

**A thesis submitted to the Department of Environmental Sciences and Policy of
Central European University in part fulfilment of the
Degree of Master of Science**

**The ethics behind the eradication of invasive species:
The case of grey squirrels in the UK**

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ABSTRACT OF THESIS submitted by:

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Environmental ethicists are concerned that an animal rights approach does not present moral reasons to protect species and ecosystems, while animal rights advocates are concerned because conservationists do not take into consideration the welfare or rights of individual animals, especially of invasive alien species. This interdisciplinary research considers such social and ethical aspects of invasive species through the analysis of the case of grey squirrels in the UK. The research aims to explore and understand the ethics behind the eradication of invasive animals through the discourse analysis of conservationists and animal rights organisations. Moreover, the research investigates the possibility of finding ethical common ground between conservationists and animal rights advocates regarding the treatment of invasive vertebrates. Interviews and document reviews are the methods employed in this study. The results suggest that conservationists' discourse has mainly a negative connotation of grey squirrels, while animal rights organisations see them as victims. Findings suggest that the main disagreement between organisations is that conservationists mainly prioritize the wellbeing of ecosystems and species, while animal rights advocates consider the welfare or rights of individual animals as the most important point. Despite the theoretical disagreements, these organisations could potentially find compromise in practice through the implementation of non-lethal management methods.

Keywords: conservationists, animal rights advocates, invasive species, grey squirrels in the UK

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List of Abbreviations

APHA - Animal and Plant Health Agency

ART - Animal Rights Theories

IUCN - International Union for Conservation of Nature

1 Introduction

According to Dickman (2010), interdisciplinary research in the invasion biology field has the potential to enable people “to move from conflict towards coexistence”. Thus, the consideration of social aspects in human-wildlife conflicts are often ignored, while they can bring solutions to the contested terrain, improving the management effectiveness of invasion science. Another layer of human-wildlife conflicts is human-human conflicts that can take place between people with different perceptions and ideologies (Dickman 2010).

Human-wildlife conflicts also influence policy decisions that incorporate the points of view of the public and different stakeholders (Perry and Perry 2008; Meech 2005). Wood and Moriarty (2001) mention that despite the fact that some scientists and environmental managers taking policy decisions try not to incorporate values in the decision-making process, “values are at the heart of such policy decisions.”

One of such conflicts of values happens between conservationists and animal rights advocates when it comes to the eradication of invasive alien vertebrate species (Perry and Perry 2008; Meech 2005). This conflict has its own long-lasting philosophical debate representing the viewpoints of the above-mentioned stakeholders. In the philosophical terrain, this conflict is well-known but alongside theory, some problems arise in the practice as a result of the clashes of different value systems.

Environmental ethicists mostly worry that an animal rights approach will not present moral reasons to protect species and ecosystems, while animal rights advocates worry that conservationists will not take into consideration the welfare or rights of individual animals, especially when these animals are invasive alien species (Light 2004).

This research aims to analyse the possibility of the shift from endless debates towards possible practical convergence on the issue of the eradication of invasive species through the analysis of the case of grey squirrels in the UK. This case study is selected as it represents very well the polarization of views of conservation and animal rights organisations regarding the eradication of grey squirrels, which are a relatively popular invasive alien species among the public in the UK. Thus, the research will investigate whether and how convergence between conflicting sides is possible in theory and practice. The research will look at different perspectives of conservation and animal rights organisations to understand both sides and to do an in-depth analysis of the case.

1.1 Aims and Objectives of the Research

The research aims to investigate the discourses of animal rights advocates and conservationists and assess the potential for common ground between the ethical approaches of these organisations regarding the management of invasive animals.

Main question

What is the potential in theory and practice for finding ethical common ground between animal rights advocates and conservationists regarding the management of invasive vertebrate species?

Sub-question 1

How do animal rights advocates and conservationists frame issues of management of invasive vertebrate species?

Sub-question 2

What are the possibilities of finding common ethical ground between animal rights advocates and conservationists?

Sub-question 3

What are the possibilities for animal rights advocates and conservationists to negotiate in practice?

The objectives are (1) to examine the possibility of finding the common ethical ground between the organisations' discourses on invasive species, and clarifying areas where they are incommensurable and (2) to investigate the possibilities for animal rights advocates and conservationists to negotiate in practice. To achieve these aims and objectives, I conducted interviews with relevant stakeholders: conservation and animal rights advocates, and also governmental bodies. I also conducted a document analysis of the websites of the main conservation and animal rights organisations campaigning on the issue of eradication of grey squirrels.

Then, I analyzed the themes that occurred from the interviews and documents and summarized the narrative around the emergent themes. The aim was to shed the light on the perceptions of these organisations about this issue, and to analyze their willingness to cooperate with each other in practice.

1.2 Outline

The chapter coming after the Introduction is the Literature review. This chapter will, firstly, review the terminology of native, alien and invasive species and discuss the vagueness of the terminology that persists in the field. The next section of the chapter will discuss the ethics behind the eradication of invasive (alien) species. The third section will discuss the

Environmental Pragmatism framework and how different forms of environmental pragmatist thought can be applied in different situations. The next section will provide information on grey squirrels and the organisations in the UK that engage with them. The last section will discuss public attitudes and the aesthetic value of grey squirrels.

The third chapter will discuss the methods used and their relevance to the study. Chapter four will provide the background information about grey squirrels and the distribution of red and grey squirrels in the UK. Chapter five will discuss the themes derived from the interviews and the documents. Mainly it will look at perceptions of the interviewees and the possibilities of the theoretical or practical convergence of the organisations.

2 Literature Review and Theoretical Framework

2.1 Introduction: Native, alien and invasive species, and Environmental Pragmatism

The purpose of this chapter is to review the literature in relation to invasive species and to emphasize the contribution of this thesis in covering the gaps within the field. First of all, I will define the native, alien and invasive species and the problems that such framing of species causes in both ethics and in the field of practice. The following section discusses the ethics behind the eradication of invasive (alien) vertebrate species referring to Leopold (1949)'s land ethic theory and Singer (1995)'s and Regan (1983)'s Animal Rights Theories (ART). Further, I will refer to the Environmental Pragmatism framework. I will introduce the definition that this research adopts for environmental pragmatism and overview the literature discussing how different forms of environmental pragmatism thought can be applied in different case scenarios. Lastly, I will provide more detailed information about grey squirrels in the UK and an overview of the advocacy issues of conservation and animal rights organisations within the UK. Then, I will proceed with a review of literature regarding the public attitudes toward squirrels and the aesthetic value of grey squirrels as one of the main factors triggering positive decision-making shifts for invasive species.

In the field of invasion science much research is focused on ecological questions, while only 4.4% focuses on social, and 3.2% on social–ecological questions (Vaz *et al.* 2017). There is a vast literature on grey squirrels but only “a small number of peer-reviewed papers on biological invasions explicitly including the analysis of social dimensions” (La Morgia *et al.* 2017).

The current study is interdisciplinary in nature, embracing environmental philosophy and socio-ecological systems with a focus on the relationship between different stakeholders like animal rights and conservation organisations in relation to grey squirrels in the UK. This research highlights the issue with invasive species and discusses different ethics behind their eradication motives and the invasive species problem within environmental pragmatism thought.

2.2 Categorization of species into native, alien and invasive

This subsection looks at how some species are valued while others are devalued, being divided into native, alien and invasive species. First of all, it is important to understand what are the most common definitions considered for the terms “native”, “alien”, and “invasive”.

Native species are defined as “species originated in its natural range (past or present) including the area which it can reach and occupy using its natural dispersal systems” (International Council for the Exploration of the Sea 1994). The most common characteristics of native species are that they evolved originally in the area, without human intervention, that the area is within the historical (natural) range of these species, that they do not tend to damage ecosystem or harm other native species, and that they are integrated part of the ecological community (Woods and Moriarty 2001).

According to IUCN (2021b), an alien species is “an animal, plant or other organism that is introduced by humans, either intentionally or accidentally, into places outside its natural range”. Usually, the terms 'alien', 'non-native', 'exotic', 'introduced', and 'non-indigenous' are used interchangeably for any animal, plant, or microbe found outside its natural range' (Devine 1998). In the thesis work, I will adhere to the term “alien” in order not to create confusion by using different terminology. The traits that alien species have are opposite to the traits of native

species, as they are originally evolved outside of the historical (or natural) range of the species, and are present in the current area as a result of human introduction, intentionally/unintentionally, directly/indirectly (Woods and Moriarty 2001). Nevertheless, according to Woods and Moriarty (2001), these traits separately are not indicators of species being native or exotic, rather these traits should be seen as a cluster of traits characterizing species, and the more traits from that cluster are noticed in a species, the more likely it is that the species will be native or alien respectively.

The definition of invasive species that I use in the thesis is taken from IUCN (2021c), defining invasive alien species as “species that are introduced, accidentally or intentionally, outside of their natural geographic range and that become problematic”. The key distinguishing word here is “problematic”, as damaging and invasive traits are the ones that differentiate invasive species from alien species. Devine (1998) points out that the main concern should be not with all alien species, but rather with the invasive species that harm the environment and other species. In most cases, the terms such as invasive and alien are used interchangeably and are usually opposed to native species (Qvenild 2013), while in reality they differ (Richardson *et al.* 2000; Colautti and MacIsaac 2004). Alien species are not always invasive, and conversely, native species may also have invasive traits. Nevertheless, as Rosenzweig (2001) points out the literature about alien species is “rich and fearful”. Devaluing alien species usually results in having a pretext to eradicate animals based on their origin. Moving animals to new lands results in the alteration of the ecosystem but practice shows that such alteration is not always negative as some alien species have positive traits, while many show neutral behaviour (Davis *et al.* 2011; Inglis 2020). According to Van Dyke (2008), it is difficult to predict the conditions under

which species become invasive, the elements that influence them or the ecological and population dynamics that will be experienced.

According to Colautti and MacIsaac (2004), terms such as 'invasive', 'weed' or 'transient' have a predisposition to be interpreted subjectively. Using the popular 'invasion' framing creates a perception of catastrophe and insecurity, and it is framed this way to show the urgency of the problem and the importance of taking action (O'Brien 2006). On the other hand, "invasiveness is seen as an attribute of species and as a characteristic that prioritizes alien species on the political environmental agenda" (Qvenild 2013). This way, environmentalists are usually urged to prevent "one of the major ecological evils", which are alien species (Hettinger 2001), informing policymakers about the importance of taking prevention, control and eradication actions in relation to invasive alien species and surveilling alien species that may have invasive attributes in the future (Qvenild 2013).

Another way of calling invasive species is "pest species", meaning any animal or plant harmful to crops, food, livestock, forestry or humans. Referring to an animal species as a pest affects the perception of animals negatively (Jaric *et al.* 2020). Grey squirrels in much literature are considered as pest species causing harm to the economy, forestry and red squirrels (Dunn *et al.* 2018; Holmes 2015).

2.3 Criteria for determination of native and alien species

The most well-known criterion that determines whether a species is native or exotic is the human introduction criterion (Woods and Moriarty 2001). Thus, by this criterion species introduced by humans are not native species, rather they are alien and invasive species, as it was previously pointed out in the definitions of alien and invasive species. Paradoxically, referring to formerly native species, that are no longer present but which occurred naturally in the past, we

can see that some of them could survive due to the reintroduction programs by humans (Warren 2007). So, if native species are just about species that emerged without human influence, then, the fact that some natives came back with the assistance of humans is ignored. Thus, human introduction criterion mentioned in the definitions of alien/invasive can be problematic, because, otherwise, conservation icons such as native red squirrels to Scotland would become aliens, as there were many reintroductions and the majority of British red squirrels' populations are "of continental ancestry, many with a very recent Scandinavian ancestry" (Hale *et al.* 2004).

On the other hand, considering humans as part of the ecosystem and our actions natural, then human influence to species introduction even unintentionally is a natural process, as Rodman (1993) mentions that it does not matter "on which animal, wild or tame, native or exotic, human or sheep, the plant hitched a ride". In other words, it does not matter whether the introduction was achieved by human or nonhuman species, as the result and the mode of introduction is the same. The only difference is the precise means and that should not determine whether the species is alien or not. "Human introduction is not sufficient to make a species alien, though it is a trait which is characteristic of alien species" (Woods and Moriarty 2001). However, in practice, human introduction is seen as a prerequisite rather than a characteristic of being an exotic species. On the other hand, Warren (2007) points out the case of species expanding their geographical range naturally, wondering whether we should consider them as alien invaders or natives expanding their range, as species moving naturally can also have invasive traits. In fact, species that naturally expand their range are directly considered natives, instead of aliens. Moreover, considering climate change patterns and invisible anthropogenic change influencing the movement of species and change of the habitats, this is potentially

another large difficulty for drawing the dividing line between ‘native’ and ‘alien’ (Warren 2007).

Moreover, there can be a parallel drawn between animals and humans, as humans are considered to be “the most catastrophically invasive species of them all” (Van Driesche and Van Driesche 2000). Nevertheless, being a dominating species, we do not plan our own extermination. If we consider ourselves aliens, however, it is harder to justify the persecution of other aliens (Warren 2007), as the only thing they do is to survive as we do. Nature should not be separated from humans as there is no pristine nature left that was not influenced by the human species. If pristine connotes with no human influence, then nature or species considered fully natural would be very difficult to define as the complexity of the interaction of humans with nature over the past several million years is undeniable. (Warren 2007).

On the other hand, according to the evolutionary criterion a species is native to an area if it originally evolved in that area (Woods and Moriarty 2001). The evolutionary criterion acknowledges that a species may go through the adaptation process to the ecosystem and be considered as native (Woods and Moriarty 2001). According to Woods and Moriarty (2001), the problem with the evolutionary criterion is that it is very complex to realize at what time one species divides into two and becomes separate species or different forms of one species and what species should be considered, then, native and which -alien? As some species after their introduction can go through a process of adaptation and speciation, it is difficult to say whether that evolved species is the same introduced species or a separate one evolved from it.

Conservation biologists mostly do not stand for the evolutionary criterion as a distinguishing feature of native and alien species, but rather they follow the historical (or natural) range criterion (Woods and Moriarty 2001). The historical range criterion, in

comparison with the human introduction criterion, considers not just human introduction but also the geographical expansion of species by natural means. As Woods and Moriarty (2001) mention, though, there is a problem with a spatial scale, as it is very controversial to understand where the borders of the native range finish, should we determine the native range within a country, region or even some specific site? In most cases, this criterion is considered within a country range, while it is not always true in practical terms and triggers nationalistic vibes. On the other hand, there is a problem with time scale, concerning at what point a species can shift from “alien” status to “native” status (Woods and Moriarty 2001).

The degradation criterion is another feature that is considered in order to classify species into native/alien. The degradation criterion is based on the harm that is caused by species to the environment (Woods and Moriarty 2001). Nevertheless, in fact, alien species may also have positive or neutral traits (Davis *et al.* 2011; Inglis 2020). In some cases, the removal of invasive species can benefit some native species and at the same time harm other native species, which also makes the reliance on just the degradation criterion unreliable (Woods and Moriarty 2001),

The community membership criterion distinguishes the species by their integration into the ecological community, thus species that even do not harm others can still be alien, following this criterion (Rodman 1993). Nevertheless, it is difficult to determine at what point species become integrated natives. The criticisms are mostly about the difficulty of measuring the community properties and stability (Shrader-Frechette *et al.* 1993).

Thus, as we can see the terminology is very inconsistent and does not consider different aspects, which questions even management methods based on this terminology. That is not to say that all the management methods and decisions taken are wrong but to acknowledge that considering all the cases based on solely one of the criteria is likely to lead to questionable

decisions. Thus, the vagueness of the key terms in relation to native, alien and invasive species can lead to unjustified decisions.

2.4 The problems of the “invasive” narrative

The problems with the “invasive” narrative are not just a semantics issue, rather they result in the formation of the deceptive understanding and perception of the problem. This way, the dominating narrative, on the one hand, educates everyone in the realm of that particular narrative, constraining the ability to see beyond that narrative, and, on the other hand, such narrative results in taking wrong or biased decisions.

The purpose of this chapter is to give an overview of how the “invasive” narrative works and what problems and associations it brings into practice.

2.4.1 The social dimension of the “invasive” narrative

In 1992 the ‘Rio’ Convention on Biological Diversity’ prioritized the alien species problem under Article 8(h), urging to “Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species” (United Nations 1992). In 1996, the Global Invasive Species Programme was established to provide policy support in relation to invasive species under Article 8(h) and raise awareness about invasive species globally. IUCN (2021a) regard invasive aliens as a major threat to the planet’s biodiversity and the second most common cause of species extinctions.

While natural science indicates the problem so explicitly, there are other social and ethical problems arising from the “invasive” narrative, which goes beyond the natural science spectrum. Pluralistic values of different organisations touching upon these issues cause a big debate over the approach that should be taken towards invasive species.

In fact, the decision-making process in many cases does not consider all the values at stake, as values can be/are conflicting. For example, conservationists usually care more about health and biodiversity values while animal rights advocates prioritize animal welfare value. Prioritizing the invasive species problem, conservationists often see the solution in complete eradication (Perry and Perry 2008), while even from the conservation point of view some authors argue not to focus exclusively on eradication (Van Dyke 2008). Nevertheless, the reason for such prioritization of eradication methods is also linked to the effectiveness of presenting concrete strategy and measures in the policy-making sphere. As Perry and Perry (2008) mention “Eradication and containment efforts are more commonly used and publicized than is prevention: they attract increased media attention and can be presented as a worthy fight against an immediate threat”.

It seems that conservationists, focusing on scientific facts showed less attention to the language used about invasive species (Larson 2005). Going back to the 1980^s, when invasion biology emerged as a subdiscipline of biology (Davis 2009), we can see that while invasion ecology was developing, the main concern was that the field is not well connected with other disciplines and there is a “dissociation between invasion ecology and the rest of ecology” (Davis *et al.* 2001). The British ecologist Charles Elton with his book “The Ecology of Invasions by Animals and Plants” was one of the main contributors to the invasive biology field. The language that he used in the book contained militaristic framing (Davis 2009). As Inglis (2020) also mentions, militarizing the non-native species issue was “a significant part of Elton’s legacy”. Elton (1958) argued that

it is not just nuclear bombs and wars that threaten us, though these rank very high on the list at the moment: there are other sorts of explosions, and this book is about ecological explosions. An ecological explosion means the enormous increase in numbers of

some kind of living organism – it may be an infectious virus like influenza, or a bacterium like bubonic plague, or a fungus like that of the potato disease, a green plant like prickly pear, or an animal like the grey squirrel. I use the word ‘explosion’ deliberately, because it means the bursting out from control of forces that were previously held in restraint by other forces.

Following Elton, many of the books about invasive species used the militaristic language, such as *Life Out of Bounds: Bioinvasions in a Borderless World* (Bright 1998), *Killer Algae* (Meinesz 1999), *Nature Out of Place: Biological Invasions in the Global Age* (Van Driesche and Van Driesche 2000), *Tinkering with Eden: A Natural History of Exotics in America* (Todd 2001), and *Plagues of Rats and Rubbervines* (Baskin 2002).

There are many critics from the fields of history, philosophy, sociology, gardening, and landscape architecture opposing the standpoint of natural scientists on the issue of controlling introduced species, referring to the nativist, racist and xenophobic elements found in their discourse (Simberloff 2003). Nevertheless, according to Simberloff (2003), such accusations do not have precise ground and the main motivation of invasion biologists and conservationists is to prevent ecological or economic harm caused by invasive species. While Larson (2005) thinks that even if it is not deliberate, the loaded framing of invasives can confuse even conservationists themselves regarding solutions to the problem. As Olwig (2003) mentions, the line between ecological patriotism and racism is very blurred, and discourses prioritizing native species can trigger the claims of racists and xenophobic nationalists (Olwig 2003). According to Simberloff (2003), complaining about the discourse containing racist and other discriminative elements suppresses the main aim of the conservationists which is nothing else than the conservation of the integrity of the environment. Nevertheless, even if the discourse does not aim to be xenophobic, it risks becoming so when the classification criterion of species status is based solely on a nation-state, for example.

One of the accusations towards conservationists is that militaristic metaphors are used in the framing of invasive alien species. According to Larson (2005), such an approach causes misunderstanding not just of the public about the issue but also causes misinterpretation by conservationists. Militaristic framing cannot assist in maintaining sustainable relations between humans and the non-human world, as it is counterproductive for conservation (Larson 2005). Militaristic metaphors lead to more homogenous solutions in relation to all native/alien species. Such framing also suppresses the facts found by conservationists and results in questioning the objectivity of scientists. Thus, the language used to interpret scientific findings is very important to make all the aims objective and justifiable.

In 1994, Michael Pollan highlighted an anti-exotic campaign resembling the ‘Nazis’ native plant movement. Peretti (1998) mentions that nativist trends in conservation biology negatively impacted environmentalists’ standpoint on alien species. Simberloff (2003), on the contrary, mentions that “certainly the Nazi drive to eliminate non-indigenous plants was related to the campaign to eliminate non-Aryan people, while the writings of some early 20th century garden writers are laden with the language of contemporary nativism”. As O’Brien (2006) mentions, the accusation of xenophobic language is not to say that restorationists and conservationists are racists by themselves rather that introducing such framing into conservationists’ debates creates a pretext for discrimination against non-native species (O’Brien 2006).

According to Meyerson and Reaser (2003), the impact from invasive species is not just economic and environmental, but also emotional, as the demarcation of charismatic wildlife species as invasive may cause a great impact on the public. The data shows that the most charismatic species despite having invasive status are supported by the public (Shackleton *et al.*

2019). There is a gap between the public's understanding of nature and conservationists' standpoint on the prioritization of native species (Warren 2007). In fact, scientific values diverge from cultural values causing different interpretations of the problems by different groups of professionals (Larson 2005). As a result, he suggests, conservationists do not consider the value of animal welfare at stake while animal activists do not consider the ecosystem value (Larson 2005). As Woods and Moriarty (2001) mention, alongside the wrong strategy of focusing on only one criterion for species classification, it is also wrong to refer just to one value (e.g. biodiversity value) in the decision-making process about invasive animals. While taking decisions, all the values should be communicated and taken into consideration (Meech 2005). Thus, the problems of current framing make it worthwhile further examining this topic.

2.5 Ethics behind the eradication of invasive vertebrate species

This subsection refers to different ethical theories on animal rights/welfare and ecocentrism to understand the ethics behind the eradication of invasive animals and how different values are embedded in the narrative of the invasive by different organisations. In order to question whether eradicating animals is ethical, the thesis will review the literature available on the relevant ethical theories. The main ones are the land ethics of Leopold (1949), animal rights of Singer (1995), and the rights-based approach of Regan (1983). These theories were chosen to understand the ideologies behind the actions of both conservationists and animal rights groups that mostly follow these ethical theories in their practical decisions. These theories will provide distinct ways of understanding the ethical issues associated with eradicating invasive animals.

2.5.1 Environmental ethics: Land Ethic versus Animal Ethics

The academic literature on invasive species usually does not make a distinction between sentient and non-sentient invasive species, demarcating all of them as “invasive”. Not considering such a distinction between sentient and non-sentient species results in the same eradication methods considered for all the invasive species, independently of the sentience factor. As conservationists aim to conserve exclusively biodiversity, their management plans in most cases prioritize lethal approaches rather than non-lethal in relation to all invasive species as the former are considered to be the most effective and cost-friendly (Van Dyke 2008). As a result, in most cases, the introduced management plan leads to a clash between the interests of conservationists and animal rights advocates due to their different values (Perry 2004; Perry and Perry 2008).

Referring to traditional animal rights theories, we may notice that the principal idea is to dismantle the animal exploitation system based on suffering and death (Singer 1995; Regan 1983; Donaldson and Kymlicka 2011). Singer’s (1995) *Animal Liberation* is considered as the beginning of the animal rights movement, while Regan’s (1983) animal rights theory was the first to include animals in the rights context (Perry and Perry 2008). Singer’s animal welfare theory is based on utilitarianism; thus, it pertains to more welfarist goals to reduce unnecessary suffering, rather than Regan’s theory presenting a strong rights view. In contrast to both these positions, Leopold’s land ethics asserts that “a thing is good if it contributes to the integrity, stability and the beauty of the biotic community. It is wrong when it tends otherwise” (Leopold 1949). If Leopold’s ethical stance is adopted then, maintaining the integrity and wellbeing of the ecosystem may require ignoring some individualistic rights of animals.

Animal rights theories tend to stand for any proposal or reform for improving the treatment of animals. According to Animal Rights Theories (ART), the main reasons to stop animal exploitation are the intrinsic value of animals and the ‘sentience’ factor (Singer 1995; Regan 1983). According to Singer (1995), the fact that an animal is sentient is a sufficient indicator to consider its rights. Singer (1995) argues that mammalian vertebrates experience pain as strongly as we do. Thus, “to say that they feel less because they are low animals is absurdity” (Singer 1995). As Singer (1995) mentions, in fact, there are animals whose senses are even more acute than ours, for example, the visual senses of some birds, or the touching or hearing senses of some wild animals. Plus, due to their inability to reason and understand the sources of approaching harm in some cases they can experience more intense feelings such as anger or fear than people (Singer 1995). Moreover, both Singer (1995) and Regan (1983) argue that there are also humans lacking the capacity to reason, nevertheless, due to their personhood factor, they do have rights, while it is not the same in the case of animals.

In most cases, ART seem to be incomplete as they mostly focus on domestic animals, while wild animals are also an important part of our society (Donaldson and Kymlicka 2011). To put it better, we all are part of a shared society with many animals. As even if most of us do not directly interact with wild animals, the interaction is inevitable, so that it is important to consider the case of wild animals more explicitly than it is done in traditional ART. Traditional ART mostly calls on humans to let nature be untouched. Singer (1995) suggests that it is better not to intervene as historically there was more harm from the intervention than help. Nevertheless, Singer also acknowledges that the decisions of humans are deeply embedded in ecosystem functioning, and in critical situations, human intervention may become a necessity. By critical situations, he means that eradication of a group of species can be considered if its

pleasure happens at the expense of another group's suffering. Thus, "if animals' population grows to such an extent that they damage their own environment and the prospects of their own survival, or that of other animals who share their habitat", then humans can intervene and take supervisory action (Singer 1995). Overall, according to Singer, eradication should be realized on the principle of the minimization of suffering.

By contrast, Regan (1983) calls for absolute non-intervention. According to Regan, animals with sufficient cognitive capacity, having beliefs and desires are "experiencing subjects of a life", mentally normal adult mammals. Regan considers the option of eradicating an animal only in case of self-defence. According to him, any incentive to kill an animal to conserve other members or the ecosystem is not justifiable. His main idea is that the overall positive consequence for a group does not necessarily mean the positive consequence for each individual being, which makes his theory more abolitionist than Singer's theory. Thus, conservationists are left with very limited management options that could be approved by Reganite animal advocates.

Donaldson and Kymlicka (2011) point out that traditional animal rights theorists put a lot of effort in arguing for the intrinsic value of animals, while in the political realm they have not got recognition. Thus, they argue for providing legal and political rights to animals, emphasising the importance of recognizing a) citizenship rights for domestic animals alongside basic intrinsic rights, and b) ensuring sovereignty for wild animals. According to Donaldson and Kymlicka (2011), as wild animals have their own habitats, their communities should be considered sovereign communities. Nevertheless, acknowledging the sovereign communities is not equal to 'hands-off' approach, as some forms of human intervention are acceptable. However, it is important to be "very careful in justifying interventions into wild animal communities" (Donaldson and Kymlicka 2011).

Regan's standpoint goes in absolute opposition to what Leopold's land ethics suggests. Leopold's (1949) land ethic, finds it incompatible to ensure individualistic rights of animals with ensuring the wellbeing of the ecosystem. According to the contemporary Leopoldian philosopher Callicott (1980), the overall well-being of the biotic community can dictate the morality of our actions, as in some cases, the killing can become a moral requirement if the whole ecosystem is at the risk. According to land ethics, the members of the biotic community do not possess equal value by nature, as, for example, bees' value is more than that of rabbits: even though bees are not sentient as rabbits, the conservation of bees is more important due to their benefits to the ecosystem (Callicott 1980). Thus, population size or even the sentience of beings are not indicators of the individual's value for the community. "Soils, mountains, rivers, forests, climate, plants and animals, despite being less alive than ourselves are vastly greater than ourselves in time and space, thus we cannot destroy it with moral impunity, as the "dead" earth is an organism possessing a certain kind and degree of life, which we intuitively respect as such" (Callicott 2010). Thus, Leopold's land ethic is actually based on the importance of human intervention in order to assist nature to revive. According to conservationists, following the animal rights approach can lead to the decrease of important species and degradation of the environment. In the case of grey squirrels, Leopold's theory would suggest choosing an option that most effectively can save the environment. 'Discipline, sacrifice, and individual restraint' are the main principles to achieve the integrity of the social community (Callicott 1980). The main idea is that individual lives do not matter so much in comparison with the wellbeing of the environment. Callicott's (1980) argument regarding pain being part of life means that ethics should not be guided by efforts to minimize it.

In the 1980s the conflict between animal rights ethicists and holistic environmental ethicists became more explicit and heated. Regan pointed out that the wellbeing of the biotic

community is dependent on the wellbeing of the individuals that are part of the ecosystem, thus insisting that the rights of individuals is the way to preserve the ecosystem, which Callicott (1980) referred to as “ecological illiteracy”. Regan (1983)’s response to this attack was that holistic environmental ethicists commit “environmental fascism” by sacrificing individual interests for the interest of the whole. Sagoff (1984) claims that

Environmentalists cannot be animal liberationists. Animal liberationists cannot be environmentalists. The environmentalist would sacrifice the lives of individual creatures to preserve the authenticity, integrity and complexity of ecological systems. The liberationist—if the reduction of animal misery is taken seriously as a goal—must be willing, in principle, to sacrifice the authenticity, integrity and complexity of ecosystems to protect the rights, or guard the lives, of animals

Later, Callicott (1988) admitted that the sensitivity factor of animals does concern him, thus he offered an ‘olive branch’ to animal ethicists in the form of the article ‘*Animal Liberation and Environmental Ethics: Back together Again*’ (1988). He identifies different communities, such as the community of human beings, the mixed community of humans and domesticated animals and the wider biotic community that also includes wild animals. He creates a hierarchical order for weighting moral concerns regarding animals, starting from human community (Callicott 1988), while how moral concerns can be weighted in this hierarchical way is not explained in practice.

2.6 Environmental Pragmatism

As different non-anthropocentric ethics such as land ethics and animal rights theories cannot be aligned on the issue of the invasive vertebrate species, I believe that environmental pragmatism with its different approach to ethics can bring in invaluable perspectives about the ways of solving such conflicts in practice.

Basically, this subsection will look at the definition and approaches of environmental pragmatism, further proceeding with the specific case of the conflict between land ethic and animal rights theories and how environmental pragmatism can solve this kind of conflict and under what circumstances.

2.6.1 Introduction to Environmental pragmatism

With all the benefits of philosophy, there is a well-known problem of the practicality of ethics and long-lasting debates between different ethicists. In fact, such debates are very interesting and complex, but unfortunately, in light of pluralistic values, these different ethics do not infiltrate into the deliberation process of scientists, activists and policymakers but often tend to result in constant conflict (Katz and Light 1996). Environmental pragmatists believe that taking into account all the complexity of the natural world and environmental problems, environmental philosophy should find practical answers to the problems. “Pragmatists cannot tolerate theoretical delays to the contribution that philosophy may make to environmental questions” (Katz and Light 1996). Pragmatism acknowledges the dynamic state of things and, thus, looks for ethics that recognizes such pluralism of values.

2.6.2 Criticism of environmental pragmatism

A number of criticisms of environmental pragmatism have been made. One of the main critics was Callicott who was in favour of monism rather than pluralism in ethical theories, as pluralistic values may require different practical approaches (Callicott 1990). According to Callicott (1990), “with a variety of theories at our disposal, each indicating different, inconsistent, or contradictory courses of action, we may be tempted to espouse the one that seems most convenient or self-serving in the circumstances”. Callicott (1990), on the other hand, thinks that the aim of environmental ethics is to achieve the philosophical certainty, while

environmental pragmatists tend to achieve solutions. Pearson (2014), meanwhile, points out that pragmatism “does not advocate the dissolution/evasion of traditional questions within environmental ethics, but rather adopts a radical re-conception of how one might productively investigate those questions” (Pearson 2014). According to Pearson (2014), there is a group of environmental pragmatists concentrating on solving practical issues, while others work on a more theoretical level leading discussions regarding the ways how practical environmental problems can efficiently be addressed.

2.6.3 Methodological pragmatism

According to pragmatists, environmental problems due to the urgency of taking action require “mutual toleration of competing theories” (Light 1995). Philosophical use of pragmatism is about elaborating positions against other theories, while metaphilosophical use of pragmatism looks for solutions to theoretical problems (Katz and Light 1996). Methaphilosophical use of pragmatism tends to avoid theoretical debates due to the urgency of taking action (Katz and Light 1996). Light (2004), then changed metaphilosophical environmental pragmatism’s name to “methodological environmental pragmatism”. Methodological pragmatism is about focusing on the convergence within results rather than arguing whose stand is more morally grounded (Light 2004). Methodological pragmatism analyzes the issues that are within the interests of the community, as philosophy should serve the larger community. Thus, in the case of invasive species, and grey squirrels specifically, methodological pragmatism investigates different values that are at stake in order to embrace a larger community of people. Following methodological pragmatism, environmentalists and animal rights advocates, instead of fiercely justifying their point of view on the issue, should look at the possibility of finding common ground in practice (Light 2004).

The main fear of environmental ethicists is that animal liberation will inhibit the protection of species and ecosystems, protecting individual animals at the expense of the welfare of ecosystems, while the fear of animal liberationists is that environmental ethicists will not consider individual rights of animals.

Light (2004) looks at ways how methodological pragmatism can be implemented in the case of animal treatment in conflicting situations such as ‘pest removal’. Looking for a solution that would meet the expectations of both conservationists and animal rights advocates regarding invasive species management, a pragmatic approach might be the conservation of native species without harming invasive species through nonlethal management tools. As Light (2004) adds “it would be an odd holist who would argue that [animals] should be treated inhumanely for the good of the overall ecosystem”.

In fact, in most cases environmental ethicists and animal advocates promote different animal management techniques and find it difficult to compromise with each other having different moral values and motivations (Light 2004). Prioritizing the wellbeing of the whole, conservationists in most cases do not consider the welfare of invasive animals, while, on the other hand, put the best effort to conserve native species. According to Light (2004),

Even if one does hold the view that ecosystems have intrinsic value, such an argument does not disprove claims that we should reject speciesism, whether such rejection takes the form of arguing that other animals have interests that should be respected in a moral sense or arguing that they should be granted rights. It is even more bizarre for environmental ethicists to dismiss such positions without argument, given that they start with the premise that the realm of moral consideration does not stop at the boundaries of the human community...Perhaps only a severe moral monist who claimed that only collective entities—species and ecosystems—had direct moral value could safely reject all claims to individual animal welfare without contradiction.

If we consider humans and ecosystems having moral value, then giving “moral respect for nonhuman components of ecosystems should be given careful consideration” (Light 2004). The strength of environmental pragmatism is that instead of applying a theory in practice, pragmatism urges case-based solutions, where ethical principles can be applied in some cases, but not in others (Tuminello 2014; Light 2004). As the animal rights movement gets stronger and opposes the legislation on eradication methods, consideration of their standpoint becomes important. Thus, pragmatists look for a compromise between these two sides at least in some situations. In fact, Light (2004) mentions that not in all cases environmental pragmatism is applicable, as there are cases when it is very difficult for environmentalists and animal liberationists to come to compromise. According to Light (2004), Singer’s animal welfare theory seems to work as a compromise in some cases, as Singer alongside protecting individual animals does not suggest to do that at the expense of the ecosystem. Singer mentions that

if animals’ population grows to such an extent that they damage their own environment and the prospects of their own survival, or that of other animals who share their habitat, then humans can intervene and take supervisory action (Singer 1995, 234).

The case of grey squirrels in the UK will help to analyze the specifics of the ethical stances of the conservation and animal rights organisations and see whether the methodological pragmatism is applicable to this specific case and under what circumstances. Thus, the current study by in-depth research will add value to the literature by directly analyzing in practice the applicability of methodological pragmatism and investigate how much, in reality, these kinds of organisations are willing and/or see value in aligning with each other. Moreover, the case of grey squirrels will help to see which theories in fact come together and do/can work on compromise solutions, especially in the case of a more deontological approach.

2.7 The case of grey squirrels in the UK

This subsection will provide the background information on the case study of grey squirrels in the UK. It will explain more explicitly the conflict that exists between conservation and animal rights advocates and their advocacy on the issue of grey squirrels. Further, it will provide information about the evolved relationship between humans and grey squirrels. Also, this subsection will touch upon the aesthetic value of grey squirrels and its role in the formation of the values of people.

2.7.1 Background information

The introduction of the American grey squirrel (*Sciurus carolinensis*) has been taken place several times in different European countries, including Ireland, Great Britain and Italy (Shackleton *et al.* 2019). In most cases, it was a deliberate introduction and only in a small number of cases they escaped captivity. It had been introduced for aesthetic reasons as an ‘ornamental addition to parks and gardens’ (Shackleton *et al.* 2019). The main issues that grey squirrels represent are their outcompeting capacity of the native European red squirrel (*Sciurus vulgaris*) for the food, exacerbating this situation even more through their transfer of a squirrel pox virus to red squirrels and also the damage that they cause to the forests by bark-stripping (UK Squirrel Accord 2021c). Grey squirrels have been included in the list of 100 of the world’s worst IAS (IUCN 2021a) due to their outcompeting capacity of red squirrels and their impact on forests, in general. According to the law on grey squirrels in Great Britain passed in 1937, the importation into and keeping within Great Britain of the grey squirrel species was prohibited. These species are classified as invasive non-native species (invasive alien species in the EU) (Great Britain Nonnative Species Secretariat 2019).

Grey squirrels' population constitutes about 2.7 million individuals which are spread throughout England, Wales, Scottish Lowlands, Northern Ireland and Ireland (Red Squirrels Northern England 2021b). Red squirrels' population in Scotland is the highest, constituting around 75% of the UK red squirrel population (Saving Scotland's Red Squirrels 2021). Red squirrels mostly can thrive where there are no or a little number of greys.

In order to protect red squirrels, grey squirrels' population number is controlled through lethal methods such as trapping and shooting. Lethal traps are one of the management methods for grey squirrels in the UK, but these are not deployed in the locations where red squirrel strongholds exist. Shooting through air rifles is another method for managing grey squirrel numbers (UK Squirrels Accord 2021a).

Inglis (2020) argues that the population of red squirrels was decreasing before the introduction of grey squirrels, as a result of the devastation caused by humans in their habitat. Moreover, red squirrels once had been treated as invasive animals and had been massively eradicated because they were causing environmental destruction (Inglis 2020). In fact, in the 18th century, red squirrels declined in their numbers due to forest destruction and then recovered thanks to reforestation. Their numbers grew so much that red squirrels became considered pests and started to be persecuted. Nevertheless, by the spread of grey squirrels, greys became “even worse forest pests than their red cousins” (Holmes 2015) As Lurz (2014) points out, “it is their [red squirrels'] relentless disappearance and loss that has evoked and precipitated this sense of belonging and identity”. As Inglis (2020) also mentions, it was only after they became an endangered species in the UK that the preservation of remaining populations of red squirrels became so important.

2.7.2 Attitudes towards grey squirrels

The method of euthanasia was chosen as an eradication method for grey squirrels in Italy (Perry 2004). In 1996 the National Wildlife Institute of Italy proposed a trial eradication plan through euthanasia. In 1997 animal rights groups proposed other techniques, such as translocation or sterilization. The methods offered by animal rights groups were not approved due to the deficiency of funds (Perry 2004). In order to evaluate the efficiency of the technique, a trial based on euthanasia was conducted in 1997, which later caused the opposition of some animal rights groups, leading the case to the court. As the procedure took a long time, the elimination of well-established grey squirrels was no longer feasible (Perry and Perry 2008). Thus, this way the conflict between conservationists and animal rights groups, having a different understanding of the value of life, was exacerbated.

Nevertheless, in the UK there are also active groups standing against the culling of grey squirrels through petitions and application to the government (notably Animal Aid, Urban Squirrels, PETA, VIVA!). In the petitions, the main demand is to stop culling methods as they see it as an ineffective way of conserving red squirrels, while according to them the decline of reds originally happened due to habitat loss and previous persecution (Animal Aid 2017). Moreover, Dunn *et al.*'s research (2018) shows that the public does not support lethal methods for grey squirrels.

Places have not just physical but also emotional linkages with people, therefore, so the loss of red squirrels means a personal emotional loss (Lurz 2014). Lurz (2014) mentions that it is difficult to admit that what for us is native and culturally significant and a life experience is not constant and each generation has its own understanding of nature and its own new interactions with wildlife. As Lurz (2014) mentions,

the rabbit, like the fallow deer, was probably brought to Britain by Normans and is now so established and integrated in our ecosystems that eradication could lead to serious consequences for rare native predators

Thus, it is difficult to determine when exactly species can be considered an integrated part of the natural community.

According to Dunn *et al.* ' the research (2018), it is possible to see that people have an ambiguous attitude towards grey squirrels, but in general, they do not support lethal measures taken for these animals. In order to control grey squirrels' population more effectively, wildlife professionals need to understand the perceptions of public attitudes about grey squirrels and the implemented control methods. According to the results, many people have little information about grey squirrels' negative impacts, conversely, grey squirrels' presence is often desirable. As Dunn *et al.* (2018) points out "a substantial number of people like or would like to see grey squirrels in their garden (47%), local parks (57%), and the countryside (58%)".

Within the recommended control methods, such as contraception, planting trees, biological control, live capture and subsequently destroyed, shooting, kill traps, warfarin poison, the most acceptable are contraception and planting trees, while the lethal methods are the least acceptable, with biological control as the most acceptable lethal control method and live capture (and subsequently destroyed), and shooting methods as the least acceptable (Dunn *et al.* 2018). According to Lurz (2014), meanwhile, people especially in the North of the country "link red squirrels to places and experiences". Lurz (2014) mentions that "seeing a red squirrel is 'news to be shared' as red squirrels became a part of social experience". This is not the same in places where grey squirrels are present for a long time and already outcompeted reds, there, attitudes "tend to be more general with an abstract sense of concern over losing biodiversity and rare species" (Lurz 2014).

In general, perceptions of people regarding invasives can differ depending on urban or rural context (Shackleton *et al.* 2019), as the experience of people with the same invasive species in urban and rural landscapes are usually different. In urban places there are few urban mammals that people can meet, so there is less interaction between humans and wildlife, which makes this interaction even more valuable and natural (Shackleton *et al.* 2019). Usually, in rural communities and/or conservation areas the relationship of humans with invasive species is more problematic (Shackleton *et al.* 2019). And, grey squirrels are considered as the popular visitors to urban and suburban parks and gardens. Thus, where no other wildlife can be met, grey squirrels may be considered desirable despite their invasive status. Nevertheless, based on Dunn *et al.*'s research (2018), it seems there is no significant relationship between the acceptability of the control methods and the presence or absence of red or grey squirrels in the area.

The conflicts raised between different groups of people were especially due to animal welfare issues. Expanding the knowledge about the public's perceptions of the specific animals can help to collaborate with different stakeholders to develop management control methods acceptable for all stakeholders (Meech 2005). Having this information can enable the development of programs to involve the stakeholders into the process by acknowledging different actors' opinions. This will help with the decision-making process and make control methods more long-term and effective, and prevent possible clashes of different groups as in the case of grey squirrels in Italy. On the other hand, a participatory approach will help scientists and managers to understand other stakeholders rather than always tending to educate them (Fischer *et al.* 2011).

2.7.3 The aesthetic value of squirrels

The interesting aspect of the conflict between conservationists and animal advocates is that ethical considerations are exacerbated when the invasives are a species “that have aesthetic or emotive value in society, independent of its ecological role” (Shackleton *et al.* 2019). Some attributes contributing to the charisma of a species are “body size, distinctive coloration, furry coat, peculiar appearance, neotenic (juvenile) features, and sentience” (Shackleton *et al.* 2019).

And, this is not just about invasive species. In the conservation field, there is a concept of “flagship species” in order to orient conservation marketing campaigns towards the charismatic species, stimulating support and funding for conservation of these species (Shackleton *et al.* 2019). If flagship species, supported by conservationists can be shown as victims of other charismatic invasive species, then the public perception can be more balanced and prevent the total support towards invasive species (Shackleton *et al.* 2019), as in the case of species pairs of grey squirrels presented as charismatic invasives and red squirrels as charismatic victims. As people’s perceptions regarding invasive species can be very positive towards “charismatic” invasive species, they can perceive very negatively the lethal management methods.

According to Lorimer (2007), species charisma involves inherent species characteristics, but also “subjective perceptions and values” of humans towards these species, as a result of direct (observation, feeding) or indirect (through educational curricula, professional contexts and the media) interactions with the species. This is not to say that animal rights advocates do not care about the rights of other non-charismatic species or that conservationists focus more on aesthetics rather than biological value, rather the main debates go around the most charismatic species. Charisma can also influence the research interest to be concentrated on specific species

(Shackleton *et al.* 2019). Charismatic species control has often been opposed while it is rare to see the same public resistance towards non-charismatic species control (Shackleton *et al.* 2019).

Among the animals considered charismatic by many groups, it is important to highlight North American squirrels (*Sciurus carolinensis*) in Europe (Bertolino and Genovesi 2003). Proposed control methods in Italy in relation to grey squirrels were opposed by animal rights groups and the public. It is important to mention that the technique that was used in order to urge people to oppose the proposed control methods was emotive and effective, as the grey squirrel was presented “in the form of an endearing cartoon character”, influencing the public perception about these species (Genovesi and Bertolino 2003).

In the UK, meanwhile, grey squirrels are perceived negatively by supporters of red squirrels especially in the places that reds are getting outcompeted by grey squirrels (Dunn *et al.* 2018), as people have cultural bonds with red squirrels (Lurz 2014), which explicitly illustrates the case of environmental campaigning of flagship species mentioned above. The reasons behind the conservation of iconic red squirrels in the UK are not just conservation-oriented, but also have to do with complex human-wildlife relationships (Lurz 2014).

2.8 Summary

The research attempts to fill the gap in the invasion field that is mostly focused on natural sciences and less on social aspects. However, as this review has indicated, social sciences and humanities represent an important part of the problems that arise in this field. Invasive species represent part of human-wildlife and human-human relationships. Acknowledging the existence of different values is important, as ignoring their existence does not solve, but rather hides the problem. Although policy makers often try to simplify and avoid the multiple values at stake, they need to consider different opinions when it comes to the

decision-making process, especially when the public pressurizes them. On the other hand, there are many conflicts in the philosophy field which cannot overcome the debates and proceed with practical solutions to the problems.

Thus, the research aims to fill this gap,

- 1) It will be an interdisciplinary research, touching upon social and philosophical aspects of the existent conflict
- 2) It will assess the applicability of environmental pragmatist thought to the conflict through the analysis of grey squirrels in the UK

From the studies reviewed, there are few studies investigating social and ethical sides of the eradication of invasive species in the UK. Most research studies done on grey squirrels are from the standpoint of the natural sciences. One of the prominent researches focusing more on the understanding of social aspects of the problem is Dunn *et al.*'s research (2018), which analyzes the public perception in the question of grey squirrels' eradication. This is a quantitative study targeting the general public within the UK. Meech's (2005) research on eradicating non-native mammals from islands is closer research to mine, as it is a qualitative study exploring different viewpoints regarding the eradication of rats in Lundy Island, UK. My research in comparison with Meech's (2005), however, is based on a more popular invasive species, which I believe creates the potential for a more significant clash of ideas and more public and animal rights advocates' resistance. Moreover, my research does not focus on the general public perceptions but rather targets directly the main conflicting parties that are aware about the issue and have their own campaigns and standpoints regarding grey squirrels. Moreover, my research approaches the problem from both social and ethical perspectives in order not just to understand the perceptions of the organisations but also to analyze whether and

how these organisations can cooperate with each other, which is a significant gap in the literature.

3 Methodology

3.1 Research Design

The idea of the research is to analyse the discourse of conservationists and animal rights groups on the issue of the eradication of grey squirrels in the UK. The study of grey and red squirrels in the UK was selected because I believe this case study represents very well the issue of invasive animals and the way how conservationists, on the one hand, and animal rights groups, on the other hand, try to influence the public and policymakers about different ways of approaching the problem. On both sides of the conflict, organisations tend to promote the situation from their perspective. This research aims to hear both sides and represent data from different perspectives, thus, to have an opportunity to analyse the reasons behind their approaches and to look for the possibilities of finding the common ethical and/or practical ground between the organisations.

A qualitative research approach through semi-structured interviews and document analysis allowed me to analyze how these organisations describe their perceptions of the grey squirrels issue, which would be difficult to understand through quantitative analysis. Qualitative research is more than an analysis of relationships among variables, it is about studying and understanding individuals (Corbetta 2003). The study is based on context-dependent knowledge, as it allows a deep understanding of not just the perceptions of the organisations but also how these perceptions are interpreted (Watkins 2012), while quantitative research would remain very limited for such in-depth analysis. “If given a chance to talk freely, people appear to know a lot about what is going on” (Bertaux 1981, 39). The qualitative research applied in the case of grey squirrels in the UK made it possible to see how people describe the issue of grey squirrels, their

incentives and their positions on this issue, which is difficult to assess through a quantitative method.

It was important to take a specific case obtained on the local level, as the data derived from the international database would be very general and unlikely to represent all the local specifics and emerging relationships between organisations. Thus, I believed that a single case study would allow more depth in obtained information.

Specifically, I chose the UK grey squirrel for several reasons:

- 1) Due to language, as my research is a context-based research, it was very important for me to fully understand all the content from interviews and documents in order to be able to do a complete analysis.
- 2) During the preliminary research, I found out that there are organisations actively engaged in the advocacy of rival narratives in their websites regarding grey squirrels which was a very important factor in order to consider the study researchable.
- 3) The official status of grey squirrels is an invasive alien in Europe, and invasive non-native in the UK, enabled me to see how the narrative is constructed within different realms, and whether the status of invasiveness plays a role in the course of the decision-making process.
- 4) The case of red and grey squirrels is a well-known case that supports a lot of literature in the field, which enables easier access to it.
- 5) This is one of the cases where animal rights organisations have expanded their advocacy from farmed animals towards wild animals. This is also an area where the general concern for animal protection takes different shapes within conservation and animal rights organisations.

6) As a researcher, I believe that choosing a country where I have no personal connection enables me to present a neutral stance in the representation of the information obtained.

Conservation and animal rights organisations usually have rival discourses and different perceptions and understandings of the problem. Despite both being a part of non-anthropocentric realms and aiming to consider the interests of nonhumans, they differ in their theories behind and practical approaches. Thus, the research investigates to what extent their discourses are rival and why that is, and seeks to understand whether these organisations, having different theoretical and practical approaches, still can apply the pragmatic approach and find common interests to solve the conflict. Thus, the case of grey and red squirrels in the UK shows whether there is a possibility of finding common ground between non-anthropocentric realms of conservation and animal rights advocates.

Different studies aim to explore the relations between conservation and animal rights organisations and the ethics behind the eradication methods of invasive animals. I believe there is no one best way to do an analysis, as different methodological approaches develop the topic from different perspectives. This research aims to look for the case at a local level as I believe that local organisations are more engaged in the advocacy and/or activity of this issue. I think that each case is particular and can add something valuable to the academic literature. The research looks not for the exact solution but rather for how the organisations can solve the problem. Thus, I looked at ethical issues arising from the narrative of interviewees and documents and referred to theories that could explain and address emerging issues.

3.2 Data Gathering

The study is based on interviews and documentary research of the conservation and animal rights organisations.

3.2.1 Interviews

The interviewees were chosen based on their advocacy and activity in the field of grey squirrels. To explore the topic, there is a need to involve more active participants in the field. Thus, after reviewing the websites of different organisations, three types of organisations were targeted: (1) conservation advocates, (2) animal right activists, (3) public bodies making managerial interventions in the field. Thus, not just the standpoints of partisan organisations but also the standpoint of decision-maker was explored. Seven subjects were interviewed-in total. These subjects were targeted in order to analyze the situation from both sides, and also see what is the standpoint of the public bodies on the issue.

On the side of animal rights, the interviewees were chosen from the following organisations: William Sorflaten, Senior Campaigner at Viva!, Natalia Doran, the founder of Urban Squirrels and Jade Emery, Campaigns Officer at Animal Aid. On the side of conservationists, Mary-Anne Collins, Conservation Officer at Argyll, The Trossachs and Stirlingshire at Saving Scotland's Red squirrels project and Hainz Traut, Project Manager of Red Squirrels Northern England project were interviewed. Moreover, a senior wildlife advisor at Natural England, a non-departmental public body in the United Kingdom sponsored by the Department for Environment, Food and Rural Affairs was also interviewed as a mediating body involved in the decision-making process. Another subject is Kenny Kortland, wildlife ecologist at Forestry and Land Scotland which is the Scottish Government agency responsible for managing Scotland's national forests and land. The interviews were conducted online through Zoom and

Teams platforms due to the limited time and COVID-19 situation. Six participants agreed upon providing their names, only one asked to be anonymous. All of them agreed upon representing the standpoint of their organisations. Interviewees were open and willing to share their knowledge, opinions, and experiences.

Interviews lasted on average for about forty minutes with each interviewee. First, they were asked about confidentiality and privacy issues. Six of them gave consent to use their names and the organisations' names and record the interviews to use the data for the research analysis and interpretation. Just one subject asked to be anonymous and rejected recording but agreed to talk on behalf of the organisation. Questions were structured in a way to cover the main questions of my research. Questions were intended to be constructed neutrally without using any obvious framing such as “invasive” or “native”, instead using the word “introduced” to let the subjects frame their standpoint independently from the researcher’s standpoint. The questions were formulated in a way that could be asked to both conservation and animal rights organisations without changing the content of questions according to the expectations or standpoints of the organisations. Moreover, as a researcher, I attempted to present a neutral stance, not showing my standpoint on the issue in order to make the subjects speak freely.

Thus, the first group of questions aimed to explore how the organisations frame issues of eradication of grey squirrels. Questions enabled the participants to frame the problem, the values motivating their job and the solutions that they come up with. Other questions aimed to look into the possibility of finding the common ethical and practical ground to negotiate.

Nevertheless, it is important to mention that, as a researcher, I tried to make the dialogue flow freely. During interviews, I asked additional questions if necessary, depending on where the interviewees were leading the conversation.

In-depth semi-structured interviews helped to investigate the perceptions and the standpoints of organisations about invasive animals and grey squirrels, in particular. The purpose of in-depth interviewing was not finding answers or testing hypothesis but exploring the experience of people and the meaning that they give to their experience. The aim was to analyse the narrative that subjects used during the interviews and define the ethics behind their discourse. I conducted semi-structured interviews because I had a framework of themes that I wanted to explore, on the other hand, I had open-ended and general questions to allow interviewees to bring new ideas, which helped to understand interviewees' opinions, perceptions and ideas about invasive animals in-depth and beyond set limits. The interview protocol is included in Appendix I.

A purposeful sampling technique was used in the qualitative research to identify and select experienced organisations that acted upon the issue of the eradication of grey squirrels. Purposeful sampling allows defining key actors in a particular field who could share specific knowledge in the field (Suri 2011). I created categories such as conservation and animal rights organisations and reached out and interviewed people from both types. The interviews included conservationists, animal rights advocates and also a decision-making body. Some interviewees were identified through the snowball sampling method by asking the interviewees about other relevant subjects to interview (Corbetta 2003).

3.2.2 Documentary Research

The main techniques of qualitative research are “observing, asking and reading” (Corbetta 2003). Reading is associated with documentation analysis through analysing documents that organisations have produced. Interviews were the primary source of data that helped to catch the personal perspectives on the issues. Document analysis in my research, on the other hand, aimed

to supplement the narrative that came from the interviews. Moreover, it helped to analyse and compare the narrative of interviews and documents. Doing a document analysis, it was possible to see the general perspective of the organisations on the issue of grey squirrels. Documents have been prepared independently from the researcher and have not been designed for the research analysis, making them suitable as narratives for analysis. The type of documents used for the research are institutional documents that “are produced by institutions, or by single individuals within the context of their institutional roles” (Corbetta 2003).

The main documents used for the analysis were the “About” page of organisations’ websites to see the organisations’ general mission and the ethics behind their job. The second type of documents used for the analysis was in connection with grey squirrels and the organisations’ approach towards them. The names of organisations are included in Appendix II. There were different types of documents such as campaign type documents, petitions, and official letters. The documents reviewed were taken not just from the interviewed organisations but also other active organisations in the field that could not be a part of the interviewing process. The logic behind this decision was to avoid being restricted only to what interviewed organisations state about the problem rather seeing the general picture in relation to the issue of grey squirrels. It made it possible to compare different sources and refine my understanding of the main messages of the targeted groups. All these documents are accessible online through the respective websites.

3.3 Data Analysis

Qualitative research techniques were used in order to analyse interviews and documents through a content analysis method. Qualitative content analysis is “an analysis of the raw data from verbatim transcribed interviews to form categories or themes as a process of further

abstraction of data at each step of the analysis; from the manifest and literal content to latent meaning” (Erlingsson and Brysiewicz 2017).

Content analysis was realised as a continuous process of dividing the text into meaning units and condensing meaning units, further developing codes, categories, and themes. And, it is important to mention that this process was not a one-time event but rather a continuous process of coding and categorising then returning to the raw data to reflect on my initial analysis.

To ensure the rigour of my study, I created a table providing a few key examples of how I progressed from the raw data of meaning units to condensed meaning units, coding, categorisation, and, if included, themes. Content analysis was chosen as a method to search for standpoints from different ideological positions and oppositional readings (White and Marsh 2006). Thus, the aim was to explore, analyse and compare different perspectives of these organisations.

In the process of the creation of categories, the open coding method was applied. Open coding can be defined as “the analytical process through which concepts are identified, and their properties and dimensions are discovered in data” (Strauss and Corbin, 1998, 101). The process allowed the review of similarities and distinctions between different units, their conceptualisation and classification into categories and subcategories.

Results are presented in a narration style by sharing quotes, exact words or phrases provided by respondents. Moreover, I decided to combine the data from different sources such as interviews and different documents and present them not separately but united in order to have a good story flow around emergent themes.

3.4 Quality of data

This section addresses concerns related to internal validity, reliability and external validity of the research—or what Lincoln and Guba (1985) call credibility, consistency/dependability, and transferability.

The best-known strategy to ensure a study's internal validity is the triangulation method employed in the current study (Leavy 2014). Referring to Denzin (1978), I applied multiple methods and multiple sources of data. Multiple sources of data from documents and interviews obtained from people with different perspectives enabled comparison and cross-checking of the data. Moreover, by multiple methods of data collection, interviews and documents were the used ones. As Patton (2015) explains, “triangulation, in whatever form, increases credibility and quality by countering the concern (or accusation) that a study’s findings are simply an artefact of a single method, a single source, or a single investigator’s blinders”. Moreover, I applied a member check technique in order to ensure the internal validity and credibility of the obtained data (Merriam and Tisdell 2015). Lincoln and Guba (1985) conceptualised reliability in qualitative research as “dependability” or “consistency.” The reliability of documents and subjects interviewed is also assessed by the triangulation method. The use of multiple methods of collecting data enabled the collection of consistent and dependable data and data that was most relevant to reality. The study is dependable as the findings of the study are consistent with the data.

The research provides “sufficient descriptive data” to make transferability possible, but this is up to the applier (other researchers interested in the field), not inquirer to know where transferability might be applicable (Merriam and Tisdell 2015). As it is qualitative research, the aim is not to find out whether the case of grey squirrels can be generalised and applied to other

cases, as Wolcott (2005) mentions, “every case is, in certain aspects, like all other cases, like some other cases, and like no other case”. Nevertheless, I also believe that it is possible to make some broader suggestions that could potentially be applied to other cases, not to all invasive species cases, but potentially elsewhere where invasives are vertebrates, whose cause is or might be taken up by animal rights groups.

3.5 Limitations of the Research

Content analysis focusing on words and phrases separately may result in reducing the whole meaning of the text (Schreier 2012). Thus, the analysis involved not all the information obtained from documents and interviews, but the aspects that were relevant to my research questions.

Second, the categories of the coding framing for content analysis are constructed at an abstract level rather than concrete which causes the loss of some specifics (Schreier 2012). As a researcher, I tried to make my categories “sufficiently abstract to allow for comparison and sufficiently concrete so as to preserve as many specifics as possible” (Schreier 2012).

Another problem is related to the issue of subjectivity of the researcher. According to Weber, value judgements even being kept apart impact the researcher's choice of the field of research to be studied (Corbetta 2003). As a researcher I did not try to change my values, but, on the contrary, I was aware of my values, and I had kept my values apart in order not to lead to misunderstanding and misinterpretation of the material.

The main limitation was that it was not possible to visit the location of the research. The interviews were conducted online, and it was not possible to meet with people face-to-face and do an observation of their work alongside interviews. Another limitation was limited time for the

research, which made it difficult to access all the subjects and relevant documents for the research. There were several organisations that I wanted to interview, especially on the conservation side, but unfortunately, I was not able to get responses from them, so that in order to cover this gap I analyzed their websites instead of conducting interviews in order to understand their standpoints on the issue. Thus, the number of interviewed subjects was limited as they were the only ones I could reach out to.

4 The case of grey squirrels in the UK

4.1 Red and grey squirrels

The red squirrel (*Sciurus vulgaris*) is the only squirrel native to Britain. Normally, they have red coat and tail, sometimes the colour varies from wheaten to dark brown. Red squirrels grow ear tufts in winter (Red squirrel Survival Trust 2021a). The grey squirrel (*Sciurus carolinensis*) are squirrel species native to Eastern North America. Their tail has an outer fringe of white or silver hairs. Greys typically have silver-grey coat, but can also be of other colours, including reddish-brown, which can cause wrong identification of the species. The key element of identification is a tail (Red Squirrel Survival Trust 2021a). Grey squirrels digest seeds more efficiently as they have hardier digestive system. Grey squirrels impact red squirrels' fitness and also transmit pox virus to which they are immune but red squirrels-no (Red Squirrel Survival Trust 2021a).

The native range of red squirrels is Europe, Siberia, Mongolia and Northwest China, while greys native range is Eastern Northern America (Red Squirrel Survival Trust 2021a). Red squirrels are a protected species under the UK's Wildlife and Countryside Act, 1981 (Red Squirrels Northern England 2021a). They are priority species in the UK Post 2010 Biodiversity Framework. They are classified as near-threatened in England, Wales, Northern Ireland, while grey squirrels are classified as an invasive non-native species in the UK and invasive alien species in Europe. Red squirrels number less than 287,000 in the UK, while there are 2.7 million grey squirrels in the UK (Red Squirrels Northern England 2021b).

4.2 Distribution of red and grey squirrels

Figure 1 shows the distribution of red and grey squirrels in 1945, 2000 and 2010 in the UK. In 1945 the map shows that red squirrels were quite well distributed around the UK, but

greys were already gaining around, while in 2000, the map shows how grey squirrels advanced, and in 2010, the map shows the significant increase in the distribution of grey squirrels replacing red squirrels. The orange color in the map shows the overlap of reds with greys. About 75% of the whole red squirrel population in the UK is located in Scotland (Saving Scotland's Red Squirrels 2021).

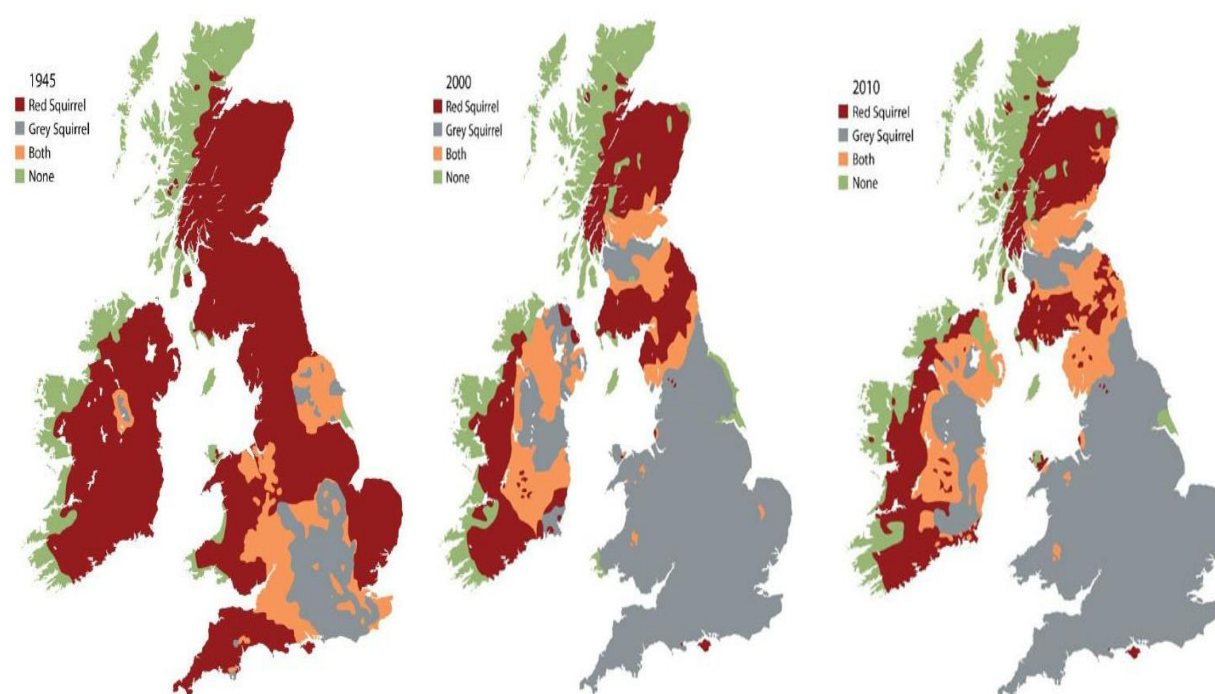


Fig. 1: Maps showing grey squirrel spread and red squirrel decline. Source: Craig Shuttleworth, Red Squirrel Survival Trust

A constantly changing forest landscape and culling of red squirrels until the beginning of the 20th century challenged red squirrels' survival a lot (Animal and Plant Health Agency (APHA) 2018). The reforestation in England and Scotland was not suitable for red squirrel habitats and the increase of broadleaved woodland benefited grey squirrels. In fact, grey squirrels are better adapted to British broadleaved woodlands (APHA 2018).

The management of grey squirrels through current management methods is not sufficient to reduce squirrel population significantly (Hodge and Pepper 1998). Culling of grey squirrels is not efficient for the eradication of grey squirrels, as they recolonize the vacated areas and increase their reproductive rate (Lawton and Rochford 1999). In fact, there are successful eradication practices of grey squirrels in the UK. As a result of culling grey squirrels in Anglesey, Wales, red squirrel population increased (Harris *et al.* 2006). As Anglesey is an island, grey squirrels were not able to repopulate culled territories, while there were no significant results from the management program in Thetford Forest, East Anglia (Harris *et al.* 2006). Thus, culling practices in isolated areas seem to present more effective examples rather than others.

5 Results and Discussion

Research Question One

How does the use of specific discourse by interviewees and reviewed documents (animal rights and conservation organisations) frame the issues of eradication of invasive animals? To answer Research Question One, the following theme was developed: (1) Grey squirrels as villains or victims.

5.1 Grey squirrels as villains or victims

The theme of grey squirrels as villains or victims was touched upon by all the interviewees and documents reviewed for the analysis. The results reveal the standpoints and perceptions of animal rights groups, conservation organisations and public bodies on the grey squirrels' issue. Asking respondents to give their standpoint on grey squirrel species, it was possible to get an understanding of how the interviewees frame these species. Public bodies' opinions are given together with conservation organisations as their opinions overlap in almost all situations. The differences in opinions if there are any are pointed out within the results and discussion sections.

5.1.1 Conservation advocates

Conservation organisations describe grey squirrels as “invasive non-native”, “invaders” “having a serious detrimental impact on red squirrels”, “having other negative biodiversity impacts”. While in relation to red squirrels, conservationists describe them as “reds are native species”, “they are part of natural heritage”, “reds are popular with the public”, “reds are charismatic”, “people love red squirrels”.

Conservationists mostly approach grey squirrels negatively due to the harm caused to reds, the environment and timber production. As a senior wildlife advisor from Natural England describes, grey squirrels are quite destructive animals that are all over the country. The British Association for Shooting and Conservation (BASC) (2021) used “no space for invaders” as a title for the control of grey squirrels on their website. Grey squirrels are considered as a “pest” species and have no protection under the Wildlife and Countryside Act (WCA) (Red Squirrels Northern England project 2021a).

Mary-Anne Collis, Conservation Officer at Argyll, The Trossachs and Stirlingshire at Saving Scotland’s Red squirrels project describes the aim of conservationists as “undoing what people have done in the past, partly because if we didn’t, our landscape would change so much more”. Thus, the aim is to reverse the wrong done in the past by the introduction of grey squirrels. So, conservationists try to conserve the environment and the main species that would die out otherwise.

UK Squirrel Accord (2021d) mentions that many factors are threatening native red squirrels such as land use, disease, and predators, but suggests that the main reason for the sharp decrease of red squirrels is grey squirrels’ introduction. Competition for food and habitat and disease transmission from grey squirrels to red squirrels are shown as the main threatening factors, so active grey squirrels’ management is a “key conservation method” to decrease the impact of this species both economically and on the native reds (UK Squirrel Accord 2021d). Regarding the outcompeting capacity of greys, Mary-Anne Collins notices that there are “3 million-plus grey squirrels compared to like 160,000. reds. That is not a good balance”. She also adds that greys are controlled not because they are grey squirrels but because of their damage. Thus, to protect red squirrels, it is important to control grey squirrels.

Moreover, conservationists highlight the importance of the conservation of red squirrels as they are native species. Red Squirrels Survival Trust (2021b) mentions in the website that “red squirrels are the UK’s only native squirrel and have lived here longer than humans”. Red Squirrels Northern England (2021c) mentions that “as a native species, the red squirrel is an integral part of our countryside and our natural heritage”.

Heinz Traut, the project manager of Red Squirrels Northern England project, explains that

We care about the wellbeing of [red squirrel]. And we're trying to protect it. If we just stood back and left it, would that, ethically be right, just to allow the extinction of the species, of the native species? ... not in my book.

Grey squirrels invading red squirrel areas transmit the squirrel pox virus that devastates red squirrels’ populations. Due to the squirrel pox virus, reds die out 17-25 times faster than by competition from grey squirrels alone (UK Squirrel Accord 2021b). Heinz Traut describes the situation with the pox virus, as follows:

We want to save the red squirrels from the suffering that they get from pox virus of which grey squirrels are a carrier. We want it to thrive in its natural environment and not be outcompeted unnaturally. So, you know, we care, we care about that animal, we are conservationists, why would we want to do any different?

Another problem of grey squirrels is their bark stripping that substantially damages trees, affecting tree growth and timber forms and increases the susceptibility of trees to various pathogens (UK Squirrel Accord 2021c; Animal and Plant Health Agency 2021). Oak trees are the most damaged by grey squirrels, so greys are controlled by many landowners and managers to protect the trees. So, as Heinz Traut adds “we can't just look at it as just affecting red squirrels. Yes, it does. But it also has all these other impacts.”.

Kenny Kortland, the Wildlife Conservationist from Forestry and Land Scotland, the Scottish Government agency, mentions that in Scotland there are many nonnatives that cannot be eradicated due to the lack of resources, so conservationists usually target issues that can be improved in some way. So, in the case of grey squirrels, the main motivation is red squirrels' popularity and of course, there is scientific evidence showing that it is possible to do something. Kenny Kortland mentions that

The Scottish public like it [red squirrel] a lot. And, you know, that sounds almost trivial, but it's highly important because a lot of conservation is quite subjective. People like the bigger cute charismatic animals. And lots of conservation money and effort focus on those.

As Heinz Traut also adds that alongside with ecological side, there is also an emotional and cultural factor.

We have an affinity for native species, red squirrel individuals, a very charismatic species enjoyable to watch. It's ingrained in our culture and our history and our literature. It's also an emotional response to our natural heritage that we want to protect and preserve for the generations that come up to us and children, for them to enjoy.

The category of the grey squirrels as villains has left me with a set of positions which are, as follows:

1. Grey squirrels are connotated negatively and are seen as invasive non-native species causing harm to native red squirrels, and threatening environment and timber production.
2. Red squirrels should be conserved and the key and primary approach is the grey squirrels' control.
3. The main motivation in grey squirrels' control is the red squirrels' conservation.

4. Conservation can be subjective focusing more on popular and charismatic animals.

5.1.2 Animal rights advocates

Animal rights organisations and different websites of animal organisations reviewed for this thesis suggest the term “introduced” for grey squirrel species. Animal rights organisations referring to grey squirrels in the UK mostly describe grey squirrels as “sentient”, “the only wildlife to interact in urban areas”, and claim that “people like grey squirrels”, and that grey squirrels are “very convincing scapegoats”. When comparing with red squirrels, they state that “reds and greys should be valued equally”, and that “red squirrels are not inherently more valuable than grey”.

One of the most observed themes among animal rights organisations is the victimization of grey squirrels. This theme comes across all the interviewed animal advocates and many websites of different animal rights organisations in the UK. They believe that grey squirrels’ control is based on a biased science (Urban Squirrels 2016; Peta 2018; VIVA! 2021; OneKind 2008). Natalia Doran, the founder of the Urban Squirrels rescue unit, remarks that there is a predetermined narrative about non-native species being a problem. So, the research usually tends “to fit the narrative”, because “we’ve already decided that they don’t belong here, we’ve already decided that we do not want them”.

Usually, animal rights organisations mention that other factors causing red squirrels’ decline are usually overlooked. First of all, they highlight that red squirrels’ habitat was deforested and destroyed by humans which led to the decrease in the numbers of red squirrels. Moreover, they refer to the fact that after reds increased in their numbers, they became considered pest species and were culled for a long time. Reds were accused of the same things that greys are accused of now, and were persecuted for a while. Animal rights advocates are also

concerned that the major role of humans in red squirrels' decline is overlooked. Regarding this, William Sorflaten notices that

it's worth going back a little bit in time in history to see how did the UK view red squirrels before grey squirrels were a problem. We actually culled and hunted red squirrels ... on a huge scale. Red squirrels were seen as pests. Red squirrels were seen as the animal that we need to obliterate and annihilate and everything like that.

PETA (2018), an animal welfare organisation adds that

it's humans who are responsible for encroaching on and destroying massive expanses of woodland – habitats that otherwise could have provided more than enough space for all species to thrive. It's unfair to scapegoat and kill grey squirrels, who are simply trying to survive.

According to animal rights organisations, the reason behind grey squirrels being persecuted is the invasiveness status of these animals. William Sorflaten calls on people to focus not on the status of species but their impact. He adds that he considers sheep and cows as the most harmful invasive vertebrates, but people see them as native, so these animals' presence should be secured, while grey squirrels are non-native species, so they should be controlled. “But that's coming down to a personal preference rather than a scientific evaluation of which animals do good and which animals do harm” (William Sorflaten, VIVA!).

As William Sorflaten mentions, “there's not even an ounce of welfare on grey squirrels just because they are invasive”. Animal rights organisations argue that killing grey squirrels is cruel and that these animals have the right to exist. Nevertheless, only protected animals seem to be under the welfare concern. William Sorflaten mentions that “a lot of it comes back to this native-invasive idea ... if grey squirrels weren't seen as invasive, then what we were doing to them would probably be deemed illegal”. The fact that grey squirrels cannot be fully eradicated

but are continuously culled in high numbers every year, is considered by all the interviewed animal rights advocates as “cruel”, “pointless” and “economically ineffective”.

Natalia Doran highlights that the main problem that she sees is “prejudice against anything foreign”. She adds that,

We can love our own, we can love our country, we can love our own species, we can love our families. And that's all very natural and very good. But when it spills over into hating everything that is not our family, not our country, not our ecosystem, that's when problems start.

To the main accusation of grey squirrels of being a threat not just to red squirrels but also having an environmental impact, animal rights organisations refer to different justifications. Regarding being a threat for birds, animal rights organisations refer to scientific facts mentioning that grey squirrels’ impact on birds is not so high and that cats are a far bigger threat for birds rather than grey squirrels but they are not eradicated. Regarding stripping the bark of trees, they mainly argue that the impact is not on such a high scale as well and that the emphasis should be given to more deliberate reforestation rather than controlling grey squirrels.

A set of the main arguments within the animal rights category are, as follows:

1. Animal rights organisations see the link between the lethal management control of grey squirrels with the idea of native and invasive species.
2. Greys are victims due to the endangered status of reds.
3. Greys do not cause significant environmental impact.
4. The harm caused by farm animals and humans is not being sufficiently considered compared to that of grey squirrels.
5. The management methods used towards grey squirrels are not humane.

5.1.3 Discussion

The first theme, the grey squirrels as villains or victims, directly reflected the animal rights and conservation advocates' perceptions of grey squirrels and how they framed the issue. Conservationists' standpoint is very explicit, approaching grey squirrels negatively due to the harm caused by these species. The negative narrative about grey squirrels is persistent in the websites and interviews. Animal rights groups reverse conservationists' standpoint and remark that reds' decline is not so much up to grey squirrels but rather humans' actions. They think that there is prejudice among conservationists regarding native and invasive alien species, so they find the scientific evidence being weak to persecute grey squirrels. Animal rights advocates also, highlight that the wellbeing of grey squirrels due to their invasive status is not considered at the level of the wellbeing of native species.

In general, animal rights groups consider that the conservation of animals is very subjective, thus if some animals are necessary for humans, the attitude towards those species can be very positive despite their negative impacts. There is some convergence between this opinion of animal rights organisations and Kenny Kortland from the Scotland's Forestry and Land, who also mentioned that the decisions can be subjective, depending on the available resources and popularity of animals. Perry and Perry also mentioned that conservationists cannot always focus on the issues that they would like to due to different reasons.

In the case of grey squirrels, conservation advocates refer mainly to introduction criteria and historical (or natural) range criterion (Woods and Moriarty 2001), which was discussed in the literature review. The main description within the introduction criterion is that animals are introduced by humans, it was the wrong done by humans, and that these species should not be here. Within the historical range criterion, they mention that red squirrels are native and reds are

considered an iconic British species. Even the names of different projects reflect reds being part of historical range such as Saving Scotland's Red Squirrels, British Red Squirrel Forum.

Considering the historical range of species within the borders of the country creates the impetus to give a species a national value, which is actually criticized by animal rights organisations because this way we prioritize natives and lower the value of non-natives. Moreover, emotionally loaded language even if not intentionally can boost the negative reaction of the public towards species. There are newsletters with very loaded and xenophobic language towards grey squirrels (Rantzen 2006; Barry 2010), but they are typically written by journalists rather than conservationists. However, I found it important to mention, as to show how the use of invasive language can boost hatred.

In relation to red squirrels, conservationists mostly refer to the fact that they are native species, which means that they evolved originally in the UK, without human intervention, and that the area is within the historical (natural) range of these species, they do not tend to damage the ecosystem or harm other native species, and are an integrated part of the ecological community. Nevertheless, as Moriarty and Woods (2001) suggest, applying the criteria is not always as straightforward as it seems. Reds holding the native status have been reintroduced several times to the UK by humans. On the other hand, red squirrels were accused of damaging the ecosystem and persecuted as pest species. Thus, these are two paradoxical nuances showing the vagueness of the existent terminology that are targeted by animal rights organisations.

Conservation and animal rights advocates see problems in people's wrong actions. Conservationists consider wrong the action of the introduction of these animals where they should not be, while animal rights advocates see the problem in humans, because first, they introduced them, and second, they try to manage the already introduced species. So, in one way

or another, humans are not seen as part of nature, as actions were taken by humans, are not seen natural.

Second Research Question

What are the possibilities of finding the common ethical ground between rival discourses?

To answer Research Question Two, the following theme was developed: (1) Shared values or conflict.

5.2 Shared values or conflict

5.2.1 Conservation advocates

The main convergence of ideas is seen to be the love that these organisations have for animals. Kenny Kortland mentions that fundamentally both organizations share a love for animals and wildlife. According to Kenny Kortland, conservationists are more pragmatic and “are prepared to sacrifice the rights of individual animals for the greater good of species”. Kenny Kortland adds that people’s opinions usually differ from each other. Mary-Anne Collins says that both organisations want to protect wildlife, although they look at it in different ways. While animal rights organisations “look at what we've got now, rather than what we did have and changed”. Whereas conservation organisations think that they should undo the faults of the past to protect the species that we have. Mary-Anne Collins adds that “it is a shame” to lose all the red squirrels in the UK. Heinz Traut adds that from his personal perspective red squirrels are a good indicator of a healthy ecosystem. He refers to the suffering of red squirrels as follows:

Look at the red squirrel. Do you realize what happens to it when it contracts, the scope of the disease develops scabs all over its skin. it swells up, it's painful. And why? Well, because it's a non-native species that introduced that disease and virus, squirrel pox virus that kills slowly reds.

Kenny Kortland questions the possibility of not tackling red squirrels, concluding that if not to tackle we end up with completely different communities of less diverse animals, that would not be in the public interest, because we all depend on biodiversity. Kenny Kortland says that “there's a lot of ethical, moral, biological, philosophical questions in there, and there's no easy answer”.

Senior wildlife advisor from Natural England describes the possibility between these organisations in the following way:

I guess, animal welfare is always a shared value, no one wants to be cruel to animals. So, I think that's, that's probably a shared value. But in terms of everything else, there's not much sort of mutual fitting.

A set of the main positions derived from the text as follows:

1. Species are important rather than individual species.
2. Red squirrels' suffering is important.
3. Conservationists love and care about animals.

5.2.2 Animal rights advocates

According to animal rights advocates, the main problem is how conservationists bypass the sentience factor of introduced vertebrate animals. Jade Emery mentions that the law on non-native invasive species does not put any difference between plants and animals, treating them almost in the same way. By that, they disregard the sentience that animals have and plants do not. Regarding grey squirrels, Jade Emery adds that it is “a tragedy” to try to cull millions of animals in an attempt to increase the population of “different coloured animals”. William Sorflaten points out that

we're not just saying one red squirrel is more valuable than one grey squirrel, we're effectively saying one red squirrel is more valuable than hundreds of grey squirrels. Is it fair? Or is it ethical to cull thousands of grey squirrels in the hopes of protecting one red squirrel? I would say, from a standpoint of every single life matters, no; if the grey squirrels were a swarm, which was destroying the UK, then it would be one thing, but they simply are not doing that.

Moreover, animal advocates refer to the fact, that the main target for culling are squirrel mothers, after giving birth, so grey babies starve from dehydration. He mentions that even for people who are in favour of controlling grey squirrels, it is very cruel.

According to animal rights advocates, the main focus is on individual animals rather than species or ecosystems. And, the sentience belongs to an animal rather than species or ecosystems. That is why the primary concern is with individual animals, as sentient beings can feel pain. Animal rights advocates also notice that killing grey squirrels is misguided and people volunteering to help endangered animals could help red squirrels in better ways. Moreover, animal rights organisations point out the fact that red squirrels are not an endangered species worldwide but are immensely protected within the UK, thus such emphasis on these animals seems unjustified.

According to animal rights groups, the main common point between them and conservationists is the fact that they work on behalf of animals. So, basically, animal rights and conservation groups have similar values and exist to protect animals. William Sorflaten says that “we’re all connected in a sense that in one way or another, each of those organisations believes that animals have some value”. Both organisations give value to animals but in different ways.

Nevertheless, mostly animal rights and conservation groups are seen as opposing forces. And, the main difference is that animal advocates give ethical priority to the individual animals

rather than ecosystems or species, as it is individuals who are sentient and feel things, while conservationists prioritize the wellbeing of species, ecosystems.

According to Natalia Doran, the conservation project is an anthropocentric agenda, although it is not about the use of animals for humans, it still works on the principle that the human knows best. She adds that the conservation attempts started with preserving beauty spots for humans to enjoy and that even now we preserve and conserve nature for future human generations. Ultimately, her standpoint is more negative regarding the possibility of working together, saying that “we either have the animal agenda or the human agenda”.

Jade Emery, meanwhile, gives a different description for conservationists mentioning that their standpoint can be due to their attempts being misguided or giving a hierarchical value to animals which animal rights groups would not do.

It is important to mention that there is also a difference between animal rights and animal welfare organisations. For example, PETA has a different approach in relation to the protection of animals in comparison to other animal rights organisations interviewed for the thesis. PETA is an animal welfare organisation following the path of Singer rather than Regan; their website also suggests that the president of the organisation was very influenced by Peter Singer and that the aim is to campaign for animal welfare rather than rights. The same is true about the organisation OneKind in Scotland is a campaigning animal welfare charity based in Edinburgh, aiming to improve the animal welfare of animals.

A set of the main positions derived from the text:

1. Sentience factor of invasive vertebrates should be considered.
2. Grey squirrels suffer due to the culling practices.
3. Individual species are important for animal rights organisations.

4. Red squirrels are not endangered species worldwide.
5. Animal rights and animal welfare organisations.

5.2.3 Discussion

Conservationists mention that the main drive to conserve red squirrels is ecological. There is enough evidence showing the harm of greys to reds and the environment to take action.

Conservationists' arguments resemble very much the arguments pointed in Leopold's land ethic. They prioritize native species and the wellbeing of the species rather than of individual animals. Grey squirrels are seen as causing threats; thus, they should be controlled, this is straightforward. The lethal method applied, shooting and trapping, is justified as the aim is to apply the most effective and quickest management method, thus the wellbeing of individual species is not so important in comparison with the wellbeing of red squirrel species and ecosystem. Animal rights groups, by contrast, prioritize the sentience factor of the individual animals.

All the interviewed organisations seem to be followers of Regan rather than Singer, as Singer (1995) alongside the importance of individual lives was not ignoring the importance of species and their wellbeing. Being under the Reganite influence, animal rights organisations oppose lethal management under any circumstance, which makes it difficult to realize the importance of species wellbeing. It is important to mention that some animal rights organisations realize that it is a more step by step process, thus while the long-term aim is to end the cruelty towards animals, the short-term aim is to achieve the minimization of animal suffering. For example, Animal Aid, being an animal rights organisation, aims to end animals' suffering, but

they also take a pragmatic approach take measures that will help to reduce suffering in the meantime.

On the other hand, there are such organisations as PETA and OneKind, which support a welfarist approach. So, according to the theory they tend to reduce animal suffering but do not advocate for the rights of animals. So, these organisations may have more convergence with conservationists, as according to Singer (1995)'s theory, animals can be controlled if they do harm other species or their environment.

Conservation and animal rights advocates both mention the suffering of animals. However, conservationists mention the suffering of the reds caused by grey squirrels, while animal rights groups mention the suffering of the grey squirrels caused due to the conservation of red squirrels. Animal rights groups consider the suffering of reds as a natural process while the suffering of greys is not natural, being imposed by humans intentionally to conserve red squirrels.

Third Research Question

What are the possibilities for animal rights/welfare and conservationists to negotiate in practice? The themes elaborated are (1) Cooperation in practice, (2) The role of the public regarding grey squirrels.

5.3 Cooperation in practice

5.3.1 Conservation advocates

Some conservation organisations showed interest in cooperating with animal rights organisations, except for the radical animal rights groups, while others were more sceptical. However, they all see the possibility to cooperate as a result of applying nonlethal methods.

Kenny Kortland mentioned that he even had minor experience in cooperating with the animal welfare organisation OneKind in Scotland, and they had some dealings with animal welfare about the use of snares for foxes. Large parts of Scotland are managed for sporting activities and sometimes hunters use snares. He says that

in terms of animal welfare, personally, I think it's absolutely terrible. And we don't allow them on the national forests but some of our neighbours use them and sometimes they put them on our fences without us knowing about it.

So, the Forestry and Land of Scotland have worked with the people from the Scottish animal organisation OneKind, and also from the Royal Society for the Protection of Birds to investigate these animal welfare abuses with the inappropriate use of snares and other methods. Kenny Kortland also mentions that public opinion is very important for them. The more public pressure they receive, the more they need to take action. The public and very powerful charities out there pressurize them to take action regarding different cases. Kenny Kortland adds that “such influences dictate really what work we do”. He also mentioned that they did not get any pressure from animal rights organisations regarding grey squirrels.

Heinz Traut mentions that animal rights advocates have a view of protecting all animals. He says that

it's funny how they look at it, because, you know, aren't we protecting red squirrels as well? Are we only going to protect the grey squirrels and we're gonna forget about the red squirrel?

Moreover, he adds that he doesn't think that aligning with them will be a very productive process, as they have opposite views. He says that animal rights organisations tend to have a preloaded bias towards protecting just grey squirrels. He mentions that they do not have issues in the north of England because residents appreciate red squirrels as they still have them. They understand the need to manage greys, that these species are not native, and that they cause

disease that is lethal to reds. But, according to Heinz Traut, if you go further south, that understanding and education reduce. Lancashire had a public meeting to talk about reds and animal rights groups went to the meeting, and the meeting was disrupted. So, Heinz Traut mentions that “there's not a peaceful rational argument; that is emotive”.

Mary-Anne Collins also talked about one of the negative experiences that they had with some animal rights advocates. They had problems due to the use of air weapons for controlling grey squirrels. And, someone complained to the local council about the use of air weapons but most probably it was because of grey squirrel control. They were willing to talk with the person that complained and explain their practices but they could not get in contact with that person.

Moreover, she mentions that they have to work with people who host traps in the gardens because squirrels go everywhere. And, people don't necessarily like euthanasia techniques to control animals or don't entirely understand it. So, they carefully ask people whether they want to get involved and under what circumstances.

Natural England mentions that they have dealings with both kinds of groups and their work is to give licenses to animal welfare groups in order to rescue and rehabilitate grey squirrels. Nevertheless, after the Invasive Alien Species (Enforcement and Permitting Order) 2019 was introduced, grey squirrels can be rescued but no longer be released into the wild (Natural England). There was a consultation by the Department for Environment, Food and Rural Affairs (Defra) due to renewing the order on invasive species where animal rescue units also took part and as a result it was decided that greys can be rescued if they are not released. A senior wildlife advocate mentions that people were not very happy with renewing the order on invasive species, which is why they opened a petition towards Natural England, demanding that the law be

reversed. A senior wildlife advocate at Natural England mentions that having such a polarization of views it is difficult to please everyone.

5.3.2 Animal rights advocates

The cooperation between these two groups was seen as possible on some occasions. First convergence was seen in terms of climate change and conservation of ecosystems, as Natalia Doran mentions whether “humans or animals, we all need our planet to be healthy”.

Jade Emery mentions that within the movement, people usually work together to effectively achieve change. She adds that Animal Aid is open to working with groups that might diverge in some but are aligned in other aspects. William Sorflaten mentions that as their organisation is focused on farmed animals, they have not had any cooperation with conservation organisations, nevertheless, he sees possible convergence in practice in relation to reducing meat consumption., as both groups work to encourage their supporters to eat less meat. In their campaign alongside promoting the fundamental rights of animals to exist which is not part of conservationists’ campaign, they also promote environmental benefits of meat reduction, thus, in fact, having similar messages as conservation advocates. So, while promoting veganism, VIVA! welcomes people that reduce meat consumption even for other reasons, thus it is a possibility that these organisations can work together on particular campaigns.

In relation to grey squirrels and, in general, introduced animals, animal rights advocates believe that it is more difficult to cooperate but it is possible in some ways. Animal welfare concern can become a starting point and non-lethal management methods are welcomed, which can become a mediating point between these organisations.

As Natalia Doran mentions they had a couple of meetings with the Wildlife Trusts that put out a call to recruit 5000 volunteers to trap squirrels and bludgeon them to death (Barkham 2017). Natalia Doran says that it was a “completely mad idea” to encourage people to kill. Jade Emery adds that “we thought that a body that is supposed to protect wildlife should not be going out, culling wildlife or encouraging volunteers to do so. So, we ran a campaign against them”.

Regarding the results of the meeting, Natalia Doran adds that

they did not get volunteers because of what we said. Fortunately, the population cannot produce the same number of people who enjoy killing.

Nevertheless, Natalia Doran does not see getting a positive outcome from that campaign, as the culling practice is going on and nothing really changed, whereas Jade Emery thinks that the campaign raised supporters’ awareness, which was one of the goals because people would be horrified to know that their donation to Wildlife Trusts goes towards killing wildlife.

Natalia Doran also mentions that online debates are going on but she does not get involved in debates, as people hear only themselves. She says that they have a few haters in their online accounts. Usually, the conversation starts nice, but when going into arguments, people get aggressive and she just blocks them.

Several petitions unite different animal rights organisations. Animal rights organisations see these petitions as one of the tools to confront the decisions taken regarding grey squirrels. One of them is the petition against the culling methods applied in the UK, in which three of the interviewed organisations participated.

Another petition took place when the invasive alien species order came into effect. As a result, rescue groups were forbidden to release rehabilitated grey squirrels back into the wild. In

England, in comparison to Scotland and Wales, licenses were issued to specific rescue organisations to release grey squirrels in the areas where it would not have any impact on red squirrels. So, the revoking of licenses as Natalia Doran mentions became “a huge impediment for their work”. She describes that “now, we're full, we're clogged up with squirrels from last year”. Animal rights organisations also mention that the release of 700 rehabilitated grey squirrels per annum is not a very significant number, especially taking into account that these animals were getting released in red free zones.

So, they started petitions, signed by about 60,000 people, to Natural England. The idea was to increase awareness among people who do not know what is happening to grey squirrels. And, as Natalia Doran mentions “it is a data, it is a sample of the population that shows that people do not like this law”.

Jade Emery adds that they had similar campaigns with the Wildlife Trusts regarding the badger cull in the UK. Wildlife Trusts involved with the culling of grey squirrels had the same campaigning message as animal rights organisations when it came to the badger cull across the UK in an attempt to tackle bovine TB. Both were campaigning against the culling method because it is inhumane and science does not support it. Jade Emery believes that the badger culls are a good example of the convergence of the opinions of these organisations. Jade Emery thinks that the main motivation of Wildlife Trusts was that it is a native species, an iconic British animal that is quite popular with the public.

5.3.3 Discussion

The cooperation is seen as ambiguous. Some organisations are keener to cooperate rather than others from each side. And, in fact, the ones that are sceptical about any kind of cooperation

do not expect calm and open dialogue from another side because of the polarization of the fundamental values.

It seems that both sides had some clashes but not constantly. The main way of campaigning of animal rights advocates is to direct joint letters and petitions to the governmental bodies. There is almost no communication between animal rights and conservation organisations, but rather with the governmental bodies. In the case of Scotland, the interviewed organisation did not experience pressure from the side of animal rights people, while it is possible that other organisations did, which needs further research.

However, Natural England has plenty of experience of meetings with animal rights organisations, as they give them the licenses to rescue grey squirrels. In the petition that was opened towards Natural England by animal rights groups, they pointed out that they are against the law prohibiting the release of grey squirrels into the wild. Nevertheless, the decision taken by Natural England regarding the prohibition of rehabilitating grey squirrels into the wild was not reversed.

5.4 Lethal or non-lethal management

5.4.1 Conservation advocates

According to UK Squirrel Accord (2021a), the main way to save red squirrels is through the control and management of grey squirrels, and lethal management that takes place in areas where red and grey populations overlap. By controlling grey squirrels, conservationists help red squirrels to come back. As Mary-Anne Collins mentions the main issue is grey squirrels and their impact on reds. Conservationists are all of the opinion that controlling grey squirrels is the only option they have at the moment.

All of the interviewees noticed that lethal control will not result in eradication but will help with population management. The findings of the Animal and Plant Agency (2021) showed that “whilst culling reduces populations more rapidly, the overall cost of fertility control can achieve the same outcome and in the longer term can potentially provide a more cost-effective solution to reduce the numbers of grey squirrels”.

As Heinz Traut says,

Lethal control is not going to result in eradication; it's going to help with population management. That does work. It's provable. But eradication, I don't believe so.

However, Heinz Traut mentions that lethal control through trapping and shooting is essential at the moment and there are protocols for how to do that humanely and responsibly. He adds that

In the north of England, managing tens of thousands of grey squirrels each year allows red squirrels population not to stabilize, but at least they're not on a retreat, we are helping them to hold the line.

So, Heinz Traut mentions that the frequency of “shooting and trapping” should be maintained or increased to gain more progress. As a result of managing grey squirrel populations, reds come back, but if management procedures are stopped, the situation reverses. Kenny Kortland mentions that in Scotland during the lockdown, when control was relaxed, greys spread back into areas where they were reduced significantly. Nevertheless, Kenny Kortland also adds that as the population density declines, the success rate of trapping declines. So, achieving complete eradication is very difficult. Kenny Kortland adds that

We're going to have to keep doing this control forever and ever and ever and ever, which is a big financial commitment. It's a big logistical commitment. So, it's not an ideal scenario, but that's the one we're in at the moment.

Lethal management is considered to be humane within the protocols on the welfare of invasive species. So, they are trapped and dispatched humanely, meaning that they are killed as quickly as possible with the least pain involved. A senior Wildlife Advisor from Natural England explains that if an animal is not protected under the law, as long as it is done humanely, and with the permission of the landowner, it is possible “to track and shoot these animals”.

A Senior Wildlife Advisor from Natural England notices that grey squirrels are not different from other invasive species, so the regulation that is applied should be consistent with regards to all invasive animals. Under the Wildlife and Countryside Act, which is domestic legislation, you could keep and release grey squirrels, but after the Invasive Alien Species (Enforcement and Permitting Order) 2019 was introduced, grey squirrels can no longer be released (Natural England). So, basically, there is a more developed licensing system that matches the policy and which is tighter on grey squirrels, according to the senior wildlife advisor at Natural England. Thus, the legislation tends to prevent the release of any invasive species, grey squirrels included.

All of the interviewed conservationists remarked that the development of other non-lethal management methods would be good to explore. As Kenny Kortland mentions, “it would save us the horrible task of having to capture and kill animals, which nobody enjoys doing”.

In fact, the Animal and Plant Health Agency is working on the elaboration of contraceptives that would be effective, less labour-intensive and non-lethal management methods, though the prognosis shows that most probably the contraceptive will not become the only method to be used. They also mentioned some other non-lethal methods that potentially can be applied, such as the introduction of pine martins, that predate on grey squirrels (). Another

project going on is a gene driver research () aiming to produce male offspring that can become another alternative.

A set of the main positions is derived from the text, as follows:

1. Long-term eradication through current management methods is not feasible.
2. Lethal management is considered to be humane within the protocols on the welfare of invasive species.
3. All invasives should be approached in the same way in order to be consistent.
4. Non-lethal methods are welcomed by conservationists.

5.4.2 Animal rights advocates

Yeah, we'd always be against lethal action.

[Jade Emery, Animal Aid]

Management is a euphemism for killing.

[Natalia Doran, Urban Squirrels]

Animal rights organisations ideally call for leaving nature untouched. According to all the animal rights interviewees and reviewed documents, there is no need to show a paternalistic approach towards nature, and nature knows how to sort out everything. Regarding this, Natalia mentions:

I mean, I don't know how nature has managed to sort itself out before Homo Sapiens came on the scene, but it has. So, I believe nature should be left to its own devices.

Thus, animal rights organisations see the process of habitat change and greys outcompeting reds as a natural process that should not be disturbed. In relation to this, Jade

Emery adds that “we find it really unfair that grey squirrels are being punished for being successful”.

Natalia continues the discussion, saying that “the present-day English habitat favours the grey squirrel. What's wrong with that? Let's call it the survival of the fittest”. Moreover, they refer to the fact that red squirrels could never survive in an urban environment which is not the case for grey squirrels.

Animal rights organisations call for a focus on preventing the introduction of new animals and enforcing the regulations on that. Regarding already introduced animals, they think that they should be left alone. As William Sorflaten adds,

Our intervention can do more harm than good. So that, you know, that's something that needs to be borne in mind, such as this relentless culling of grey squirrels is, you know, this is human intervention, which is not actually doing much good.

Nevertheless, animal rights groups acknowledge that many people support the idea of controlling greys. Thus, they see the compromise in non-lethal management tools that are welcomed in the case of grey squirrels. Contraceptives are mentioned as one of the non-lethal methods that are worth consideration. Contraceptives may have their own side effects but as Jade Emery mentions anything non-lethal is preferable to culling if people are absolutely determined to take some action. Animal rights organisations call to explore other management methods that will be non-lethal and acknowledge the welfare aspect of the control. Natalia also sees fertility control as a compromise solution mentioning that “fertility control, is after all, how we control the number of our companion animals”. So, fertility control is considered humane, supported by the majority and effective.

Another non-lethal method seen as a compromise is the elaboration of a vaccine for grey squirrels due to their transmission of the poxvirus to the red squirrels. William Sorflaten mentions that it would be more economically efficient to put more research into a poxvirus vaccine; “it would be a huge relief to know that there is an end to the culling”. Accommodating habitat conditions for both species such as tree plantation is seen as a plausible alternative. Thus, according to animal rights groups, instead of putting money into an annual cull, which is not economically effective, it is more reasonable to put that money into another type of research.

Culling grey squirrels is not acceptable among animal rights advocates, as Natalia Doran mentions

it's very cruel, basically, squirrels are trapped, transferred to a bag and bludgeoned by being hit on the head with a heavy object to kill them, which I don't think anybody in their right mind would consider that humane.

Due to the inhumane management methods of the grey squirrels, animal rights advocates unanimously are against lethal methods applied for grey squirrels.

A set of the main positions derived from the text, as follows:

1. Animal rights groups see the best solution in leaving nature untouched.
2. If that is not possible, then animal rights groups welcome the exploration of non-lethal methods.
3. Animal rights groups are against introducing new animals.
4. Culling is not acceptable for animal rights groups.

5.4.3 Discussion

Leaving nature untouched is the main argument that separates conservation and animal rights advocates from each other. Animal rights groups consider it pointless to try to save species when individuals are harmed on a large scale. Despite being against the introduction of new animals, animal rights groups are against controlling already introduced animals, arguing that nature can manage itself without our intervention, as usually, human intervention brings more harm rather than help. This resonates with what Singer (1995) was saying about human intervention, arguing that

Judging by our past record, any attempt to change ecological systems on a large scale is going to do far more harm than good. For that reason, if for no other, it is true to say that, except in a few very limited cases, we cannot and should not try to police all of nature. We do enough if we eliminate our own unnecessary killing and cruelty toward other animals.

Nevertheless, the approach of Regan is even more absolute, seeing the eradication unjustified for environmental reasons. According to conservationists, it is important to intervene to trace problems and take action.

Nevertheless, it is important to mention that despite being in favour of leaving nature as it is, animal rights organisations realize that this view is not shared by many. So, from the interviews with animal rights organisations, it is possible to conclude that they welcome non-lethal management methods. Even if these methods may have side effects for animals that animal advocates worry about, any non-lethal method is preferable in comparison with the current management method. Thus, it seems that with this compromise, the convergence of these organisations in practice is possible.

The main reason for continuing the practice is the importance of protection of reds and control of greys with existing methods. All other factors are secondary while conservation is

primary. Moreover, governmental bodies also confirm the existence of these factors, but also prioritize conservation. Animal rights groups do prioritize the wellbeing of animals, but also mention all other factors that make this practice pointless.

It seems that the well-being of animals is a concern of all parties. All organisations mentioned that they are not interested in killing as such but this is the only available option. Nevertheless, the fact that the same methods are not welcomed with native species makes one think that there is an ambiguous approach towards animals. For example, the method of shooting is considered as inhumane for badgers by Wildlife Trusts, and humane regarding grey squirrels. The Senior Wildlife Advisor of Natural England mentions that they always urge trapping to shooting, as shooting is not very reliable, nevertheless, shooting continues to be a part of the control program of grey squirrels. Thus, considering the same management methods differently, depending on the origin of squirrels and their impact seems not to be well justified. As such, it seems that the protection status of animals under the law dictates what methods are acceptable and what not. Jade Emery mentions that the nativeness status of animals intensifies the research and creates a big impetus to find out the best humane methods for the control of natives, as in case of the badger cull. Vaccines, contraceptives and other non-lethal methods are welcomed by all sides. Thus, having an interest in the same end goal, despite having a different level of interest in the same arguments, it seems logical to tend to promote the non-lethal methods by all sides, not just animal rights organisations.

5.5 The role of the public regarding grey squirrels

Although initially, the public was not the target of the research, an emergent theme was that public perception plays a significant role in considering a species to be “wanted or “unwanted” nature. Moreover, public support or disapproval seems to be very important for all

sides, including governmental bodies. This theme appears under the question on the possibilities for animal rights advocates and conservationists to negotiate in practice, as public perception plays a certain role in the possibility of convergence between the different sides.

5.5.1 Conservation advocates

Kenny Kortland mentions that red squirrels are one of the most popular animals in Scotland. And, he thinks that they are still popular because people can see them in gardens and feed them, so people have interaction with them. He mentions that

They're super cute. And people just love them. They absolutely love them. It's incredible. I mean, I get them in the garden. And they are really nice. And it's easy to understand why people prefer them to some beetle or spiders. So that's just human nature.

He mentions that red squirrels are cute, Scottish people like them, and this is important, because in fact “a lot of conservation is quite subjective”. People like big, cute and charismatic animals. There is continuous pressure and advocacy from various groups to conserve red squirrels, and, basically, the government does what the public wants. So, he mentions that people directly affect them by contacting them, and by being members of these conservation organisations that tell them what they have to do. So, lots of conservation funds and efforts concentrate on these animals, while people do not care about invertebrates and taxa. He mentions that it is not completely logical because the red squirrel is quite a common animal globally, and many invertebrates in Scotland are far rarer.

He mentions that

We should probably be working on those or using the money to conserve soils, but no, we focus most of our efforts on a tiny proportion of species which are mainly cute vertebrates ... And the issue is quite clear cut. You've got this grey squirrel, which is a non-native invasive, that's the bad guy. And we've got the red squirrel, which is cute and cuddly. It's the nice guy. And in most

people's minds, that's quite straightforward. Let's control the bad guy to help the good guy.

Kenny Kortland also mentions that people like grey squirrels as well. People go to parks in Edinburgh and feed greys, they are cute in their own way, and they are probably quite popular with a lot of people. He mentions that most people probably do not know there are grey squirrels controlled in other places.

In Scotland, many nonnatives are here forever, and there are no resources to get rid of them, so the targeted issues are the ones that can be improved in some way. So, in the case of grey squirrels, the main motivation is red squirrels' popularity and of course, there is scientific evidence showing that it is possible to do something.

Heinz Traut mentions that people have a different perception of red/grey squirrels issue and it is mostly due to the difference in education. So, basically knowledgeable people about the issue understand that there is a need to control greys to conserve reds and change their perspective. Heinz Traut, also mentions that it is difficult with people living in urban areas that have interaction with grey squirrels. People like interaction with wildlife as it is a unique and enjoyable experience. "The grey squirrel is a wild animal that is just not from this country but still wild. And, as people had very little chance to see reds in London during their lifetimes, so it is a difficult one". So, it is very important to educate public, as public support is very important. Heinz Traut adds that it is possible to explain to people that

if you've got a native species that's ingrained in your natural heritage. This is a species that has not been just a few hundreds of years ... For thousands of years, red squirrels are part of the ecosystem, part of our heritage, natural heritage and our culture ... If you can take a look, you can have interactions with it. But in order to do so, they need to exist. Most people will be reasonable and understand that there are steps required.

The senior wildlife advisor at Natural England in relation to public standpoint mentions that their opinions are important but a lot of it is just about emotion. We need to look at the evidence. He mentions that American crayfish destroyed the river system having a significant negative impact, but because they are not “cuddly and furry and emotive”, there is no such resistance that you get with grey squirrels. So, according to him, emotion is the main driver, but he also mentions that they cannot base their decisions on emotion and they need facts and figures.

Senior wildlife advisor at Natural England refers to the fact that there is a significant polarization of the views, one side considering grey squirrels as a non-native species that cause problems and should not be here, and another side considering them attractive and looking after them. So, that's why we issue licenses to Animal Rescue centres and other individuals to look after grey squirrels. So, these organisations have two different views but the main and probably the only view that unites them is that no one wants the animals to suffer unnecessarily (Heinz Traut).

A set of the main positions are, as follows:

1. People have interaction with red squirrels.
2. Public pressure matters.
3. Reds are common globally.
4. People also like grey squirrels.
5. People are emotional.
6. People do not care about uncharismatic species.
7. Public should be educated.

5.5.2 Animal rights advocates

Some animals are popular with the public and some are not. In fact, animal rights organisations think that this plays a key role in people's perceptions and support of some animals. One of the factors making grey squirrels popular is that they are doing well in urban areas, so people have a chance to directly interact with them. In central London, for example, grey squirrels are some of the only wildlife apart from birds that people interact with. So, people like them, feed them and bond with them. So, as Jade Emery mentions that is why there is more interest in the welfare of squirrels rather than of even less popular animals such as mice and rats. Jade Emery believes that generally people do not like the idea of culling any animal, they can be persuaded by some arguments, but in general, they are against lethal management. Natalia Doran mentions that unfortunately public opinion is taken into account less than they hope. Most of all grey squirrels are hated because of their harm to red squirrels while reds are vital to the country and greys are bad. Animal rights organisations think that people mostly are not aware of the culling of greys that is why there is less emphasis on campaigning and also the ones that know the situation can be misguided, thus the education is very important in order to attract people to their side.

Moreover, people differ in their opinions. It seems that it is partially positive about greys and partially negative. As the literature review suggests the same species can be perceived positively when you feed them enjoy watching them, and very negatively when they take roof tiles of their houses (Shackleton et al. 2019). The Royal Society for the Prevention of Cruelty to Animals (2021) suggests that removing access points to places such as roof cavities will help to solve the problem.

A set of the main positions are presented:

1. Greys are popular species in urban places.

2. Uncharismatic species are not interesting for people.
3. Public opinion is not so much considered.
4. Public should be educated.

5.5.3 Discussion

In fact, there is little or no direct contact between animal rights advocates and conservation organisations. Animal rights organisations mainly target governmental bodies. Animal rights organisations mention that public opinion is not much considered by the governmental bodies as they would like it to be. On the other hand, for example in Scotland, public pressure was not really so much felt from the side of the interviewed governmental body. In England, meanwhile, the conflict is more explicit, and there were several campaigns and petitions presented to the Natural England by animal rights organisations. This also can be explained by the fact that in England, in comparison to Scotland and Wales, it was possible to rescue and release grey squirrels into the wild through a special licensing system. So, the unexpected change in the law led to the resistance of the rescue units that were engaged with rehabilitating grey squirrels. Overall, the support of the public for the organisations is very important, as their support or opposition can make the work of these organisations either very efficient or very difficult.

The conservationists want to bring back the past experience, while animal rights advocates want to acknowledge the present connections between people and grey squirrels. This resembles what Lurz (2014) mentioned about the social experience which in fact changes with time. School children in the south of England could not recognize red squirrels as a native species, thinking that they are fictional. This shows that a social experience is not constant and changes with time and the surroundings.

As described by interviewed governmental bodies, people can feed grey squirrels and be unaware that they are being culled. People can be biased about animals, as the charisma of animals plays a role in their defense. So, less cute animals do not attract so much attention. Natural England mentions that people are very emotive, thus as a governmental body they make decisions referring to the existent evidence. Kenny Kortland from Forestry and Land Scotland mentions that public opinion pressures them a lot but it is difficult to make everyone happy. Thus, it seems that the public plays an important role in the decision-making process.

It is pertinent to mention that this is not quantitative research, thus the aim is not to present an absolutely precise data. However, all the interviewees mentioned that greys are popular in urban communities, as people have interaction with them. The opposition of greys with reds puts greys on second place, such pairing seems to damage the greys' image even more. Moreover, the same species can be approached differently due to temporal differences, as a shift of red squirrels from pest to the native icon.

Moreover, such misunderstanding of the conservation side by animal rights groups seems to be related not just to the difference of values, rather also to the gaps in the terminology of native, alien and invasive that are mostly given in the arguments of animal rights organisations. Thus, it is necessary to consider these gaps and do further research on them.

The most interesting part was about educational programmes. Both conservationists and animal rights people mentioned the importance of educating people and being sure that adequate people will understand their arguments. It is interesting to see whether education is effective in formulating people's values and which education is more influential.

5.6 Discussion

The results showed that animal rights and conservationists have rival discourses on the case of grey squirrels in the UK. Interviews and documents analysis showed explicitly that these organisations have opposing value systems with each other. The negative connotation and demarcation of species as invasive seems to have influence on how these species are managed. The fact that these species are not protected suggests different ways of their management in comparison with native animals that need control. Most likely, this demarcation hinders the possibility of putting more research in non-lethal management methods, as there is less motivation to do so for aliens in comparison with native species.

The prospects of aligning these organisations from a theoretical perspective seem to be very limited, as the core values of the organisations are different. Animal rights advocates generally call for human non-intervention while conservationists call for the conservation of species and ecosystems. Although not visible at first, there are however some practical prospects for cooperation. Animal rights groups mostly seem to be followers of a Reganite approach in theory, thus being against the harm of individual species (even at the expense of conserving other species or ecosystems). In practice, however, animal welfare organisations and conservationists can be more aligned, as the non-intervention standpoint is sometimes softened in practical advocacy, when organisations take a more pragmatic approach to try to reduce or minimize harm. This goes beyond Regan's theory because in practice animal rights organisations cannot fully prevent the suffering of animals which makes them shift towards a more pragmatic approach. So, it seems that there is a split between the theory and practice that animal rights organisations present. This split seems to be a result of the motivation of these organisations to decrease the suffering of animals as much as possible. In the argumentation all animal rights organisations explicitly pointed out non-intervention to be the prioritized option. So, while Light (2004) was

referring to Singer's theory that can become a convergence terrain, it seems that even animal rights organisations having a deontological stance (i.e. theoretically more aligned with Regan than Singer) can find some common ground with conservationists in practice. I believe this is data that could be found only through interaction with the organisations and understand the split between theory and practice. On the other hand, animal welfare organisations, like PETA and OneKind, seem to have the same strategy in practice as animal rights organisations. In the case of grey squirrels, they also suggest non-lethal approaches as an alternative and refer to the fact that there is a lack of scientific data supporting the lethal eradication of grey squirrels.

In fact, animal rights and conservation organisations seem to come together when 'individual animal welfare' and 'natural ecosystem' considerations align, but it is possible that under other circumstances there can be other arguments that will prevent this alignment. For example, lack of scientific data or resources can result in less desirable approaches towards native species. Nevertheless, if enough scientific data shows the disadvantages of some management methods, then surely native species that are protected under the law will be prioritized and the convergence of individual animal welfare and natural ecosystem considerations will most probably align with each other. Conversely, in the case of invasive alien species, as they are not protected under the law and are usually considered 'unwanted nature' by conservationists, there seem to be more clashes between individual welfare and the natural ecosystem. Nevertheless, I believe that with more public resistance, the policymakers will hesitate to make decisions that go against the will of the majority, which could provide more impetus to research non-lethal methods. Nevertheless, it is also important to mention that animal rights organisations should realize that following the Reganite approach they will have more clashes with conservationists than animal welfare advocates would have. However, a lot also depends on the organisations

because as the data shows the theory does not get fully reflected in practice, having some divergencies that can lead to even more cooperation.

In practice, animal rights organisations, while clearly opposed to lethal methods, sometimes consider non-lethal interventions as an alternative. While animal welfarist organisations theoretically are not fully against lethal management, in practice they also seem to oppose lethal control for grey squirrels just as animal rights organisations do, referring for uncertainty of scientific evidence supporting the culling of squirrels. Conservationists explicitly point out that their aim is to conserve species and ecosystems and apply the most effective methods for that. Nevertheless, they also welcome non-lethal methods. I believe that the practical convergence of these organisations can be understood along the lines of what Light (2004) explained and advocated as methodological environmental pragmatism. Organisations that have different underlying motivations and reasons can still potentially converge in practice, in this case through the implementation of non-lethal methods towards grey squirrels. The case explicitly shows that it is not so much important who is right or wrong in this debate but rather how they can work on the same aims with different motivations. Another clash may arise if non-lethal approaches are considered insufficient management methods (by conservationists). In this case, animal rights organisations will likely have ongoing struggles with conservationists, that will require further research.

6 Conclusion

This research investigated the possibility of applying environmental pragmatist thought to the case of grey squirrels in order to facilitate the cooperation between conservation and animal rights advocates. I looked for the case of grey squirrels in the UK in order to show all the complexity of human-wildlife relationship through human-human relationship in practice beyond the theoretical battle. Considering long-lasting and well-known conflict between non-anthropocentric ethics like animal rights/welfare and ecocentrism, I was looking for the possibility to apply methodological environmental pragmatism to the case of grey squirrels in the UK.

The vagueness in the terminology of native, invasive, and alien seems to be a big problem as it causes misunderstanding and confusion. Moreover, many of the animal rights groups' main arguments picked up on vaguenesses in the terminology. Thus, scientists also considering the problems with terminology should be more careful in using and advocating different messages in order to protect their neutral stance and avoid any misinterpretations.

Groups are sceptical about approaching each other and mostly expect a negative reaction from each other. Some interviewees even do not see so much meaning in such cooperation. Nevertheless, others believe that cooperation is possible and even real, referring to different small cooperative dealings with each other. In fact, organisations are campaigning on their own sides with little or no significant interaction with each other. Animal rights advocates mostly deal with governmental bodies, sending petitions and joint letters, rather than directly with conservationist groups.

Theoretically, the most explicit and only convergence seems to be the fact that organisations care for and love animals and are against unnecessary suffering of any animal. Nevertheless, in the case of animal rights groups, it is about the minimization of suffering, which makes it difficult to bridge with conservationists but not impossible, as non-lethal methods are welcomed by animal rights organisations. Moreover, animal rights organisations, despite mostly being the Reganite followers, often seem to take a pragmatic approach, considering other steps that would minimize the suffering of animals.

Practically, there are a few dealings of organisations that show that together they can even enforce their campaigns rather than apart from each other. Moreover, research showed that non-lethal methods can become a mediating point between these organisations regarding the grey squirrels. Both sides showed interest in such an approach but did not have exactly the same motivations, as conservationists refer to the eradication effectiveness, economic advantages as primary but also welfare advantages, while for animal rights the main advantages are welfare advantages, nevertheless, all of them also mentioned other advantages that are worth consideration. According to environmental pragmatism, differences between organisations' values and standpoints of organisations should be less important than being able to agree on actions and come to compromise solutions on issues of mutual concern.

Also, it was found out that the high public interest in some issues can play a significant role in the decision-making process. The more the public pushes, the more it is possible to get results. Nevertheless, governmental bodies also show concern regarding what they see as the emotive approach of many people if these positions are not backed up by facts. Raising public education is in fact an approach that both conservationists and animal rights groups agree on, as both sides consider people insufficiently knowledgeable about the situation. Both sides believe

that after they are educated, rational people will get on their sides, meaning that from their point of view the other side does not seem to be rational. Thus, it seems that ‘education’ seems unlikely to solve the problem given that the conflicting sides have a different perspective on what that education would deliver.

In fact, another finding that needs further research is the possibility of social pressure over people regarding approaching animals in a way that they do not wish. So, for example, not being able to rehabilitate grey squirrels, which are part of the urban community, can be socially damaging for people, especially children. Thus, it is important to consider that grey squirrels are part of human social experience, at least in many areas of the UK, which then often makes them more ‘wanted’ rather than ‘unwanted’ nature.

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Appendix I

Introductory interview protocol

Thank you for agreeing to participate in this interview for my thesis work on “The ethics behind the eradication of invasive species: The case of grey squirrels in the UK”. The questions will be about the grey squirrels issue and the values motivating your advocacy on these issues, and the problems that arise between conservationists and animal rights advocates regarding the management methods of grey squirrels in the UK. I have planned this interview to last no longer than one hour. During this time, I have several questions that I would like to cover.

- First of all, I would like to know whether you would feel comfortable with the recording of our interview exclusively for the research purpose?
- Do you give consent to use your name as a subject interviewed in my research thesis, if no, anonymity and confidentiality can be provided.
- Do you give consent to talk on behalf of your organisation, if no, anonymity and confidentiality for the name of the organisation can be provided.

If you have any questions related to my research or any other questions related to the interviewing process, please let me know.

Interview questions (for conservationists)

- 1) What is the standpoint of the [...] organisation on introduced vertebrate animals?
- 2) Can you describe the problem specifically in relation to grey squirrels, and how do you suggest dealing with it?
- 3) What are the underlying values motivating your advocacy/activity on the issue? Why do you care about the issue of red and grey squirrels?
- 4) Do you think that any management is needed towards grey squirrels? If so, what methods do you think are the most appropriate for managing grey squirrels and why?
- 5) How do you find the standpoint of animal rights organisations, in general, on the issue of introduced animals and specifically on grey squirrels?
- 6) Do you think that you have any important shared values with animal rights groups, and if so whether that could (or indeed does) form the basis for alliances on some issues (and if so, what kinds of issues/under what circumstances)?
- 7) Have you experienced any struggles with animal rights organisations on the case of grey squirrels? If so, can you describe how your organisation reacted to animal rights organisations' position?
- 8) Have you noticed differences in the approaches of various animal rights advocacy groups? Are some easier to negotiate with than others, and if so, what makes them easier to talk to?
- 9) Have you ever had negotiated with animal rights organisations on the case of grey squirrels or maybe other cases of introduced animals? If so, have you ever had positive results from such a negotiation and what were the reasons for the positive results?

10) Does your general concern for animal protection ever allows alliances on nature protection issues with animal rights organisations, and whether you would see any value in allying with them on some issues? If so, under what circumstances? How might it come about?

11) How close is the standpoint of public with conservation organisations' activity on grey squirrels? Do you face more support or alienation in this issue?

12) How important do you find the support of public in these issues; do you think that this is something that influence the course of the decisions made regarding introduced animals?

Interviewees:

Animal right advocates:

1. William Sorflaten, Senior Campaigner at Viva!
2. Natalia Doran, the founder of Urban Squirrels Rescue
3. Jade Emery, Campaigns Officer at Animal Aid

Conservationists:

1. Mary-Anne Collins, Conservation Officer at Argyll, The Trossachs and Stirlingshire at Saving Scotland's Red Squirrels project
2. Hainz Traut, Project Manager of Red Squirrels Northern England project

Governmental bodies:

1. A senior wildlife advisor at Natural England, a non-departmental public body in the United Kingdom sponsored by the Department for Environment, Food and Rural Affairs.
2. Kenny Kortland, wildlife ecologist at Forestry and Land Scotland which is the Scottish Government agency responsible for managing Scotland's national forests and land.

Appendix II

The data for the document analysis was derived from the following organisations' websites:

1. Red squirrels Northern England
2. Red Squirrel Survival Trust
3. The British Association of Shooting and Conservation
4. PETA
5. OneKind
6. Urban Squirrels
7. VIVA!
8. Wildlife Trusts
9. British Red Squirrel Forum
10. Forestry and Land Scotland
11. Saving Scotland's Red Squirrels
12. Natural England
13. Animal and Plant Health Agency
14. UK Squirrel Accord