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Abstract: Ravens (Corvus corax) and red kites (Milvus milvus) were commonly seen in London in the early modern period. The aim of this paper is to reconstruct the diversity of attitudes towards these birds. Previous historiography on the subject has failed to contextualise its sources. The excited accounts of travellers like Schaseck, the Venetian Ambassador’s amanuensis and Lupold von Wedel need to be counter-balanced by considering the bored antipathy common amongst the British naturalists; William Turner, Francis Willughby and John Ray and the descriptions of sanitation services provided by European naturalists and local poets. The final part of the paper reconstructs the patchwork of legislation and custom relating to the species from early modern London.


Early modern attitudes to the ravens and red kites of London

This bird [the red kite] has now become exceedingly rare in England; extensive forests or well-wooded districts afforded it the only chance of escape from the war of extermination carried on by those who wished to preserve their poultry or game. Formerly it abounded throughout the country and even in London, where it seems there was a regulation for its protection, so as to have been an object of astonishment to foreigners…

I think it highly probable that till a comparatively late date, Rooks, Carrion Crows and Ravens were afforded a real and active protection in our towns and villages on account of their services to cleanliness, but that, as with so many habits and customs now curious to us, the very ordinarness of their presence in former days led to it being passed over unremarked by contemporary writers…

In the nineteenth century, Alfred Newton published the first account telling the story of the former presence of red kites (Milvus milvus) as scavengers in medieval and early modern London. This discovery resonated with conservationists; it came at a time when there were only around a dozen red kites left on the island. Newton’s account was ultimately declensionist (with a grand narrative of decline): it is the story of how a rare bird (the red kite) once found, surprisingly, in London, was lost due to the prejudice of gamekeepers. Fifty years later, Newton’s account was updated by Ritchie (our second quotation), who reversed the grand narrative, and extended the account to include the ravens.
of urban Scotland. Ravens at this time were found almost exclusively in isolated upland areas in the
north and west of Britain. Ritchie gave the story as an example of how top-down protective legislation
could create an environment where humans could live in harmony with wildlife. Both these narratives
were partly informed by the conservationist ethos of the time of writing, but also by the available
historical sources; Newton and Ritchie were especially reliant on the accounts of early modern
travellers which, as we shall see, were themselves pre-occupied with depicting London, and thus the
birds of London, as unusual.

In the century since they wrote, Newton and Ritchie’s accounts have continued to be influential. Most
later historical accounts of the ravens and red kites of London have borrowed not only the same
conservationist themes of a surprising former harmony, later decline, and the importance of
legislation to conserve biodiversity, but were reliant on the very same sources that Newton and
Ritchie discovered. This established narrative has resulted in an unsatisfactory, surface-level
historiography which both fails to contextualise accounts of the ravens and red kites of London, and is
unable to provide answers about how and why specifically Londoners lived in relative harmony with
raptors during the time period. This paper will explore the differing attitudes towards the ravens and
red kites held by residents and visitors to early modern London, as well as some of the customs and
laws relating to the time period.

Early modern London

The presence of raptors in early modern London is surprising if the city is imagined as an island of
inhospitable streets; a dead spot in the centre of a mosaic of living habitats. But the idea that the city
and its surrounding countryside are distinct is fallacious and scholarship over the last few decades has
aimed to ‘unbound’ the city. The countryside, is of course shaped by human management just like the
city. Most of Britain’s surviving wildlife species are adapted to living in close proximity to humans.

Even in terms of green space, the country melds into the city in green corridors, whilst many wild
species thrive in built areas. Scavenger species are experts at finding opportunities for food, and
urban environments offer many opportunities, as attested by the numbers of feral pigeons and gulls
and foxes in London today. Recent environmental history has studied the relationships between
humans and animals in the history of London. Early modern London was certainly not a sterile, animal-
free place. Even in the 1800s, at least 4,000 acres of the metropolis was still covered by market
gardens, orchards, fields and meadows, and less than two-thirds of the metropolis area was built up.
Thousands of horses provided transportation around the city. Cattle were kept and butchered in the
city and were transported to markets in the centre of London ‘on the hoof’. Offal and food disposal
methods were often ad-hoc. Pigs and dogs were kept in homes or on the streets. Sanitation was variable and large compost dump sites were formed within the city limits. This is the favourable context in which London’s ravens and red kites both lived and built relationships with the city’s human inhabitants.

Ravens and Red Kites as Vermin

Not only were British naturalists of the sixteenth and seventeenth centuries aware of the ravens and red kites of London they also had clear opinions about the species. To these writers, the urban scavengers were vermin. For example, William Turner (1509/10-1568) describes them as a pest both in *Avium praecipuarum* (1544), and in a letter printed in Gessner’s (1555) *Historia animalium liber III:

I know two sorts of Kites, the greater and the less; the greater is in colour nearly rufous, and in England is abundant and remarkably rapacious. This kind is wont to snatch food out of children’s hands, in our cities and towns. The other kind is smaller, blacker, and more rarely haunts cities. This I do not remember to have seen in England, though in Germany most frequently.  

Miluos tales habemus in Anglia, quales nusquā alias uidi. Nostrates sunt Germanicis multò maiores, clamiosiores, ad albedinem magis uergetes, & multò rapaciores. Tanta enim est nostrorum miluorum audacia, ut panem pueris pisces fœminis, & sudaria sepibus & uirorum manibus eripere audeant. Imò sæpe pileos hominum capitibus, eo tempore, quo nidulantur, ui auferre solent…  

[We have excellent kites in England, I have never seen any others of such size. Ours are much bigger than the German ones, and noisier, with big white patches, and more greedy. In fact, such is the daring of our kites, that they often dare to take bread from children, fish from women, and cloths from hedges and from the hands of men. Indeed, very often they will take the hats from people’s heads during the time when they are nesting.]

The first passage here describes the red kite as a common pest in cities and towns. It is of special interest because it distinguishes the historical London species as red kite (*Milvus milvus*) not black kite (*Milvus migrans*). This distinction agrees with the archaeological record.

Turner’s conception of the red kite fits it neatly within the early modern English category of vermin, as described by Mary Fissell. The kite is greedy and eats human food. It is also cunning, and so knows to target human children, who are unable to properly defend themselves, and hedges, where cloth is left, undefended, while it dries. This idea of Britain’s red kites is perhaps most famously described in Shakespeare’s *The Winter’s Tale* where Autolycus uses the birds as a scapegoat when he steals cloth: ‘When the kite builds, look to lesser linen’.
The hatred directed towards red kites was not just because they stole hats, fabrics, bread and fish. Other accounts make it clear that kites preyed upon livestock, just like sparrowhawks. Francis Willughby (1635-1672) and John Ray (1627-1705) writing in the seventeenth century described how the birds were common pests to people who kept poultry:

... In England they are seen all the year, neither do they fear or fly our Winters... They are very noisom to tame birds, especially Chickens, Ducklings, and Goslings; among which espying one far from shelter, or that is carelessly separated a good distance from the rest, or by any other means lies fit and exposed to rapine, they single it out, and fly round, round for a while, marking it; then of a sudden dart down as swift as Lightning and catch it up before it is aware, the Dam in vain crying out, and men with hooting and stones scaring them away. Yea so bold are they, that they affect to prey in Cities and places frequented by men; so that the very Gardens and Courts or Yards of houses are not secure from their ravine. For which cause our good Housewives are very angry with them, and of all birds hate and curse them most. 

Willughby and Ray’s account suggests that red kites were a threat especially to young domestic birds ('chickens, ducklings, and goslings' – the term chicken in the seventeenth century referred to only young birds or, 'chicks'), and that fully-grown domestic fowl were at less risk. This predatory behaviour had been central to cultural depictions of the red kite for centuries by the time Willughby and Ray wrote. It was mentioned, for example, in the great medieval encyclopaedias, as the *Etymologies* of Isidore of Seville as well as the Second Family Bestiaries. In the late fourteenth or early fifteenth century ‘Duke Roland and Sir Otuel of Spain’, a group of Saracens seeking to shame Duke Naymes suggested he was more fit to guard against kites, jackdaws and magpies than go to a real battle.

London’s ravens had a better reputation than London’s red kites among the early naturalists. This is surprising, since in medieval and early modern English culture, ravens were most often associated with death and were considered a bad omen. A good example is provided by *The Book of Revelations* (c.1200), by London-based Prior Peter of Cornwall. This book provides us with the story of Martin, who was the parish priest of All-Hallows-upon-the-Cellar in Dowgate. Martin failed to provide spiritual counselling to one of his parishioners, and as a result he fell into a guilty spiral of sin. When he died ravens flew into his room to escort his soul to hell. Surprisingly however, this popular association with death does not seem to have prevented the raven from forming a relationship with the people of pre-industrial urban Britain. Willughby and Ray rather describe the way the raven nests in cities as evidence of the species’ cleverness and adaptability:
Ravens are found not only in one part or Region of the World but abound in all Countries: Do easily bear all changes of weather, fearing neither heat nor cold, enduring well to abide and live where-ever there is plenty of meat for them. And though they are said to love solitude; yet they do very often live and build in the midst of the most populous Cities, as Aldrovandi delivers, and experience confirms. They build in high Trees, or old Towers, in the beginning of March with us in England and sometimes sooner...

It is immediately clear that ravens did not only nest in London but also other cities. A few other population centres can be traced: Thomas Browne (1605-1682) describes ravens (although not red kites) as present in Norfolk. The evidence that ravens nested at Berwick-on-Tweed and Dundee is discussed with the naturalists’ accounts in the next section. John Rutty also (less reliably) describes ravens nesting in urban areas in his ‘Essay toward a Natural History of the County of Dublin’ (1772) which suggests they were found in Dublin. Finally, as noted by Gurney there is also continental evidence of the urban ravens. The second edition of the Hortus Sanitatis, (1491) published in Mainz, Germany, depicts a kite [Fig 1] actually sitting on a towns-person’s head, together with many other urban commensal and domesticated species (tentatively identifying in rows from top left to bottom right: four European swifts (Apis apis), four white storks (Ciconia ciconia), chicken (Gallus gallus domesticus), barn swallow (Hirundo rustica), pigeon (Columbia livia domestica), red kite, unknown, carrion crow (Corvus corone), goose (Anser anser domesticus), white stork, barred grass snake (Natrix Helvetica)). Urban ravens in particular were also described occasionally in accounts from Ancient Greece and Rome, so may have been exploiting urban environments in the early modern period for thousands of years. The archaeological record supports this evidence and suggests that ravens may have been formerly common in urban areas across Europe. The position of ravens as scavengers in urban London was not unique.

**Fig 1. The frontispiece for the ‘De Auibus’ section of the Hortus Sanitatis.** Book in the public domain.

**Exotic Ravens and Red Kites in the Travellers’ Accounts**

The characterisation of the London red kite in particular as an unremarkable pest in the accounts of the early naturalists is important, but it is also biased. The seventeenth century naturalists were utilitarian in outlook; they saw part of their role as being to catalogue and study the natural resources of Britain with a view to how they could be best utilised. Species like red kites would have had a low exploitation value, although Robert Sibbald (1641-1722) does note a medical use: ‘its fat soothes joint pains’. A different perspective can be gained from the accounts of the early modern travellers. They had their own agenda; their stories emphasise the otherness of Britain and focus on its exotic nature.
We can focus on three writers in particular whose accounts were central to the modern historiographic narrative of the London ravens and red kites crafted by Yarrell and Ritchie:

The account of Schaseck, squire of Jaroslav Lev of Rožmitál (1466)
I have never seen so many kites as I saw there [London]. It is a capital offence to harm them.34

The relazione of the anonymous amanuensis of Andrea Trevisan (1496-7)
... it is truly a beautiful thing to behold one or two thousand tame swans upon the river Thames, as I, and also your Magnificence have seen, which are eaten by the English like ducks and geese. Nor do they dislike what we so much abominate, i.e. crows, rooks and jackdaws; and the raven may croak at his pleasure, for no one cares for the omen; there is even a penalty attached to destroying them, as they say they keep the streets of the towns free from all filth.

It is the same case with the kites, which are so tame, that they often take out of the hands of little children, the bread smeared with butter, in the Flemish fashion, given to them by their mothers. And although this is general throughout the island, it is more observed in the kingdom of England than elsewhere.35

The account of Lupold von Wedel (1584-5)
There are many ravens in this town [Berwick-on-Tweed], which it is forbidden to shoot, upon pain of a crown’s payment, for they are considered to drive away the bad air.37

The first account was written by Schaseck, who was a squire or armourer of Jaroslav Lev of Rožmitál. The account portrays England as an exotic country rich in natural resources but with a strange landscape and customs. While we know from the naturalists’ accounts that London did have a strong red kite population, there is no other evidence to suggest that ravens would have been protected by capital punishment. This is likely to have been invented by Schaseck to emphasise the barbaric nature of London.

The second extract comes from the official relazione (report) submitted by Venetian Ambassador Andrea Trevisan to the Senate after his visit to England. Since this account addresses Trevisan in the third person, it is unlikely to have been written by him, and it is conventional to call the anonymous author the ambassador’s amanuensis.38 It is important for us to recognise that this description is stylised. There was an Italian tradition during this period of characterising England as a wild, uncivilised and dangerous place.39 While we know that red kites, crows, rooks, jackdaws and swans were all present in early modern London and could have been seen, the figure of two thousand swans at one time is a likely fabrication. As previously mentioned, ravens could be found in urban areas across Europe so the idea that other countries used to ‘abominate’ ravens is also at best an over-exaggeration. The characterisation of the raven as a sinister bird did have some currency in early modern Britain.40 An entry in Wedderburne’s Compt Buik dated 1597 in Dundee describes how sinister
an eclipse was by describing that even the ‘crawis and corbeis and ravenous foullis fled to [from] houssis to our steple and tolbuith and schip tappis most mervelously affrayit’. 41

The final extract comes from Lupold von Wedel, who was travelling for pleasure rather than business. His account is not from London, but from Berwick-on-Tweed. Although our extract here is short, von Wedel is just as prone to embellishment and exotification as the other writers. Elsewhere in the text, for example, von Wedel attests that the swans were exclusively used by the monarch and were protected on pain of death. 42 Of course, this is erroneous. Mute Swans were not protected by the death penalty any more than red kites were when Schaseck visited London. 43 The fine von Wedel attests for shooting ravens is more reasonable, and agrees with the account by the Ambassador’s amanuensis, so may be factual. The reason given for the protection will make sense in the context of the sanitation services provided by ravens and red kites. 44

Ravens and Red Kites as Sanitation Officers

While the travellers’ accounts agree with the accounts of Britain’s early modern naturalists that ravens and red kites were present in London, they disagree about almost everything else. The early modern naturalists’ accounts suggest that the species were not unique to London, that they are unremarkable, of low value, and that they were common pests whereas the travellers’ accounts suggest that the species were highly valued and even legally protected. The two perspectives can be synthesised by considering exactly why ravens and red kites were tolerated in London.

John Taylor, the Water Poet (1578-1653), was one of the Watermen of London, and a minor celebrity during his lifetime, perhaps most famous for his publicity stunt journey from London to Queensborough in a boat made of brown paper. Taylor mentions the scavenger species of London as part of a metaphor in his mock sermon: ‘A Bawd’, which describes the advantages that bawds (widely used to refer to all kinds of socially transgressive people) bring to the commonwealth:

Rauens, Kites, Crowes, and many other birds of Prey, are tolerated to liue vnhurst, not for any good that is in themselves, but because they doe good offices in deououring and carrying away our Garbage and noysome excrements, which they liue by: and if they were not our voluntarie Scauengers, wee should be much annoyed with contagious sauors of these corrupted offals. 45

Despite the poor reputation of London’s wild birds then, it is clear that their presence in the city was seen as positive. In a time when meat and fish was imported into London ‘on the hoof’ and was butchered and processed in urban slaughterhouses, hungry raptors could be seen as beneficial to the
During this period it was widely believed that miasma or bad air could lead to diseases. Fears of miasma were heightened during epidemics, such as the Oxford Assize fever of 1577, the plague outbreak of 1609 and of course during and following The Great Plague of London in 1665-6. In some cases, court actions were successfully brought against neighbours who caused bad air, not because of the smell but because of the possibility that the bad air might create an infectious disease. In this context, the ‘offices’ described as carried out by ravens, kites and crows in this passage exactly fit with our current concept of high-profile wildlife carrying out valuable ‘ecosystem services’. Today we might reintroduce beavers to a landscape to raise resilience to flooding. In the seventeenth century people conserved raptors in London to help improve sanitation and prevent disease.

This justification for the tolerance of ravens and red kites in London was not unique to Taylor. The same reason is given earlier in the seventeenth century in a poem by Nathaniel Baxter (fl.1569-1611). It is also repeated by Fynes Moryson (1566-1630), the English traveller, who attests that this tolerance was common throughout the ‘great cities’.

This concept also seems to have had currency in the sixteenth century, when two foreign naturalists reported on it, both publishing in 1555:

Il est maintenant defendu aux habitants d'Angleterre sur peine de grosse amende, de ne faire aucune violence aux Corbeaux, d'autant qu'ils se nourrissent en leurs pays, de charognne, dont ils les en deliurent, qui autrement pourrait empuantir l'ær: comme aussi vivent des poissons que la mer á deiecté au riage.

[It is now forbidden to the inhabitants of England, under pain of a heavy fine, to do any violence to ravens, especially because they feed in their country on carrion, which they relieve them of, and which otherwise could foul the air, likewise they also live on the fish which are thrown up onto the shore from the sea.]

Vix majorem in Cairo milviorum frequentiam conspici existimo, quam Londini Trenobantum in Britannia, qui nullo non anni tempore frequentiśimi istic apparent, cūm enim eos interficere vetitum sit, ut spurcitiem in plateas, vel etiam ipsum flumen Thamesini qui urbem alluit ab incolis ejectam, legant & devorent...

[I estimate kites to be only just more common in Cairo than in London in Britain where at all times they seem very common. It is forbidden to kill them there, as they consume and devour the filth of the streets, and even that thrown by locals into the River Thames, which flows through the city...]

In the first extract, Pierre Belon (1517-1564) suggests that recent legislation has been put in place to protect ravens on a national level. In the second, edited by Carolus Clusius (1526-1609), the
importance of ravens for keeping the banks of the Thames sanitary is emphasised. Taken together the
two accounts suggest that ravens and red kites were legally protected based on the services they
carried out in London and especially along waterways. It seems probable that the shoreline Belon had
in mind was the tidal Thames in London, since dead fish outside of urban areas would be a less serious
problem even if they were not eaten by other scavengers.

Legal Protection for Ravens and Red Kites?

I have quoted extracts from both the 1555 naturalists’ accounts because they present an interesting
question. These accounts refer to a recently passed protective law in England. However, no such law
seems to exist in the Statutes of the Realm. The Acte against taking of Hawks (1539)\(^53\) and the Acte
ayenst Destruccyon of Wyldfowle (1533 – repealed in 1549)\(^54\) do not apply to ravens or red kites, and
the latter actually expressly excludes ‘crowes, choughes, ravons and busardes’ from protection. Of
course, crows were not only unprotected but their control was legally mandated by the first Grain Act,
the Acte made and ordenyned to dystroye Chouches, Crowes and Roks (1532).\(^55\) This law is referred to
by Gerolamo Cardano in De Subtilitate (1550), which was quoted by another European naturalist,
Conrad Gessner, in 1555:

\[\text{In Britannia abundant cornices ut ob frugum damna nuper publico consilio cornices perdentibus proposita praemia sint.}\]

\[\text{[In Britain crows are common - on account of the destruction of crops lately, a bounty has been declared for a public plan for destroying crows.]}\]

On the contrary, under the second Grain Act (1566) ravens and red kites were actually subject to a
compulsory pest control law alongside most other predatory species of wildlife in England. However,
red kites and ravens living in urban areas like London were explicitly excepted from this pest control:

\[\text{And bee it further provyded, That this Acte or any Thing therein conteined, shall not extende to gyve or appoint any soome or soomes of Money to be givyn payde or distrybuted to any person or persons for... the killing and bringing the Head of any Kyte or Raven killed in any City or Towne Corporate, or within two Myles of the same.}\]\n
It is easy to imagine that this exemption from pest control for the urban ravens and red kites might be
confused with a protection act. However, Belon and Clusius were writing in 1555, before the second
Grain Act (1566) was passed. The existence of a protection act before 1555 is also attested in some of
our traveller’s accounts, as can be seen in Table 1.
Table 1. Sources which attest to a hypothetical lost law protecting ravens and red kites in England.

On the basis of this evidence, it is possible that a lost law was implemented before 1466 which prohibited killing ravens and red kites in England in general or London in particular. However, the existence of this law is improbable. The fact that it is mainly referred to by foreign sources, and the fact that the sources cannot agree on what the Act actually criminalised, or the punishment indicated is suspicious. The existence of the Grain Acts and the exclusion of ravens from the Acte ayenst Destruccion of Wyldfowle (1533) also cast serious doubts about the existence of a lost raptor protection act. The statutes from this period refer to each other in cases where they apply to similar situations, but I have not found any reference to a law protecting kites and ravens in the related statutes. The reference in Willughby and Ray to men throwing stones at kites suggests that if there was such a law it was a very limited one. Most probably, legal protection for medieval raptors belongs to the mythology of London, alongside Charles II keeping ravens in the Tower of London, and the threat of capital punishment for harming a swan.

Conclusion

Ravens and red kites seem to have been quietly lost from London in the eighteenth century. The last record of a raven nesting in London is from 1777. The nesting location was Gray’s Inn, which was adjacent to the humorously named Mount Pleasant, an eight-and-half-acre dump site where the city’s refuse was brought and deposited – an idyllic site for a raven. The species seems to have been quietly extirpated from Middlesex, Cheshire and Lancashire around the same time. Lovegrove, has attributed the loss of these species to the bounties paid on ‘vermin’ species after the second Grain Act (1566). But given that the Grain Act prohibited taking ravens and red kites in London, and that the species continued to thrive in London for two centuries after 1566, there must have been local factors involved in the extinction there. Keith Thomas has argued that kites began to decline in urban areas as the local authorities began regularly clearing the streets and selling manure to farmers, as well as paying bounties to exterminators. O’Connor agreed that contemporary changes in disposal of refuse and also the felling of trees in urban areas likely led to a lack of food and habitat for the species around the same time period. With improved sanitation, the services of London raptors may not have been so relevant. Both ravens and red kites were lost from most of England and Wales by 1870, and the red kite was lost from Scotland around 1880.
However, that was not the end of Britain’s ravens and red kites. Over the last century, populations have recovered. A scheme of bounty payments for each successful nest reversed the decline of the red kite in Wales, so that the population increased from ten pairs in the 1930s to sixty pairs in the 1990s. From 1989-1994 a reintroduction to the Chilterns ultimately led to the establishment of 250+ breeding pairs in south east England in 2005. This population has even begun to visit the northern and western suburbs of London where it is an increasingly common resident and occasional breeder.

Ravens have recolonised naturally without reintroduction, and over the last fifty years have spread from exclusively being resident in Wales, Scotland, the Westcountry and north west England, to also starting to breed in the London area. The returned success of these species in lowland and urban England offers us a different perspective with which to view the raptors of early modern London.

The introduction to this essay described a narrative about the raven and red kite constructed by Newton and Ritchie. Their story was of how two surprising raptors of London were almost driven to extinction following the loss of legal protection. The problem with this narrative is that it was ahistorical and fixated on the contemporary status of these species. Part of the issue is that for Newton and Ritchie, London was a civilised, urban environment, unfriendly to nature and therefore not a place where rare wild raptors could ever be expected. The story was of interest to the two because it illustrated the ‘Strange, wild times when the Sparrow scavengers of modern thoroughfares were replaced in numbers and in assurance by Rooks, Carrion Crows and Ravens!’ Even for Keith Thomas, writing in 1991, episodes like the eradication of the red kite were used to make arguments about urban humans establishing dominion over their local environments and ultimately dividing their civilised cities from the rural surroundings. For Newton and Ritchie, this narrative was partly drawn from the early modern travellers’ accounts which emphasised the strangeness of the raptors in order to exoticise London. But now that ravens and red kites are once more to be found visiting London, this portrayal is no longer satisfactory. Part of the aim of this paper has been to complicate and ‘unbound’ the story of the early modern raven and red kite by considering a more complete, balanced range of sources. In the early modern period, British naturalists saw the species as ingenious, greedy species of vermin. Travellers portrayed the species as evidence of Britain’s strangeness. European naturalists noted, perhaps enviously, that the birds carried out a useful function, and poets used the birds as evidence that a little vice could be a good thing. Early modern London itself, facing the challenges of undeveloped sanitation, street cleaning, and the abundance of offal from butchered cattle, invited wild raptors with its abundant habitats and feeding and nesting opportunities. The single, top-down law protecting ravens and red kites in London which Newton and Ritchie celebrated
probably did not exist. The uneasy alliance between Londoners and raptors in the early modern period was more likely ad-hoc and based on a partnership of mutually beneficial practices.
NOTES


11 Of course, London changed through the modern period. In 1600 the population was 200,000. By the mid-eighteenth century it had nearly quadrupled to 750,000. As London grew, its streets were increasingly paved, and more drainage systems and sewers were installed. Following the Great Plague (1665–6) and the Great Fire of London (1666), houses were increasingly built of brick rather than timber, and built higher than previously. The removal of rubbish from streets became more of a priority to avoid breeding ‘bad air’ and increasing the risk of fire. These developments must have presented new challenges and opportunities to London’s raptors, who had a continuous presence in the city throughout the period.


17 J. Jowett and others, *The Oxford Shakespeare*, Second Edition (Oxford: Clarendon Press, 2005), 1139 (4.3). Scholarship on the kite also sometimes quotes the ‘city of crows and kites’ in Shakespeare’s *Coriolanus*, but this quotation is taken out of context; the city referred to there is Rome, not London, and the crows and kites are not literal birds but the people of Rome who ‘peck the eagles’ by their insistence on democracy. Ibid., 1104 (3.1); 1112 (4.5).
45 J. Taylor, All the Workes of John Taylor the Water Poet (London: James Boler, 1630: STC (2nd ed.), 23725), 99.
46 Williamson, An Environmental History of Wildlife in England, 60.
47 Cockayne, Hubbub, 212–13.
48 As for example the current population kept in an enclosure at the Forest of Dean to reduce flooding on the River Wye. For more about beaver ecosystem services see: D. Müller-Schwarze and L. Sun, The Beaver: Natural History of a Wetlands Engineer (London: Cornell University Press, 2003).
52 P. Belon, Plurimarum Singularium et Memorabilium Rerum Etc., ed. by C. Clusius (Flanders, 1555), 108.
55 Statutes of the Realm, Vol 3 (1509-1545). 24 Henry VIII c.10
57 Statutes of the Realm, Vol 4 (1547-1585) (London: Printed by Command of his Majesty King George III, 1819). 8 Eliz 1 c.15
58 Ray, Ornithology, 75 (I.1.8.5).
59 Before the Laws in Wales Acts (1535 & 1542), ravens were protected in the Welsh law codes. The Latin A and Blegywyrd lawbooks both assign a fine of forty pence for killing a raven, eagle or crane (Grus grus) on somebody else’s land. The Cyfnerth lawbook orders that the king is to be paid the legal value of any killed raven, eagle or crane presumably to remove any financial incentive for hunting these birds. H.D. Emanuel, The Latin Texts of the Welsh Laws (Cardiff: University of Wales Press, 1967). The Welsh text of the Cyfnerth law is found in BL Harley MS 4353 and the Plas Bodorgan, Bodorgan MS. The Blegywyrd law is found in Aberystwyth, National Library of Wales, Peniarth MS 36B and Oxford Jesus College MS 57.
62 Cockayne, Hubbub, 190.
64 Lovegrove, Silent Fields: The Long Decline of a Nation’s Wildlife, 120–27, 163–68.
67 Macdonald, Rebirding, 49.
68 Carter, The Red Kite’s Year, chap. 3.
73 Thomas, Man and the Natural World, 244–45, 274.

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NOTES ON CONTRIBUTOR

Dr Lee Raye is an Associate Lecturer at the Open University. They specialise in the pre-industrial history of wildlife and wildflowers in Britain and Ireland. Their current project is *The Atlas of Early Modern Wildlife*, which describes the state of nature from 1500-1760 CE, based on the wild populations recorded by early modern British and Irish naturalists, topographers and travellers. You can follow Lee on Twitter at @LeafyHistory.