to thank Steven Bednarski, the best mentor and scholar I could have hoped to have worked with. Thank you for taking me under your wing and teaching me so much about environmental history. I truly appreciate all the time you have taken to help and encourage me this past year. I hope that one day my writing will be half as good as yours.

## TABLE OF CONTENTS

AUTHOR’S DECLARATION .....	ii
ABSTRACT .....	iii
ACKNOWLEDGEMENTS .....	iv
LIST OF FIGURES .....	vii
INTRODUCTION .....	1
CHAPTER I.....	6
SOURCES AND METHODS .....	6
1.1 GENESIS OF THE RESEARCH: SURVEY OF THE EXISTING BODY OF WORK .....	6
1.1.1 Introduction to British Environmental History .....	6
1.1.2. Historiography of Park and Forest Studies .....	8
1.2. Parameters of the Research.....	17
1.2.1. Spatial Boundaries .....	17
1.2.2. Temporal Boundaries.....	17
1.2.3. Sources.....	18
CHAPTER II .....	19
The MEDIEVAL CLIMATE ANOMALY AND ITS IMPACT ON MEDIEVAL ENGLISH VINEYARDS .....	19
2.1. Introduction to The Medieval Climate Optimum: An English Perspective .....	19
2.2. Medieval English Vineyards.....	21
2.2.1. Agriculture in Medieval West Sussex.....	21
2.2.3 English Vineyards Before 1300 .....	27
2.3. The Little Ice Age and its Impact Upon Vineyards .....	30
2.3.1. Introduction to the Little Ice Age (LIA): England .....	30
2.3.2. The Impact of the Little Ice Age on Medieval English Vineyards 1300-1400.....	33
CHAPTER III .....	37
FORESTS, DEER, AND DEER PARKS IN MEDIEVAL ENGLAND .....	37
3.1. Introduction to English Forests and Deer Parks 1150-1400.....	37
3.1.2. Medieval Deer Park Maintenance and Forest Laws.....	42
3.2. Deer and Animals in Medieval England .....	47
3.2.1. Deer Species and Population Management 1200-1400.....	47

3.2.2. Human-Animal Relations .....	52
3.3. Little Parks in Medieval Europe 1150-1400 .....	55
CHAPTER IV .....	57
THE ARUNDEL “LITTLE “PARK” 1150-1400: CASE STUDY.....	57
4.1. Introduction.....	57
4.1.2. Medieval Parks on the Arundel Estate .....	59
4.2. Arundel “Little Park” 1158-1275.....	63
4.3. Transition from a Vineyard to a Garden and Pastureland 1158-1275 .....	65
4.4. Transition from a Garden and Pastureland to a Deer Park 1275-1301.....	66
4.5. Conclusions.....	68
CHAPTER VI.....	71
CONCLUSION .....	71
BIBLIOGRAPHY.....	75
APPENDIX A – MAPS OF THE ARUNDEL ESTATE AND LITTLE PARK.....	80

## LIST OF FIGURES

<b>Figure 1. Map of the Arundel Little Park, 1795.....</b>	<b>75</b>
<b>Figure 2. Map of the Arundel Estate 1875, Including Rewel and Great Park .....</b>	<b>76</b>
<b>Figure 3. 1877-1880 Map of the Arundel Little Park .....</b>	<b>77</b>
<b>Figure 4. Modern Little Park 2021 .....</b>	<b>78</b>
<b>Figure 5. Modern Little Park and Closeup of Park Pale.....</b>	<b>79</b>

# INTRODUCTION

Medieval deer parks are generally well known to historians of the era, yet there are many aspects of this type of landscape that scholars have neglected. In part, this is no doubt because the proper study of late medieval deer parks is interdisciplinary; it requires the expertise of historians and scientists from a range of backgrounds. What work has been done, though, tends to come from landscape historians and ecologists who have produced scholarly studies of historical forests, woodlands, and, in turn, deer parks, for about fifty years. For the past forty, cultural, economic, and more recently environmental historians, have also begun to provide more thorough examinations of deer parks. These works notwithstanding, in the past, many historians have failed to draw connections between fluid patterns of landscape transformation and the impact of climate, leaving a major aspect of this topic misrepresented in the historiography. Deer parks and landscape transformation and change have taken on more prominent in the most recent historical debates because of the fact that the topic helps us to understand how humans alter behaviours and adapt to their surroundings in response to changes in the natural environment.

Through an examination of Arundel's "Little Park," located in West Sussex, from 1150 – 1400, this thesis examines the common medieval English practice of imparking to understand its environmental implications, including shifts in landscape management and deforestation. The dominance of agriculture in the English economy also plays an important role in the study of medieval deer parks. The Medieval Climate Optimum, between about 800 and 1300 in Europe, allowed English people to cultivate grapes more easily in the southern regions of their island. Certainly, by 1158, the area known as Little Park on the Arundel estate was being utilized as a vineyard. By 1275, it was both a garden and a pasture. With the onset of the Little Ice Age



around 1300, viticulture became more difficult than in previous centuries. Interestingly, by the year 1301, Little Park's landscape was transformed into a deer park. The records reveal that those managing the Arundel estate thought a deer park a more profitable use of the land. This dramatic and constant transformation of Little Park leads to many questions. Why would a park be reorganized three times within 150 years? Nature and environment only played a partial role in this kind of landscape transformation. Although climate and weather patterns changed, social and cultural attitudes changed as well and we must be careful not to ascribe causation too easily or too quickly. A thorough examination of the environmental and social factors affecting the transformation of Little Park, therefore, provides clues for these landscape changes. In particular, I argue that the reasons for landscape transformation were complex, owing to at least three dominant factors, of which climate and environment were but one. In addition, I find that the FitzAlans, the vastly wealthy owners of the Arundel estate, were not limited by finances and altered their parks due to personal preferences influenced by social norms. In this way, the third dominant factor of these modifications was frequent changes in estate ownership as each owner sought to utilize the land in different ways.

Medieval deer parks played an important role in the lives of peasants, elites, and kings across Europe. Throughout the Middle Ages in England, deer parks acted not only as a place where wealthy men hunted wild beasts, but they also provided many basic resources for the general population, including, timber, underwood for fuel, pannage, pasture for farm animals, and of course venison for elite members of society. The pre-eminent ecologist Oliver Rackham explains that deer parks proliferated in the twelfth century and reached their heyday around 1300.<sup>1</sup> These woodlands, carefully managed, stocked, and re-stocked with deer, demonstrate how

---

<sup>1</sup> Oliver Rackham, *Trees and Woodland in the British Landscape*, (London, England: Dent), 1990; 152.

medieval landowners and commoners understood that resources were finite, and that environmental management was key to allowing these complex ecosystems to thrive and endure for future generations. Not only did medieval landowners manage deer populations in their parks, they also tended to other commodities important to the forest. These included timber, underwood, and plants essential to livestock. Elites, facing constant pressure from trends related to the commodification of land and the deepening control of natural resources, hired men to enforce laws with the goal of regulating deer parks and forests to prevent poaching and the illegal assarting of trees. Wealthy landowners and laymen faced many of the same challenges that modern people today face in relation to climate change and environmental degradation. They had exploited the ancient forests of England for hundreds of years and, by the late Middle Ages, people from all classes worked together to reserve and regenerate the woodland spaces.

Chapter one of this paper outlines the sources and methods utilized. The first part places the study of deer parks and landscape transformation within the field of environmental history, while providing an introduction to environmental history and the methods of historical investigation commonly used. This chapter emphasizes the importance of an interdisciplinary approach within the field of environmental history and park studies and provides a detailed historiography of park and forest studies in the British Isles.

The second chapter presents an overview of medieval English vineyards. It provides details about grape cultivation in medieval southern England and presents an analysis of vine-growing and winemaking in Europe. Wine was an immensely popular commodity in medieval Europe, and, as such, English consumers imported it aggressively from France. With the warming of the climate around 800-1300, English farmers were able to cultivate grapes in Sussex. They crafted wine on a small scale and sustained many of the needs of the local churches

and estates. English wine, however, remained a lower quality due to environmental factors, and was not sold on a mass scale, meaning that wine produced in the British Isles was primarily for domestic consumption. It is important to note that wine production in England did not cease entirely, but rather, that grape cultivation drastically decreased.<sup>2</sup> In the second chapter, I also explore the nature and features of medieval English vineyards to situate the Little Park vineyard within the context of its contemporary small-scale estate wineries.

Chapter three provides a detailed examination of deer parks in medieval Sussex. Focusing on imparkment and elite culture, this section of the paper provides context on the physical and social features of medieval English deer parks. The focus of this chapter is on the defining characteristics of deer parks and the examination of how park owners maintained their assets. Socioeconomic factors and waves of famine and disease in the fourteenth century, including the Black Death in 1348 – 9, altered the shape of these parks, but also led to the creation of new parks, the deletion of some, and the reorganization of others.<sup>3</sup> Chapter 3 connects this information to elite hunting culture while addressing changing attitudes towards land, animals, and the social causes behind these changes. The elite hunting culture of medieval England permeated many aspects of everyday life for religious leaders, secular rulers, laypeople, and commoners. Animals, in general, played a large role in the lives of everyday people who relied on them for survival. Christians in the Middle Ages saw themselves above animals and therefore saw hunting as a God-given right and a way to assert dominion over the animal kingdom. Hunting was both practical and performative. It allowed for elites to display their power. Deer were, therefore, extremely valuable to medieval elites who managed and maintained

---

<sup>2</sup> Morgan Kelly and Cormac Ó Gráda, "The Waning of the Little Ice Age: Climate Change in Early Modern Europe," *The Journal of Interdisciplinary History* 44, no. 3 (2014): 311.

<sup>3</sup> Leonard M. Cantor, *The Changing English Countryside, 1400-1700*, (London: Routledge & Kegan Paul), 1987; 14-15.

healthy herds. Their management included, for example, supplementing the animals' diets, building shelters, and consistently maintaining park barriers to prevent animal loss and to protect from predators. In order to discuss the Arundel Little Park, chapter three also provides an introduction to this type of landscape.

Ultimately, the fourth and final chapter presents a case study of the Arundel Little Park. This section of the paper examines the park from 1150 – 1400 to investigate the ways in which owners transformed the landscape from vineyard to deer park. The Arundel Estate, in fact, featured multiple deer parks, with the largest being the Great Park. Little Park, as its name implies, was a smaller park, but one that still played an important role in estate dynamics. To explore these dynamics, I tie in larger themes from the above analyses of medieval vineyards, deer parks, agricultural practices, elite hunting cultures, and deer population management. In so doing, the final chapter contextualizes the changes that occurred within the park leading up to the fifteenth century. This final chapter serves as a culmination of the above research to understand the motivation beyond local landscape changes.

# CHAPTER I

## SOURCES AND METHODS

### 1.1 GENESIS OF THE RESEARCH: SURVEY OF THE EXISTING BODY OF WORK

#### 1.1.1 Introduction to British Environmental History

Landscape and forest histories existed before the formal elaboration of the field of environmental history. The methods and approaches of these earlier pioneers left their mark on later historians, primarily by offering up the interdisciplinary approach necessary to researching nature and human history in tandem. This paper, thus, examines sources from a variety of fields including, geography, zooarchaeology, ecology, social and cultural history, environmental history, and landscape history. All of these fields culminate together to produce histories that are relevant to modern discussions around the environment and climate change. However, there has been to date virtually no research into a medieval English vineyard that was transformed into a deer park. This type of research clearly suggests connections between climate change and human landscape management techniques to understand the motivations behind these short-term shifts.

Environmental history presents itself as a unique branch of history to study. The general influence of environmental concerns in modern society arose in the 1950s, explains Lloyd Kramer and Sarah Maza, leading to the development of the subfield of environmental history really only in the 1970s.<sup>4</sup> T. C. Smout, in *Exploring Environmental History*, states that environmental history has a great deal of overlap with other subjects but brought an energy of its own and a purpose.<sup>5</sup> He continues, stating that, “Good environmental history is certainly relevant, simply because environmental change by definition is something that happens

---

<sup>4</sup> Lloyd Kramer and Sarah Maza, *Historical Thought in Medieval Europe*, (Malden, MA; Blackwell Publishers), 2002; 403.

<sup>5</sup> Smout, T. C. *Exploring Environmental History: Selected Essays*, (Edinburgh: Edinburgh University Press), 2009; 2.

historically, over time, and to ignore a time dimension is to deprive its study of any context”.<sup>6</sup>

Richard Hoffmann, a prominent European medieval environmental historian, states that:

“Environmental history brings the natural world into the story as an agent and object of history”.<sup>7</sup>

Removing environmental history from past, present, and future historical discussions deprives history of major considerations. In the past, historians considered the environment and nature as scenery, merely a stage for cultural causation.<sup>8</sup> Environmental history aims to study the past to better understand how humans have been impacted by nature, and in turn, how humans have altered the environment around them. Environmental history places man in the context of his environment, not as a master with dominion over nature but as part of nature and subject to its laws.<sup>9</sup> This point is important to understanding the interaction between medieval people and their environment.

Medieval people of all classes were extremely vulnerable to environmental change. Bad harvests, diseases, and changing weather patterns severely impacted the lives of people across continents during the Middle Ages. Add all three phenomena together and mass devastation occurred. England was no exception. The Great Famine (1315 – 1322) and the Black Death in England (1348 – 1349) changed many aspects of medieval society and resulted in the death of millions of people. It is important to keep in mind that these two major events occurred within the scope of this paper. It is also unreasonable to assume that the sheer impact of these historical events transpired solely as a result of environmental change. Therefore, studying environmental

---

<sup>6</sup> Smout, 5.

<sup>7</sup> Richard Hoffmann, *An Environmental History of Medieval Europe*, (Cambridge, England: Cambridge University Press), 2014; 3.

<sup>8</sup> Hoffmann, *An Environmental History of Medieval Europe*, 3.

<sup>9</sup> Smout, 2.

history and social history side-by-side allow for a more in-depth investigation into both large and small-scale historical events.

In Britain, there was a long tradition of scholars considering the natural world. In the Renaissance, this emerged as a focus on natural history.<sup>10</sup> Even earlier, in the Middle Ages, scholars had attempted studies into the natural sciences with particular emphasis, for example, on bestiaries, a genre of writing that presented animal species and behaviour.<sup>11</sup> Studies of the natural world existed throughout the medieval period, however, medieval authors depicted Christian ideals that God placed creatures on earth to be tended, hunted, and exploited by humans. Animals permeated every aspect of life for medieval people and humans lived closely alongside animals throughout history. Due to the nature of the British landscape, historians tend to focus mostly on landscape history and agrarian history since Britain has been constantly inhabited by humans for well over 12,000 years, making the British environment a constructed and carefully managed agrarian ecosystem. Humans have been altering the landscape in the British Isles for tens of thousands of years making its environmental history rich but also subjected to many social and cultural factors that resulted in ancient changes. This means that any genuinely “natural” British landscape is virtually non-existent and that many of the characteristics of today’s ecosystem were altered or created by generations of earlier humans.

### 1.1.2. Historiography of Park and Forest Studies

Park and Forest studies began in the 1970s and 1980s and differ from broad environmental history traditions. Some of the most well-known authors of the British landscape, such as Leonard M. Cantor and Oliver Rackham, wrote their immensely popular works during

---

<sup>10</sup> Smout, 2.

<sup>11</sup> Smout, 2.

these two decades, as landscape history became more widespread. Forests and woodlands in the Middle Ages played a large role in the economy and everyday lives of people, making these types of landscape histories relevant to many historians. Authors have written and published numerous histories of Forests, parks, and the British landscape in the past fifty years. In the 1970s, authors like Peter Brandon and Leonard Cantor published works on landscape and park history. Peter Brandon in 1974 published *The Sussex Landscape* to present an historical evolution of the landscape. He wrote about ancient British people and their mark on the landscape, and also moved chronologically to incorporate information about Roman Britain, the Middle Ages, the early modern period, and the present. Brandon states that: “The Sussex landscape was most actively in the making in the twelfth and thirteenth centuries”.<sup>12</sup> This is because, as Leonard Cantor explains, “From the time of the Conquest until the beginning of the fourteenth century...England generally experienced economic expansion and prosperity,” and, “By the time the Normans arrived in England in 1066, the major characteristics of the English landscape had already been determined by their Anglo-Saxon and Scandinavian predecessors.”<sup>13</sup> With this point in mind, deer parks also became more popular throughout the twelfth and thirteenth centuries. A period of immense urban expansion and population increase occurred leading up to the year 1200 and placed additional pressure on local ecosystems to provide adequate food supplies and other essential resources.

To combat pressures on woodlands, landowners enclosed their private forests and deer parks. Medieval English parks, thus, had specific boundaries and were securely restricted from the inside and out to prevent animals from escaping and from farm animals entering. Forests

---

<sup>12</sup> Peter Brandon, *The Sussex Landscape*, (London: Hodder and Stoughton), 1974; 94.

<sup>13</sup> Leonard M. Cantor, *The English Medieval Landscape*, (London: Croom Helm), 1982; pp. 18.



were private lands, as Cantor explains, and were not necessarily wooded.<sup>14</sup> In forests, hunting rights belonged exclusively to the crown and these large tracts of land were subject to extensive forest laws.<sup>15</sup> There are many historical studies that focus solely on forest laws and hunting rights in medieval England, a common social history topic.<sup>16</sup>

Rackham asserts that: “By 1250 the various uses of woods were more sharply defined, and conservation was taken for granted”.<sup>17</sup> It is also possible, however, that, along with the Conquest, other pressures resulted in the privatization of woodlands. These included an increased population and agricultural pressure. The result was the creation of additional parks to contain and preserve prized animal populations. Della Hooke, in her 1989 article about pre-conquest woodland in England, states that, in the seventh and eight centuries, “the Laws of Ine instituted penalties for the destruction of timber trees” in Anglo-Saxon England.<sup>18</sup> Hooke also explains that hunting rights and exclusions existed before 1086. Robert Liddiard shares similar views with Hooke in his article, “The Deer Parks of Domesday Book,” in which he challenges the assumption that it was the Normans who introduced deer parks were introduced into England. Liddiard states that native deer enclosures, known as *haga*, existed in England before the conquest and also preserved timber, provided grazing areas for livestock, and featured tracts of arable farmland.<sup>19</sup> These hunting rights were mentioned in charters, as evident in tenth-century writings.<sup>20</sup> With this distinction clear, the concept of royal hunting preserves and limitations

---

<sup>14</sup> Leonard. M. Cantor and J. Hatherly. “The Medieval Parks of England.” *Geography* 64, no. 2 (1979): 71.

<sup>15</sup> Leonard. M. Cantor and J. Hatherly. “The Medieval Parks of England,” 71.

<sup>16</sup> For examples, see Judith Green “Forest Laws in England and Normandy in the Twelfth Century”, 2013, Jean Birrell, “Peasant Deer Poachers in the Medieval Forest.” In *Progress and Problems in Medieval England*, edited by Richard Britnell and John Hatcher, 1996, and Della Hooke, “Royal Forests – Hunting and Other Forest Use in Medieval England,” in *New Perspectives on People and Forests*, 2011.

<sup>17</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 135.

<sup>18</sup> Della Hooke, “Pre-Conquest Woodland: Its Distribution and Usage,” *Agricultural History Review* 37 (1989): 117.

<sup>19</sup> Robert Liddiard, “The Deer Parks of Domesday Book,” *Landscapes* 4, no. 1 (2003): 4–5.

<sup>20</sup> Della Hooke, “Pre-Conquest Woodland: Its Distribution and Usage,” 122.

upon the taking of wild beasts became more widespread in England after 1086, although hunting was undoubtedly a notable pastime of the Anglo-Saxon nobility.<sup>21</sup>

L. M. Cantor and J. Hatherly in 1979 published their article, “The Medieval Parks of England,” in which they clearly identify many aspects of parks, including their characteristics, their number in medieval England, and their various animal species. This article closely resembles a landscape history, as it presents deer parks as a particular topic of historical investigation. Oliver Rackham, an ecologist of the British landscape, studied the development and management of woodlands in England. In the 1980s he published two books relating to woodland history, *Ancient Woodland: Its History, Vegetation and Uses in England* and *The History of the Countryside*. Rackham’s approach to woodland history was innovative and shared many characteristics with environmental history through the utilization of a variety of scientific methods to arrive at his conclusions. Rackham’s books are still widely cited in current historiographical debates around parks, forests, and historical woodland cover.

Historians of the 1970s and 80s built upon early twentieth century works and medieval archival materials to write their histories. The Annales tradition revived medieval and early modern history, but from a social perspective. Studying historical structures over the so-called *longue durée*, historians began to include geography into historiographical trends while studying politics and war. In the 1920s, some works about the English forest were published, including “The Extent of the English Forest in the Thirteenth Century” by Margaret Ley Bazeley. Bazeley sought to define a “Forest” much like Cantor and Rackham, and describes a forest as “either the whole area in which the king’s game is protected by a special law, or a separate administrative

---

<sup>21</sup> Della Hooke, “Pre-Conquest Woodland: Its Distribution and Usage,” 125.

district within it”.<sup>22</sup> Scientific techniques like dendrochronology also emerged in the 1920s. However, in the 70s and 80s, historians acquired the tools and scientific knowledge to better physically investigate the environment, leading to an explosion of interdisciplinary park and environmental history studies.

Moving into the 1990s, historians refined case studies and other investigations of parks and forests. For example, individual studies of deer parks, like K. P. Witney’s 1990 article, “The Woodland Economy of Kent, 1066 – 1348,” and M. A. Atkin’s 1994 article, “Land Use and Management in the Upland Demesne of the De Lacy Estate of Blackburnshire c.1300,” sharpened the focus. Historians, accompanied by historical studies of animals, likewise aimed to shed light on hunting practices and definitions of what it means to be an ‘animal’. Both Esther Cohen and Joyce Salisbury published works in 1993 and 1994 that addressed cultural connotations around animals in the Middle Ages. Such studies attempted to explain why humans thought themselves superior to other animals. These cultural investigations, strengthened by historical zooarchaeological studies in the next decade, complimented studies in environmental history by contributing to an understanding of historical animal exploitation.

The 1990s saw the explosion of investigations into niche historical topics around deer parks and forests which continued into the 2000s. Landscape histories remained prominent throughout these decades with Robert Liddiard’s article “The Deer Parks of Domesday Book”, and L. W. Wright’s “Woodland Continuity and Change: Ancient Woodland in Eastern Hertfordshire” both published in 2003. These landscape histories recognized that Europe’s physical structures were largely medieval and sought to give more credit to medieval people and

---

<sup>22</sup> Margaret Ley Bazeley, “The Extent of the English Forest in the Thirteenth Century,” *Transactions of the Royal Historical Society* 4 (1921): 140.

their ability to alter nature and the environment around them.<sup>23</sup> Important to this paper, studies around medieval gardens also emerged within the historiography of British deer parks and landscape studies. In 2003, Sylvia Landsberg published her book, *The Medieval Garden*, to connect gardens within broader contexts of agriculture and medieval landscape management practices. Landscape histories remained popular throughout the 1990s and early 2000s, especially from a Eurocentric perspective.

Jean Birrell, a medieval historian who has written numerous pieces on common land management and deer in England, argues that medieval historians tend to see deer parks as ‘obvious luxuries: a manifestation of conspicuous consumption’ and ‘an unprofitable use of land’.<sup>24</sup> In her 1992 article entitled “Deer and Deer Farming in Medieval England,” she argues that deer parks are complex ranges of landscape and therefore have not been fully studied by historians, and that when historians dismiss parks as status symbols, they neglect a wide range of skills developed and practiced by medieval deer farmers.<sup>25</sup> Naomi Sykes, a zooarchaeologist, asserts that from the late ninth to mid-eleventh centuries, widespread changes in social, economic, and landscape organization prompted the establishment of these vast hunting preserves.<sup>26</sup> Due to the nature of the British landscape, many modern historians tend to focus mostly on landscape history and agrarian history. More recently historians are beginning to adopt a stronger interdisciplinary approach to forest history through the use of environmental history methods.

---

<sup>23</sup> John Howe and Michael Wolfe, *Inventing Medieval Landscapes: Senses of Place in Western Europe*, (Gainesville: University Press of Florida), 2002; 3.

<sup>24</sup> Jean Birrell, "Deer and Deer Farming in Medieval England," *The Agricultural History Review* 40, no. 2 (1992): pp. 112.

<sup>25</sup> Birrell, "Deer and Deer Farming in Medieval England," 126.

<sup>26</sup> Naomi Sykes, “The Impact of the Normans on Hunting Practices in England,” in *New Food in Medieval England: Diet and Nutrition*, Oxford University Press, 2006, pp. 165.

Cultural investigations into European hunting practices emerged in the early 2000s. William Perry Marvin's book, *Hunting Law and Ritual in Medieval English Literature*, was published in 2006 along with Richard Almond's *Medieval Hunting*, and many more.<sup>27</sup> These cultural histories provided an understanding of the motivations behind the elite hunting culture of medieval Europe. This includes why medieval people hunted certain animals and how they saw themselves in relation to God based on their outlook on animals. These cultural investigations into hunting practices were accompanied by further works on medieval deer parks. In 2007, Robert Liddiard published the book, *The Medieval Park: New Perspectives*, which brought together articles of influential authors of the next decade, including Stephen Miles and Aleksander Pluskowski. Responsible for writing one of the most influential books on medieval deer parks in England was Miles in 2009, where he completed a large in-depth survey of parks in the Middle Ages. He asserts in his introduction that: "Over the last fifty years a great deal of research has been devoted to these landscape features, and interest in them appears to be growing rather than diminishing."<sup>28</sup> He continues on to say that: "Recent work has adopted a variety of methodological approaches, used a wide range of historical, archaeological, and landscape evidence and started to engage in more wide-ranging and theoretical analysis."<sup>29</sup> Ellen Arnold states that medieval forest history has a long pedigree that combines landscape studies, ecology, conservation, political history, and quantitative studies of agricultural land-use patterns.<sup>30</sup> Deer parks as a topic of historical inquest, not only became more popular, but also studies of this kind diversified and found new roots in scientific exploration.

---

<sup>27</sup> William Perry Marvin, *Hunting Law and Ritual in Medieval English Literature*, (Woodbridge: D.S. Brewer), 2006, and Richard Almond, *Medieval Hunting*, (Stroud: Sutton), 2003.

<sup>28</sup> Stephen Miles, *Parks in Medieval England*, (Oxford: Oxford University Press), 2009; 1.

<sup>29</sup> Miles, 1.

<sup>30</sup> Ellen Arnold, "An Introduction to Medieval Environmental History." *History Compass* 6, no. 3 (2008): pp. 900.

In the 2010s, historians diversified their research and looked at deer parks from a variety of perspectives. Historical works written about environmental history, especially looking at the Middle Ages, became more widespread.<sup>31</sup> In many ways, some of these historical works act as a type of cultural-environmental history. Human culture is explored alongside environment and climate change. In some cases, authors use climatic and environmental changes to understand historical events, but more importantly, these authors attempt to draw connections between historical records and scientific proxy data. Although there is a risk in overestimating the impact of climate and environment upon historical events, it is generally agreed among historians of this era that the environment played a role in human affairs. For example, the book *Farming, Famine and Plague: The Impact of Climate in Late Medieval England* by Kathleen Pribyl, a medieval environmental historian, explores the role of climate when investigating human disasters such as the Great Famine and the Black Death. She explains: “The consideration of late medieval English mortality peaks in their climatological setting reveals the strong connection between meteorological factors and virulent human plague outbreaks.”<sup>32</sup> Although Pribyl attributes some causality of the plague to changes in medieval climate, she also mentions the relationship between human culture, disease, and famine.

The current historiographical climate is extensive and features histories written by a variety of interdisciplinary academics, with the 2020s producing similarly multifaceted investigations into a broad range of environmental history topics including park studies, meteorological and weather studies, landscape studies, and a mix of cultural and environmental history. While some landscape historians characterize the role of medieval deer parks as status

---

<sup>31</sup> For example, see John Aberth *An Environmental History of the Middle Ages: The Crucible of Nature*, 2013, and Richard Hoffmann *An Environmental History of Medieval Europe*, 2014.

<sup>32</sup> Kathleen Pribyl, *Farming, Famine and Plague: The Impact of Climate in Late Medieval England*, (Cham: Springer International Publishing AG), 2017; 222.

symbols present in the British landscape, historians now tend to view deer parks as being much more deeply connected to many of the issues studied by environmentally-minded scholars.

## 1.2. Parameters of the Research

### 1.2.1. Spatial Boundaries

Deer parks and vineyards were widespread throughout medieval Europe. Isolated studies of these types of landscapes ignore larger trends and limit the investigation of wider historical themes. Wine was an important commodity in medieval Europe, not only due to the proliferation of Christian ritual, but because water was frequently unsafe to drink. Deer parks not only emulated social status, but also played an important role in elite culture and provided necessary resources to all medieval social classes. I consider existing studies on medieval vineyards and parks to form a framework against which to examine Little Park on the Arundel estate. Although I focus primarily on West Sussex, I make frequent comparisons with other parts of southern England to situate it within the broader historical context. My choice of Little Park was not arbitrary. First, the Arundel estate preserves a rich corpus of historical documentation. The earls of Arundel have resided upon the Arundel estate since 1138. For over 850 years, the Arundel Estate has been a subsidiary of the Duchy of Norfolk, which preserves many important historical documents. Second, by focusing on such a large, wealthy, and well-known estate, I hope to illustrate the potential that exists to fill a current gap in the historiography of medieval English vineyards and deer parks.

### 1.2.2. Temporal Boundaries

This study examines Little Park from 1150 – 1400. I chose these parameters based on the types of transformations occurring in Little Park, since in 1158, this park was a vineyard. In 1275 its owners converted the vineyard into a park that included space for garden and pasture, and then, in 1301, they transformed it into a deer park. The temporal boundary of this study ends at 1400 due to the enclosure movements and population recoveries that then took place in the



ensuing years of the early modern period. Although deer parks changed frequently throughout the medieval period, enclosures and further transformations of parks occurred in the later fifteenth century making the year 1400 a decisive endpoint to exclusively consider medieval parks. Also, no drastic changes occurred within Little Park in the fourteenth century, making the 1150 – 1400 period the most impactful on its core characteristics.

### 1.2.3. Sources

This paper relies upon archival records from Little Park and the Arundel estate. These records contain brief references to the transformations that occurred within the timeline of the park mentioned above. This study, therefore, incorporates this archival evidence alongside secondary material, such as the Victoria County Histories, and later documentary evidence, to piece together the first chronology of the parks' history. Later chronological descriptions, in addition to maps and preliminary archaeological research, help to contextualize the data in the written records. Although there may be additional records on Little Park, some of the estate records located within the Arundel archives require physical investigation which is not possible due to current global pandemic circumstances and are therefore beyond the scope of this MA thesis.

## CHAPTER II

### The MEDIEVAL CLIMATE ANOMALY AND ITS IMPACT ON MEDIEVAL ENGLISH VINEYARDS

#### 2.1. Introduction to The Medieval Climate Optimum: An English Perspective

The Medieval Climate Optimum (MCO) improved growing conditions and enabled grapes to grow and ripen more easily in England between 800 and 1200. Grape varieties show different responses to climate and are in turn, very sensitive to weather patterns.<sup>33</sup> Studies of wine in medieval England are limited since viticulture was not always a common practice and also, in part, because English wine is considered to be of a lower quality than that of wine grown on the Continent. Pribyl explains that: “The production of good-quality wine, however, was not the primary purpose of medieval English viticulture”.<sup>34</sup> English wine was produced and consumed for an eager domestic market, meaning that it did not have to be of superior quality. This section considers the MCO and its impact on grape cultivation in West Sussex to understand vineyards in medieval southern England.

The MCO was a large-scale warming of the earth’s climate between 800 and 1300 that resulted in a 1° C increase in summer temperatures in Europe and affected England in a variety of ways.<sup>35</sup> It occurred due to natural variability in climate and was not anthropogenic. Historic climate change affected water supply, agricultural productivity, and animal (including human) health. In the case of England, warming temperatures, which coincided with technological and agricultural innovations, allowed human population to expand and settlements to boom. During

---

<sup>33</sup> García de Cortázar-Atauri, et al, “Climate Reconstructions from Grape Harvest Dates: Methodology and Uncertainties,” *Holocene* (Sevenoaks) 20, no. 4 (2010): 600.

<sup>34</sup> Pribyl, 138.

<sup>35</sup> John Aberth, *An Environmental History of the Middle Ages: The Crucible of Nature*, (London: Routledge), 2013; 26.

the MCO, the English population tripled.<sup>36</sup> It is estimated that the rural population of England grew by more than a million between 1200 and 1300, and at least 200,000 new households formed.<sup>37</sup> Significant climatic changes occurred as a result of the interplay between arctic air and ocean seawater that power thermohaline circulation, which acted as a sort of hemispheric heat pump for Europe, through the circulation of warm ocean currents.<sup>38</sup> These fluctuations are caused by cyclical shifts in the earth's orbits and axis.<sup>39</sup> These shifts occur naturally on small and large scales, and in the medieval period, they happened on a large scale to alter climatic patterns across Europe.

From 700 to 1000, England experienced a series of warmer and drier summers which, when combined with ideal cultural conditions, such as technological advances that improved agricultural production and allowed for surplus farming and increasing political stability with decreased mass migrations, supported sustained demographics and rapid cultural and political growth.<sup>40</sup> Humid and mild summers came with fewer weather and precipitation fluctuations between 1000 and 1200 than had occurred between 700 and 1000. During the MCO, farmers were able to push cultivation 60 metres higher than they had before and to grow hardier grains such as oats, barely, and rye at the coolest margins of the Continent, including northern England and the highlands of Scotland.<sup>41</sup> Expanded growing regions maximized greater seed-yield ratios supported by consistent crop rotation and the widespread use of the heavy wheeled plough (*La. carruca*), which may have been introduced to the British Isles as early as the Viking invasions of the ninth century. Along with the shift from a two-field to a three-field system of crop rotation

---

<sup>36</sup> Aberth, 28.

<sup>37</sup> Christopher Dyer, "Conflict in the Landscape: The Enclosure Movement in England, 1220-1349," *Landscape History* 28, no. 1 (2006): 27.

<sup>38</sup> Aberth, 27.

<sup>39</sup> Aberth, 27.

<sup>40</sup> Hoffmann, *An Environmental History of Medieval Europe*, 70.

<sup>41</sup> Aberth, 26.

and the *carruca* came other animal-based technologies such as the introduction of the rigid horse collar and nailed horseshoes.<sup>42</sup> Hoffman attributes medieval agricultural prosperity to: “A renewed emphasis on cereal growing”, which occurred between 900 and 1100, resulting in agricultural intensification and an emphasis on mixed farming.<sup>43</sup> Regardless, net increases in agricultural productivity not only produced higher crop yields, they went hand-in-hand with innovation and a new willingness to experiment. This mindset and these conditions supported, therefore, the intensified cultivation of grapes in England. Aberth estimates that grape cultivation extended as much as 500 kilometers north of today’s vineyards during the MCO, allowing for more widespread grape cultivation in England.<sup>44</sup>

## 2.2. Medieval English Vineyards

### 2.2.1. Agriculture in Medieval West Sussex

Sussex boasts a range of agriculturally productive lands and woodlands. Agriculturally, the region provides rich soils capable of growing an array of crops.<sup>45</sup> The main crops historically grown in Sussex include wheat, peas, beans, barely, oats, and rye, staples of the medieval diet.<sup>46</sup> In the twelfth and thirteenth centuries, medieval Sussex peasants drained marshes and cleared woodlands to convert the landscape into an ordered pattern of fields, farms, and villages.<sup>47</sup> This represents what Bartlett Robert refers to as “a highly particular form of land use.”<sup>48</sup> Agrarian workers created farmland from the sea through the construction of a series of dykes and tide-

---

<sup>42</sup> Aberth, 29.

<sup>43</sup> Hoffmann, *An Environmental History of Medieval Europe*, 83.

<sup>44</sup> Aberth, 27.

<sup>45</sup> Peter Brandon, *The Sussex Landscape*, (London: Hodder and Stoughton), 1974; 67.

<sup>46</sup> Leonard M. Cantor, *The Changing English Countryside, 1400-1700*, (London: Routledge & Kegan Paul), 1987; 6.

<sup>47</sup> Brandon, 94.

<sup>48</sup> Robert Bartlett, *The Making of Europe: Conquest, Colonization, and Cultural Change, 950-1350*. Princeton, (N.J: Princeton University Press), 1993; 152.

gates.<sup>49</sup> Brandon explains that: “During the twelfth and early thirteenth centuries the Pevensey Levels gradually changed from saltmarsh to reedy and sedgy meadows and, ultimately, into arable fields.”<sup>50</sup> This drainage of marshlands and the accompanying creation of new arable was essential so that medieval people might feed the expanding English population. In the Middle Ages, Sussex settlement patterns included scattered houses and a few villages and hamlets, as well as common fields.<sup>51</sup> County soils were fertile and close to urban centers which created a high demand for food, resulting in an advanced agricultural regime that produced high yields of crops per acre.<sup>52</sup> Inhabitants of London and other city markets relied upon the food produced in Sussex, and other hinterlands, making the county an important source of grains and produce throughout the Middle Ages.

Between the mid-twelfth and mid-thirteenth centuries, the management of landed estates in England changed with the introduction of demesne farming.<sup>53</sup> The Arundel estate featured eight thousand acres of demesne arable scattered across more than fifty manors, the majority upon the Plain and Downs.<sup>54</sup> Brandon mentions that: “By the end of the thirteenth century, the demesne fields had mostly been segregated and the common fields of the township peasants were consolidated into separately formed farms.”<sup>55</sup> These changes occurred at a time where population growth was accompanied by rising land values, rising grain prices, and falling real wages.<sup>56</sup> Officers appointed by the local landlords managed the land and tenant farmers worked it.<sup>57</sup>

---

<sup>49</sup> Brandon, 111.

<sup>50</sup> Brandon, 111-113.

<sup>51</sup> Mark Gardiner, “South-East England: Forms and Diversity in Medieval Rural Settlements”, In *Medieval Rural Settlement: Britain and Ireland, AD 800-1600*, 100-117, (Oxford: Windgather Press), 2012; 106.

<sup>52</sup> Cantor, *The Changing English Countryside, 1400-1700*, 10.

<sup>53</sup> P. D. A. Harvey, “The Pipe Rolls and the Adoption of Demesne Farming in England,” *The Economic History Review* 27, no. 3 (1974): 345.

<sup>54</sup> Brandon, 119.

<sup>55</sup> Brandon, 119.

<sup>56</sup> Ian Kershaw, “The Great Famine and Agrarian Crisis in England 1315-1322,” *Past & Present* 59, no. 1 (1973): 3.

<sup>57</sup> Harvey, 345.

Although it is possible that demesne farming was not practised in all of the fields on the Arundel estate, this is a time where agricultural land was being enclosed and utilized at an increasing rate, and also being converted into demesne farmland.

### 2.2.2. Wine Consumption and Winemaking in Medieval England

People of all classes consumed wine in the Middle Ages and the commodity played an especially important role in religious and civil rituals. Medieval English noblemen and ecclesiastics, therefore, cultivated wine on their estates for personal consumption.<sup>58</sup> English vineyards in the Middle Ages produced both wine and verjuice.<sup>59</sup> Vineyard cultivation and harvesting closely resembled ancient Greek and Roman practices.<sup>60</sup> Due to lists of expenditures that detail payments for cutting roots, propagating by layering, digging and hoeing between the vines and fashioning stakes to support the plants, historians are able to draw connections between medieval and ancient grape cultivation techniques.<sup>61</sup> The tasks highlighted above were carried out by highly trained and experienced workers who were paid by the owners of the estate.<sup>62</sup> Another aspect of grape cultivation and winemaking was the actual pressing of the grape to make juice that would become wine or verjuice. Presses involved a considerable amount of labour and maintenance due to the fact that the moving parts had to be greased with wax.<sup>63</sup> In addition to these services that estate owners paid for, there were also some tasks assigned to peasants under the title of feudal services. The transport of wine barrels and grape picking was

---

<sup>58</sup> Susan Rose, *The Wine Trade in Medieval Europe, 1000-1500*, (London: Continuum), 2011; 16.

<sup>59</sup> Rose, 17.

<sup>60</sup> Rose, 19.

<sup>61</sup> Rose, 25.

<sup>62</sup> Rose, 25.

<sup>63</sup> Rose, 25.

completed by peasants as a part of their feudal duties.<sup>64</sup> Since winemaking was such a large operation, it involved the cooperation of many people.

Vineyards were expensive enterprises for elites and time-consuming operations for those whom they hired to work. In addition to the tasks listed above, there were other considerations necessary to properly maintain vineyards in medieval England. Constant maintenance was required year-round. In the spring, landowners purchased dung, which their agrarian workers spread to increase soil fertility.<sup>65</sup> Workers laid vines out in rows with distances varying with the variety of grape and method of growth.<sup>66</sup> On average, grape vines were cultivated three to six feet apart in the rows themselves, with rows about five to seven feet apart.<sup>67</sup> This gave workers room for two men side by side to work on the vines year-round, and for grapes to be harvested more easily.<sup>68</sup> Summer maintenance included weeding and removing leaves from the plants to allow for direct sunlight to bare down on the grapes.<sup>69</sup> Baskets also needed to be purchased or constructed in late summer or fall around the time of harvest.<sup>70</sup> These baskets were used to harvest the grapes and carry the fruit to the presses to be made into wine.

Once the grapes were harvested, medieval winemakers began actual production. First, workers harvested grapes, removed stalks from the fruits, pressed the grapes, and placed the mash into a large wooden vat to ferment.<sup>71</sup> Fermentation began in a matter of hours and the vats were covered with wooden planks to enable the process.<sup>72</sup> Second quality wine was also produced from the crushed grape and stem matter remaining from the processing of the initial

---

<sup>64</sup> Rose, 25.

<sup>65</sup> Rose, 27.

<sup>66</sup> Landsberg, 27.

<sup>67</sup> Landsberg, 27.

<sup>68</sup> Landsberg, 27.

<sup>69</sup> Rose, 27.

<sup>70</sup> Rose, 27.

<sup>71</sup> Rose, 34.

<sup>72</sup> Rose, 34.

wine. This secondary matter was removed from the vat with forks and taken to the press to make a bitter wine beverage and later sold cheaply or given to estate workers.<sup>73</sup> A third step was sometimes undertaken to produce verjuice, a low alcohol beverage of about 2-3 percent.<sup>74</sup> Verjuice was consumed by workers or those looking for a refreshing beverage other than water. Since verjuice contained more water than regular wine, it was a popular drink of choice on a particularly hot day. Lastly, the last remnants of the entire wine-making process were used as mulch or winter fodder for farm animals.<sup>75</sup> Winemaking was efficient and produced barely any waste. Nearly every part of the cultivated grape could be utilized for one purpose or another. In this way, vineyards were also valuable assets and could be utilized for a variety of purposes.

Storage and consumption required planning. Wine in the Middle Ages was commonly consumed fresh. With a lack of bacteria and germ knowledge wine frequently spoiled, inducing sickness in those who consumed it. This point is key to understanding wine production and consumption in medieval England. Since medieval English wine was created in small batches on larger estates and consumed domestically, it was not stored for long periods of time. Therefore, the lower quality wine produced in England was certainly not shipped to continental Europe or sold for great profit. These points aid in explaining why vineyards were created and maintained in medieval England on a small scale. English wine was not the best quality, and therefore did not inherently possess much value, meaning that its sole purpose was to be consumed by the owners or workers of the vineyards. Also, since vineyards required intensive amounts of labour and money, especially in the unfavourable climate in England, grape growing was confined to specific regions in England.

---

<sup>73</sup> Rose, 35.

<sup>74</sup> Rose, 35.

<sup>75</sup> Rose, 35.



The main consumers of wine in England in the Middle Ages were ecclesiastics and elites. Rose explains that: “In the eighth and ninth centuries the Church, particularly the bishops and the most important monasteries, were the people most likely to be the proprietor of considerable areas under vines.”<sup>76</sup> Due to the use of wine in the Christian mass, vineyards were often located near churches and monasteries. Wine was also a gift presented to visitors of religious houses and secular estates. Served in lavish quantities at meals and other important occasions, the serving of wine demonstrated the honour and status of visitors to religious and secular lodgings.<sup>77</sup>

Medieval people believed that wine was good for the body.<sup>78</sup> This notion drew upon ancient Greek and Roman perceptions of wine. Both ancient and medieval cultures frowned upon wine consumption if it was drunken in excess.<sup>79</sup> Relating to the medical theory of the four humors, the ancient and medieval view of the human body, wine was both warm and moist and strengthened natural heat in all parts of the body.<sup>80</sup> Wine was also believed to bring joy to drinkers and aid in other matters. According to Bartholomew Anglicanus, writing in the thirteenth century, wine helped to rid a person of flatulence, generally aided in the elimination of urine, and accelerated the healing of wounds.<sup>81</sup> Wine was also commonly prescribed by physicians and utilized medicinally.<sup>82</sup> In this case, sour wine was used to add flavour to dishes or seen as having benefits in medieval medicine. The connections between wine, religion, and health in medieval English and European society made it an extremely popular commodity. It was also deeply embedded in social life from the time of the ancient Greeks and Romans, which transpired into the Middle Ages, the early modern period, and beyond.

---

<sup>76</sup> Rose, 39.

<sup>77</sup> Rose, 39.

<sup>78</sup> Rose, 133.

<sup>79</sup> Rose, 133.

<sup>80</sup> Rose, 133-134.

<sup>81</sup> Rose, 134.

<sup>82</sup> Pribyl, 138.

### 2.2.3 English Vineyards Before 1300

English vineyards before the year 1300 were small and produced wine in most cases exclusively for local consumption but still impacted the surrounding landscape. Grape cultivation and wine production are significant economic activities and have a profound impact on culture and the environment. The distribution of grapes and wine production are concentrated in certain areas where the “terroir” or geography is favourable.<sup>83</sup> Some locations are better suited for grape cultivation as the core area for grape growing is the zone between annual isotherms of 10°C and 20° C both in the northern and southern hemispheres.<sup>84</sup> England remained at the northern limits of viticulture in ancient times and throughout the Middle Ages.<sup>85</sup> Pribyl refers to these regions as climatologically disadvantaged for wine-growing.<sup>86</sup> Regional environmental differences, however, also affect grape cultivation. For example, one town could receive adequate rainfall at crucial times in the grape growing season, and another nearby might not receive any.<sup>87</sup> There are many variables to take into account when considering all of the factors affecting viticulture, especially in places like England where it is not easy to grow grapes climatically. Not all areas grow the same grapes, and even if they do, there are distinct differences in the aroma and taste of wine from different geographical regions.<sup>88</sup> Nonetheless, viticulture thrived in Western Europe after the year 1000, due to cultural factors and the warmer climate of the Medieval Climate Optimum.

Despite the unfavorable weather for grape cultivation, the inhabitants of England have grown grapes for thousands of years. Records of vineyards in England are available from the

---

<sup>83</sup> Percy H. Dougherty, “Introduction to the Geographical Study of Viticulture and Wine Production,” In *The Geography of Wine*, 3–36, (Dordrecht: Springer Netherlands), 2011; 7.

<sup>84</sup> Dougherty, 3.

<sup>85</sup> Pribyl, 138.

<sup>86</sup> Pribyl, 137.

<sup>87</sup> Rose, 27.

<sup>88</sup> Dougherty, 3.

Romans who cultivated grapes in Europe in the second and third centuries.<sup>89</sup> However, England was never known for its wine industry.<sup>90</sup> English vineyards were scattered around the country throughout the Middle Ages, as Rose explains: “In the south and east of England, 42 different manors are listed in Domesday Book as including vine-growing areas. Essex contained the most while there were six in Middlesex including Kensington and Staines.”<sup>91</sup> The vineyards mentioned in Domesday Book were recently planted, small in size, and served the initial purpose of providing wine to the Anglo-Norman nobility and the Church.<sup>92</sup> Vine growing was not common across the majority of the country, especially in the north, and was confined to certain favourable districts.<sup>93</sup> The Norman Conquest in the second half of the eleventh century created an invigorated interest in viticulture and in the 150 years after the conquest and by the thirteenth century, the southeast part of the country had developed into the centers of English viticulture.<sup>94</sup> Vineyards were located as far north as Yorkshire, and eastern England was dotted with vineyards as well.<sup>95</sup> The specific number of vineyards in medieval Sussex is unknown due to a gap in the records. However, in the modern day, Sussex produces the greatest amount of wine in comparison to all other counties. That being said, due to the coastal climate of Sussex and because of its rich soils, it is reasonable to assume that Sussex contained many wineries throughout history. In an era of polluted water supplies, and in many cases unsafe to drink, wine was the beverage of choice for medieval people across Europe.<sup>96</sup>

---

<sup>89</sup> A. G Brown et al., “Roman Vineyards in Britain: Stratigraphic and Palynological Data from Wollaston in the Nene Valley, England,” *Antiquity* 75, no. 290 (2001): 745.

<sup>90</sup> Frances E. Dolan, “Biodynamic Viticulture, Natural Wine, and the Premodern,” *In Premodern Ecologies in the Modern Literary Imagination*, (2019); 125.

<sup>91</sup> Rose, 16.

<sup>92</sup> Kelly, Morgan and Cormac Ó Gráda, 311.

<sup>93</sup> Rose, 36.

<sup>94</sup> Pribyl, 138.

<sup>95</sup> Pribyl, 138.

<sup>96</sup> Dougherty, 3.

Medieval English viticulture produced both white and red wines. Both, even during the MCO, were traditionally sour since the climate did not allow for fully ripened grapes by the harvest. The style of wine sought, its quality and maturity influence the harvest date.<sup>97</sup> Pribyl explains that: “Thirteenth-century summers were warm and would at least partly allow for a high sugar-content in the grapes in England, but success or failure of the English vine harvest was by no means critical, as the country did not actually depend on home grown wine for drinking.”<sup>98</sup> Therefore, due to the fact that viticulture harvest dates were cut short in England due to the climate, the grapes would not always reach full maturity and would have to be harvested earlier than in countries located on the Continent, such as France and Spain. The quality of homegrown wine in England was not a big problem because of the fact that it was consumed locally, and expectations were not always high due to the variability in quality from year to year. Wine quality depends on a balance, specific to the particular vineyard, between sugars, acids, aromatic constituents and phenolic compounds.<sup>99</sup> The price of wine in England doubled in the thirteenth century, so wine quality began to matter less than price.<sup>100</sup> Nonetheless, the sugar content is considered to be a good indicator of maturity and quality in most vineyards.<sup>101</sup> Sugar content and yield have also been proposed as climate proxies.<sup>102</sup> Therefore to make a high-quality, sweet wine, a period of warm and sunny days is required to ripen the grapes to a point where they will be sweet. This was not always possible, even with the MCO, which in some years, made summers in England warmer and sunnier. Wine cultivation in England had its challenges, but it was also a worthwhile endeavor for medieval people. Through the production of their own wine,

---

<sup>97</sup> García de Cortázar-Atauri, et al., 600.

<sup>98</sup> Pribyl, 138.

<sup>99</sup> García de Cortázar-Atauri, et al., 600.

<sup>100</sup> Pribyl, 139.

<sup>101</sup> García de Cortázar-Atauri, et al., 600.

<sup>102</sup> García de Cortázar-Atauri, et al., 600.

medieval English elites and ecclesiastics were able to locally procure some of their own wine and avoid importing larger quantities of wine from the continent, which was an expensive endeavour.

## 2.3. The Little Ice Age and its Impact Upon Vineyards

### 2.3.1. Introduction to the Little Ice Age (LIA): England

The Little Ice Age (LIA) was the most recent cold era to affect Europe and the globe. This climate anomaly affected most of the European population between 1500 and 1850 and was characterized by multidecadal episodes of cold temperatures that jeopardized crops, public health, and human populations.<sup>103</sup> Some historians and climatologists estimate the LIA to have begun around 1300, with the most visible effects seen in Europe between 1500 and 1850. During this time period, average temperatures became 1°C colder.<sup>104</sup> The causes behind this dramatic climatic shift include a lack of thermohaline circulation, more widespread snow cover, deviations in the earth's orbit, fluctuations in solar radiation, and dust veils in the stratosphere.<sup>105</sup> Previously, the high Middle Ages had been a time of minimal volcanic activity and low solar forcing, which changed in the thirteenth century, declining further with the onset of the Spörer Minimum in 1420.<sup>106</sup>

The LIA affected England and Europe in a variety of ways. Growing seasons in Europe shrank by three weeks and the altitude limit of crop cultivation and tree growth fell by two-hundred meters.<sup>107</sup> Morgan Kelly and Cormac Ó Gráda estimate the growing seasons in England to have shrank by as much as five weeks.<sup>108</sup> Not only did the weather in England become colder

---

<sup>103</sup> Yiou, P. I., et al., "Continental Atmospheric Circulation over Europe During the Little Ice Age Inferred from Grape Harvest Dates," *Climate of the Past* 8, no. 2 (2012): 577.

<sup>104</sup> Aberth, 49.

<sup>105</sup> Aberth, 50.

<sup>106</sup> Pribyl, 3.

<sup>107</sup> Aberth, 49.

<sup>108</sup> Kelly, Morgan and Cormac Ó Gráda, 318.

and wetter, but it also became wilder and more unpredictable.<sup>109</sup> Storms and floods buffeted coastal areas in England, Normandy, and Flanders.<sup>110</sup> Weather patterns swung from one extreme to the next with no warning. Medieval people did not have the knowledge or technology to adapt well to these adverse and unprecedented changes. The elements and weather were, in a sense, unreliable. Aberth explains how: “It was in the short-term fluctuations of the weather, when a succession of bad harvests caused by the climate occurred on an almost yearly, unforgiving basis, as seems to have happened in 1315-22, 1363-71, 1408-19.”<sup>111</sup> This was when the effects of climate change in England impacted the lives of medieval people on a large scale. Regional climate responses to the LIA did not mirror global conditions, rather, regional variations in weather and climate profoundly impacted late medieval society.<sup>112</sup> Therefore, preparation for such variations was impossible and all ranks in medieval society had to do their best to survive and adapt to the unpredictable climatic conditions.

One of the most significant climate-related events of the Middle Ages was the Great Famine, which took place between 1315 and 1322.<sup>113</sup> The famine was a time in which crops failed due to increased rainfall inundation and the accompanying flooding of fields. Across Northern Europe, including England, Ireland, Scandinavia, France, and Germany, contemporary chroniclers testify that extreme levels of rainfall occurred, beginning in 1315, with up to one-hundred days of continuous rain.<sup>114</sup> This rain not only affected the planting of crops, but also the growing and harvesting periods. In England, the Great Famine was accompanied by rainy summers prior to the event and was sandwiched by unaccountably dry and warm summers.<sup>115</sup>

---

<sup>109</sup> Aberth, 49.

<sup>110</sup> Aberth, 51.

<sup>111</sup> Aberth, 50.

<sup>112</sup> Pribyl, 3.

<sup>113</sup> Aberth, 51.

<sup>114</sup> Aberth, 51.

<sup>115</sup> Aberth, 49.

Pribyl explains how: “The very cold growing seasons of 1314, 1315, 1319 and 1323, as well as the warm year 1318 are related to the Great Famine and the prolonged agricultural crisis in its aftermath.”<sup>116</sup> Mortalities as a result of this large-scale famine ranged from 10 to 18 percent in England, which was two to three times higher than normal in medieval England.<sup>117</sup> Concurrently, England experienced a typhoid epidemic, increasing famine mortality rates in 1316.<sup>118</sup> Harvests failed in 1314, rain ruined crops in 1315, the sheep murrain of 1315-1317 decimated livestock, and warm and dry growing seasons occurred in 1318.<sup>119</sup>

Scholars tend to disagree on the end dates of the Great Famine with disputes as to whether or not the famine ended in 1318 or 1322. In 1319, cold and rainy weather challenged farmers, alongside the cattle plague of 1319-1321, and additional harvest failures in 1321 and 1322.<sup>120</sup> Kershaw even extends the dates of the Great Famine to 1325, stating that the wet and unpredictable weather accompanied these years of famine.<sup>121</sup> Although climate change might not be the culprit of the later harvest failures in 1321 and 1322, it is clear that the weather changed drastically throughout this period, resulting in an inability to feed the English population.

The LIA is best characterized by the fact that the weather became increasingly more unpredictable leading to a rise in grain prices. Medieval English farmers would have adapted more effectively to changing climatic conditions if shifts remained reasonably steady. Warm and dry summers succeeded by cold and rainy summers from year to year not only affected the crops, but also the people and their ability to anticipate weather conditions. As a result of these changes, grain prices rose from 1320-1323 with no relation to changing weather.<sup>122</sup> Pribyl points to socio-

---

<sup>116</sup> Pribyl, 118.

<sup>117</sup> Aberth, 51.

<sup>118</sup> Kershaw, 11.

<sup>119</sup> Pribyl, 119-123.

<sup>120</sup> Pribyl, 123.

<sup>121</sup> Kershaw, 6.

<sup>122</sup> Pribyl, 126.

economic consequences of the price increases that took place after 1320.<sup>123</sup> Grain prices were not the only food source that reflect high levels of inflation. Livestock, dairy, and the prices of other foodstuffs witnessed price increases since as early as 1305, partly due to currency depreciation.<sup>124</sup> By the end of fourteenth century, foodstuffs cost 25 percent more in England than they had in 1299.<sup>125</sup> This is because the economic effects of famine took time to manifest. It took medieval English agriculture on average about two years to recover from each harvest disaster, and by 1320, there had been successive, cumulative failures. A full recovery of an agricultural economy takes decades.<sup>126</sup> That noted, it is important to keep in mind that these devastations affected medieval people on a regional level, and that some areas were hit harder than others. After 1322, agrarian conditions settled, characterized by better harvests and lower grain prices<sup>127</sup> For coastal areas of England, however, droughts occurred in the summers of 1325 and 1326 alongside serious inundations of the ocean and other devastating livestock epidemics<sup>128</sup>. Although the LIA brought about changes in the agricultural industry of England as a whole, individual regions and landowners bore the brunt of these fluctuations in weather.

### 2.3.2. The Impact of the Little Ice Age on Medieval English Vineyards 1300-1400

Scholars have tracked approximately fifty vineyards in England during the MCO and, with the onset of the LIA, this number declined. Some vineyards were repurposed for other uses, such as deer parks or pastoral farmland, and some vineyards became obsolete altogether.<sup>129</sup>

Vineyards are very sensitive to climatic conditions and therefore the LIA made it too challenging

---

<sup>123</sup> Pribyl, 126.

<sup>124</sup> Kershaw, 6.

<sup>125</sup> Kershaw, 6.

<sup>126</sup> Pribyl, 129.

<sup>127</sup> Kershaw, 15.

<sup>128</sup> Kershaw, 15.

<sup>129</sup> Aberth, 49.



in some cases to continue growing grapes in England. Across much of Europe during the LIA, wet conditions damaged arable farmland by raising the risk of hydraulic soil erosion.<sup>130</sup>

Grapevines do not flourish in wet conditions. Excessive rain, snow, and fog diminish arable crops, especially grapevines, by inhibiting germination, beating down the stalks of ripening grain, and encouraging growth of fungi and moulds.<sup>131</sup> Hot and dry climates are the ideal environments for grape growing, which England experienced to a greater extent throughout the eleventh and twelfth centuries. By the twelfth and early thirteenth centuries, vine growing was a well-known activity in England.<sup>132</sup> This is due to the fact that labour was cheap and readily available. However, as early as 1250 in England, the weather changed, altering grapevine growing patterns and harvest dates.

Spring and summer temperatures became cooler between 1256 and 1290, representing a turning point in medieval English grape cultivation.<sup>133</sup> By 1315, the effects of the LIA were felt by farmers in southern England.<sup>134</sup> Not only were grapes more difficult to cultivate, but in these years with worse weather, the quality of the wine was poorer. Therefore, the demand for English wine dropped. The cool and wet summers of the early thirteenth century did not allow for grapes to fully ripen and frost during extremely cold winters threatened the survival of the vines themselves.<sup>135</sup> In addition, the Great Famine did not help matters. Aberth explains that: “Medieval agriculture entered a prolonged period of contraction after the famine, when during the worst years of 1315 – 16 harvest yields declined by as much as 40 – 45 percent in the South and 72 – 89 percent in the North of England.”<sup>136</sup> This included grape harvests.

---

<sup>130</sup> Hoffmann, *An Environmental History of Medieval Europe*, 70.

<sup>131</sup> Hoffmann, *An Environmental History of Medieval Europe*, 70.

<sup>132</sup> Pribyl, 139.

<sup>133</sup> Pribyl, 139.

<sup>134</sup> Pribyl, 139.

<sup>135</sup> Pribyl, 139-140.

<sup>136</sup> Aberth, 51-52.

The data suggests that cold growing seasons in 1330, 1335, 1347–1348 and that high precipitation levels in 1342 – 1343 and again in the late 1340s contributed to the abandonment of viticulture in many places across the country.<sup>137</sup> Wine was still imported from the Continent on a large scale, meaning that the English still had much wine to drink, they were simply deprived of less expensive home-grown wine. This occurred as a result of the fact that, in the twelfth century, Henry II owned properties in Gascony and Bordeaux, which yielded high-quality wine.<sup>138</sup> Therefore, importing wine became more cost effective during this time. With the Black Death also decimating populations across the English countryside, cheap labour became unavailable after 1350 and since vineyards were extremely labour-intensive enterprises, some landlords could no longer afford to maintain them. Also contributing to a decrease in the number of medieval English vineyards was the fact that the profitability of demesne farming dropped after 1350, which prevented a reactivation of the vineyards.<sup>139</sup> In addition to the cooler and wetter weather of the fourteenth century, vineyards were gradually closed down or replaced by orchards and pastoral farmland, to combat changes in socioeconomic factors and climate.<sup>140</sup>

Arable farmland, including land under cultivation for grapes, was replaced by pastoral farmland in many regions of England to combat population decline and a series of bad harvests where grain supplies were not as reliable as they had been earlier on throughout the Middle Ages. Pastoral farming and livestock rearing required less labour and hands-on management, making it an easier vocation for medieval farmers in the fourteenth century.<sup>141</sup> This trend continued with the onset of the Black Death in 1348 in England. The decline of vineyards in late

---

<sup>137</sup> Pribyl, 140.

<sup>138</sup> Landsberg, 25.

<sup>139</sup> Pribyl, 140.

<sup>140</sup> Landsberg, 26.

<sup>141</sup> Aberth, 52.

medieval England cannot be fully attributed to the LIA. Climate only played a partial role in the reduction of grapevine cultivators. Social factors influenced wine production since winemaking was labour-intensive. It is likely that vineyards disappeared in some parts of southern England due to socioeconomic factors.<sup>142</sup> It is important to keep in mind that some vineyards operated throughout the LIA.<sup>143</sup> Some wealthy landowners and religious men believed vineyards to be a worthwhile enterprise and therefore continued growing grapes despite the rainy and irregular weather patterns and the added expenses of maintaining these specialty landscapes. It is true that summer temperatures dropped between 1300 and 1400 in England, and it is likely that wine quality also dropped, but the true determining factor of this change was the fact that population size and density levels changed, along with the availability and cost of labour.<sup>144</sup>

---

<sup>142</sup> Pribyl, 140.

<sup>143</sup> Pribyl, 141.

<sup>144</sup> Pribyl, 141.

## CHAPTER III

### FORESTS, DEER, AND DEER PARKS IN MEDIEVAL ENGLAND

#### 3.1. Introduction to English Forests and Deer Parks 1150-1400

I begin my analysis of Forests and deer parks from 1150-1400 by discussing the importance of woodlands and their role in medieval England. Agriculture dominated the English landscape. Forests and woodland frequently gave way to the creation of arable due to population expansion, which increased the demand for food in the early and high Middle Ages. Assarting that resulted in the clearance of woodland was driven by local subsistence needs.<sup>145</sup> This proves to be the main reason why fields and forests were converted into enclosed parks that had their own set of laws with strict fines enforced by the Crown. Many hundreds of individuals were involved in establishing, extending, and redesigning parks throughout the Middle Ages.<sup>146</sup> The thirteenth century can be seen as the most prosperous time for medieval deer parks in England due to the fact that the Black Death impacted the shape and distribution of deer parks in the later medieval period. In the mid-fourteenth century, the Black Death decimated the population of England leaving many deer parks with no one to care for them. At this time, some deer parks fell into disrepair, some were abandoned, and, surprisingly in some cases, additional land was converted into deer parks on vast estates. This interesting shift in landscape reorganization prompted the development of specialized infrastructure which ultimately resulted in local ecological shifts. Changes were regional, as particular areas experienced varying levels of enclosure, animal exploitation, and environmental impacts.

---

<sup>145</sup> Richard Hoffmann, "Frontier Foods for Late Medieval Consumers: Culture, Economy, Ecology," *Environment and History* 7, no. 2 (2001): pp. 136.

<sup>146</sup> S.A. Miles, "The Sociology of Park Creation in Medieval England," in *The Medieval Park: New Perspectives*, (Macclesfield: Windgather Press), 2007; 21.

Following the Last Glacial Period (LGP), which coincided with the Palaeolithic and Mesolithic periods in human evolution, the British Isles contained many natural forests.<sup>147</sup> Throughout ancient history, however, humans cleared and assarted those woodlands, and the only floral data available today comes from the pollen record. Many English forests were and are not naturally-occurring; humans planted or regrew plant species to suit their needs. Rackham explains that almost all woods in Britain, though of natural origin, have been managed intensively for centuries.<sup>148</sup> During the late Saxon period, sophisticated forms of open-field agriculture, and settlement patterns of nucleated villages developed throughout the English countryside as a result of population pressure, which served not only to subdivide and intermix holdings but, in addition, led to the over-expansion of arable at the expense of pasture and woodland.<sup>149</sup> Assarting that resulted in the clearance of woodland was driven by local subsistence needs.<sup>150</sup> From pre-historic times to the present, there was a continuous interchange between the felling of trees and the management and replanting of forests.<sup>151</sup> From the ninth to eleventh centuries, widespread social, economic, political, and landscape transformations are consistent with ‘formal rationalization,’ which Sykes explains as the dynamic process of social change created through the pursuit of mastery over nature and other people, based on the achievement and demonstration of material goals.<sup>152</sup> It is not, therefore, possible to identify regions in England in which woodland was relatively plentiful in early medieval England.<sup>153</sup>

---

<sup>147</sup> Rackham, *The History of the Countryside*, 64.

<sup>148</sup> Rackham, *The History of the Countryside*, 65.

<sup>149</sup> Tom Williamson, *Shaping Medieval Landscapes: Settlement, Society, Environment*, (Oxford: Windgather Press), 2003; 28.

<sup>150</sup> Richard Hoffmann, "Frontier Foods for Late Medieval Consumers: Culture, Economy, Ecology," 136.

<sup>151</sup> Ian G. Simmons, *An Environmental History of Great Britain: From 10,000 Years Ago to the Present*, (Edinburgh: Edinburgh University Press), 2001; 92.

<sup>152</sup> Sykes, Naomi. "Deer, Land, Knives and Halls: Social Change in Early Medieval England." *The Antiquaries Journal* 90 (2010): pp. 182.

<sup>153</sup> Della Hooke, "Pre-Conquest Woodland: Its Distribution and Usage," *Agricultural History Review* 37 (1989): 114.

Landscape reorganization occurred in England at an alarming rate from the late Anglo-Saxon period to the Conquest, and into the high Middle Ages. Patterns of settlement and land use in England in 1066 highlight how earlier Anglo-Saxon hunting grounds were incorporated into Forests first, then confiscated lands were included, and then land in possession of those not recognized by new elites were added into Forests.<sup>154</sup> The Domesday survey of 1086 makes it clear that England was not then a very wooded land.<sup>155</sup> In 1086, about 35 per cent of England was devoted to arable land, at least 25 per cent to pasture, 15 per cent to woodland and the remaining 25 per cent to settlement, moorland and land devastated by war.<sup>156</sup> However, by the year 1200, all of the forests in England were owned.<sup>157</sup> From the Norman Conquest to the early 1200's, population increases placed additional demand upon the landscape to provide food necessary to feed a growing society, sacrificing forests and woodlands for arable farmland. By 1250, it is estimated that only a few per cent of England contained woodland.<sup>158</sup>

By 1200, the English landscape was already extensively managed and exploited, especially areas containing woodland. In the Middle Ages, English Forests consisted of a mixture of woods that were partly new and other woodlands that remained from older forests. Almost every Forest contained some woodland within its legal bounds.<sup>159</sup> While the land was tilled to a remarkable extent, an estimated 80 per cent of the total area was under cultivation as in 1914.<sup>160</sup> Due to increasing populations, the shortage of arable land led to the assarting of marginal land, often at the expense of essential pastures, and the clearance of woodland had

---

<sup>154</sup> Judith Green, "Forest Laws in England and Normandy in the Twelfth Century," *Historical research: the bulletin of the Institute of Historical Research* 86, no. 233 (2013): pp. 421-422.

<sup>155</sup> Rackham, 75.

<sup>156</sup> Leonard M. Cantor, *The English Medieval Landscape*, 18.

<sup>157</sup> Simmons, 94.

<sup>158</sup> Rackham, *The History of the Countryside*, 85.

<sup>159</sup> Rackham, *Trees and Woodland in the British Landscape*, 169.

<sup>160</sup> Cantor, *The English Medieval Landscape*, 17.

progressed a great deal, so that in some places, it was in short supply.<sup>161</sup> By the Middle Ages, woods had definite names, boundaries, and acreages, were private property, and were also intensively managed.<sup>162</sup> Forests in medieval England contained various types of landscapes, including, pastureland, moors, fields, and wooded areas, and were therefore utilized for a variety of purposes. The countryside of medieval England was comprised mainly of farmland with inlets of woods and wooded areas. These wooded areas were extremely valuable, especially throughout the fifteenth-century, due to the fact that whatever woodland remained became a vital component of the English economy, due to the fact that elites and commoners had no other access to resources like wood for fuel.<sup>163</sup> The disafforestation of woodland for use as arable farmland and the prosperity of local landowners between 1150 and 1250, resulted in the creation of hundreds of hunting parks at a time when towns flourished, and urban expansion was occurring at an increasing rate.<sup>164</sup>

Urban needs for fuel, food, and other natural resources shaped medieval towns and cities and affected their relationship with the broader landscape.<sup>165</sup> Between the years 500 and 1700, resource use in England intensified, even though the predominant economy was agriculture.<sup>166</sup> Woodlands provided grazing for livestock, pannage for pigs, timber for buildings, fuel in the form of underbrush.<sup>167</sup> Timber as a commodity was usually in less demand than other types of wood for fuel.<sup>168</sup> From about 1300, over-population, soil exhaustion, periods of persistently

---

<sup>161</sup> Jean Birrell, "Common Rights in the Medieval Forest," *Past & Present*, no. 117 (1987): pp. 22.

<sup>162</sup> Rackham, *The History of the Countryside*, 85.

<sup>163</sup> L. W. Wright, "Woodland Continuity and Change: Ancient Woodland in Eastern Hertfordshire," *Landscape History* 25, no. 1 (2003): 73.

<sup>164</sup> Cantor, *The English Medieval Landscape*, 19.

<sup>165</sup> Ellen Arnold, "An Introduction to Medieval Environmental History," *History Compass* 6, no. 3 (2008): 900.

<sup>166</sup> Simmons, 52.

<sup>167</sup> K. P. Witney, "The Woodland Economy of Kent, 1066–1348," *Agricultural History Review* 38, no. 1 (1990): 228-31.

<sup>168</sup> Witney, 28-31.

hostile weather, and plagues affected the levels with which medieval elites and peasants interacted and exploited the environment around them.<sup>169</sup> Forests and deer parks inevitably slowed the destruction of woodlands as these lands were protected from being converted into arable farmland.<sup>170</sup> Land hunger during the thirteenth century pushed the boundaries of cultivation into marginal lands with relatively poor soils, and by the end of the century, soil exhaustion and poor yields were becoming more common.<sup>171</sup> As a result, large-scale reclamation of land first slowed down, then came to a halt and after 1350 and during the fifteenth century, arable farmland began to contract.<sup>172</sup>

Throughout the thirteenth and fourteenth centuries, increased enclosure of agricultural land, Forests, and woodlands by wealthy landowners and kings, resulted in the creation of thousands of deer parks. Medieval deer parks were a series of complex, intensively managed landscapes blended together and enclosed by a series of banks and fences. Deer parks featured a wide variety of terrain in order to provide adequate resources to the animals living within them. At the time of their creation, deer parks eliminated human dwellings in areas deemed suitable for the animals, and peasants were driven from their lands.<sup>173</sup> By the thirteenth century, extensive records of park and park-making appear due to the fact that licenses became mandatory to impark a piece of land.<sup>174</sup> Land and resource ownership represented a person's status in society, meaning that elite members of society displayed their wealth through material objects and land ownership.<sup>175</sup>

---

<sup>169</sup> Cantor, *The English Medieval Landscape*, 19.

<sup>170</sup> Charles Young, *The Royal Forests of Medieval England*, (University of Pennsylvania Press, Inc.), 2015; 2.

<sup>171</sup> Cantor, *The English Medieval Landscape*, 20.

<sup>172</sup> Cantor, *The English Medieval Landscape*, 20.

<sup>173</sup> Barbara Hanawalt, *Of Good and Ill Repute: Gender and Social Control in Medieval England*, Oxford University Press, 1998, pp. 144.

<sup>174</sup> Rackham, *The History of the Countryside*, 122.

<sup>175</sup> Naomi Sykes, "Deer, Land, Knives and Halls: Social Change in Early Medieval England," 183.



The popularity of deer parks was due, in part, to the fact that they were relatively easy to create. Any elite in medieval England could have a park if he could afford it.<sup>176</sup> Such parks were typically pear or egg shaped and comprised of compact acres of land enclosed by robust timber palings, ditches, or walls, with the landscape made up of large areas of grazed lawn, pollarded rather than coppiced trees, as well as groves and larger patches of unimproved woodland.<sup>177</sup> The sizes and shapes of deer parks also fluctuated throughout the Middle Ages, even at the height of deer park popularity. Deer parks in England were common, but they also were constantly changing to adapt to the needs of their owners. This means that many parks were built up over long periods of time as opportunities occurred to take in new land occurred, as well as the opportunity convert additional land into deer parks.<sup>178</sup> Not all deer parks, though, served the same purposes for their owners as size and shape dictated what parks were utilized for.

### 3.1.2. Medieval Deer Park Maintenance and Forest Laws

Medieval elites understood the importance of properly monitoring and maintaining deer parks and hired specialists, such as foresters, to care for these enclosed lands. Elites closely monitored resources present in their parks to ensure they were not depleting their supplies to a point where they could not be regenerated for later use. The creation of a deer park also tended to increase the owner's power over the resources enclosed within it, as the complaints of many ousted commoners testify.<sup>179</sup> With many valuable resources present in a deer park, owners had to

---

<sup>176</sup> Rackham, *The History of the Countryside*, 125.

<sup>177</sup> James P. Bowen, "From Medieval Deer Park to an Enclosed Agricultural and Developing Industrial Landscape: The Post-Medieval Evolution of Lilleshall Park, Shropshire," *Midland History* 38, no. 2 (2013): pp. 195.

<sup>178</sup> Leonard M. Cantor and J. Hatherly, 74.

<sup>179</sup> Birrell, "Deer and Deer Farming in Medieval England," 112.

take drastic measures to ensure that peasants, and other elite rivals, did not try and steal resources, or worse, illegally poach deer present within their parks.

In medieval England, both uncomparted parks and compartmented parks were popular and were utilized for a variety of purposes. Rackham explains that uncomparted parks were accessible to the deer at all times, while compartmented parks maintained a separation between trees and grazing lands.<sup>180</sup> A park would be divided by internal banks into coppices, each of which would be felled like an ordinary wood and then fenced in the early stages to keep deer out until it had grown sufficiently not to be damaged.<sup>181</sup> A deer park, however, was a troublesome and precarious enterprise as it often belonged to absentee elites who were unable to devote the necessary attention.<sup>182</sup> Parks, thus, required constant maintenance and care by on-site officials who were appointed and paid to complete such tasks. Most important was the task of keeping barriers intact so that the deer could not escape. Another difficulty associated with owning and maintaining deer parks was the fact that parks served many purposes, and therefore, required many people with different skills to maintain them.<sup>183</sup> Deer parks served as grounds for grazing livestock and other domestic animals, but they also provided timber, wood, and other valuable resources to the medieval economy.<sup>184</sup> These parks were essential to the medieval economy since, as the thirteenth century progressed, these commodities became increasingly more scarce.<sup>185</sup> The shortage of these resources occurred due to instances of population increase and insufficient supply during the Middle Ages in England.

---

<sup>180</sup> Rackham, *The History of the Countryside*, 125.

<sup>181</sup> Rackham, *The History of the Countryside*, 125.

<sup>182</sup> Rackham, *The History of the Countryside*, 126.

<sup>183</sup> Birrell, "Deer and Deer Farming in Medieval England," 112.

<sup>184</sup> Birrell, "Deer and Deer Farming in Medieval England," 112.

<sup>185</sup> Birrell, "Deer and Deer Farming in Medieval England," 112.

Forest laws emerged as did legislation to prohibit trespass and the poaching. By the end of the twelfth century the main features of the English forest system had been established and were given statutory force by the Charter of the Forest in 1217.<sup>186</sup> Medieval people, especially commoners, disliked forest laws because they were often seen as encroaching on the perceived rights of men of all classes and status groups. Commoners and elites alike believed it was their right to exploit the natural environment.<sup>187</sup> However, forestal rights did not necessarily include ownership of the land.<sup>188</sup> The landowner had to right to exploit the soil, timber, wood, and grazing rights, except where the forest was subject to common rights.<sup>189</sup> Forest laws such as the Forest Charter of 1217, established administrators of forest laws, wardens, foresters, and ‘garcons’.<sup>190</sup> These officials were responsible for administering forest law at the local level, patrolling forests to look for illegal activity, and were also responsible for arresting violators.<sup>191</sup> As I have established previously, the taking of venison from deer parks was illegal, but there were other laws that protected various aspects of forests and deer parks in medieval England. Cutting underbrush, killing lesser game such as rabbits, and the trespassing of grazing animals were also prohibited.<sup>192</sup> Peasants living near deer parks were forbidden to own bows or nets, in the case that they might partake in poaching.<sup>193</sup> Illegal poaching still occurred on these lands, however, most often with commoners caught and made to pay fines for their delict.<sup>194</sup> Since Forest laws sometimes encompassed land around forests, peasants were also banned from

---

<sup>186</sup> John Langton, “Forest Fences: Enclosures in a Pre-Enclosure Landscape,” *Landscape History* 35, no. 1 (2014): 5.

<sup>187</sup> Hanawalt, 146.

<sup>188</sup> Rackham, *Trees and Woodland in the British Landscape*, 168.

<sup>189</sup> Rackham, *Trees and Woodland in the British Landscape*, 168.

<sup>190</sup> Hanawalt, 145.

<sup>191</sup> Hanawalt, 145.

<sup>192</sup> Hanawalt, 145.

<sup>193</sup> Matt Cartmill, *A View to a Death in the Morning Hunting and Nature through History*, (Cambridge, MA: Harvard University Press), 1993; 61.

<sup>194</sup> William Perry Marvin, *Hunting Law and Ritual in Medieval English Literature*, (Woodbridge: D.S. Brewer), 2006; 74.

attacking game animals that were devouring their crops.<sup>195</sup> Deer were also protected legally even if they escaped their respective forest, emphasizing how Forest law extended beyond the physical forest itself.<sup>196</sup> In this sense, forests were not a physical phenomenon, but rather, a legal one.

Within forest borders, farming, cattle raising, mining, ironmaking, and many other activities took place.<sup>197</sup> Kings and elites collected fees from the enforcers of forest laws through leasing out economic activities on their lands.<sup>198</sup> The rate of fees changed throughout the Middle Ages based on demand and supply of available land. When land shortages afflicted growing towns, rules became stricter. However, wood-pasture rights remained reasonably consistent throughout the Middle Ages.

Wood-pasture, the grazing of animals within forests and woodlands, was an essential practice that occurred throughout the medieval period in England. Forest laws prevented the commoners from catching game, but they also ensured the continuation of an ancient and essential tradition: the use of woodlands for seasonal pasture.<sup>199</sup> In many instances, forest inhabitants had extensive common rights that were administered through forest courts.<sup>200</sup> Commoners' herds kept the woods open enough, by grazing, for the pursuit of game.<sup>201</sup> This means that there was a direct benefit from farm animals grazing in forests owned by knights, lords, and kings. Cattle, horses, even sheep, might be "agisted" or pastured in the woods, but it was pigs that were the main kind of domestic stock, taken, especially, to gorge upon acorns and beechmast at the end of the summer.<sup>202</sup> Although animals, such as sheep and pigs were

---

<sup>195</sup> Cartmill, 61.

<sup>196</sup> Rackham, *Trees and Woodland in the British Landscape*, 166.

<sup>197</sup> Young, 6.

<sup>198</sup> Young, 6.

<sup>199</sup> Hooke, 51-52.

<sup>200</sup> Langton, "Forest Fences: Enclosures in a Pre-Enclosure Landscape," 6.

<sup>201</sup> Hooke, 51-52.

<sup>202</sup> Hooke, 51-52.

sometimes seen as bad for forests due to the destructive nature of their grazing habits, it was actually beneficial for all parties involved to have these animals graze in forests, as long as the grazing was carefully managed. Over-pasturing could harm the forest if animals such as sheep and goats plucked roots out of small plants and trees that regenerated forests and parks. Farm animals also rooted up the soil, which actually aided with tree regeneration.<sup>203</sup> The effects of animal grazing in medieval society were, therefore, beneficial for all parties involved and aided in preserving the landscape and forests within parks.

Opposition to the forest system increased in the mid-thirteenth century, and although kings such as Edward I attempted to enforce forest laws with greater severity, new bounds were agreed upon in 1299 that effectively pushed most of the forests back to their original cores.<sup>204</sup> The Forest Laws of wooded Forests covered areas much wider than the actual wood-pastures where deer lived.<sup>205</sup> Between 1200 and 1350, however, many Forests were converted to arable farmland to allow for cultivation.<sup>206</sup> The removal of forest laws allowed for individual landowners to create their own deer parks, without the influence of the crown. Forests were converted to deer parks for a monetary fee since the crown was in debt throughout the thirteenth century.

---

<sup>203</sup> Hooke, 52.

<sup>204</sup> Hooke, 54.

<sup>205</sup> Rackham, *The History of the Countryside*, 130.

<sup>206</sup> Leonard. M. Cantor and J. Hatherly, 76.

## 3.2. Deer and Animals in Medieval England

### 3.2.1. Deer Species and Population Management 1200-1400

Deer populations rose rapidly throughout the Middle Ages as a result of specialized deer population management techniques and restocking methods. Not only did woodland cover increase with the establishment of medieval deer parks, but deer populations also increased.<sup>207</sup> Deer parks and Forests contained multiple species of deer, including fallow deer, red deer, and roe deer. The majority of medieval deer parks contained fallow deer as they were the simplest to care for and they were the most aesthetically appealing with their spotted coats.<sup>208</sup> Fallow deer were also more commonly found in English parks due to the fact that they are easier to manage than other deer species. However, they were very strong and agile and required a sturdy park barrier to keep them from escaping.<sup>209</sup> They also thrived in small forests and parks, explaining why fallow deer became more widespread across England.<sup>210</sup>

Fallow deer most likely came from the Mediterranean, and since the Normans occupied Sicily, it is likely that they brought deer over to England with them.<sup>211</sup> Mileson explains that: “The large-scale introduction of the fallow deer from overseas in the twelfth century seems to have been a response to this decline in native deer, as well as being related to changing hunting practices.”<sup>212</sup> Deer populations of a variety of species were also imported from Scotland into England.<sup>213</sup> Red deer are an indigenous species to England.<sup>214</sup> There are historical records that mention how Saxon kings hunted red deer in forests of Sussex.<sup>215</sup> Red deer, although widespread

---

<sup>207</sup> Flight, 319-320.

<sup>208</sup> Rackham, *The History of the Countryside*, 125.

<sup>209</sup> Rackham, *Trees and Woodland in the British Landscape*, 153.

<sup>210</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 177.

<sup>211</sup> Sykes, “The Introduction of Fallow Deer to Britain: A Zooarchaeological Perspective,” 81.

<sup>212</sup> Mileson, 28.

<sup>213</sup> John M. Gilbert, *Hunting and Hunting Reserves in Medieval Scotland*, (Edinburgh: Donald), 1979; 31.

<sup>214</sup> William Page, *The Victoria History of the County of Sussex Vol. 1.*, (Folkestone, England: Published for the University of London, Institute of Historical Research by Dawson of Pall Mall), 1973; 305.

<sup>215</sup> William Page, *The Victoria History of the County of Sussex Vol. 1.*, 305.

in Lowland England, were more commonly found in moorland and mountain areas with little or no woodland, such as Northern England or Scotland where they thrived on harder food sources in comparison to fallow deer.<sup>216</sup> Roe deer were rare because of the fact that they preferred dense woodland habitats.<sup>217</sup> Pluskowski explains that: “Roe deer were not particularly suited to compartmented parks given their colonization of hedgerows and small patches of woodland, whilst the large size of red deer made them unsuitable for small parks.”<sup>218</sup> Many deer parks contained a combination of these three species of deer. Within deer parks, chases and forests, deer were managed more intensively in the later parts of the thirteenth and fourteenth centuries.<sup>219</sup>

Deer were managed in the Middle Ages, skillfully and intelligently, using methods that showed a considerable understanding of the animal’s habits and needs. Red and roe deer species, both native to England, were in decline in the twelfth and thirteenth centuries due to the intensifying agricultural practices.<sup>220</sup> Deer populations, especially in parks but also in chases and forests, did not necessarily flourish of their own accord and needed regular care and attention.<sup>221</sup> The legitimate means of populating a deer park in the Middle Ages were by the imparkment of woods already containing deer populations, a royal grant of live deer, or the use of deer-leaps licensed by the king.<sup>222</sup>

---

<sup>216</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 177.

<sup>217</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 169.

<sup>218</sup> Aleksander Pluskowski, “The Social Construction of Medieval Park Ecosystems: An Interdisciplinary Perspective,” 66.

<sup>219</sup> Birrell, “Deer and Deer Farming in Medieval England,” 112.

<sup>220</sup> Mileson, 28.

<sup>221</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 187.

<sup>222</sup> Graham J Cooper and William D Shannon, “The Control of Salters (deer-Leaps) in Private Deer-Parks Associated with Forests: A Case Study Using a 1608 Map of Leagram Park in the Forest of Bowland, Lancashire,” *Landscape History* 38, no. 1 (2017): 43.

Deer park management was multifaceted and even the deer themselves needed to be cared for. The basic requirements of deer within parks included, shelter, fodder, and drinking water.<sup>223</sup> Due to disease, malnourishment, and overcrowding, those hired to work in Forests and woodlands also needed to continually monitor the animals contained within them. As a result of the inherent value of deer, some owners tried to keep far too many deer, which resulted in the death of these animals due to starvation, disease, and overcrowding.<sup>224</sup> It is important to keep in mind that deer parks did support considerable herds, and that their owners drew on them regularly for supplies of venison.<sup>225</sup>

Due to issues associated with unhealthy herds, a wide range of measures were adopted to preserve and encourage healthy deer populations.<sup>226</sup> These ranged from very specific practices such as providing cows to suckle motherless fawns, to very general but basic measures to protect the deer's habitat.<sup>227</sup> While the woodland of the royal forests were inevitably eroded over time, there was a consistent attempt, in principle at least, to preserve within the larger forest those areas the deer habitually frequented.<sup>228</sup> For example, inquisitions attempted to establish which woods might be felled or which areas assarted to cause deer the least amount of damage.<sup>229</sup> Customary activities such as pasturing animals, collecting wood and digging turf might be confined to areas where they would not disturb the deer.<sup>230</sup> Deer were the most important assets for owners of these vast woodlands and it was important to keep populations healthy to maximize the amount of resources, including venison, that could be extracted from these parks.

---

<sup>223</sup> Aleksander Pluskowski, "The Social Construction of Medieval Park Ecosystems: An Interdisciplinary Perspective," in *The Medieval Park: New Perspectives*, (Macclesfield: Windgather Press), 2007; 64.

<sup>224</sup> Rackham, *The History of the Countryside*, 126.

<sup>225</sup> Birrell, "Deer and Deer Farming in Medieval England," 113.

<sup>226</sup> Birrell, "Deer and Deer Farming in Medieval England," 116.

<sup>227</sup> Birrell, "Deer and Deer Farming in Medieval England," 116.

<sup>228</sup> Birrell, "Deer and Deer Farming in Medieval England," 116.

<sup>229</sup> Birrell, "Deer and Deer Farming in Medieval England," 116.

<sup>230</sup> Birrell, "Deer and Deer Farming in Medieval England," 116.



Although still considered wild animals, owners provided deer in their parks with food. Since the deer lived on enclosed land, the animals frequently faced shortages. Deer, traditionally, are mainly grass feeders.<sup>231</sup> They also eat dead leaves, brambles, fruits, and nuts.<sup>232</sup> For the most part, deer are able to forage for themselves, especially where the population density is not excessively high in relation to food resources.<sup>233</sup> Especially in hard winters, though, some animals fail to survive due to a mixture of cold and poor nutrition.<sup>234</sup> Due to the fact that deer parks were artificially constructed habitats with clear borders, food might not always be accessible at all times of the year to these animals. Smaller deer parks with more artificial habitats would not always provide adequate food supplies for deer populations. Generally, larger deer parks featured a wider range of habitats that allowed for them to graze and have more access to larger, natural supplies of food. To combat this, medieval landowners ordered the construction of sheds and other wooden shelters to feed, protect, and preserve the deer.<sup>235</sup> Pluskowski explains that these deer shelters could be rather elaborate, with the construction of timber-framed buildings with thatched roofs.<sup>236</sup> To combat poor nutrition, medieval landowners simply excluded other stock animals from grazing in parks in order to preserve for the deer whatever meagre food was available in the winter and other bad times of the year.<sup>237</sup> This practice is referred to as ‘winter heyning’.<sup>238</sup>

Across medieval England, deer received priority over other animals. It was the king or landowner’s decision whether or not common people were able to use parks for a variety of

---

<sup>231</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 177.

<sup>232</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 177.

<sup>233</sup> Birrell, "Deer and Deer Farming in Medieval England," 117.

<sup>234</sup> Birrell, "Deer and Deer Farming in Medieval England," 117.

<sup>235</sup> Birrell, "Deer and Deer Farming in Medieval England," 117.

<sup>236</sup> Aleksander Pluskowski, "The Social Construction of Medieval Park Ecosystems: An Interdisciplinary Perspective," 65.

<sup>237</sup> Birrell, "Deer and Deer Farming in Medieval England," 117.

<sup>238</sup> Birrell, "Deer and Deer Farming in Medieval England," 117.

purposes, and it was also his decision whether or not to bring in outside sources of food for the deer in his parks. The use of managers or feeding troughs, possibly under cover, which would prevent the hay from spoiling, is sometimes recorded in medieval records and suggests a systematic and controlled provision of food.<sup>239</sup> Feeding and caring for deer was also a costly enterprise. Fallow deer were not a native English species and therefore required considerable resources, especially during the winter.<sup>240</sup> Especially with the onset of the LIA in the fourteenth century, it became extremely costly for elites to maintain healthy deer populations within their parks.<sup>241</sup>

Since, however, fallow deer populations are believed to have been scarce in England throughout the early medieval period, emparkment and further enclosure and breeding techniques most likely aided in their population growth.<sup>242</sup> Deer were also transferred from park to park in England.<sup>243</sup> The king, with the vast area of royal forest to draw on, was obviously best placed to supply deer for the purpose of re-stocking parks. There is much documentation of royal gifts of live deer being provided in the thirteenth century.<sup>244</sup> Scores of deer, mostly bucks and does were granted live to favoured deer park owners every year.<sup>245</sup> This proves that a body of farming practice and management existed and was widespread. Deer transportation involved a considerable amount of labour and also money. Bringing deer across England, from park to park, required much investment as well as a range of skills and knowledge about deer.<sup>246</sup> It would take

---

<sup>239</sup> Birrell, "Deer and Deer Farming in Medieval England," 118.

<sup>240</sup> Mileson, 77.

<sup>241</sup> Mileson, 77.

<sup>242</sup> Sykes, "The Introduction of Fallow Deer to Britain: A Zooarchaeological Perspective," 81.

<sup>243</sup> Birrell, "Deer and Deer Farming in Medieval England," 120.

<sup>244</sup> Birrell, "Deer and Deer Farming in Medieval England," 120.

<sup>245</sup> Birrell, "Deer and Deer Farming in Medieval England," 120.

<sup>246</sup> Birrell, "Deer and Deer Farming in Medieval England," 123.

considerable time to transport such large creatures across the country, but it was also a worthwhile endeavour due to their inherent value.

### 3.2.2. Human-Animal Relations

To better understand deer parks in medieval England, it is important to consider the ubiquity of premodern human-animal relations. The people of medieval Britain lived in daily contact with domestic and wild animals.<sup>247</sup> Cultural attitudes meant that deer were regarded as a special kind of animal, meaning that they were not managed in the same manner as livestock and farm animals.<sup>248</sup> Christianity reinforced man's presumed rights over the natural world, placing man above animals. There was a long-established view in medieval England that the world had been created for man's sake and that other species were meant to be subordinate to man's wishes and needs.<sup>249</sup> Cultural generalizations about the ideas of animals changed throughout the medieval period, meaning that notions about animals were not uniformly acquired and have not remained constant over time.<sup>250</sup> Although medieval people believed humans to be animals, animals are only animals if their behaviour is not up to human standards.<sup>251</sup> Therefore, humans are above animals because they do not give into primal urges to the extent that all other animals do. This means that humans not only have control over animals as seen from the authority of God, but they can subject their will upon all other species and the environment.

---

<sup>247</sup> Susan Crane, *Animal Encounters: Contacts and Concepts in Medieval Britain*, (Philadelphia: University of Pennsylvania Press), 2013; 1.

<sup>248</sup> Mileson, 46.

<sup>249</sup> Keith Thomas, *Man and the Natural World: Changing Attitudes in England, 1500-1800*, (London: A. Lanes), 1983, 29.

<sup>250</sup> Joyce Salisbury, *The Beast Within: Animals in the Middle Ages*, (New York: Routledge), 1994, 10.

<sup>251</sup> Salisbury, 10.

Deer and venison were considered luxury commodities, meaning that they were exclusively available to the rich and powerful members of medieval English society. A mark of distinction for the upper classes was having the ability and the resources to partake in deer hunting.<sup>252</sup> The hunt was a matter primarily for the king and his court, and, by extension, for the nobility and knightly class.<sup>253</sup> Although venison was viewed as a highly regarded gift for people of elite status, the main purpose of deer parks and deer farming was the meat that they produced. Fresh venison could be obtained for much of the year, making it a desirable dish for elite members of medieval English society.<sup>254</sup> All meats were extremely valuable in the Middle Ages, and to serve meat in abundance was a way of demonstrating wealth and status.<sup>255</sup> As Hoffmann explains: "Meat was never absent from medieval European diets, though it nowhere served as the principal source of calories and was eaten as much for reasons of taste and social prestige as on nutritional grounds."<sup>256</sup> Food, landscape and social order are inextricably linked and their complex inter-relationship, although articulated in many different ways, is expressed eloquently through hunting and the redistribution and consumption of venison.<sup>257</sup>

Medieval aristocrats were the main consumers of venison, but they were not always the ones who went hunting for deer. It was impracticable for the owners of deer preserves to supply their own tables as the greatest lords had numerous hunting grounds and not enough time to actually go out and capture the deer. Hundreds of deer were hunted and killed each year, just for the king. Rackham explains how, "In an average year Henry III took 607 fallow deer: half for his own table, one-third for the feasts of his friends, one-sixth alive. He took 159 red deer, 45 roe,

---

<sup>252</sup> Flight, 319.

<sup>253</sup> Frank Barlow, *The Norman Conquest and Beyond*, (London: Hambledon Press), 1983; 15.

<sup>254</sup> Birrell, "Procuring, Preparing, and Serving Venison in Late Medieval England," 177.

<sup>255</sup> Birrell, "Procuring, Preparing, and Serving Venison in Late Medieval England," 187.

<sup>256</sup> Hoffmann, "Frontier Foods for Late Medieval Consumers: Culture, Economy, Ecology," 137.

<sup>257</sup> Naomi Sykes, "Deer, Land, Knives and Halls: Social Change in Early Medieval England," 185.

and 88 wild swine.”<sup>258</sup> Also, many high-ranking members of medieval English society might also be occupied elsewhere at the crucial times of year when deer hunting was most common.<sup>259</sup> Much, perhaps most, of the venison consumed in aristocratic households was hunted by servants, and hunting was a job that employed many people and required lots of equipment and numerous specially trained hunting dogs.<sup>260</sup> The king, with his large household and many hunting preserves, employed several teams of huntsmen, whose working lives were spent travelling from one royal forest to another, hunting when asked.<sup>261</sup> It was usually they who were dispatched to take the king’s venison in specified forests.<sup>262</sup> Many deer parks across medieval England required a dedicated team to hunt the animals to satisfy the desires of the kings and the elites. This exposes a complex network of relationships between kings, nobles, knights, commoners, and people who had specialized jobs, such as hunters. Deer parks are not simple cultural and social creations, but rather complex parks that required much attention and care from specially trained workers.

The special status associated with eating venison derives from the fact that it was not accessible to everyone in the Middle Ages.<sup>263</sup> Venison was indicative of status and its gift was a special favour, whether from the king or from those fortunate enough to have it in parks of their own.<sup>264</sup> Gifts of food formed a part of hospitality, a duty and, at various times, a formal obligation; it might be expected by a lord from his tenants and others.<sup>265</sup> This is due to the fact that venison was neither bought nor sold in the normal way; it had to be hunted, and venison

---

<sup>258</sup> Rackham, *Trees and Woodland in the British Landscape*, 170.

<sup>259</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 178.

<sup>260</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 178.

<sup>261</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 178.

<sup>262</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 178.

<sup>263</sup> Birrell, “Procuring, Preparing, and Serving Venison in Late Medieval England,” 177.

<sup>264</sup> C.M. Woolgar, “Gifts of Food in Late Medieval England,” *Journal of medieval history* 37, no. 1 (2011): pp. 11.

<sup>265</sup> Woolgar, 13.

might be eaten only on occasion and in smaller quantities than other meats.<sup>266</sup> Venison was a commodity that was beyond price. There is not a single record of a sale or valuation of deer and venison, as a haunch was a gift that money could not buy.<sup>267</sup> When not provided as a gift, venison, for the most part, was consumed by the owners of the deer parks and Forests.

### 3.3. Little Parks in Medieval Europe 1150-1400

Little parks were a category of park found across England and Europe and they served a variety of purposes that differed from traditional, larger deer parks. Deer parks, as outlined above, were distinct types of landscapes that provided a supply of venison to their owners and the king. In contrast, little parks featured many of the same characteristics as larger deer parks, but they also contained gardens as well as animals that were not always hunted. Similar to traditional deer parks, little parks were owned by elites who typically possessed more than one park and had room for multiple parks on their vast estates.

In medieval Europe, little parks were typically either vegetable gardens, ornamental gardens, or orchards. The first type of little park can be characterized as an herber, which was a small ornamental garden under an acre in size, that contained a lawn as well as an herbaceous border.<sup>268</sup> Orchards, the second type of little park, were typically one to four acres in size and provided fruit and served ornamental purposes, for example, they provided owners with places to relax in the shade.<sup>269</sup> The third type of little park, resembled an ornamental park, populated with animals and birds and contained a variety of flora.<sup>270</sup> These animals were present in the park for

---

<sup>266</sup> Birrell, "Procuring, Preparing, and Serving Venison in Late Medieval England," 177.

<sup>267</sup> Rackham, *The History of the Countryside*, 125.

<sup>268</sup> Landsberg, 13.

<sup>269</sup> Landsberg, 13.

<sup>270</sup> Landsberg, 13.

the sole purpose of visual appeal, as wealthy landowners ventured into these parks to enjoy nature. Landsberg explains how: “Royalty and the nobility would have had all three types, covering upwards of fifteen acres such properties in England being commonly interwoven with moats and chains of ponds, and lying adjacent to a large hunting park of some two hundred acres.”<sup>271</sup> The sizes of these parks also varied, meaning that herber gardens, although the smallest type of this park, could be two to five acres in size.<sup>272</sup> In comparison, traditional British deer parks ranged from fifty acres for smaller parks, to one thousand acres for larger parks.<sup>273</sup> Sometimes called “pleasure parks”, little parks were owned by elites in large quantities. Many elites would have multiple types of the same park, and of all types of parks outlined above.

Some of these parks were walled or had defined barriers to keep animals inside of them. Much like deer parks, little parks were expanded, added to, and transformed throughout the Middle Ages. The purposes of these parks also changed due to socioeconomic and environmental factors. Located within little parks were a diverse range of animals such as, hares, stage, deer, rabbits, wildfowl, and fish.<sup>274</sup> Some little parks also contained cows.<sup>275</sup> These animals were not to be hunted, but rather to be observed by the owners and guests of the parks. Medieval aristocratic hunters shaped their parks as a miniature image of an ideal forest with a guaranteed supply of animals, and with places to harbour them.<sup>276</sup> There were also open areas within these parks so that men could easily make their way through the terrain and woodland, much like deer parks, to either hunt, track, or observe the animals.<sup>277</sup>

---

<sup>271</sup> Landsberg, 13.

<sup>272</sup> Landsberg, 13.

<sup>273</sup> Mileson, 3.

<sup>274</sup> Landsberg, 21.

<sup>275</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 197.

<sup>276</sup> John Cummins, “Medieval Hunting and the ‘Natural Landscape’”, in *Inventing Medieval Landscapes: Senses of Place in Western Europe*. Gainesville: University Press of Florida, 2002; 47.

<sup>277</sup> Cummins, 47.

## CHAPTER IV

### THE ARUNDEL “LITTLE “PARK” 1150-1400: CASE STUDY

#### 4.1. Introduction

“Little Park” on the Arundel estate underwent many changes in its long history. Located on the north-west side of Arundel Castle, the estate’s occupants utilized this park for a variety of purposes between 1150 and 1400. In 1158, the region was a vineyard and, by 1275, it was a mixture of garden and pasture.<sup>278</sup> By 1301, Arundel’s masters transformed the space into a deer park.<sup>279</sup> This section of the paper examines Little Park to piece together when and why these changes and landscape transformations occurred. Evidence from archival documents will be used as well as evidence found in maps, Victoria County Histories, and other secondary sources.

To better understand the Arundel Little Park, it is important first to analyze the topography of the estate. Sussex boasts land that is not only agriculturally productive, but also well suited to woodlands, making it a popular county for farming and deer parks.<sup>280</sup> Rackham explains that: “Outside of the Weald in Sussex, with the coast being one of the most highly-farmed parts of England, it is estimated that Sussex contained about 25,000 acres of woodland shortly after the Conquest.”<sup>281</sup> Before 1535, Rackham estimates that Sussex contained 112 deer parks, meaning one deer park for every 13 square miles.<sup>282</sup> William Page explains how: “The forest of Arundel was a wide tract of country extending over the two rapes of Arundel and Chichester, stretching from the bank of the Arun nearly to the western border of Sussex, in

---

<sup>278</sup> A. P. Baggs and H. M. Warne. "Arundel," in *A History of the County of Sussex: Volume 5 Part 1, Arundel Rape: South-Western Part, Including Arundel*, ed. T P Hudson (London: Victoria County History, 1997), 10-101. *British History Online*, accessed June 10, 2021, <http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101>.

<sup>279</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>280</sup> Gardiner, 102.

<sup>281</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 113.

<sup>282</sup> Rackham, *Ancient Woodland: Its History, Vegetation and Uses in England*, 191.



length about 12 miles, and in breadth from 4 to 6 miles.”<sup>283</sup> He continues, stating that: “Within or on the verge of this forest were the great and little parks of Arundel, the wood called Ruell.”<sup>284</sup>

Humans have occupied what became the Arundel estate for over ten thousand years and have fortified it for at least one thousand years. Indeed, the estate served as an important defensive fortress in (West) Sussex. In 1067, the Castle of Arundel was built by Roger de Montgomery.<sup>285</sup> As a key port from Normandy to England, being the shortest and most direct route between the two countries, Arundel became an important defensive stronghold for William the Conqueror.<sup>286</sup> It is assumed that there was a port at Arundel before 1066, as in 1086, Roger de Montgomery received income from the port and ship dues.<sup>287</sup> The town remained a passenger port for Normandy in the early thirteenth century. The early Norman castle featured a circular moat at the center with baileys to the north-west and south-east.<sup>288</sup> On the east side, the estate is pitched on the cliff edge of the river of Arun with deep ditches on the west and north sides of the estate.<sup>289</sup>

Throughout the high and late Middle Ages, the castle and estate changed owners several times. Between 1102-35 and 1176-90, the castle was in royal hands due to socioeconomic difficulties and political disputes.<sup>290</sup> It is important to keep these dates in mind since Little Park was recorded as a vineyard in 1158, between two periods of crown ownership. In 1139, William d’Aubigny, the then-earl of Arundel, owned the estate.<sup>291</sup> By 1275, the year in which Little Park

---

<sup>283</sup> William Page, *The Victoria History of the County of Sussex Vol. 2.*, (Folkestone, England: Published for the University of London, Institute of Historical Research by Dawson of Pall Mall), 1973; 303.

<sup>284</sup> Page, *The Victoria History of the County of Sussex Vol. 2.*, 303.

<sup>285</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>286</sup> Page, *The Victoria History of the County of Sussex Vol. 1.*, 353.

<sup>287</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>288</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>289</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>290</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>291</sup> A. P. Baggs and H. M. Warne. "Arundel".

was recorded as both a garden and park, the estate was in the custody of John de Wauton (1275-6) and then Ralph of Sandwich (1276) since the previous owners were involved in a legal case with the crown.<sup>292</sup> By 1292, these disputes were solved and Richard FitzAlan, earl of Arundel and owner of the estate, lived at the castle until he passed away in 1302.<sup>293</sup> Little Park was transformed into a deer park in the lifetime of Richard FitzAlan.

In the 1340s and 50s, Richard FitzAlan, earl of Arundel, who passed away in 1376, owned and lived on the estate between these decades, managing the estate until the end of the period in this study.<sup>294</sup> At his death, he was most likely the richest man in England.<sup>295</sup> Chris Given-Wilson explains how: “Between 1337 and 1373 he spent about 4,000 pounds on buying manors and other properties in Sussex, thus bolstering his already dominant position in the western half of the country.”<sup>296</sup> Richard FitzAlan used his wealth in his family’s, friends, and his own interest to spend and lend in a way to increase their position in England.<sup>297</sup>

#### 4.1.2. Medieval Parks on the Arundel Estate

Land use in Arundel during the Middle Ages was diverse. The estate was divided between meadow beside the river, arable on the lower slopes of the downs, and some rough pasture on the highest land.<sup>298</sup> The west park with its poorer soil supported parkland and woods.<sup>299</sup> Agricultural land was present above the Little Park to the north.<sup>300</sup> A diverse range of

---

<sup>292</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>293</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>294</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>295</sup> Chris Given-Wilson, “Wealth and Credit, Public and Private: The Earls of Arundel 1306-1397,” *The English Historical Review* 106, no. 418 (1991): 1.

<sup>296</sup> Given-Wilson, 1.

<sup>297</sup> Given-Wilson, 1.

<sup>298</sup> A. P. Baggs and H. M. Warne. "Arundel".

See also Figures 2 and 4.

<sup>299</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>300</sup> A. P. Baggs and H. M. Warne. "Arundel".

meadow, pasture, woodland, and agricultural land was common on estates in southern England at this time, and the Arundel estate was no exception. The FitzAlans made a majority of their fortune from seigneurial income and leasing land, with a small portion of this income derived from leasing pasturelands: “In 1302, the family's lands were worth about 1,600 pounds per annum. By the late 1340s, with the acquisition of Chirk and various properties in Sussex, it was over 2,700 pounds.”<sup>301</sup> This expansion and added income through the addition of other lands allowed for the Arundel estates in West Sussex to thrive. The FitzAlans, unrestrained by fiscal concerns, were able to alter their estates and create whatever types of landscapes they desired, including a large number of parks. Within the Arundel estate in West Sussex there were two deer parks, the Arundel forest, and one forest called the “Rewel Wood”.

The Rewel Wood was located to the west of the Great Park and was a separate part of the Arundel Forest (See Figures 2 and 4). This forest was most likely established in the later medieval period and seems to have been sectioned off from the Arundel Forest in the fifteenth or sixteenth century, and in 1570 it was said to be about 20 miles round.<sup>302</sup> In the Middle Ages, the Rewel contained woods and open pasture, with common pasture rights mentioned in 1302.<sup>303</sup> In 1331, deer were kept in the Rewel.<sup>304</sup> Around the year 1600, the Rewel acted as pastureland for sheep, cattle, and horses.<sup>305</sup>

The borders of the Arundel forest are difficult to deduce. The records attest to the deer parks and the Rewel being a part of this forest, but do not specify the exact bounds of this forest. Arundel forest also provided provisions of “dry-wood” in 1276.<sup>306</sup> The records mention how this

---

<sup>301</sup> Given-Wilson, 17.

<sup>302</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>303</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>304</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>305</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>306</sup> "Close Rolls, Edward I: December 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 362-366. *British History Online*, 2021.

was to be completed in a manner that would result in the least amount of damage done to the forest, with the sale price of 20 marks to be re-invested into repairing the houses of the king's castle of Arundel.<sup>307</sup> Again in 1277, underwood and dead-wood were sold from the Arundel forest for 20 marks, with the money being utilized for repairs in the "houses" of Arundel castle.<sup>308</sup> The records do not mention exactly where these provisions of dry wood were taken from the estate, however, it is important to note that these activities were conducted on the estate.

From the late twelfth century, regular quantities of deer were hunted and taken from the Arundel estate. In 1273, the Archbishop of Canterbury requested twenty-six bucks yearly from the forest of Arundel, to be delivered at the archbishop's manor of Slindon.<sup>309</sup> Also in 1273, bucks and does were kept in the Arundel estate.<sup>310</sup> The earls of Arundel also gave deer from their forest as gifts: for example in 1275, they granted four bucks to Stephen de Penecestria.<sup>311</sup> Again in 1276, there are records of more deer, thirteen bucks and thirteen does yearly, taken from the forest and given to the Archbishop of Canterbury.<sup>312</sup> Later in 1276, the king sent huntsmen to take twenty bucks in the forest and park of Arundel.<sup>313</sup> An interesting note to make with this last entry, is the fact that the deer are not only taken from the forest of Arundel, but also from the parks located on the Arundel estate. Previously, the forest had only been mentioned. This trend continues into 1279 as the king provided more of his subjects with grants of deer. On April 19

---

<sup>307</sup> "Close Rolls, Edward I: December 1276," 362-366.

<sup>308</sup> "Close Rolls, Edward I: May 1277," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 380-391. *British History Online*.

<sup>309</sup> "Close Rolls, Edward I: July 1273," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 18-25. *British History Online*.

<sup>310</sup> "Close Rolls, Edward I: October 1273," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 32-36. *British History Online*.

<sup>311</sup> "Close Rolls, Edward I: August 1275," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 205-209. *British History Online*.

<sup>312</sup> "Close Rolls, Edward I: January 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 262-267. *British History Online*.

<sup>313</sup> "Close Rolls, Edward I: May 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 281-292. *British History Online*.

and 21, 1279, the king granted two does to Roger de Clifford as a gift, and a doe to Isabella, wife of Roger de Clifford.<sup>314</sup> This means that deer parks on the Arundel estate may have been stocking a high number of deer, especially in the late thirteenth century and early fourteenth century. This might be one of the reasons why Little Park was converted into a deer park in 1301, since the estate needed to house more deer to keep up with demand.

Along with these forests, The Arundel estate featured two medieval parks: the Great Park and the Little Park, with the largest park being the Great Park (See Figures 1, 2, and 3). Established in 1094, the Great Park was created by Roger de Montgomery.<sup>315</sup> The Great Park occupied semi-fertile land located west of the parish.<sup>316</sup> In 1589, the park was approximately 450 acres in size with a three-mile round pale.<sup>317</sup> The park contained a variety of trees, including oak timber, beech, and maple throughout the Middle Ages. In 1275, winter and summer pasture for cattle are recorded in the Great Park.<sup>318</sup> Grazing and pannage are recorded in this park in the thirteenth century.<sup>319</sup> This park also had a keeper in 1244 who was responsible for ensuring trespassers did not steal any valuable goods, including deer. The Great Park featured meadows in 1275 and by 1302 there was 120 acres of meadow in this park.<sup>320</sup> Deer are recorded in the Great Park in the later 13<sup>th</sup> century and in 1301, the earl of Arundel could take five bucks and seven does per year.<sup>321</sup> By 1570, there were about 300 to 400 fallow deer and 24 red deer.<sup>322</sup> Rough

---

<sup>314</sup> "Close Rolls, Edward I: April 1279," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 524-528. *British History Online*.

<sup>315</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>316</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>317</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>318</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>319</sup> Marie Clough, *Two Estate Surveys of the Fitzalen Earls of Arundel*, (Lewes, England: Sussex Record Society), 1969; 2.

<sup>320</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>321</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>322</sup> Clough, 2.

pastureland was also present in the Great Park during the Middle Ages, making this piece of land economically valuable for a variety of reasons.<sup>323</sup>

#### 4.2. Arundel “Little Park” 1158-1275

Between 1158 and 1275, the owners and operators of Arundel converted Little Park from a vineyard into a garden pasture. In the Middle Ages, it is estimated that Little Park was about 26 acres in size.<sup>324</sup> Located directly to the north of the Castle, the park is easily seen from the interiors of the castle. The original path to the castle had been through the Little Park, curving towards the medieval barbican and gatehouse.<sup>325</sup> Little Park had definite man-made fences and woodland borders with underbrush in the medieval and early modern period. This type of park pale is also present today (Figure 5). Throughout the Middle Ages, underwood and wind-fallen wood was sold.<sup>326</sup> However, the types of trees present in this park throughout the Middle Ages is not clear, however, today the park hosts a variety of species of trees. The center of the park featured land that was grassy and clear, and land that was not considered to be rough terrain (Figure 5). Pannage for swine was mentioned in the later twelfth century in both the Little Park and the Great Park.<sup>327</sup> Grazing was also available for livestock, worth 5s.<sup>328</sup>

Throughout the medieval and early modern period, there were multiple gardens located on the Arundel estate. In 1187, and in the thirteenth and fourteenth century, Little Park also included space for small gardens.<sup>329</sup> This was a common use of land in medieval England, as

---

<sup>323</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>324</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>325</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>326</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>327</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>328</sup> Clough, 2.

<sup>329</sup> A. P. Baggs and H. M. Warne. "Arundel".

some estates contained small gardens within the castle walls. In addition to the gardens within Little Park, there was also a small castle garden located near Little Park (See Figure 3). This small garden likely produced a small amount of produce or fruit for the inhabitants of the Arundel Castle. In addition to the small garden located just outside the castle, archival documents reveal that Little Park was called “Wynyard”, that is, vineyard, in 1158.<sup>330</sup> Little Park in 1158 was also enclosed in a way that ran partially around the castle, as described in the archival documents, to prevent outside animals from entering and eating the produce grown in this space.<sup>331</sup> This park was also said to contain “tree lands” and lands that were “tilled”.<sup>332</sup> The tree lands most likely refer to a boundary of mature trees within the park, still visible today (See Figure 4). The areas that were tilled were likely located at the center of the park, where the terrain is smooth and easy to cultivate plants. Clearly, the park served a variety of purposes, and in medieval park fashion, provided its owners with a range of desirable commodities.

Little Park possesses many traits similar to twelfth-century medieval English vineyards. In medieval England, vineyards were surrounded by a ditch, a bank and a thorn hedge.<sup>333</sup> On the continent, vineyards were surrounded by a wall.<sup>334</sup> Little Park contains a combination of these two types of enclosure methods. In the 1630s, there is evidence of Little Park being used as an orchard that contained apple, pear, plum, and filbert trees.<sup>335</sup> This means that Little Park was capable of providing adequate land to grow fruit and harbour fruit trees. Unfortunately, the record does not specify what kinds of trees are found in Little Park in 1158, however, the fact that Little Park was referred to as “Wynyard” strongly suggests that operators cultivated grapes

---

<sup>330</sup> West Sussex Record Office Par 8/6/5 f.3v.

<sup>331</sup> West Sussex Record Office Par 8/6/5 f.3v.

<sup>332</sup> West Sussex Record Office Par 8/6/5 f.3v.

<sup>333</sup> Landsberg, 26.

<sup>334</sup> Landsberg, 26.

<sup>335</sup> A. P. Baggs and H. M. Warne. "Arundel".

on this small tract of land. The characteristics of the park and the climate of this region in southern England further support this likelihood.

#### 4.3. Transition from a Vineyard to a Garden and Pastureland 1158-1275

Between 1158 and 1275, changes in weather and ownership caused changes within the Arundel estate and Little Park. In 1275, the Arundel estate changed owners twice with John de Wauton stewarding the castle in 1275-6, and Ralph of Sandwich in 1276. With the changes in ownership and changes in climate, it most likely became challenging and increasingly more expensive for managers of the estate to cultivate grapes for wine. Little Park was, therefore converted from a vineyard to a garden and pastureland in 1275.<sup>336</sup> For many historians and climatologists, grape harvests data and dates provide a basis for reconstructing spatial information for variability of past climate changes, and can be represented by a mean temperature change of as high as 1° C.<sup>337</sup> This is indicative of the fact that wine growing practices did not shift during the Little Ice Age and therefore the reasons for these changes in harvest dates are related to climatic changes on a regional level.<sup>338</sup> Although in the case of Little Park grape harvest dates are not known, a series of records of years and seasons of bad weather can provide reasoning for shifts in land management and usage. Pribyl explains how: “Summer temperatures dropped between 1300 and 1400 in England and wine quality must have been reduced, but what changed in a much more fundamental way were population size and density as well as the availability and cost of labour.”<sup>339</sup>

---

<sup>336</sup> Public Records Office SC 6/1019/22.

<sup>337</sup> P. I. Yiou et. al., 585.

<sup>338</sup> P. I. Yiou et. al., 585.

<sup>339</sup> Pribyl, 141.



It is estimated that April-July temperatures dropped in southern England as early as 1256.<sup>340</sup> Kathleen Pribyl, Richard C. Cornes, and Christian Pfister explain that average temperatures dropped from 13°C to 12.4°C between 1256 and 1431.<sup>341</sup> Between 1256 and 1320 the April to July mean temperatures were lower than the warmer spring-early summer temperatures in the 1320s, 1330s, and 1360s.<sup>342</sup> Many other vineyards had a short life in England, as it was not uncommon to change the uses of these landscapes. For example, a vineyard was created in Plumstead in 1310, but by 1334-1335, records of this vineyard vanish.<sup>343</sup> This is an interesting vineyard to consider in contrast to Little Park since the vineyard at Plumstead was created after the onset of the LIA, whereas Little Park was transformed into an easier to manage landscape in reaction to changes in the natural environment.

#### 4.4. Transition from a Garden and Pastureland to a Deer Park 1275-1301

In the fourteenth century, as early as 1301, Little Park contained deer.<sup>344</sup> Records from the fourteenth century indicate that two bucks and two does were taken from the park each year.<sup>345</sup> In the early fifteenth century, a ranger was responsible for monitoring the Little Park.<sup>346</sup> Within the Honour of Arundel there were foresters and parkers employed at Little Park, the Great Park, and the Ruele.<sup>347</sup> This demonstrates not only the existence of these parks, but also the fact that these parks were regarded as important enough to employ paid men to patrol them. Records of park keepers on the Arundel estate are well-documented. These records indicate

---

<sup>340</sup> Kathleen Pribyl, Richard C. Cornes, and Christian Pfister, "Reconstructing Medieval April-July Mean Temperatures in East Anglia, 1256–1431." *Climatic Change* 113, no. 2 (2012): 393.

<sup>341</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 393.

<sup>342</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 393.

<sup>343</sup> Pribyl, 139.

<sup>344</sup> Public Records Office SC 6/1029/22.

<sup>345</sup> Clough, 2.

<sup>346</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>347</sup> Clough, 115.

direct notes to the parkers of the kings' huntsmen being sent to the forest to take deer in the name of the king, although it is not specified which parks these deer will be taken from.<sup>348</sup>

The transition of Little Park from a garden pasture into a deer park may have been influenced by periods of cold weather in the late thirteenth century. Very cold growing seasons were recorded in southern England in 1275, 1283, 1294, 1314, 1315, 1319, 1323, 1335, 1348, 1364, 1370, 1374, 1421 and 1428, affecting crop and grapevine cultivation.<sup>349</sup> However, data density is low until 1290, so a definite assessment of interannual variability before 1290 is difficult.<sup>350</sup> This means that temperatures could have been lower or higher than in neighbouring years. During these periods, jumps in growing season temperatures from one year to the next of 1.5°C or more are not uncommon, which is evident in the grain harvest date records.<sup>351</sup> A great deal of temperature variability is recorded from the decade 1290-1300.<sup>352</sup> The bad weather of the LIA after the year 1300, demonstrated the effectiveness of the FitzAlan's shift from Little Park as a vineyard, to a garden/pasture, to a deer park. The wet weather became worse in 1316, cementing Little Park as a deer park.<sup>353</sup> In medieval England, cool conditions during the growing season often coincided with raised levels of precipitation, whereas warm spring-summer conditions are more likely associated with drier weather.<sup>354</sup>

In addition to the colder weather, during the fourteenth century parks became fashionable again with the addition of heroines and tree-lined avenues.<sup>355</sup> However, the economic contribution of parks, underbrush and timber resources, may have outweighed their sporting

---

<sup>348</sup> "Close Rolls, Edward I: May 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 281-292. *British History Online*.

<sup>349</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 404.

<sup>350</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 404.

<sup>351</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 404.

<sup>352</sup> Pribyl, 83.

<sup>353</sup> Aberth, 51.

<sup>354</sup> Pribyl, 95.

<sup>355</sup> Brandon, 135.

value.<sup>356</sup> Plenty of parks in the later fourteenth and fifteenth centuries remained full of deer, meaning the continued disregard for increasing profits and better land-use management techniques.<sup>357</sup> The FitzAlans, as described above, were extremely wealthy and could, therefore, afford to transform this park three times within the span of 150 years. They were also able to maintain their deer parks in the face of socioeconomic challenges. In 1570 there were about 30 fallow deer and two or three red deer kept in Little Park, even though by this time, only a small part of the park remained wooded.<sup>358</sup>

#### 4.5. Conclusions

Why did the owners of Arundel transform Little Park three times in 150 years? Were the main deciding factors of these types of landscape transformations in response to socioeconomic changes, shifts in castle ownership, or climatic variations? The most likely answer is a combination of the three. But to what extent does each factor play a role? Were the climatic influences the major deciding factor in the shift of Little Park from a vineyard to a deer park? If so, the climate in Sussex may have been deteriorating well before 1300, the generally agreed upon date of the onset of the LIA, as some historians hypothesize. Kathleen Pribyl, Richard C. Cornes, and Christian Pfister theorize a deterioration of the climate towards the onset of the LIA, at the end of the thirteenth century.<sup>359</sup> In addition, the LIA on a larger scale might have affected Sussex in 1300. Perhaps late thirteenth century England witnessed a more variable climate, attributing to landscape transformation, given the fact that grape vines are extremely sensitive to weather and sunshine levels.

---

<sup>356</sup> Mileson, 45.

<sup>357</sup> Mileson, 72.

<sup>358</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>359</sup> Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister, 410.

This is a possibility since the LIA affected England on a regional level and not every region in England was affected in the same way throughout the duration of the LIA. Morgan Kelly and Cormac Ó Gráda argue that the main reason for the disappearance of grape cultivation in medieval England is the cooler temperatures of the LIA.<sup>360</sup> They also mention how the production of wine did not cease altogether, but rather there were less vineyards than there had been previously.<sup>361</sup> Pribyl explains that: “If climate would have been the determining factor for English viticulture in general...the crucial point would have been the disastrous climate-induced agricultural crisis of the Great Famine and the following difficult years until 1323, which included not only a further sequence of cold and wet summers, but also of very harsh winters.”<sup>362</sup> If this is the case, more research needs to be completed on the climate of West Sussex in the Middle Ages.

If changes in castle ownership and socioeconomic variations were the main deciding factors behind these changes within Little Park, how did other parks fare in comparison to Arundel? Did the same types of changes occur elsewhere in West Sussex, or in England as a whole? Historians are well aware of the economic shifts in the later half of the thirteenth century, especially with the Black Death. Little Park, however, was a deer park by 1301. Some historians already mentioned how these shifts occurred before the Black Death, meaning social and cultural changes were already affecting land-use patterns in the beginning of the fourteenth century. How far back do these changes go? Woodland landscapes were less affected by profound changes in rural society, meaning that land with woods were less likely to be altered in the fourteenth and

---

<sup>360</sup> Kelly, Morgan and Cormac Ó Gráda, 310.

<sup>361</sup> Kelly, Morgan and Cormac Ó Gráda, 311.

<sup>362</sup> Pribyl, 139-140.

fifteenth centuries.<sup>363</sup> Clearly there are opportunities for more intensive research on these changes in Little Park and other possible implications for southern England as well.

---

<sup>363</sup> Andrew Watkins, "Cattle Grazing in the Forest of Arden in the Later Middle Ages," *Agricultural History Review* 37, no. 1 (1989): 25.

## CHAPTER VI

### CONCLUSION

Deer parks were a popular venture for wealthy members of society throughout the Middle Ages because of the high status associated with venison, and the other valuable resources that could be extracted from these woodlands. Deer parks did not lock land up in an unprofitable way and they also allowed for lords to exercise a degree of choice and control over their lands and the resources within them.<sup>364</sup> Cultural and social beliefs around forests and deer meant that animals in the Middle Ages were assessed based on the value inherent in the function they served for humans. Venison was a gift that was beyond value; it was difficult and expensive to source and also in high demand, which is why Little Park was converted into a deer park in 1301. Overall, these distinctive land-use transformations demonstrated shifts in cultural values impacted by earlier changes in climate.

By 1400, deer parks were in decline and many had fallen out of use in many parts of England and Europe.<sup>365</sup> Shortages of labour made it increasingly difficult to maintain parks properly meaning that many had been disparked or existed in name only and, increasingly, pasture within them was leased out for long periods.<sup>366</sup> Unlike the hunting parks of the early Middle Ages, parks created in the early modern period were often quite large, running to hundreds of acres, were probably never securely enclosed, and were conceived from the beginning as amenity parks.<sup>367</sup> The link between park-making and social ambition was not always clear-cut, as not all those who rose in wealth and social position made parks, and rather

---

<sup>364</sup> Birrell, "Deer and Deer Farming in Medieval England," 126.

<sup>365</sup> Cantor, *The Changing English Countryside, 1400-1700*, 14.

<sup>366</sup> Cantor, *The Changing English Countryside, 1400-1700*, 14.

<sup>367</sup> Cantor, *The Changing English Countryside, 1400-1700*, 14.

invested their money elsewhere.<sup>368</sup> The configuration of enclosed habitats was therefore the result of choices made at the time of initial imparkment, augmented by later modifications, which might include expansion across the landscape, the deliberate planting of trees and hedgerows, and the subdivision, as well as conversion, of land, much like Arundel's Little Park.<sup>369</sup> After the Black Death there was not the same pressure on woods and wastes, however, falling agrarian profits and a shift in emphasis towards pastoral farming and woodland management prompted lords to use parkland areas more efficiently.<sup>370</sup>

While it is true that some old parks had been abandoned or converted to farmland, many existing parks remained intact.<sup>371</sup> Probably around 70 per cent of parks that were in place at the turn of the fourteenth century were still there in the late fifteenth century.<sup>372</sup> The main causes of decline and disparkment were in operation in the thirteenth century as much as the fifteenth: changes in family fortunes, shifts in residential patterns, alteration in agricultural priorities, and the compromising of deer herds through overuse, disease, or poaching, the last particular problem during times of unrest.<sup>373</sup> However, like in the case of Little Park, challenges facing parks could be resolved by the wealth of the property owner. Little Park remained a park throughout the centuries because the owners could afford to maintain it despite unexpected cultural factors. Throughout the later Middle Ages and into the early modern period, wealthy elites were focused on expanding their existing parkland, as their predecessors had been in setting up parks, and their interest clearly centred on hunting.<sup>374</sup>

---

<sup>368</sup> S. A. Miles, "The Sociology of Park Creation in Medieval England," 22.

<sup>369</sup> Aleksander Pluskowski, "The Social Construction of Medieval Park Ecosystems: An Interdisciplinary Perspective," 65.

<sup>370</sup> Miles, 45.

<sup>371</sup> Miles, 37.

<sup>372</sup> Miles, 37.

<sup>373</sup> Miles, 38.

<sup>374</sup> Miles, 39.

Shifts in climate and socioeconomic factors impacted how the owners and operators of Arundel utilized their Little Park. Modern Little Park, however, still resembles its medieval antecedent (See Figure 4). After 1815, Little Park was incorporated into the enlarged pleasure grounds of the castle and in 1895, was converted into a cricket ground.<sup>375</sup> In the early modern period, kings and wealthy elites decided that deer were no longer necessary and landscape parks began to replace deer parks.<sup>376</sup> These new landscape parks served the same purposes for the rich, a fashion that continued to demonstrate class and wealth. Professional park designers gave a new life to old deer parks by enhancing existing landscapes and reorganizing plants and large trees to create ascetically appealing tracts of land.<sup>377</sup> These new landscape parks preserved much of the foliage that was left over from previous deer parks, as seen with Little Park. The modern cricket grounds on the Arundel estate resemble the medieval and early modern features of the park. With a grassy interior, a prominent fence, and woodland surrounding the outside edges of the park, the landscape features of Little Park have not changed much in the past one thousand years (See Figure 5).

Due to the fact that the original footprints of the park remain virtually unchanged throughout its history, Little Park presents itself as a unique object of historical enquiry (See Figures 1-4). The ongoing COVID-19 pandemic regrettably constrained my ability to examine the park and mean that some investigations are absent from this paper. Further archival evidence may be available and may offer more insights into this unique park. Also of importance to this study is physical evidence. Future archaeological evidence may reveal important evidence about Little Parks' time as a vineyard in the years before 1275. More extensive climate reconstruction

---

<sup>375</sup> A. P. Baggs and H. M. Warne. "Arundel".

<sup>376</sup> John Langton, "Royal and Non-royal Forests and Chases in England and Wales," *Historical Research: the bulletin of the Institute of Historical Research* 88, no. 241 (2015): pp. 384.

<sup>377</sup> Rackham, 129.



data for West Sussex may allow for more intensive research into the LIA and if significant climate shifts impacted this region in southern England earlier than 1300. With the growth of the environmental history field, park studies are able to be reborn in a new fashion that allows for further investigations into deer parks with a higher degree of interaction with social history and proxy data. After all, the conversion of Little Park from a vineyard to deer park within 150 years must be multifaceted, but the true extent of factors influencing these transformations including, climate, culture, and economics, have yet to be discovered.

## BIBLIOGRAPHY

### Primary Sources:

- "Close Rolls, Edward I: July 1273," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 18-25.
- "Close Rolls, Edward I: August 1275," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 205-209.
- "Close Rolls, Edward I: January 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 262-267.
- "Close Rolls, Edward I: May 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 281-292.
- "Close Rolls, Edward I: December 1276," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 362-366.
- "Close Rolls, Edward I: May 1277," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 380-391.
- "Close Rolls, Edward I: April 1279," in *Calendar of Close Rolls, Edward I: Volume 1, 1272-1279*, ed. H C Maxwell Lyte (London: Her Majesty's Stationery Office, 1900), 524-528.
- Clough, Marie. *Two Estate Surveys of the Fitzalen Earls of Arundel*. Lewes, England: Sussex Record Society, 1969.
- Public Records Office SC 6/1019/22.
- Public Records Office SC 6/1029/22.
- "Sheet 063," in *Map of Sussex*, (Southampton: Ordnance Survey, 1877-1880), *British History Online*, <http://www.british-history.ac.uk/os-1-to-10560/sussex/063>.
- West Sussex Record Office Par 8/6/5 f.3v.

### Secondary Sources:

- Aberth, John. *An Environmental History of the Middle Ages: The Crucible of Nature*. London: Routledge, 2013.
- Almond, Richard. *Medieval Hunting*. Stroud: Sutton, 2003.
- Arnold, Ellen. "An Introduction to Medieval Environmental History." *History Compass* 6, no. 3 (2008): 898–916.
- Atkin, M. A. "Land Use and Management in the Upland Demesne of the De Lacy Estate of Blackburnshire c 1300." *Agricultural History Review* 42, no. 1 (1994): 1–19.
- Baggs, A. P. and H. M. Warne. "Arundel," in *A History of the County of Sussex: Volume 5 Part 1, Arundel Rape: South-Western Part, Including Arundel*, ed. T P Hudson. London: Victoria County History, 1997, 10-101. *British History Online*, accessed June 10, 2021, <http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101>.
- Barlow, Frank. *The Norman Conquest and Beyond*. London: Hambledon Press, 1983.
- Bartlett, Robert. *The Making of Europe: Conquest, Colonization, and Cultural Change, 950-1350*. Princeton, N.J: Princeton University Press, 1993.
- Bazeley, Margaret Ley. "The Extent of the English Forest in the Thirteenth Century." *Transactions of the Royal Historical Society* 4 (1921): 140–59.
- Birrell, Jean. "Common Rights in the Medieval Forest," *Past & Present*, no. 117 (1987): 22-49.
- Birrell, Jean. "Deer and Deer Farming in Medieval England." *The Agricultural History Review* 40, no. 2 (1992): 112-26.

- Birrell, Jean. "Peasant Deer Poachers in the Medieval Forest." In *Progress and Problems in Medieval England*, eds. Richard Britnell and John Hatcher, 68-88. Cambridge: Cambridge University Press, 1996.
- Birrell, Jean. "Procuring, Preparing, and Serving Venison in Late Medieval England," in *Food in Medieval England: Diet and Nutrition*, Oxford University Press, 2006.
- Bowen, James P. "From Medieval Deer Park to an Enclosed Agricultural and Developing Industrial Landscape: The Post-Medieval Evolution of Lilleshall Park, Shropshire." *Midland History* 38, no. 2 (2013): 194–212.
- Brandon, Peter. *The Sussex Landscape*. London: Hodder and Stoughton, 1974.
- Brandon, P. F. "Late-Medieval Weather in Sussex and Its Agricultural Significance." *Transactions - Institute of British Geographers* (1965), no. 54 (1971): 1–17.
- Brown, A. G. I Meadows, S. D Turner, and D. J Mattingly. "Roman Vineyards in Britain: Stratigraphic and Palynological Data from Wollaston in the Nene Valley, England." *Antiquity* 75, no. 290 (2001): 745–57.
- Brown, Neville. *History and Climate Change: A Eurocentric Perspective*. London: Routledge, 2001.
- Campbell, Bruce. "Nature as Historical Protagonist: Environment and Society in Pre-industrial England." *The Economic History Review*, New Series, 63, no. 2 (2010): 281-314.
- Cantor, Leonard M. *The Changing English Countryside, 1400-1700*. London: Routledge & Kegan Paul, 1987.
- Cantor, Leonard M., *The English Medieval Landscape*, (London: Croom Helm), 1982.
- Cantor, Leonard M., and J. Hatherly. "The Medieval Parks of England." *Geography* 64, no. 2 (1979): 71–85.
- Cartmill, Matt. *A View to a Death in the Morning Hunting and Nature through History*. Cambridge, MA: Harvard University Press, 1993.
- Christie, Neil., and Paul. Stammer. *Medieval Rural Settlement: Britain and Ireland, AD 800-1600*. Oxford: Windgather Press, 2012.
- Cohen, Esther. "Animals in Medieval Perceptions: The Image of the Ubiquitous Other." In *Animals and Human Society: Changing Perspectives*, edited by Aubrey Manning and James Serpell, 59-80. London; New York: Routledge, 1994.
- Cooper, Graham J, and William D Shannon. "The Control of Salters (deer-Leaps) in Private Deer-Parks Associated with Forests: A Case Study Using a 1608 Map of Leagram Park in the Forest of Bowland, Lancashire." *Landscape History* 38, no. 1 (2017): 43–66.
- Cragoe and McDonagh. "Parliamentary Enclosure, Vermin and the Cultural Life of English Parishes, 1750–1850." *Continuity and Change* 28, no. 1 (2013): 27–50.
- Crane, Susan. *Animal Encounters: Contacts and Concepts in Medieval Britain*. Philadelphia: University of Pennsylvania Press, 2013.
- Dolan, Frances E. "Biodynamic Viticulture, Natural Wine, and the Premodern." In *Premodern Ecologies in the Modern Literary Imagination*, 121–49. Toronto: University of Toronto Press, 2019.
- Dougherty, Percy H. "Introduction to the Geographical Study of Viticulture and Wine Production." In *The Geography of Wine*, 3–36. Dordrecht: Springer Netherlands, 2011.
- Dyer, Christopher. "Conflict in the Landscape: The Enclosure Movement in England, 1220-1349." *Landscape History* 28, no. 1 (2006): 21–33.
- Flight, Tim. "Aristocratic Deer Hunting in Late Anglo-Saxon England: A Reconsideration, Based upon the Vita S. Dvnstani." *Anglo-Saxon England* 45 (2017): 311–31.

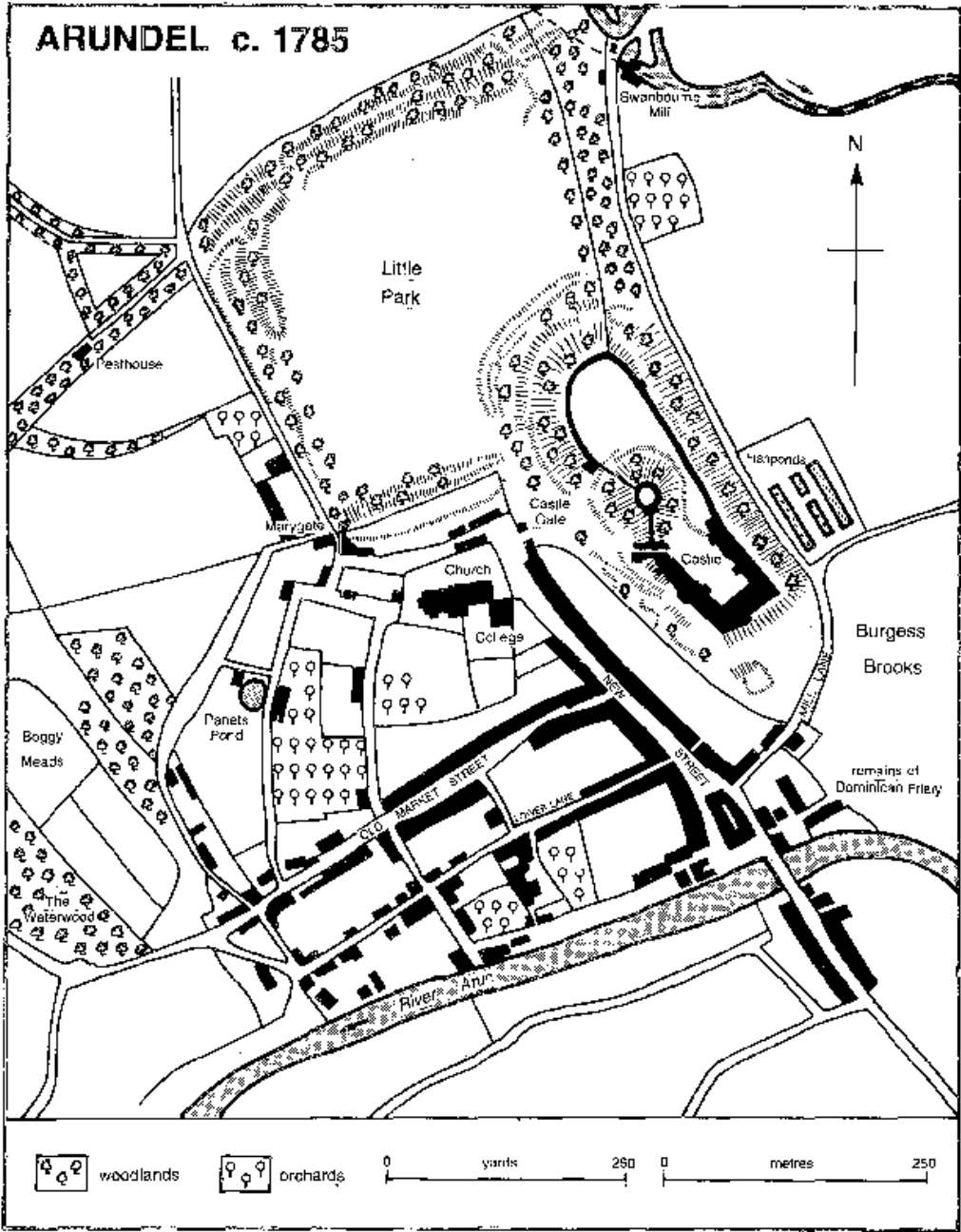
- García de Cortázar-Atauri, I, V Daux, E Garnier, P Yiou, N Viovy, B Seguin, J.M Boursiquot, A.K Parker, C van Leeuwen, and I Chuine. "Climate Reconstructions from Grape Harvest Dates: Methodology and Uncertainties." *Holocene* (Sevenoaks) 20, no. 4 (2010): 599–608.
- Gilbert, John M. *Hunting and Hunting Reserves in Medieval Scotland*. Edinburgh: Donald, 1979.
- Given-Wilson, Chris. "Wealth and Credit, Public and Private: The Earls of Arundel 1306-1397." *The English Historical Review* 106, no. 418 (1991): 1–26.
- Green, Judith. "Forest Laws in England and Normandy in the Twelfth Century." *Historical research: the bulletin of the Institute of Historical Research* 86, no. 233 (2013): 416–431.
- Harvey, P. D. A. "The Pipe Rolls and the Adoption of Demesne Farming in England." *The Economic History Review* 27, no. 3 (1974): 345–59.
- Hodder, M. A. "Continuity and Discontinuity in the Landscape: Roman to Medieval in Sutton Chase." *Medieval Archaeology* 36 (1992): 178–182.
- Hoffmann, Richard. *An Environmental History of Medieval Europe*. Cambridge, England: Cambridge University Press, 2014.
- Hoffmann, Richard. "Frontier Foods for Late Medieval Consumers: Culture, Economy, Ecology." *Environment and History* 7, no. 2 (2001): 131–67.
- Hooke, Della. "Royal Forests – Hunting and Other Forest Use in Medieval England." In *New Perspectives on People and Forests*, 46–70. Springer Netherlands, 2011.
- Hooke, Della. "Pre-Conquest Woodland: Its Distribution and Usage." *Agricultural History Review* 37 (1989): 113–29.
- Howe, John, and Michael. Wolfe. *Inventing Medieval Landscapes: Senses of Place in Western Europe*. Gainesville: University Press of Florida, 2002.
- Judkins, Ryan R. "The Game of the Courtly Hunt: Chasing and Breaking Deer in Late Medieval English Literature." *The Journal of English and Germanic Philology* 112, no. 1 (2013): 70–92.
- Keeling, Susan M., and C. P. Lewis. *A History of the County of Sussex*. Index to Volumes I–IV, VII, and IX. Oxford: Published for the Institute of Historical Research by Oxford University Press, 1984.
- Kelly, Morgan, and Cormac Ó Gráda. "The Waning of the Little Ice Age: Climate Change in Early Modern Europe." *The Journal of Interdisciplinary History* 44, no. 3 (2014): 301–25.
- Kershaw, Ian. "The Great Famine and Agrarian Crisis in England 1315-1322." *Past & Present* 59, no. 1 (1973): 3–50.
- Klemetilä, Hannele. *Animals and Hunters in the Late Middle Ages*. New York: Taylor and Francis, 2015.
- Kramer, Lloyd S., and Sarah C. Maza. *A Companion to Western Historical Thought*. Malden, Mass: Blackwell Publishers, 2002.
- Landsberg, Sylvia. *The Medieval Garden*. Toronto: University of Toronto Press, 2003.
- Langton, John. "Forest Fences: Enclosures in a Pre-Enclosure Landscape." *Landscape History* 35, no. 1 (2014): 5–30.
- Langton, John. "Royal and Non-royal Forests and Chases in England and Wales." *Historical research: the bulletin of the Institute of Historical Research* 88, no. 241 (2015): 381–401.
- Liddiard, Robert. "The Deer Parks of Domesday Book." *Landscapes* 4, no. 1 (2003): 4–23.
- Liddiard, Robert. *The Medieval Park: New Perspectives*. Macclesfield: Windgather Press, 2007.

- Lovegrove, Roger. *Silent Fields: The Long Decline of a Nation's Wildlife*. Oxford University Press, 2007.
- Marvin, William Perry. *Hunting Law and Ritual in Medieval English Literature*. Woodbridge: D.S. Brewer, 2006.
- Mate, Mavis. "Agrarian Economy after the Black Death: The Manors of Canterbury Cathedral Priory, 1348-91." *The Economic History Review* 37, no. 3 (1984): 341–354.
- Mileson, Stephen. *Parks in Medieval England*. Oxford: Oxford University Press, 2009.
- Neeson, J. M. *Commoners: Common Right, Enclosure and Social Change in England, 1700-1820*. Cambridge: Cambridge University Press, 1995.
- Parry, J. D. *An Historical and Descriptive Account of the Coast of Sussex*. The Gentleman's Magazine: and Historical Chronicle, Jan. 1736-Dec. 1833; Mar 1833; British Periodicals pg. 233-236.
- Pluskowski, Aleksander. "The Zooarchaeology of Medieval 'Christendom': Ideology, the Treatment of Animals and the Making of Medieval Europe." *World Archaeology* 42, no. 2 (2010): 201-14.
- Pluskowski, Aleksander. *Wolves and the Wilderness in the Middle Ages*. Woodbridge: Boydell & Brewer, 2006.
- Pratt, Rebekah L. "From Animal to Meat: Illuminating the Medieval Ritual of Unmaking." *Ehumanista* (Santa Barbara, California) 25 (2013): 17–30.
- Pribyl, Kathleen. *Farming, Famine and Plague: The Impact of Climate in Late Medieval England*. Cham: Springer International Publishing AG, 2017.
- Pribyl, Kathleen, Richard C. Cornes, and Christian Pfister. "Reconstructing Medieval April-July Mean Temperatures in East Anglia, 1256–1431." *Climatic Change* 113, no. 2 (2012): 393–412.
- Rackham, Oliver. *Ancient Woodland: Its History, Vegetation and Uses in England*. London: E. Arnold, 1980.
- Rackham, Oliver. *The History of the Countryside*. London: J.M. Dent, 1986.
- Rackham, Oliver. *Trees and Woodland in the British Landscape*. London, England: Dent, 1990.
- Raven, Matt. "The Earls of Edward III and the Polity: The Earls of Arundel and Northampton in the Localities, 1330–60." *Historical Research: The Bulletin of the Institute of Historical Research* 92, no. 258 (2019): 680–704.
- Roberts, Mark. "The Institute of Archaeology Field Course at Downley Park, Singleton, West Sussex, UK. Multi Period Excavations Around the Hunting Lodge of the Earls of Arundel." *Archaeology International* 21 (2018): 141–52.
- Rose, Susan. *The Wine Trade in Medieval Europe, 1000-1500*. London;: Continuum, 2011.
- Salisbury, Joyce. *The Beast Within: Animals in the Middle Ages*. New York: Routledge, 1994.
- Savage, Henry L. "Hunting in the Middle Ages." *Speculum* 8, no. 1 (1933): 30-41.
- Simmons, Ian G., *An Environmental History of Great Britain: From 10,000 Years Ago to the Present*, Edinburgh: Edinburgh University Press, 2001.
- Smout, T. C. *Exploring Environmental History: Selected Essays*. Edinburgh: Edinburgh University Press, 2009.
- Soderberg, John. "Wild Cattle: Red Deer in the Religious Texts, Iconography, and Archaeology of Early Medieval Ireland." *International Journal of Historical Archaeology* 8, no. 3 (2004): 167-83.
- Stone, David. *Decision-Making in Medieval Agriculture*. Oxford;: Oxford University Press, 2005.

- Sykes, Naomi. "Deer, Land, Knives and Halls: Social Change in Early Medieval England." *The Antiquaries Journal* 90 (2010): 175–93.
- Sykes, Naomi. "The Introduction of Fallow Deer to Britain: A Zooarchaeological Perspective." *Environmental Archaeology* 9, no. 1 (2004): 75–83.
- Sykes, Naomi, Gema Ayton, Frazer Bowen, Karis Baker, Polydora Baker, Ruth F. Carden, Craig Dicken, et al. "Wild to Domestic and Back Again: The Dynamics of Fallow Deer Management in Medieval England (c. 11th-16th Century AD)." *STAR: Science & Technology of Archaeological Research* 2, no. 1 (2016): 113–26.
- Sykes, Naomi, and Ruth Carden. "Were Fallow Deer Spotted (OE Pohha/pocca) in Anglo-Saxon England? Reviewing the Evidence for Dama Dama Dama in Early Medieval Europe." *Medieval Archaeology* 55, no. 1 (2011): 139–162.
- Taylor, Christopher. "Medieval Ornamental Landscapes." *Landscapes (Bollington, England)* 1, no. 1 (2000): 38–55.
- Thomas, Keith. *Man and the Natural World: Changing Attitudes in England, 1500-1800* London: A. Lanes, 1983.
- Watkins, Andrew. "Cattle Grazing in the Forest of Arden in the Later Middle Ages." *Agricultural History Review* 37, no. 1 (1989): 12–25.
- Williamson, Tom. *Shaping Medieval Landscapes: Settlement, Society, Environment*, Oxford: Windgather Press, 2003.
- Witney, K. P. "The Woodland Economy of Kent, 1066–1348." *Agricultural History Review* 38, no. 1 (1990): 20–39.
- Wright, L. W. "Woodland Continuity and Change: Ancient Woodland in Eastern Hertfordshire." *Landscape History* 25, no. 1 (2003): 67–78.
- Woolgar, C.M. "Gifts of Food in Late Medieval England." *Journal of medieval history* 37, no. 1 (2011): 6–18.
- Woolgar, C. M., D. Serjeantson, and T. Waldron. *Food in Medieval England: Diet and Nutrition*. Oxford University Press, 2006.
- Yerby, George. *The English Revolution and the Roots of Environmental Change: The Changing Concept of the Land in Early Modern England*. New York, NY: Routledge, 2016.
- Yiou, P, I García De Cortázar-Atauri, I Chuine, V Daux, E Garnier, N Viovy, C Van Leeuwen, A.K Parker, and J.-M Boursiquot. "Continental Atmospheric Circulation over Europe During the Little Ice Age Inferred from Grape Harvest Dates." *Climate of the Past* 8, no. 2 (2012): 577–88.
- Young, Charles. *The Royal Forests of Medieval England*. University of Pennsylvania Press, Inc, 2015.

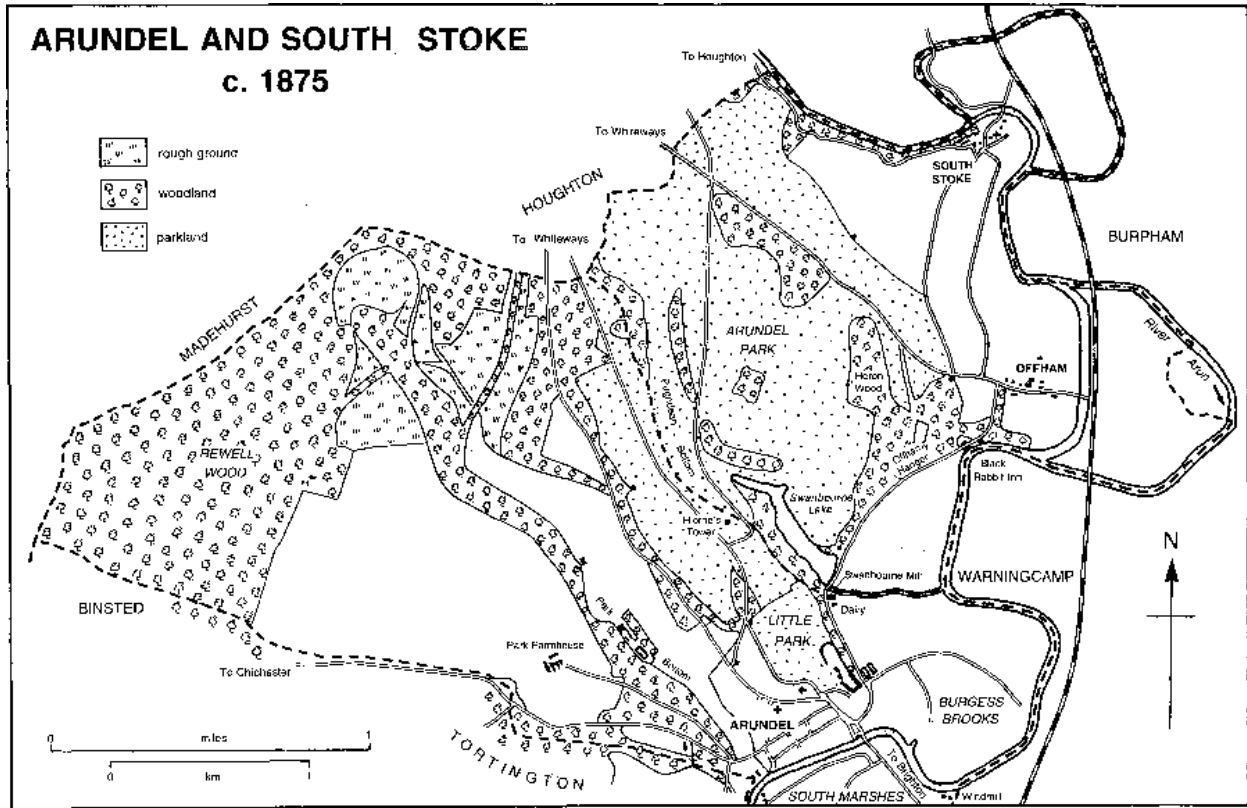
# APPENDIX A – MAPS OF THE ARUNDEL ESTATE AND LITTLE PARK

Figure 1 – Map of the Arundel Little Park from 1795



(A P Baggs and H M Warne. "Arundel," in *A History of the County of Sussex: Volume 5 Part 1, Arundel Rape: South-Western Part, Including Arundel*, ed. T P Hudson (London: Victoria County History, 1997), 10-101. *British History Online*, 2021, <http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101.>)

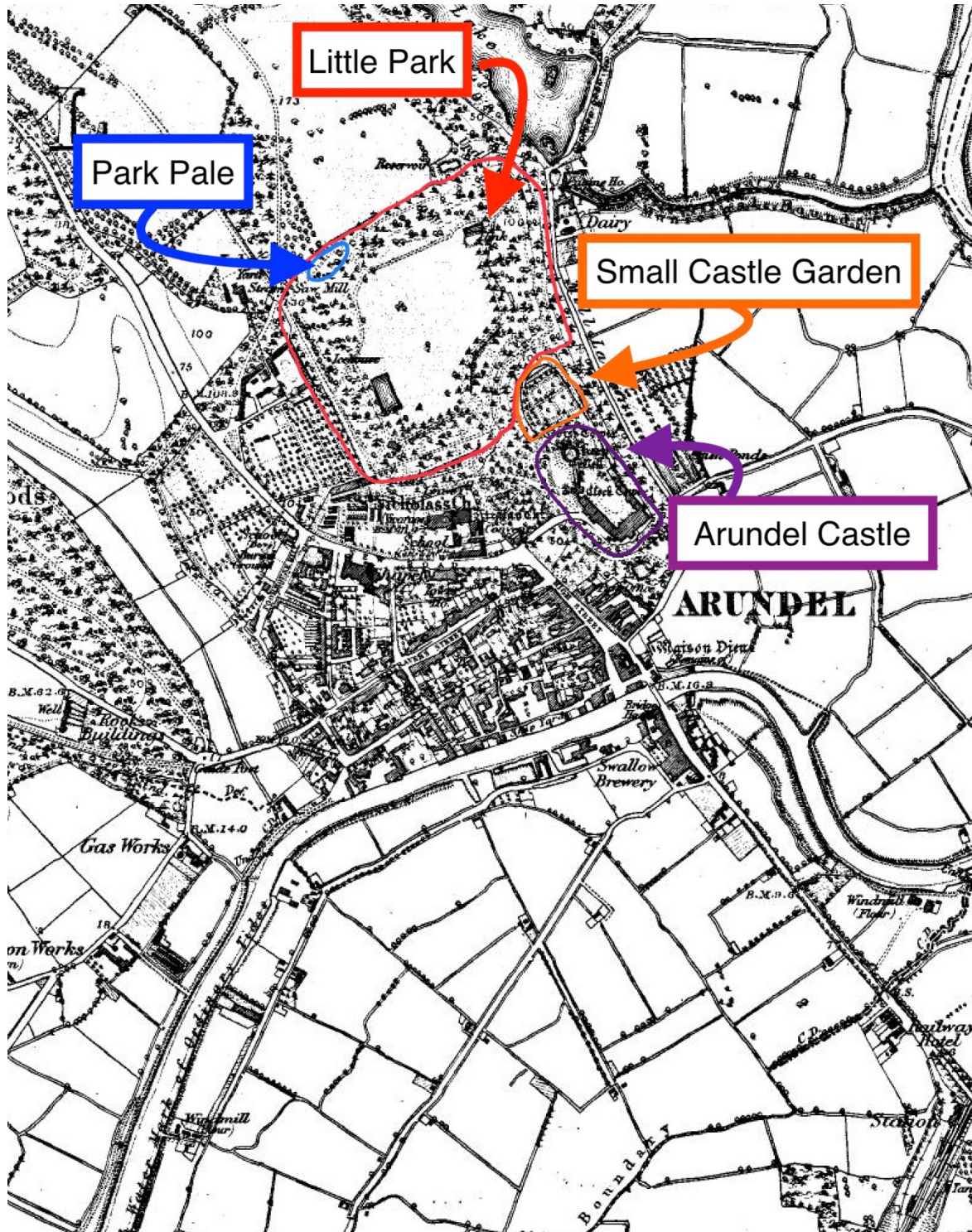
Figure 2 – Map of the Arundel Estate 1875, Including Rewel and Great Park



(A P Baggs and H M Warne. "Arundel," in *A History of the County of Sussex: Volume 5 Part 1, Arundel Rape: South-Western Part, Including Arundel*, ed. T P Hudson (London: Victoria County History, 1997), 10-101. *British History Online*, 2021, <http://www.british-history.ac.uk/vch/sussex/vol5/pt1/pp10-101>.)



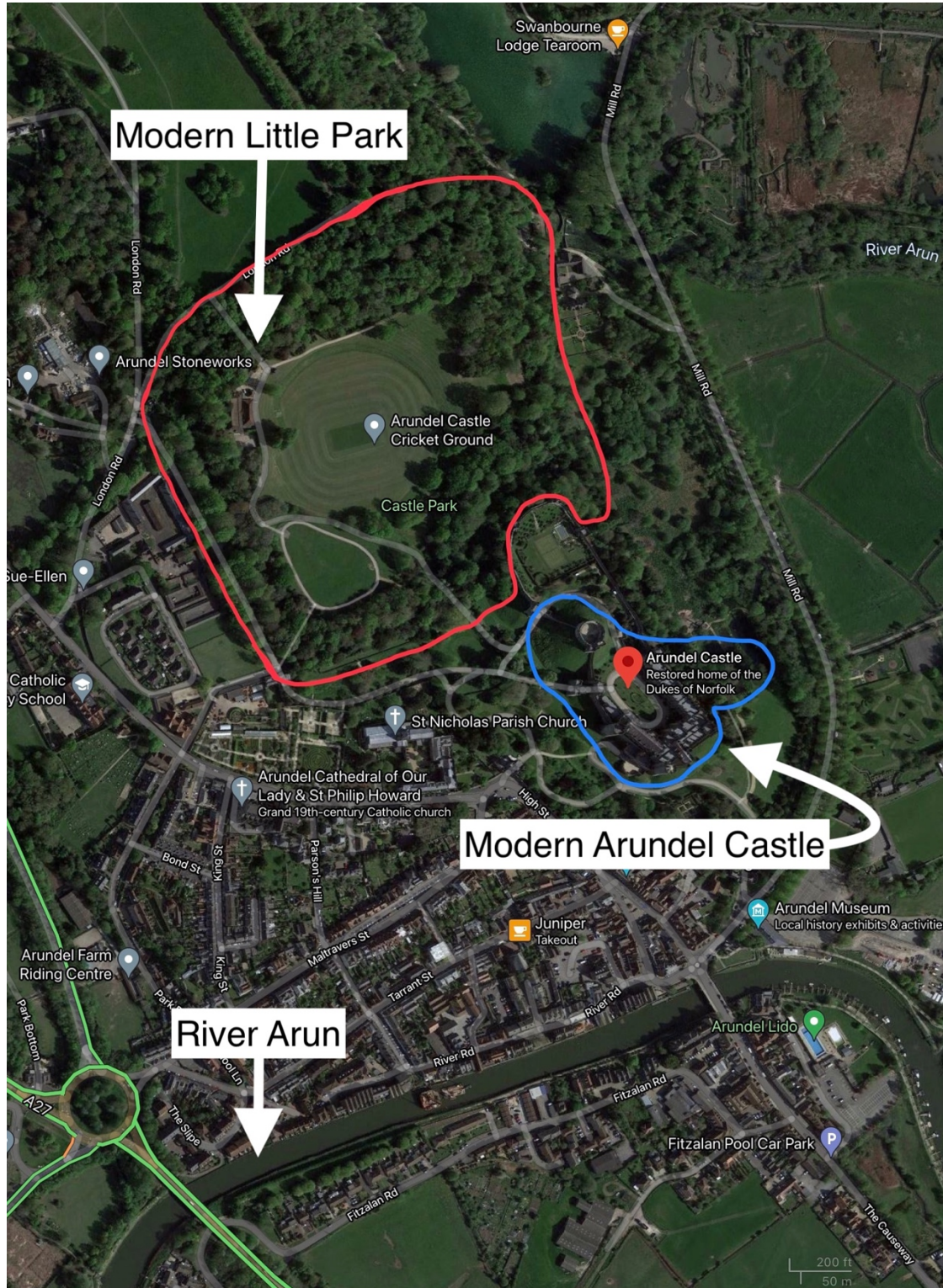
Figure 3 – 1877-1880 Map of the Arundel Little Park



("Sheet 063," in *Map of Sussex*, (Southampton: Ordnance Survey, 1877-1880), *British History Online*, <http://www.british-history.ac.uk/os-1-to-10560/sussex/063>.)



Figure 4 – Modern Little Park 2021



(Google Maps 2021)

Figure 5- Modern Little Park and Closeup of Park Pale



(Google Maps 2021)